

Physical health of people in prisons

Physical health of people in prison: assessment, diagnosis and management of physical health problems of people in prison

NICE guideline <number>

Appendices A – U

16 May 2016

Draft for consultation

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Disclaimer

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1 Appendices

2 Appendix A: Scope

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

SCOPE

1 Guideline title

Physical health of people in prison: assessment, diagnosis and management of physical health problems of people in prison

1.1 Short title

Physical health of people in prison

2 The remit

NHS England has asked NICE to produce a guideline on 'assessment, diagnosis, and management of physical health problems of people in prison'.

3 Need for the guideline

3.1 Epidemiology

- a) Prison is a special setting for provision of healthcare. Prisoners have the same healthcare rights including healthcare and treatment as anyone outside of prison.
- b) Health and justice services are interdependent and work together to deliver a system which is safe, legal and decent and which delivers both health and re-offending outcomes for the person.
- c) There were 119 prisons in England and Wales in 2011, of which 11 prisons are privately run. Their primary purpose is to detain people proven or suspected of committing a criminal offence. The prison population has increased in recent years in England and Wales and was reported to be 84,431 in March 2013. Around 140,000 people move through the prison system each year.

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- d) From 1 April 2013, NHS England became responsible for commissioning all health services (with the exception of some emergency care, ambulance services, out of hours and 111 services) for people in prisons in England. This expanded range of commissioned services included secondary mental health services, secondary physical health services and some public health services previously commissioned by primary care trusts.
- e) The prison population is much younger than the general population with most prisoners aged between 21 and 49 years. Although the majority of prisoners are young, mostly in their 20s or 30s, they have significant health needs caused by a combination of accumulated social and economic disadvantage, undiagnosed chronic health conditions and previous poor access and uptake of mainstream community health services. There are a small but growing number of older prisoners who have high levels of need.

3.2 Current practice

- a) Offenders are drawn from a population with significantly raised risk of developing a range of chronic conditions. There are national programmes to identify people at risk for some of these conditions, and these could be applied in prison. Social exclusion and disadvantage is common in the offender population and access to healthcare and screening services while living in the community tends to be poor.
- b) Healthcare provided in prisons currently varies significantly between prisons in breadth, quality, methods of delivery and accessibility. This guideline will seek to set out clear standards which should be met in all prisons and will investigate how healthcare may best be delivered in such settings.

4 The guideline

The guideline development process is described in detail on the NICE website (see section 6, 'Further information').

This scope defines what the guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from NHS England. Where NICE guidelines already exist and are relevant for prison health these will be incorporated.

The areas that will be addressed by the guideline are described in the following sections.

This guideline is being developed in parallel to a further clinical guideline on Mental health of adults in contact with the criminal justice system.

4.1 Population

4.1.1 Groups that will be covered

- a) Adults (18 and older) in prisons or young offender institutions:
- adults in prison
 - young people aged 18–21 in young offender institutions.
- b) Special consideration will be given to:
- people with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities)
 - women, especially pregnant women and the mothers of babies in prison
 - people over 50
 - long-term prisoners (>4 years)
 - short-term prisoners (<12 months)
 - people with a history of substance misuse.

4.1.2 Groups that will not be covered

- a) Children and young people (aged under 18 years)

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- b) Babies of mothers in prisons
- c) People in Immigration Removal Centres
- d) People in police custody

4.2 Setting

- a) The guideline will cover NHS-commissioned care provided in prisons, young offender institutions and when people move from prison to another setting (such as another prison or a court).

4.3 Management

4.3.1 Key issues that will be covered

- a) Improving health and wellbeing in prison
 - Approaches (including interventions and methods of delivery) to improve health and wellbeing in prisons
- b) Health needs assessment
 - Health needs assessment at reception into prison
 - Subsequent health needs assessment in prisons
- c) Coordination and communication between healthcare professionals
 - Coordination, case management and communication between healthcare professionals involved in primary care, mental healthcare, substance misuse care and secondary care
- d) Use of medication
 - Identification of the most effective approaches regarding prescribing, dispensing and adherence to medicines in prisons to maximise adherence and good health outcomes and reduce inappropriate use

- e) **Urgent and emergency management in prison (including trauma and resuscitation care)**
 - Timely identification and management of health deterioration
 - Management of emergency situations in prisons (for example, appropriate advice for the first person on scene (including prisoner officers) in emergency situations)
- f) **Continuity of healthcare on admission to prison, transfer, or on release to the community**
 - Identification of the most effective systems, including management of patient records, to ensure continuity of healthcare of people moving from one prison to another, or between prison and the community or hospital

4.3.2 Issues that will not be covered

- a) **Mental health of prisoners.**
- b) **NHS care provided for prisoners outside the prison service (such as acute hospitals).**
- c) **Cultural and spiritual needs of the prisoner and their families and carers.**
- d) **End of life care.**
- e) **Dental management, with the exception of self-care.**

4.4 Main outcomes

- a) **Adoption of health-improving behaviours.**
- b) **Uptake of screening programmes.**
- c) **Morbidity.**
- d) **Mortality.**

- e) Health-related quality of life

4.5 Review questions

Review questions guide a systematic review of the literature. They address only the key issues covered in the scope, and usually relate to interventions, diagnosis, prognosis, service delivery or patient experience. Please note that these review questions are draft versions and will be finalised with the Guideline Development Group.

- a) What are the most effective assessment tools to determine the health improvement needs of prisoners?
- b) What are the most effective methods of delivery of health improvement activities in prison?
- c) What information, support and mentoring do prisoners require to improve health and wellbeing?
- d) What are the most effective interventions that can be implemented to improve health and wellbeing? A review of existing NICE guidance will be undertaken. New reviews will not be conducted where relevant existing guidance is in place.
- e) What health assessment needs to be done at reception into prison?
- f) What subsequent health assessment needs to be done in prisons?
- g) When should subsequent health assessment be done in prisons?
- h) What are the most effective strategies for coordination, case management and communication between healthcare professionals involved in primary care, mental healthcare, substance misuse care and secondary care?
- i) What are the most effective interventions to maximise adherence to prescribed drugs?

- j) What are the most effective interventions to minimise inappropriate use of prescribed drugs?
- k) How should chronic conditions be monitored in prison?
- l) How should emergency situations be managed in prison (including first person on the scene)?
- m) What are the most effective systems or policies, including management of patient records, to ensure continuity of healthcare of people moving from:
 - community to prison?
 - prison to prison?
 - prison to hospital?
 - hospital to prison?
 - prison to community?

4.6 Economic aspects

Developers will take into account both clinical and cost effectiveness when making recommendations involving a choice between alternative interventions. A review of the economic evidence will be conducted and analyses will be carried out as appropriate. The preferred unit of effectiveness is the quality-adjusted life year (QALY). The costs considered will usually be from an NHS and personal social services (PSS) perspective, but National Offender Management Service costs will be considered where relevant. Further detail on the methods can be found in [The guidelines manual](#).

4.7 Status

4.7.1 Scope

This is the final version of the scope.

4.7.2 Timing

The development of the guideline recommendations will begin in December 2014.

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5 Related NICE guidance

5.1 Published guidance

- [HIV testing](#) NICE local government briefing 21 (2014)
- [Managing overweight and obesity in adults: lifestyle weight management services](#) NICE public health guideline 53 (2014)
- [Lipid modification for the prevention of cardiovascular disease](#) NICE clinical guideline 181 (2014)
- [Behaviour change: individual approaches](#) NICE public health guideline 49 (2014)
- [Myocardial infarction: secondary prevention](#) NICE clinical guideline 172 (2013)
- [Hepatitis B \(chronic\)](#) NICE clinical guideline 165 (2013)
- [Falls](#) NICE clinical guideline 161 (2013)
- [Tobacco: harm-reduction approaches to smoking](#) NICE public health guidance 45 (2013)
- [Patient experience in adult NHS services](#) NICE clinical guideline 138 (2012)
- [Hepatitis B and C: ways to promote and offer testing to people at increased risk of infection](#) NICE public health guideline 43 (2012)
- [Preventing type 2 diabetes: risk identification and interventions for individuals at high risk](#) NICE public health guidance 38 (2012)
- [Identifying and managing tuberculosis among hard-to-reach groups](#) NICE public health guidance 37 (2012)
- [Preventing type 2 diabetes: population and community-level interventions](#) NICE public health guidance 35 (2011)
- [Increasing the uptake of HIV testing among men who have sex with men](#) NICE public health guidance 34 (2011)
- [Increasing the uptake of HIV testing among black Africans in England](#) NICE public health guideline 33 (2011)
- [Hypertension](#) NICE clinical guideline 127 (2011)
- [Management of stable angina](#) NICE clinical guideline 126 (2011)
- [Tuberculosis](#) NICE clinical guideline 117 (2011)

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- [Pregnancy and complex social factors](#) NICE clinical guideline 110 (2010)
- [Chronic heart failure](#) NICE clinical guideline 108 (2010)
- [Hypertension in pregnancy](#) NICE clinical guideline 107 (2010)
- [Chronic obstructive pulmonary disease](#) NICE clinical guideline 101 (2010)
- [Alcohol-use disorders: alcohol-related physical complications](#) NICE clinical guideline 100 (2010)
- [Chest pain of recent onset](#) NICE clinical guideline 95 (2010)
- [Weight management before, during and after pregnancy](#) NICE public health guidance 27 (2010)
- [Quitting smoking in pregnancy and following childbirth](#) NICE public health guidance 26 (2010)
- [Unstable angina and non-ST-segment-elevation myocardial infarction](#) NICE clinical guideline 94 (2010)
- [Type 2 diabetes](#) NICE clinical guideline 87 (2009)
- [Stroke and transient ischaemic attack](#) NICE clinical guideline 68 (2008)
- [Diabetes in pregnancy](#) NICE clinical guideline 63 (2008)
- [Antenatal care](#) NICE clinical guideline 62 (2008)
- [Preventing the uptake of smoking by children and young people](#) NICE public health guidance 14 (2008)
- [Maternal and child nutrition](#) NICE public health guidance 11 (2008)
- [Intrapartum care](#) NICE clinical guideline 55 (2007)
- [Drug misuse – opioid detoxification](#) NICE clinical guideline 52 (2007)
- [Drug misuse – psychosocial interventions](#) NICE clinical guideline 51 (2007)
- [Antenatal and postnatal mental health](#) NICE clinical guideline 45 (2007)
- [Behaviour change: the principles for effective interventions](#) NICE public health guidance 6 (2007)
- [Interventions to reduce substance misuse among vulnerable young people](#) NICE public health guidance 4 (2007)
- [Prevention of sexually transmitted infections and under 18 conceptions](#) NICE public health guidance 3 (2007)
- [Obesity](#) NICE clinical guideline 43 (2006)
- [Postnatal care](#) NICE clinical guideline 37 (2006)

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- [Brief interventions and referral for smoking cessation](#) NICE public health guidance 1 (2006)
- [Type 1 diabetes](#) NICE clinical guideline 15 (2004)

5.2 Guidance under development

NICE is currently developing the following related guidance (details available from the NICE website):

- Disability, dementia and frailty in later life: mid-life approaches to prevention. Publication expected February 2015.
- Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes. NICE clinical guideline. Publication expected March 2015.
- Antimicrobial stewardship. NICE clinical guideline. Publication expected May 2015.
- Challenging behaviour and learning disabilities. NICE clinical guideline. Publication expected May 2015.
- Care of the dying adult. NICE clinical guideline. Publication expected October 2015.
- Oral health promotion approaches for dental teams. NICE public health guideline. Publication expected October 2015.
- Major trauma, NICE clinical guideline. Publication expected April 2016.
- Sexually harmful behaviour among young people, NICE public health guideline. Publication expected August 2016.
- Multimorbidities: clinical assessment and management, NICE clinical guideline. Publication expected September 2016.
- Dual diagnosis. NICE clinical guideline. Publication expected September 2016.
- Mental health of adults in contact with the criminal justice system, NICE clinical guideline. Publication expected November 2016.
- Regaining independence (reablement), NICE social care guideline. Publication expected July 2017.

- Acute medical emergencies, NICE clinical guideline. Publication date to be confirmed.
- Intrapartum care for high risk women. NICE clinical guideline. Publication date to be confirmed.

6 Further information

Information on the guideline development process is provided in the following documents, available from the NICE website:

- [How NICE clinical guidelines are developed: an overview for stakeholders the public and the NHS](#)
- [The guidelines manual](#).

Information on the progress of the guideline will also be available from the [NICE website](#).

1 Appendix B: Declarations of interest

2 Richard Bradshaw (GDG Chair)

Date	Item declared	Classification	Action taken
Initial declaration 10/06/2014	No interest declared	Nil	Nil
12/01/2015	GDG1: No new interest declared	Nil	Nil
13/01/2015	GDG2: No new interest declared	Nil	Nil
27/02/2015	GDG3: No new interest declared	Nil	Nil
15/04/2015	GDG4: No new interest declared	Nil	Nil
20/05/2015	GDG5: No new interest declared	Nil	Nil
01/07/2015	GDG6: No new interest declared	Nil	Nil
10/09/2015	GDG7: No new interest declared	Nil	Nil
11/09/2015	GDG8: No new interest declared	Nil	Nil
21/10/2015	GDG9: No new interest declared	Nil	Nil
26/11/2015	GDG10: No new interest declared	Nil	Nil
13/01/2016	GDG11: No new interest declared	Nil	Nil
11/02/2016	GDG12: No new interest declared	Nil	Nil

3

4 Ian Bickers

Date	Item declared	Classification	Action taken
Initial declaration (20/12/2014)	No interest declared	Nil	Nil
12/01/2015	GDG1: No new interest declared	Nil	Nil
13/01/2015	GDG2: No new interest declared	Nil	Nil
27/02/2015	GDG3: No new interest declared	Nil	Nil
15/04/2015	GDG4: Apologies sent	Nil	Nil
20/05/2015	GDG5: Apologies sent	Nil	Nil
01/07/2015	GDG6: No new interest declared	Nil	Nil
10/09/2015	GDG7: No new interest declared	Nil	Nil
11/09/2015	GDG8: Apologies sent	Nil	Nil
21/10/2015	GDG9: Apologies sent	Nil	Nil
26/11/2015	GDG10: Apologies sent	Nil	Nil
13/01/2016	GDG11: No new interest declared	Nil	Nil
11/02/2016	GDG12: No new interest declared	Nil	Nil

5

6 Francesca Cooney

Date	Item declared	Classification	Action taken
Initial declaration 17/12/2014	No interest declared	Nil	Nil

Date	Item declared	Classification	Action taken
12/01/2015	GDG1: No new interest declared	Nil	Nil
13/01/2015	GDG2: No new interest declared	Nil	Nil
27/02/2015	GDG3: No new interest declared	Nil	Nil
15/04/2015	GDG4: No new interest declared	Nil	Nil
20/05/2015	GDG5: No new interest declared	Nil	Nil
01/07/2015	GDG6: No new interest declared	Nil	Nil
10/09/2015	GDG7: No new interest declared	Nil	Nil
11/09/2015	GDG8: No new interest declared	Nil	Nil
21/10/2015	GDG9: conducted focus group work with women which was included in the Prison Reform Trust research 'Doing Time' on the experiences and needs of older people; this study is included in the qualitative question on Use of medication.	Personal non-pecuniary interest	Declare and withdraw from recommendations on use of medication
26/11/2015	GDG10: No new interest declared	Nil	Nil
13/01/2016	GDG11: Apologies sent	Nil	Nil
11/02/2016	GDG12: No new interest declared	Nil	Nil

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8 **Jane de Burgh**

Date	Item declared	Classification	Action taken
Initial declaration (08/01/2015)	No interest declared	Nil	Nil
12/01/2015	GDG1: Apologies sent	Nil	Nil
13/01/2015	GDG2: No new interest declared	Nil	Nil
27/02/2015	GDG3: Apologies sent	Nil	Nil
15/04/2015	GDG4: No new interest declared	Nil	Nil
20/05/2015	GDG5: No new interest declared	Nil	Nil
01/07/2015	GDG6: No new interest declared	Nil	Nil
10/09/2015	GDG7: No new interest declared	Nil	Nil
11/09/2015	GDG8: No new interest declared	Nil	Nil
21/10/2015	GDG9: No new interest declared	Nil	Nil
26/11/2015	GDG10: No new interest declared	Nil	Nil
13/01/2016	GDG11: No new interest declared	Nil	Nil
11/02/2016	GDG12: Apologies sent	Nil	Nil

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10 **Denise Farmer**

Date	Item declared	Classification	Action taken
Initial declaration 05/12/2014	No interest declared.	Nil	Nil
12/01/2015	GDG1: Apologies sent	Nil	Nil
13/01/2015	GDG2: No new interest declared	Nil	Nil
27/02/2015	GDG3: No new interest declared	Nil	Nil
15/04/2015	GDG4: No new interest declared	Nil	Nil

Date	Item declared	Classification	Action taken
20/05/2015	GDG5: No new interest declared	Nil	Nil
01/07/2015	GDG6: No new interest declared	Nil	Nil
10/09/2015	GDG7: No new interest declared	Nil	Nil
11/09/2015	GDG8: Apologies sent	Nil	Nil
21/10/2015	GDG9: No new interest declared	Nil	Nil
26/11/2015	GDG10: No new interest declared	Nil	Nil
13/01/2016	GDG11: No new interest declared	Nil	Nil
11/02/2016	GDG12: No new interest declared	Nil	Nil

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12 **Laimonas Goncaras**

Date	Item declared	Classification	Action taken
Initial declaration (15/12/2014)	No interest declared	Nil	Nil
12/01/2015	GDG1: No new interest declared	Nil	Nil
13/01/2015	GDG2: No new interest declared	Nil	Nil
27/02/2015	GDG3: No new interest declared	Nil	Nil
15/04/2015	GDG4: Apologies sent	Nil	Nil
20/05/2015	GDG5: No new interest declared	Nil	Nil
01/07/2015	GDG6: No new interest declared	Nil	Nil
10/09/2015	GDG7: No new interest declared	Nil	Nil
11/09/2015	GDG8: No new interest declared	Nil	Nil
21/10/2015	GDG9: No new interest declared	Nil	Nil
26/11/2015	GDG10: Apologies sent	Nil	Nil
13/01/2016	GDG11: No new interest declared	Nil	Nil
11/02/2016	GDG12: No new interest declared	Nil	Nil

13

14 **Jake Hard**

Date	Item declared	Classification	Action taken
Initial declaration (16/11/2014)	No interest declared	Nil	Nil
12/01/2015	GDG1: No new interest declared	Nil	Nil
13/01/2015	GDG2: No new interest declared	Nil	Nil
27/02/2015	GDG3: invited to speak on opioid analgesic dependence at a conference for Indivior (formerly Reckitt Beckinser) for a fee.	Personal pecuniary interest non-specific	Declare and participate
15/04/2015	GDG4: No new interest declared	Nil	Nil
20/05/2015	GDG5: No new interest declared	Nil	Nil
01/07/2015	GDG6: appointed as vice chair of the RCGP Secure Environments Group	Personal non-pecuniary interest	Declare and participate
10/09/2015	GDG7: No new interest declared	Nil	Nil
11/09/2015	GDG8: No new interest declared	Nil	Nil
21/10/2015	GDG9: No new interest declared	Nil	Nil
26/11/2015	GDG10: No new interest declared	Nil	Nil
13/01/2016	GDG11: appointed chair of the RCGP Secure	Personal non-	Declare and

Date	Item declared	Classification	Action taken
	Environments Group	pecuniary interest	participate
11/02/2016	GDG12: No new interest declared	Nil	Nil

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16 **Susan Russell**

Date	Item declared	Classification	Action taken
Initial declaration (04/11/2014)	No interest declared	Nil	Nil
12/01/2015	GDG1: No new interest declared	Nil	Nil
13/01/2015	GDG2: No new interest declared	Nil	Nil
27/02/2015	GDG3: No new interest declared	Nil	Nil
15/04/2015	GDG4: No new interest declared	Nil	Nil
20/05/2015	GDG5: No new interest declared	Nil	Nil
01/07/2015	GDG6: No new interest declared	Nil	Nil
10/09/2015	GDG7: No new interest declared	Nil	Nil
11/09/2015	GDG8: No new interest declared	Nil	Nil
21/10/2015	GDG9: Apologies sent	Nil	Nil
26/11/2015	GDG10: No new interest declared	Nil	Nil
13/01/2016	GDG11: No new interest declared	Nil	Nil
11/02/2016	GDG12: No new interest declared	Nil	Nil

17

18 **Sophie Strachan**

Date	Item declared	Classification	Action taken
Initial declaration	Freelance consultant for Salamander Trust/Athena network as part of a reference group working on the revision of the WHO 2006 guidelines on women's SHRH living with HIV	Personal pecuniary interest	Declare and participate
	Caseworker for UK charity Positively UK, supporting people living with/affected by HIV	Personal pecuniary interest	Declare and participate
	Dialogue platform member for UNAIDS for women living with HIV	Personal non-pecuniary interest	Declare and participate
	Advisory group member of The Global Coalition on Women & Aids	Personal non-pecuniary interest	Declare and participate
	Lay member of Infectious diseases in pregnancy screening committee Public Health England	Personal non-pecuniary interest	Declare and participate
	The Sophia Forum trustee (UK branch of the Global Coalition on Women & Aids)	Personal non-pecuniary interest	Declare and participate
12/01/2015	GDG1: No new interest declared	Nil	Nil
13/01/2015	GDG2: No new interest declared	Nil	Nil
15/04/2015	GDG4: No new interest declared	Nil	Nil
20/05/2015	GDG5: No new interest declared	Nil	Nil
01/07/2015	GDG6: Lay member of NHS Health + Justice Clinical reference group	Personal non-pecuniary interest	Declare and participate
10/09/2015	GDG7: Patient representative : opt out Blood Borne Viruses Task and Finish group, Public Health England	Non-personal pecuniary interest	Declare and participate

Date	Item declared	Classification	Action taken
	GDG7: Representative on the Patient voice: Public health secure and detained assurance group	Non-personal pecuniary interest	Declare and participate
11/09/2015	GDG8: No new interest declared	Nil	Nil
21/10/2015	GDG9: No new interest declared	Nil	Nil
26/11/2015	GDG10: Apologies sent	Nil	Nil
13/01/2016	GDG11: No new interest declared	Nil	Nil
11/02/2016	GDG12: No new interest declared	Nil	Nil

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20 **Nina Turner**

Date	Item declared	Classification	Action taken
Initial declaration (01/12/2014)	received a payment for speaking at the Association of Rehabilitation Nurses conference.	Non-specific personal pecuniary interest	Declare and participate
	appointed as a member of the Royal College of Nursing Criminal Justice Group for 3 years from January 2015.	Non-specific personal non-pecuniary interest	Declare and participate
12/01/2015	GDG1: Apologies sent	Nil	Nil
13/01/2015	GDG2: Apologies sent	Nil	Nil
27/02/2015	GDG3: No new interest declared	Nil	Nil
15/04/2015	GDG4: No new interest declared	Nil	Nil
20/05/2015	GDG5: Apologies sent	Nil	Nil
01/07/2015	GDG6: Apologies sent	Nil	Nil
10/09/2015	GDG7: No new interest declared	Nil	Nil
11/09/2015	GDG8: Apologies sent	Nil	Nil
21/10/2015	GDG9: No new interest declared	Nil	Nil
26/11/2015	GDG10: No new interest declared	Nil	Nil
13/01/2016	GDG11: No new interest declared	Nil	Nil
11/02/2016	GDG12: No new interest declared	Nil	Nil

21

22 **Elisabeth Walsh**

Date	Item declared	Classification	Action taken
Initial declaration (03/11/2014)	Chair of the Nursing in Criminal Justice Services Forum, Royal College of Nursing.	Non-specific personal non-pecuniary interest	Declare and participate
12/01/2015	GDG1: Apologies sent	Nil	Nil
13/01/2015	GDG2: Apologies sent	Nil	Nil
27/02/2015	GDG3: No new interest declared	Nil	Nil
15/04/2015	GDG4: No new interest declared	Nil	Nil
20/05/2015	GDG5: No new interest declared	Nil	Nil
01/07/2015	GDG6: Lead author of a paper included in review on deteriorating health	Personal non-pecuniary interest	Declare and withdraw recommendations on deterioratin

Date	Item declared	Classification	Action taken
			g health (review question Q14)
10/09/2015	GDG7: Freelance consultant with Central North West London NHS Trust (HMP Winchester) and Dorset Healthcare University NHS Trust (HMP Guys Marsh, The Verne IRC, HM YOI Portland)	Personal pecuniary interest	Declare and participate
	GDG7: Visiting senior lecturer (research) University of Manchester from 1 August 2015	Personal non-pecuniary interest	Declare and participate
11/09/2015	GDG8: No new interest declared	Nil	Nil
21/10/2015	GDG9: No new interest declared	Nil	Nil
26/11/2015	GDG10: No new interest declared	Nil	Nil
13/01/2016	GDG11: No new interest declared	Nil	Nil
11/02/2016	GDG12: Apologies sent	Nil	Nil

23

24 **Joe Hall (Co-opted)**

Date	Item declared	Classification	Action taken
Initial declaration (31/10/2014)	No interest declared	Nil	Nil
26/11/2015	GDG10: No new interest declared	Nil	Nil

25

26 **Meng Aw-Yong (Co-opted)**

Date	Item declared	Classification	Action taken
Initial declaration (10/03/2015)	Member of Independent Advisory panel on Deaths in Custody (Ministry of Justice)	Personal financial non-specific	Declare and participate
	Member of Harris Review: Deaths in 18-24 year olds in prisons (Ministry of Justice)	Personal financial non-specific	Declare and participate
11/09/2015	GDG8: No new interest declared	Nil	Nil

27

28 **Nick Kosky (Chair of Mental health of adults in contact with the criminal justice system guideline)**

Date	Item declared	Classification	Action taken
Initial declaration (10/06/2014)	No interest declared	Nil	Nil
20/05/2015	GDG5: Member of the 'Reducing Deaths in Detention' panel, organised by Centre for Mental Health	Personal non-pecuniary interest	Declare and participate
01/07/2015	GDG6: Apologies sent	Nil	Nil
10/09/2015	GDG7: Apologies sent	Nil	Nil
11/09/2015	GDG8: Apologies sent	Nil	Nil
21/10/2015	GDG9: Apologies sent	Nil	Nil
26/11/2015	GDG10: No new interest declared	Nil	Nil
13/01/2016	GDG11: Apologies sent	Nil	Nil
11/02/2016	GDG12: Apologies sent	Nil	Nil

29 **NCGC team**

Date	Item declared	Classification	Action taken
Initial declaration	No interest declared	Nil	Nil
12/01/2015	GDG1: No new interest declared	Nil	Nil
13/01/2015	GDG2: No new interest declared	Nil	Nil
27/02/2015	GDG3: No new interest declared	Nil	Nil
15/04/2015	GDG4: No new interest declared	Nil	Nil
20/05/2015	GDG5: No new interest declared	Nil	Nil
01/07/2015	GDG6: No new interest declared	Nil	Nil
10/09/2015	GDG7: No new interest declared	Nil	Nil
11/09/2015	GDG8: No new interest declared	Nil	Nil
21/10/2015	GDG9: No new interest declared	Nil	Nil
26/11/2015	GDG10: No new interest declared	Nil	Nil
13/01/2016	GDG11: No new interest declared	Nil	Nil

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1 Appendix C: Clinical review protocols

C.1 Health assessment

Review question	1. What health assessment needs to be done at reception into prison?
Objectives	To determine what health assessments should be conducted on the day that people are received into prison to ensure safety of people in prison. Assessment of acute mental illness and self-harm are under the remit of the mental health guideline.
Criteria for considering studies in the review	
Study design	Randomised controlled trials Non-randomised controlled trials If no intervention studies are included, diagnostic cohort studies (prospective and retrospective) will be considered Systematic reviews and meta-analyses of the above
Population	Adults (18 and over) in prisons or young offender institutions. Additional indirect settings listed in the 'settings' section.
Intervention	Validated (physical) health assessment tools/triage/policies/screening protocols at entry into prison (for example, Grubin reception screen or CHADS screening in young offenders/CHAT1/2)
Comparison	Other validated health assessment tools/triage/policies/screen
Outcomes	<p>Critical:</p> <ul style="list-style-type: none"> • Morbidity • Mortality until second screen (7 days) <p>• Important:</p> <ul style="list-style-type: none"> • Health-related quality of life (related to continuity of treatment/symptom management) • Patient safety incidents • Reduced self-harm • Reduced hospital admission • Delayed and omitted medicine • Reduced infectious disease transmission • Risk factors • Referrals • Self-reported satisfaction <p>Diagnostic accuracy data</p>
Setting	Prisons or young offender institutions. Indirect settings will also be searched for: Immigration Removal Centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.
Equalities	As listed in 'subgroups' below.
Search Strategy	Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO Language: Restrict to English only Date restriction: none

Review Strategy	<u>Strata</u> Men and women
	<u>Subgroups</u> People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) Women, especially pregnant women and the mothers of babies in prison People over 50 Long-term prisoners (>4 years) Short-term prisoners (<12 months) People with a history of substance misuse.

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Review question	2. What subsequent health assessment(s) are clinically and cost-effective in prisons?
Objectives	<p>To determine what health assessment(s) should be conducted after reception to prison to determine further health needs, and any other on-going reasons that healthcare may be required.</p> <p>We will present existing NICE guidance to the GDG after evidence from our primary review is presented e.g. including Hep B&C, TB, HIV, STDs</p>
Criteria for considering studies in the review	
Study design	<p>Randomised controlled trials</p> <p>If no intervention studies are included, diagnostic cohort studies (prospective and retrospective) will be considered</p> <p>Systematic reviews and meta-analyses of the above</p>
Population	<p>Adults (18 and over) in prisons or young offender institutions.</p> <p>Additional indirect settings listed in the 'settings' section.</p>
Intervention	<ul style="list-style-type: none"> • Validated health assessment tools/triage/policies/screening protocols • Self-reporting/tick boxes • Patient history • Secondary screen • Second health check • Transfer screen • Clinical health assessment • Comprehensive clinical assessment • Primary healthcare screen • Induction • Annual health check for those not qualifying for national requirement
Comparison	Usual care or each other
Outcomes	<p>Critical:</p> <ul style="list-style-type: none"> • Mortality. <p>Important:</p> <ul style="list-style-type: none"> • Health-related quality of life (related to continuity of treatment/symptom management) • Patient safety incidents • Reduced self-harm • Reduced hospital admission • Delayed and omitted medicine • Reduced infectious disease transmission • Risk factors • Referrals • Self-reported satisfaction • New diagnoses <p>Diagnostic accuracy data</p>
Setting	<p>Prisons or young offender institutions.</p> <p>Indirect settings will also be searched for: Immigration Removal Centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure</p>

	training centres (STCs), police custody and detention centres.
Equalities	As listed in 'subgroups' below
Search Strategy	Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO Language: Restrict to English only Date restriction: none
Review Strategy	<u>Strata</u> None identified. <u>Subgroups</u> People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) Women, especially pregnant women and the mothers of babies in prison People over 50 Long-term prisoners (>4 years) Short-term prisoners (<12 months) People with a history of substance misuse.

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Review question	3. When should subsequent health assessments be done in prisons?
Objectives	To determine when initial health assessment(s) should be conducted (after the first day in prison), and when any subsequent assessments should be conducted.
Criteria for considering studies in the review	
Study design	Randomised controlled trials Diagnostic cohort studies (prospective and retrospective) Systematic reviews and meta-analyses of the above
Population	Adults (18 and over) in prisons or young offender institutions. Additional indirect settings listed in the 'settings' section.
Intervention	<ul style="list-style-type: none"> • Validated health assessment tools/triage/policies/screening protocols • Self-reporting/tick boxes • Patient history • Secondary screen • Second health check • Transfer screen • Clinical health assessment • Comprehensive clinical assessment • Primary healthcare screen • Induction • Annual health check for those not qualifying for national requirement
Comparison	Usual care or any other time point up to one year.
Outcomes	<p>Critical: Mortality.</p> <p>Important: Health-related quality of life (related to continuity of treatment/symptom management) Patient safety incidents Reduced self-harm Reduced hospital admission Delayed and omitted medicine Reduced infectious disease transmission Risk factors Referrals Self-reported satisfaction New diagnoses</p>
Setting	Prisons or young offender institutions. Indirect settings will also be searched for: Immigration Removal Centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.
Equalities	As listed in 'subgroup' section below.
Search Strategy	Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO Language: Restrict to English only Date restriction: none
Review Strategy	<u>Strata</u> None identified.

Subgroups

People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities)

Women, especially pregnant women and the mothers of babies in prison

People over 50

Long-term prisoners (>4 years)

Short-term prisoners (<12 months)

People with a history of substance misuse.

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Review question	4. What are the most effective and cost-effective assessment tools to determine the health promotion needs of prisoners?
Objectives	<p>To identify the health needs of prisoners regarding:</p> <ul style="list-style-type: none"> • smoking • nutrition • personal hygiene/self-care/oral health • physical activity • sexual health
Criteria for considering studies in the review	
Study design	<p>Randomised controlled trials Non-randomised controlled trials Diagnostic cohort studies (prospective and retrospective) Systematic reviews and meta-analyses of the above</p>
Population	<p>Adults (18 and over) in prisons or young offenders institutions. Additional indirect settings listed in the 'settings' section.</p>
Intervention	<p>Validated health assessment tools/triage/policies/protocols</p> <ul style="list-style-type: none"> • Self-reporting/tick boxes • Patient history • Secondary screen • Second health check • Transfer screen • Clinical health assessment • Comprehensive clinical assessment • Primary healthcare screen • Focus groups/prisoner consultation meetings/user group meetings • Opportunistic • PER form (prisoner escort record) • Don Grubin reception screen • Mental health interventions will be excluded • CHADS screening in young offenders/CHAT1/2 • Medicines reconciliation/medication history taking/medicines confirming • SystemOne • Induction • Wellbeing clinic (Wellmen and Wellwomen)
Comparison	<p>Usual care or each other</p>
Outcomes	<p><u>Critical:</u> Adoption of health-promoting behaviours:</p> <ul style="list-style-type: none"> • Nutrition – healthy BMI • Personal hygiene/self care/oral health – patient-reported satisfaction • Physical activity – healthy BMI, 30 mins a day • Sexual health – decrease in STD diagnosis from in-prison, accessing barrier methods and sexual health clinics • Smoking cessation – quit for at least 4 weeks

	<p><u>Important</u></p> <ul style="list-style-type: none"> • Uptake of screening programmes. • Morbidity. • Mortality. • Health-related quality of life
Setting	<p>Prisons or young offenders institutions.</p> <p>Indirect settings will also be searched for:</p> <p>Immigrant Removal Centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.</p>
Equalities	As listed in 'subgroups' below
Search Strategy	<p>Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO</p> <p>Language: Restrict to English only</p> <p>Date restriction: none</p>
Review Strategy	<p><u>Strata</u></p> <p>None identified.</p> <p><u>Subgroups</u></p> <p>People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities)</p> <p>Women, especially pregnant women and the mothers of babies in prison</p> <p>People over 50</p> <p>Long-term prisoners (>4 years)</p> <p>Short-term prisoners (<12 months)</p> <p>People with a history of substance misuse.</p>

C.2 Coordination and communication

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Review question	5. What are barriers and facilitators to coordination, case management and communication between healthcare professionals involved in primary care, mental healthcare, substance misuse care and secondary care? (qualitative)
Objectives	Identification of the barriers and facilitators to coordination, case management and communication between multiple individuals and teams involved in assessing, managing and delivering healthcare, to enable the GDG to identify the necessary features for an effective coordinated healthcare service for prisoners.
Study design	<p>Qualitative studies including interviews and focus groups</p> <p>Surveys</p>
Population and setting	<p>Adults (18 and over) in prisons or young offender institutions.</p> <p>Additional indirect settings listed in the 'settings' section.</p> <p>Health professionals and other staff working in prisons or young offenders institutions</p> <p>Indirect settings: Immigration removal centres (IRCs), secure environments, forensic units, low or medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.</p>
Search Strategy	<p>Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO</p> <p>Language: Restrict to English only</p> <p>Date restriction: none</p>
Review Strategy	Thematic analysis of qualitative studies, as reported in the studies.

C.3 Promoting health and wellbeing

10 Scope area: Approaches (including interventions and methods of delivery) to promote health and wellbeing in
11 prisons

Review question	6. What are the most clinically and cost-effective interventions that can be implemented to promote health and wellbeing in prisons?
Objectives	Identification of health promoting activities in prison, resulting in positive outcome.
Criteria for considering studies in the review	
Study design	Randomised controlled trials Systematic reviews and meta-analyses of the above Non-randomised controlled trials if no RCTs are identified Observational studies if no controlled trails are identified
Population	Adults (18 and over) in prisons or young offender institutions. Additional indirect settings listed in the 'settings' section.
Intervention	<p>Prioritised interventions:</p> <ul style="list-style-type: none"> • Smoking cessation • Nutrition (food served/access to canteen/snack food). Supplements will not be included, but cross reference made to existing NICE guidance. • Personal hygiene/self-care/oral health • Physical activity (including time in open air/mobilisation) • Sexual health (advice/access to barrier methods) <p>Over the counter drugs available in the canteen will be excluded.</p> <p>A full review of published related NICE guidance will be identified by hand searching the NICE website, based on the prioritised areas listed below. All recommendations on health promotion will be presented to the GDG after the primary evidence reviews.</p>
Comparison	Usual care or alternative interventions appropriate within prioritised areas.
Outcomes	<p>Adoption of health-promoting behaviours:</p> <p><u>Critical</u></p> <ul style="list-style-type: none"> • Nutrition – healthy BMI • Smoking cessation – quit for at least 4 weeks • Personal hygiene/self-care/oral health – patient-reported satisfaction • Physical activity – healthy BMI, 30 minutes a day • Sexual health – decrease in STD diagnosis from in-prison, accessing contraception and sexual health clinics <p><u>Important</u></p> <ul style="list-style-type: none"> • Uptake of screening programmes. • Morbidity. • Mortality. • Health-related quality of life
Setting	<p>Prisons or young offender institutions.</p> <p>Indirect settings will also be searched for: Immigration removal centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.</p>
Equalities	As listed in 'subgroups' section

Search Strategy	Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO Language: Restrict to English only Date restriction: none
Review Strategy	<u>Strata</u> None identified. <u>Subgroups</u> People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) Women, especially pregnant women and the mothers of babies in prison People over 50 Long-term prisoners (>4 years) Short-term prisoners (<12 months) People with a history of substance misuse.

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Review question	7. What are the most clinically and cost-effective methods of delivering health promotion activities in prison?
Objectives	Identification of the best methods of delivering health promoting activities in prison, resulting in positive outcomes.
Criteria for considering studies in the review	
Study design	Randomised controlled trials Systematic reviews and meta-analyses of the above Non-randomised controlled trials if no RCTs are identified Observational studies if no RCTs are identified
Population	Adults (18 and over) in prisons or young offender institutions. Additional indirect settings listed in the 'settings' section.
Intervention	Validated health assessment tools/triage/policies/protocols <ul style="list-style-type: none"> • Group work • 1-2-1s • Wing-based vs central • Radio • Audio-visual • Posters • leaflets • Internet/intranet • Self-help/workbook • Prisoner newspapers • Newsletters • Events (Wellbeing days) • Mentoring • Peers • Motivational/incentivising • Teaching through learning English • Educational classes around life skills • Welcome pack • Induction
Comparison	Against each other or usual care.
Outcomes	Adoption of health-promoting behaviours: <u>Critical</u> <ul style="list-style-type: none"> • Nutrition – healthy BMI • Personal hygiene/self-care/oral health – patient-reported satisfaction • Physical activity – healthy BMI, 30 minutes a day • Sexual health – decrease in STD diagnosis from in-prison, accessing barrier methods and sexual health clinics as an outcome for accessing health care, increase in recordings of STDs needs to be noted, like that of women accessing contraception. • Smoking cessation – quit for at least 4 weeks <u>Important</u> <ul style="list-style-type: none"> • Uptake of screening programmes. • Morbidity. • Mortality.

	<ul style="list-style-type: none"> • Health-related quality of life
Setting	<p>Prisons or young offender institutions.</p> <p>Indirect settings will also be searched for: Immigration removal centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.</p>
Equalities	As listed in 'subgroups' section
Search Strategy	<p>Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO</p> <p>Language: Restrict to English only</p> <p>Date restriction: none</p>
Review Strategy	<p><u>Strata</u></p> <p>None identified.</p> <p><u>Subgroups</u></p> <p>People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities)</p> <p>Women, especially pregnant women and the mothers of babies in prison</p> <p>People over 50</p> <p>Long-term prisoners (>4 years)</p> <p>Short-term prisoners (<12 months)</p> <p>People with a history of substance misuse.</p>

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Review question	8. Who should deliver health promotion activities in prison?
Objectives	Identification of health promoting activities in prison, resulting in positive outcome.
Criteria for considering studies in the review	
Study design	Randomised controlled trials Systematic reviews and meta-analyses of the above Observational studies if no RCTs are identified
Population	Adults (18 and over) in prisons or young offender institutions. Additional indirect settings listed in the 'settings' section.
Intervention	Validated health assessment tools/triage/policies/protocols Who delivers the activities <ul style="list-style-type: none"> • healthcare staff (including external organisations, prison officers/nurses/doctors) • custody staff (escorting staff/contracting staff/PE officers) • educational staff • Probation staff • Health trainers/health champions • IMB • Social care assistants • CARAT workers/RAPT workers/PASRO/Clinks • UKBA officers • Positively UK • Peer-led (serving prisoners/external organisations) and professionally led approaches
Comparison	Against each other or usual care.
Outcomes	Adoption of health-promoting behaviours: <u>Critical</u> <ul style="list-style-type: none"> • Nutrition – healthy BMI • Personal hygiene/self-care/oral health – patient-reported satisfaction • Physical activity – healthy BMI, 30 minutes a day • Sexual health – decrease in STD diagnosis from in-prison, accessing barrier methods and sexual health clinics • Smoking cessation – quit for at least 4 weeks <u>Important</u> <ul style="list-style-type: none"> • Uptake of screening programmes. • Morbidity. • Mortality. • Health-related quality of life
Setting	Prisons or young offender institutions. Indirect settings will also be searched for: Immigration removal centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.
Equalities	<ul style="list-style-type: none"> • As listed in 'subgroups' section
Search Strategy	<ul style="list-style-type: none"> • Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO

	<ul style="list-style-type: none">• Language: Restrict to English only• Date restriction: none
Review Strategy	<p><u>Strata</u> None identified.</p> <p><u>Subgroups</u></p> <ul style="list-style-type: none">• People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities)• Women, especially pregnant women and the mothers of babies in prison• People over 50• Long-term prisoners (>4 years)• Short-term prisoners (<12 months)• People with a history of substance misuse.

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Review question	9. What are the barriers and facilitators to information provision, support and mentoring for prisoners to promote health and wellbeing?
Objectives	<p>Identification of themes on information provision, support and mentoring, that aid or hinder health and wellbeing.</p> <p>To include all forms of information provision such as group work, mentoring, inductions, posters, leaflets etc.</p>
Study design	<p>Qualitative studies</p> <p>Structured interviews and focus groups</p> <p>Surveys</p>
Population and setting	<p>Adults (18 and over) in prisons or young offender institutions.</p> <p>Prisons or young offender institutions.</p> <p>Indirect settings will also be searched for: Immigration removal centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.</p>
Search Strategy	<p>Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO</p> <p>Language: Restrict to English only</p> <p>Date restriction: none</p>
Review Strategy	Thematic analysis of qualitative studies, as reported in the studies.

1.4 Medication management

- 17 Identification of the most effective approaches regarding prescribing, dispensing and adherence to medicines
18 in prisons to maximise adherence and good health outcomes and reduce inappropriate use.

Review question	10. What are the most clinically and cost-effective methods for people to access medicines in prisons to maximise adherence and good health outcomes and reduce inappropriate use?
Objectives	<p>The safe and timely management of medications within a prison environment presents several challenges.</p> <p>Some people in prison misuse prescribed medication. Many of these people will have a previous history of substance misuse. Medications may be traded within prisons, presenting a risk to the person misusing it and others who may acquire it. If a person misuses multiple medications the potential harm is increased person through the additional risk of drug interactions.</p> <p>'access' - to encompass prescribing and administration and supply of medicines.</p>
Criteria for considering studies in the review	
Study design	<p>Randomised controlled trials</p> <p>Systematic reviews and meta-analyses of the above</p> <p>Observational studies if no RCTs are identified.</p>
Population	Adults (18 and over) in prisons or young offender institutions.
Intervention	<ul style="list-style-type: none"> • In possession medication (self-administration) versus non in possession (supervised) • Formulary adaptation

	<ul style="list-style-type: none"> • Monitoring adherence (random checks of in possession medication to support clinical review) • Mandatory drug testing (tests for specific drugs - NOMS function) • Stock medicines (unlabelled bulk packs) versus named patient medicine • In possession risk assessment • Minimising diversion • Minimising bullying • Minimising abuse of medicines • Electronic versus manual prescription (check medicines optimisation guideline) <p>NB All drugs included, exclude methasoft (automated dispensing).</p>
Comparison	Compared to each other
Outcomes	<p><u>Critical outcomes</u></p> <ul style="list-style-type: none"> • Drug adherence • Morbidity. <p><u>Important outcomes</u></p> <ul style="list-style-type: none"> • Measures of drug diversion/trading (either from being bullied or selling medication) • Overdose • Mortality. • Health-related quality of life • Drug diversion
Setting	<p>Prisons or young offender institutions.</p> <p>Indirect settings will also be searched for: Immigration removal centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.</p>
Equalities	As listed in 'subgroups' below
Search Strategy	<p>Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO</p> <p>Language: Restrict to English only</p> <p>Date restriction: none</p>
Review Strategy	<p><u>Strata</u></p> <p>None identified.</p> <p><u>Subgroups</u></p> <p>People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities)</p> <p>Women, especially pregnant women and the mothers of babies in prison</p> <p>People over 50</p> <p>Long-term prisoners (>4 years)</p> <p>Short-term prisoners (<12 months)</p> <p>People with a history of substance misuse.</p> <p>Prisons or young offender institutions.</p>

Review question	<p>11. What are the most clinically and cost-effective methods for continuity of care for people to access medicines to maximise adherence and good health outcomes and reduce inappropriate use when:</p> <ul style="list-style-type: none"> • coming into prison? • being transferred between prisons? • discharged from prison?
Objectives	<p>The safe and timely management of medications within a prison environment presents several challenges.</p> <p>Other issues in the management of medication in prisons include ensuring patients requiring regular medications continue to have access to them, including when the timing of medication is important, and considering when it is appropriate for patients to be in possession of medication.</p> <p>‘access’ - to encompass prescribing and administration and supply of medicines.</p>
Criteria for considering studies in the review	
Study design	<p>Randomised controlled trials Systematic reviews and meta-analyses of the above Observational studies if no RCTs are identified.</p>
Population	Adults (18 and over) in prisons or young offenders institutions.
Intervention	<p>In possession medication (self-administration) versus non in possession (supervised) Formulary adaptation Monitoring adherence (random checks of in possession medication) Mandatory drug testing (tests for specific drugs - NOMS function) Stock medicines versus named patient medicine Medicine reconciliation</p>
Comparison	Compared to each other
Outcomes	<p><u>Critical outcomes</u></p> <ul style="list-style-type: none"> • Drug adherence • Morbidity. <ul style="list-style-type: none"> • Important outcomes • Measures of drug diversion/trading (either from being bullied or selling medication) • Overdose • Mortality. • Health-related quality of life • Unplanned admissions
Setting	<p>Prisons or young offender institutions. Indirect settings will also be searched for: Immigration removal centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.</p>
Equalities	As listed in ‘subgroup’ section below.
Search Strategy	Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO

	Language: Restrict to English only Date restriction: none
Review Strategy	<u>Strata</u> None identified. <u>Subgroups</u> People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) Women, especially pregnant women and the mothers of babies in prison People over 50 Long-term prisoners (>4 years) Short-term prisoners (<12 months) People with a history of substance misuse. Prisons or young offenders institutions.

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Review question	<p>12. What are the barriers and facilitators to ensuring access to medicines to maximise adherence and good health outcomes and reduce inappropriate use when:</p> <ul style="list-style-type: none"> • coming into prison? • in prison? • being transferred between prisons? • discharged from prison?
Objectives	<p>To identify themes around access to medication that impact on adherence, good health outcomes and minimise inappropriate use. Areas highlighted by the GDG include communication, medicines diversion, bullying, pain assessment and staff training that may potentially impact access and management of medication.</p> <p>Note that ‘access’ is meant to encompass prescribing and administration and supply of medicines.</p>
Study design	<p>Qualitative studies including structured interviews and focus groups. Survey data to support identified themes from qualitative studies.</p>
Population and setting	<p>Adults (18 and over) in prisons or young offender institutions. Health professionals and other staff working in prisons or young offenders institutions</p> <p>Indirect settings: Immigration removal centres (IRCs), secure environments, forensic units, low or medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.</p>
Search Strategy	<p>Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO Language: Restrict to English only Date restriction: none</p>
Review Strategy	<p>Thematic analysis of qualitative studies, as reported in the studies.</p>

Q5 Monitoring chronic conditions

Review question	<p>13. How should chronic conditions be monitored in prison? – review of NICE guidance (diabetes, chronic respiratory, epilepsy, chronic heart disease, chronic kidney disease)</p>
Objectives	<p>To review existing NICE guidelines on monitoring conditions and decide whether they are applicable to the prison population. If appropriate, recommendations will be cross referred to. The GDG prioritised diabetes, chronic respiratory conditions, epilepsy, chronic heart disease and chronic kidney disease for review, as detailed in the The Prisons and Probation Ombudsman (PPO), 2008 report.</p>
Criteria for considering recommendations in the review	
Study design	<p>Review of current NICE guidance and cross referral of recommendations. Study design to be extracted from existing NICE guidance reviews on monitoring chronic conditions and GDG to consider its applicability.</p>
Population	<p>Adults (18 and over) in prisons or young offender institutions. Additional indirect settings listed in the ‘settings’ section.</p> <p>Population to be extracted from existing NICE guideline reviews on monitoring chronic conditions and GDG to consider its applicability.</p>
Intervention and comparison	<p>Methods for monitoring chronic conditions as listed in current NICE guidelines (diabetes, chronic resp, epilepsy, chronic heart disease, chronic kidney disease) Intervention and comparisons to be extracted from existing NICE guideline reviews on</p>

	monitoring chronic conditions and GDG to consider the applicability.
Outcomes	<p>Adoption of health-promoting behaviours. Uptake of screening programmes. Morbidity. Mortality. Health-related quality of life</p> <p>Others as prioritised by existing NICE guideline reviews on monitoring chronic conditions and GDG to consider the applicability.</p>
Setting	<p>Prisons or young offender institutions. Indirect settings include: Immigration removal centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.</p> <p>Setting to be extracted from existing NICE guideline reviews on monitoring chronic conditions and GDG to consider the applicability.</p>
Equalities	As listed in 'subgroups' below.
Search Strategy	Hand search of published NICE guidelines on chronic conditions. No separate literature search conducted.
Review Strategy	<p>The GDG noted that they want to aim for equivalence of care provided outside of prison, therefore that current NICE guidance for monitoring chronic conditions is relevant for this population. Current NICE recommendations will be presented to the GDG for the main chronic conditions as listed in the PPO 2008 report³⁷¹.</p> <p>As stated in the NICE guidelines manual the GDG will formally determine and document that:</p> <ul style="list-style-type: none"> • the review question in the guideline in development is similar to the question addressed in the published guideline • the evidence review underpinning any recommendations is not likely to have changed significantly since the publication of the related guideline • the evidence review for the review question in the published guideline is relevant and appropriate to the question in the guideline in development. <p>Based on consideration of the evidence and the recommendation, the Committee may decide to cross-refer to the recommendation in the published guideline if it is happy to accept the intent and exact wording, and any future changes to that recommendation (for example, changes made as part of an update).</p> <p><u>Strata</u> None identified.</p> <p><u>Subgroups</u> People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) Women, especially pregnant women and the mothers of babies in prison People over 50 Long-term prisoners (>4 years) Short-term prisoners (<12 months) People with a history of substance misuse.</p>

Q.6 Deteriorating health and emergency management

Review question	14. What are the barriers and facilitators to prison staff, healthcare workers and prisoners for recognising deteriorating health?
Objectives	<p>To identify themes around recognising deteriorating health in prison, including known or unknown deterioration of chronic conditions, and what the key barriers and facilitators are.</p> <p>The Prisons and Probation Ombudsman (PPO) has reported on high incidence of coronary artery disease, stroke and cancer. Potential causes include: delays in responding to rapid deterioration in health and summoning emergency services.</p>
Study design	<p>Qualitative studies including structured interviews and focus groups. Survey data to support identified themes from qualitative studies.</p>
Population and setting	<p>Adults (18 and over) in prisons or young offender institutions. Health professionals and other staff working in prisons or young offenders institutions</p> <p>Indirect settings: Immigration removal centres (IRCs), secure environments, forensic units, low or medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.</p>
Search Strategy	<p>Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO Language: Restrict to English only Date restriction: none</p>
Review Strategy	Thematic analysis of qualitative studies, as reported in the studies.

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Review question	15. What are the barriers and facilitators for prison staff, healthcare workers and prisoners in managing emergency situations including first person on the scene?
Objectives	<p>To identify themes around emergency situations in prison, exploring potential problems around how to distinguish those in pain from those pretending to be in pain, issues of access to prisoners overnight or at weekends. Also to consider evidence on information provision, training, roles and responsibilities and access to equipment that may impact on how emergency situations are managed.</p> <p>The PPO has also reported on a number of significant issues in the management of emergency situations in prison. These include:</p> <ul style="list-style-type: none"> • Delays in entering cells and absence of emergency first aid trained staff at the scene • Urgent physical management of prisoners who self-harm, particularly those who regularly cut themselves. • Lack of access to emergency equipment. • Delays in healthcare staff reaching the scene. • Delays in calling an ambulance. • Delays in paramedics reaching the scene.
Study design	<p>Qualitative studies including structured interviews and focus groups. Survey data to support identified themes from qualitative studies.</p>
Population and setting	<p>Adults (18 and over) in prisons or young offender institutions. Health professionals and other staff working in prisons or young offenders institutions</p> <p>Indirect settings: Immigration removal centres (IRCs), secure environments, forensic units, low or medium secure units, regional secure units, high secure units, places of</p>

Review question	15. What are the barriers and facilitators for prison staff, healthcare workers and prisoners in managing emergency situations including first person on the scene?
	detention, secure training centres (STCs), police custody and detention centres.
Search Strategy	Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO Language: Restrict to English only Date restriction: none
Review Strategy	Thematic analysis of qualitative studies, as reported in the studies.

24

Q7 Continuity of healthcare

Review question	<p>16. What are the barriers and facilitators to ensuring continuity of healthcare, including management of patient records, of people moving from:</p> <ul style="list-style-type: none"> • community to prison? • prison to prison? • prison to court? • court to prison? • prison to hospital? • hospital to prison? • prison to community? • transport to or from other detention centres?
Objective	Identification of the barriers and facilitators to coordination, case management and communication between multiple individuals and teams involves in assessing, managing and delivering healthcare, to enable the GDG to identify the necessary features for an effective coordinated healthcare service for prisoners.
Study design	Qualitative interviews/focus groups Surveys
Population and setting	Adults (18 and over) in prisons or young offender institutions. Health professionals and other staff working in prisons or young offenders institutions Indirect settings: Immigration removal centres (IRCs), secure environments, forensic units, low or medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.
Search strategy	Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO Language: Restrict to English only Date restriction: none
The review strategy	Thematic analysis of qualitative studies, as reported in the studies.

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Review question	17. What are to the most clinically and cost-effective systems to manage patient records, to ensure continuity of healthcare of people moving from one prison to another, or between prison and the community or hospital?
Objectives	To identify the most effective methods of recording people’s healthcare information and ensuring continuity of care between different locations.
Criteria for considering studies in the review	
Study design	Systematic reviews and meta-analyses Randomised and non-randomised controlled trials (RCTs) If no RCTs then comparative cohort studies (prospective and retrospective)
Population	Adults (18 and over) in prisons or young offender institutions. Staff in both prison- and non-prison settings (eg hospital, community) with the responsibility of managing patient records. Additional indirect settings listed in the ‘settings’ section.
Interventions	Any generic IT system, email system, telephone, record keeping or other named method of communication. System 1 Social Services record system
Comparison	Compared to any other system.
Outcomes	Omitted and delayed medication. Cancelled hospital appointments Medication errors Adverse events Patient safety incidents
Setting	Prisons or young offender institutions. Indirect settings will also be searched for: Immigration removal centres (IRCs), secure environments, forensic units, low/medium secure units, regional secure units, high secure units, places of detention, secure training centres (STCs), police custody and detention centres.
Equalities	As listed in ‘subgroup’ section below.
Search Strategy	Databases: Medline, Embase, Cochrane Library, CINAHL, Social Care Online, PsycINFO Language: Restrict to English only Date restriction: none
Review Strategy	<u>Strata</u> None identified. <u>Subgroups</u> People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) Women, especially pregnant women and the mothers of babies in prison People over 50

	Long-term prisoners (>4 years)
	Short-term prisoners (<12 months)
	People with a history of substance misuse.

27

1 Appendix D: Health economic review protocol

2 Table 1: Health economic review protocol

Review question	All questions – health economic evidence
Objectives	To identify economic evaluations relevant to any of the review questions.
Search criteria	<ul style="list-style-type: none"> • Populations, interventions and comparators must be as specified in the individual review protocol above. • Studies must be of a relevant economic study design (cost–utility analysis, cost-effectiveness analysis, cost–benefit analysis, cost–consequences analysis, comparative cost analysis). • Studies must not be a letter, editorial or commentary, or a review of economic evaluations. (Recent reviews will be ordered although not reviewed. The bibliographies will be checked for relevant studies, which will then be ordered.) • Unpublished reports will not be considered unless submitted as part of a call for evidence. • Studies must be in English.
Search strategy	An economic study search will be undertaken using population-specific terms and an economic study filter – see Appendix G.
Review strategy	<p>Studies not meeting any of the search criteria above will be excluded. Studies published before 1999, abstract-only studies and studies from non-OECD countries or the USA will also be excluded.</p> <p>Each remaining study will be assessed for applicability and methodological limitations using the NICE economic evaluation checklist which can be found in Appendix G of the NICE guidelines manual (2012).³²⁴</p> <p>Inclusion and exclusion criteria</p> <ul style="list-style-type: none"> • If a study is rated as both ‘Directly applicable’ and with ‘Minor limitations’ then it will be included in the guideline. An economic evidence table will be completed and it will be included in the economic evidence profile. • If a study is rated as either ‘Not applicable’ or with ‘Very serious limitations’ then it will usually be excluded from the guideline. If it is excluded then an economic evidence table will not be completed and it will not be included in the economic evidence profile. • If a study is rated as ‘Partially applicable’, with ‘Potentially serious limitations’ or both then there is discretion over whether it should be included. <p>Where there is discretion</p> <p>The health economist will make a decision based on the relative applicability and quality of the available evidence for that question, in discussion with the GDG if required. The ultimate aim is to include studies that are helpful for decision-making in the context of the guideline and the current NHS setting. If several studies are considered of sufficiently high applicability and methodological quality that they could all be included, then the health economist, in discussion with the GDG if required, may decide to include only the most applicable studies and to selectively exclude the remaining studies. All studies excluded on the basis of applicability or methodological limitations will be listed with explanation as excluded economic studies in Appendix M.</p> <p>The health economist will be guided by the following hierarchies.</p> <p><i>Setting:</i></p> <ul style="list-style-type: none"> • UK NHS (most applicable). • OECD countries with predominantly public health insurance systems (for example, France,

Germany, Sweden).

- OECD countries with predominantly private health insurance systems (for example, Switzerland).
- Studies set in non-OECD countries or in the USA will have been excluded before being assessed for applicability and methodological limitations.

Economic study type:

- Cost–utility analysis (most applicable).
- Other type of full economic evaluation (cost–benefit analysis, cost-effectiveness analysis, cost–consequences analysis).
- Comparative cost analysis.
- Non-comparative cost analyses including cost-of-illness studies will have been excluded before being assessed for applicability and methodological limitations.

Year of analysis:

- The more recent the study, the more applicable it will be.
- Studies published in 1999 or later but that depend on unit costs and resource data entirely or predominantly from before 1999 will be rated as ‘Not applicable’.
- Studies published before 1999 will have been excluded before being assessed for applicability and methodological limitations.

Quality and relevance of effectiveness data used in the economic analysis:

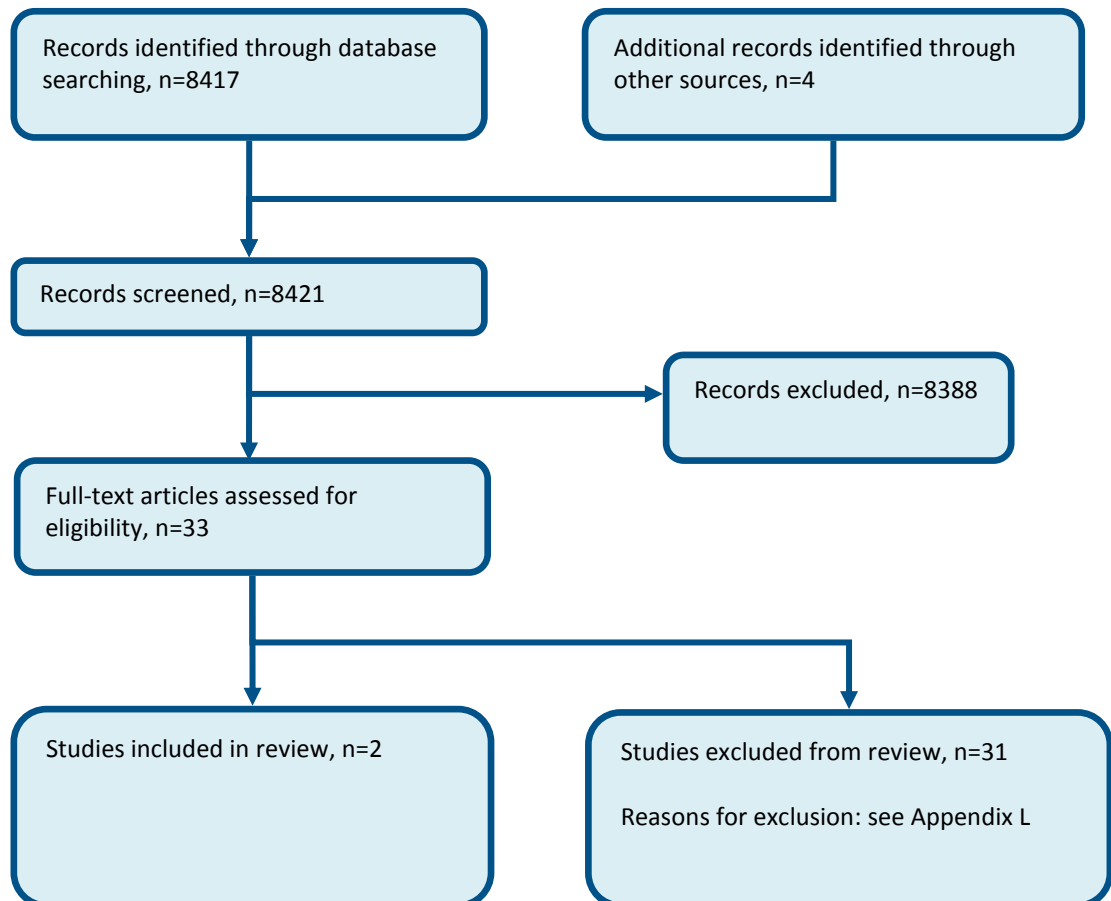
- The more closely the effectiveness data used in the economic analysis matches with the outcomes of the studies included in the clinical review the more useful the analysis will be for decision-making in the guideline.

1 Appendix E: Clinical study selection

E.1 Health assessment

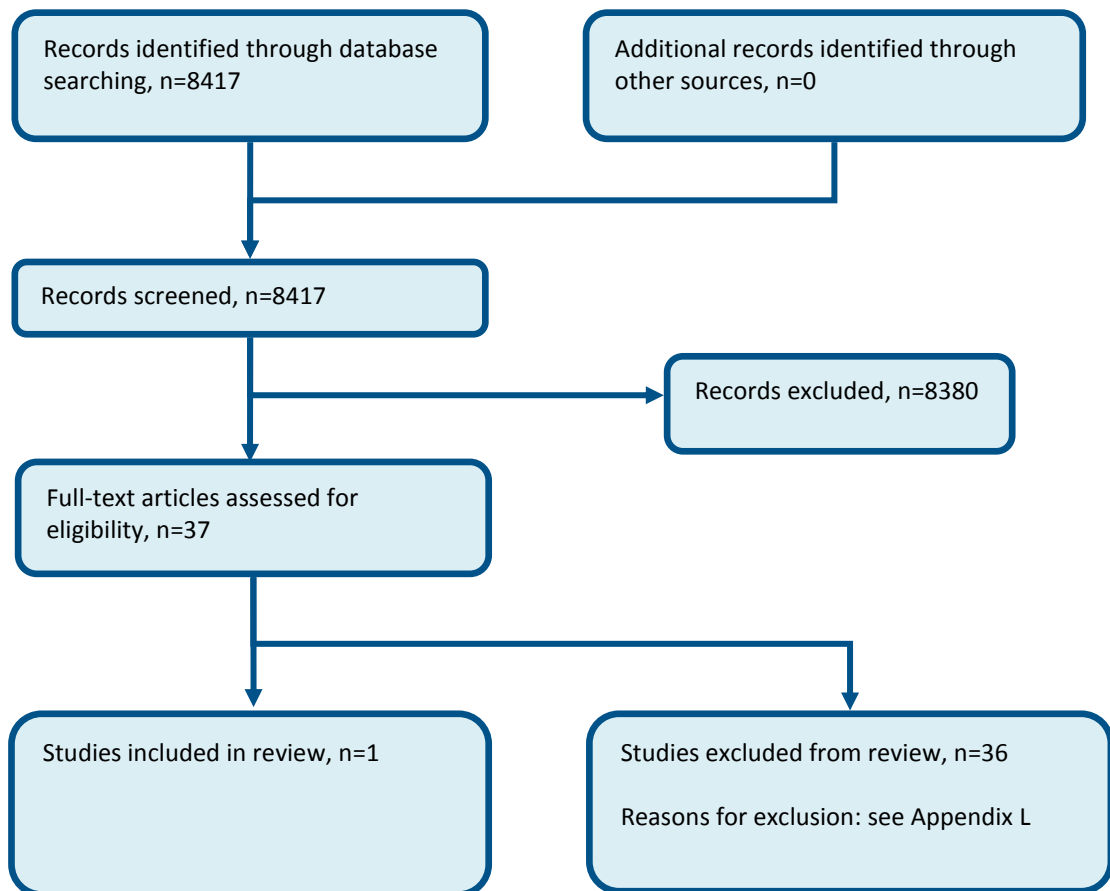
E.1.1 Reception assessment

Figure 1: Flow chart of clinical article selection for the review of health assessment at reception into prison



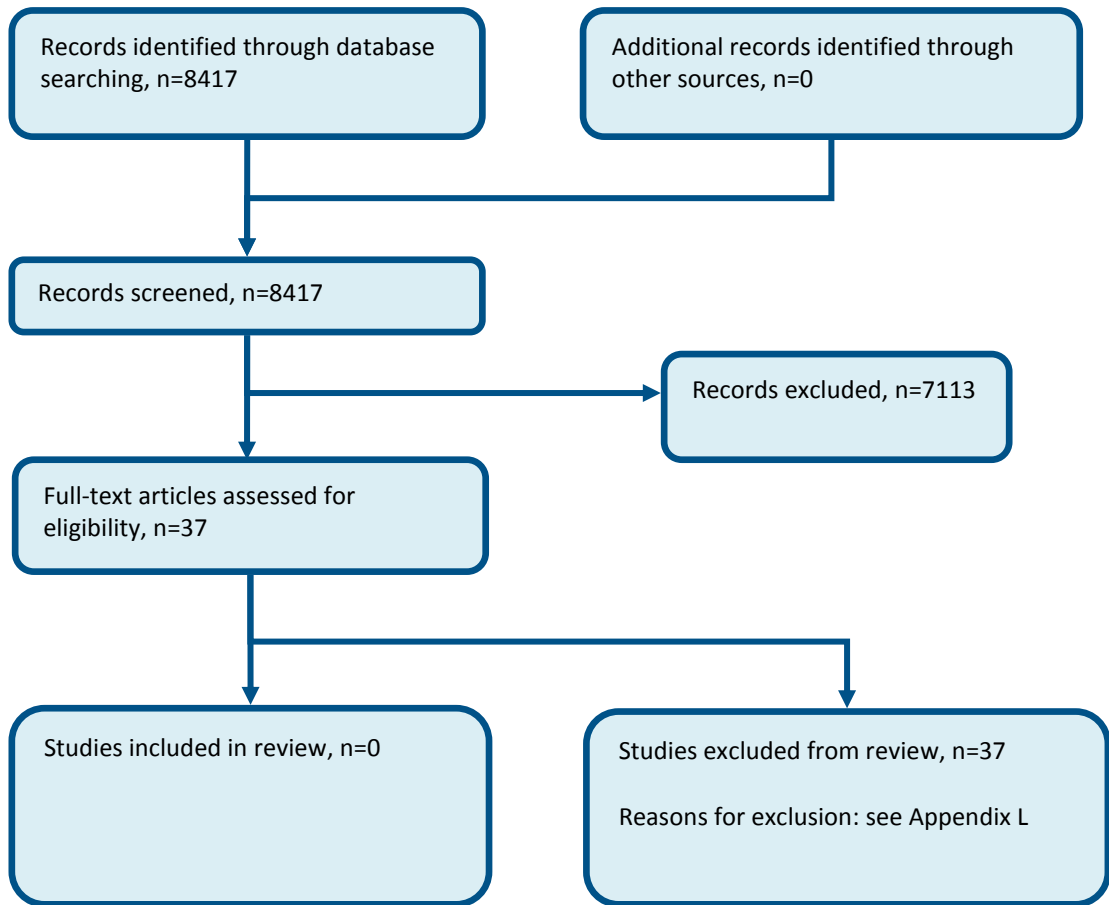
E.1.2 Subsequent assessment

Figure 2: Flow chart of clinical article selection for the review of subsequent health assessments



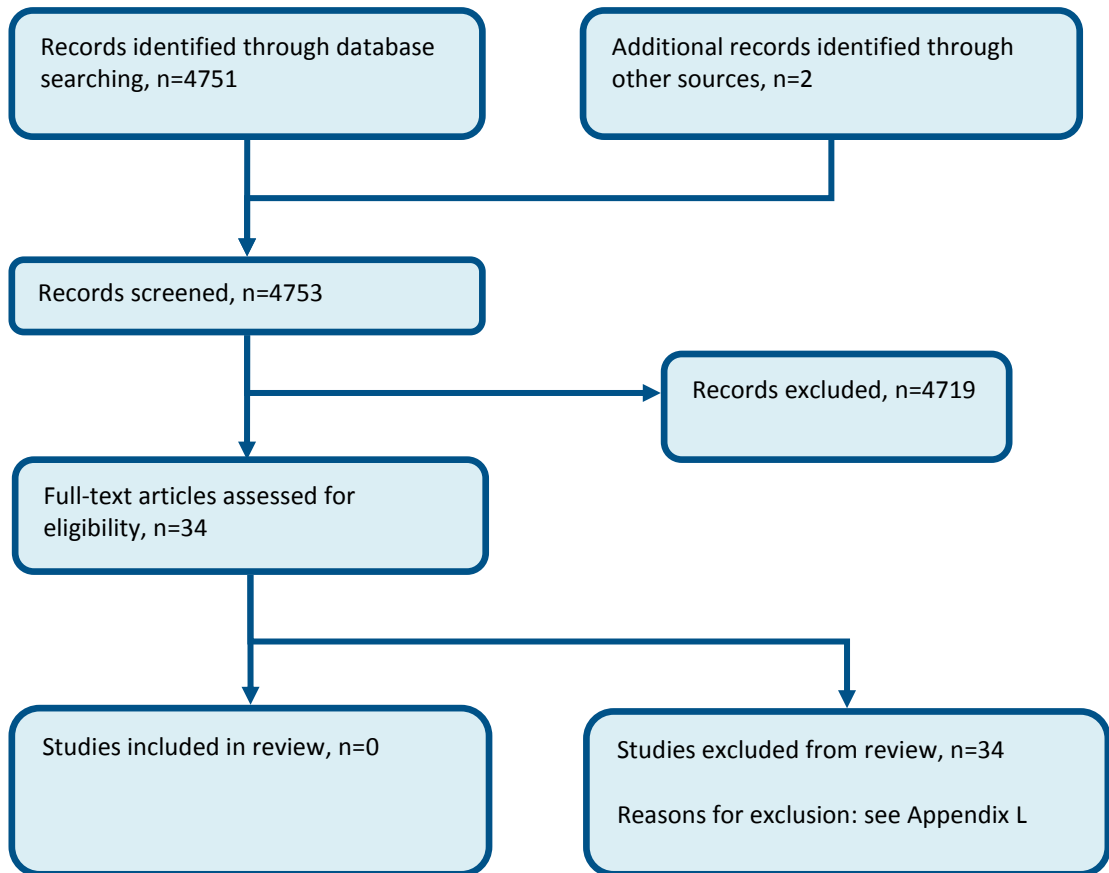
E.13 When should subsequent assessments be done

Figure 3: Flow chart of clinical article selection for the review of when should subsequent health assessments be conducted in prisons



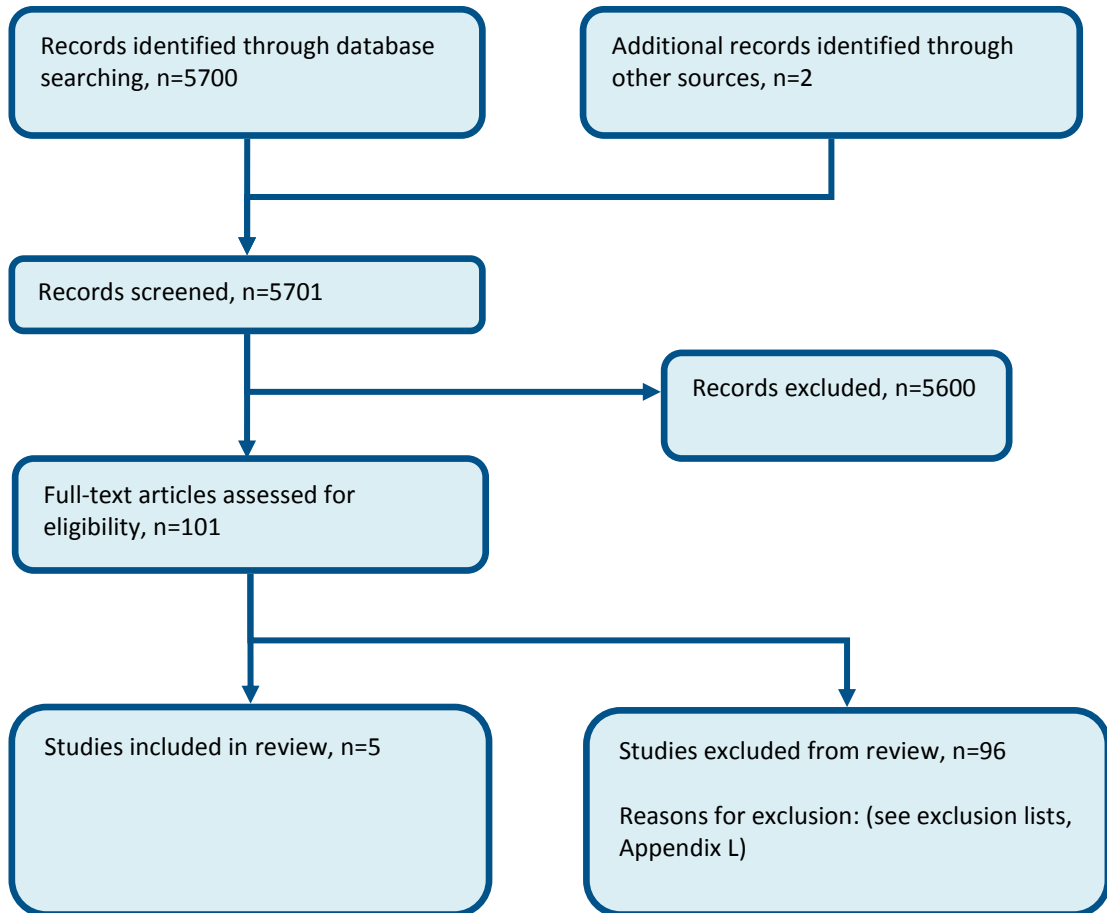
E.1.74 Assessment tools

Figure 4: Flow chart of clinical article selection for the review of: what are the most effective assessment tools to determine health promotion needs of prisoners?



E.2 Coordination and communication

Figure 5: Flow chart of clinical article selection for the review of: What are the barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals in prison?

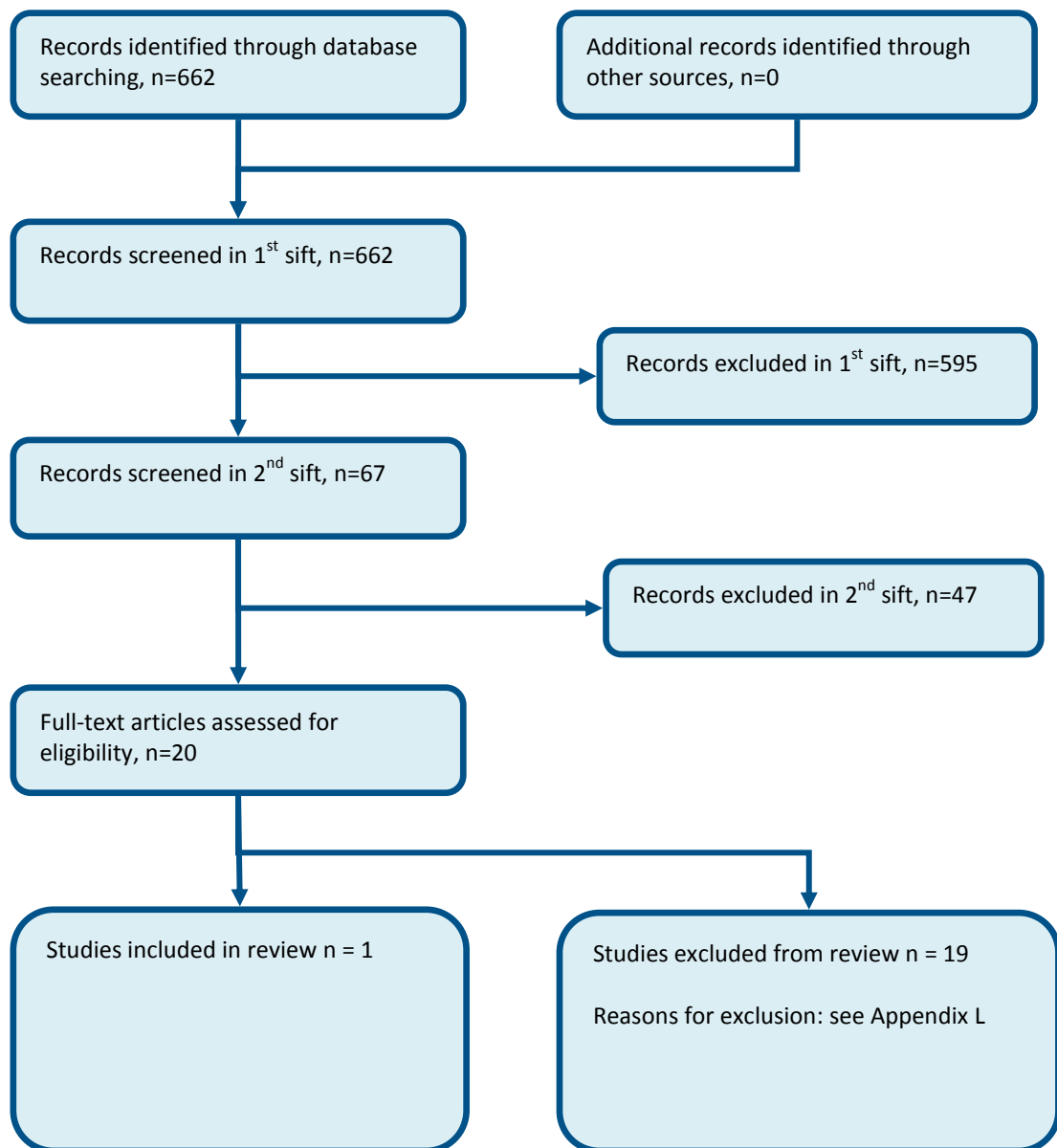


E.3 Promoting health and wellbeing

E.3.1 Interventions

E.3.1.1 Nutrition

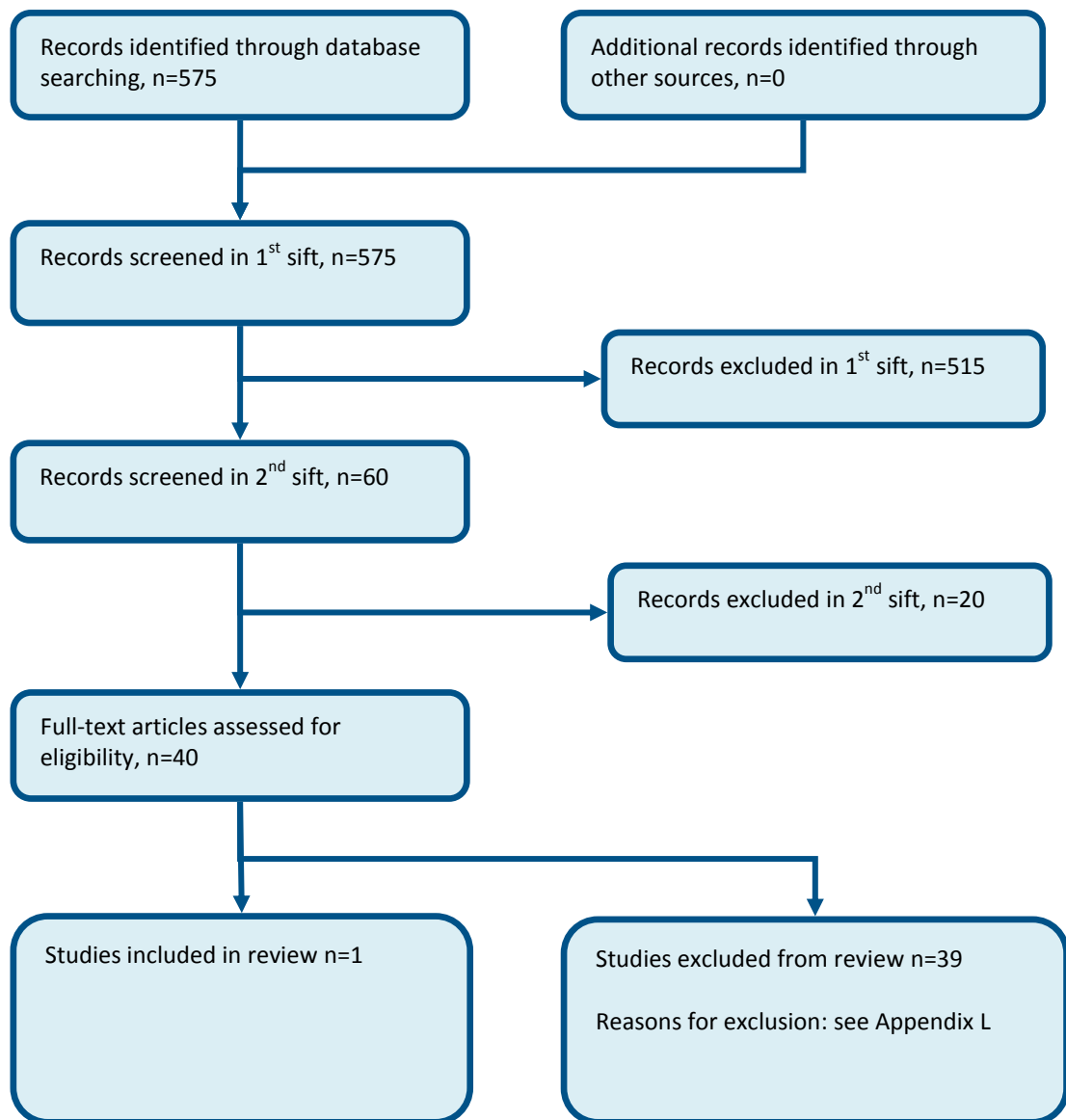
14 Figure 6: Flow chart of clinical article selection for the intervention: nutritional health promotion



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13.1.2 Hygiene

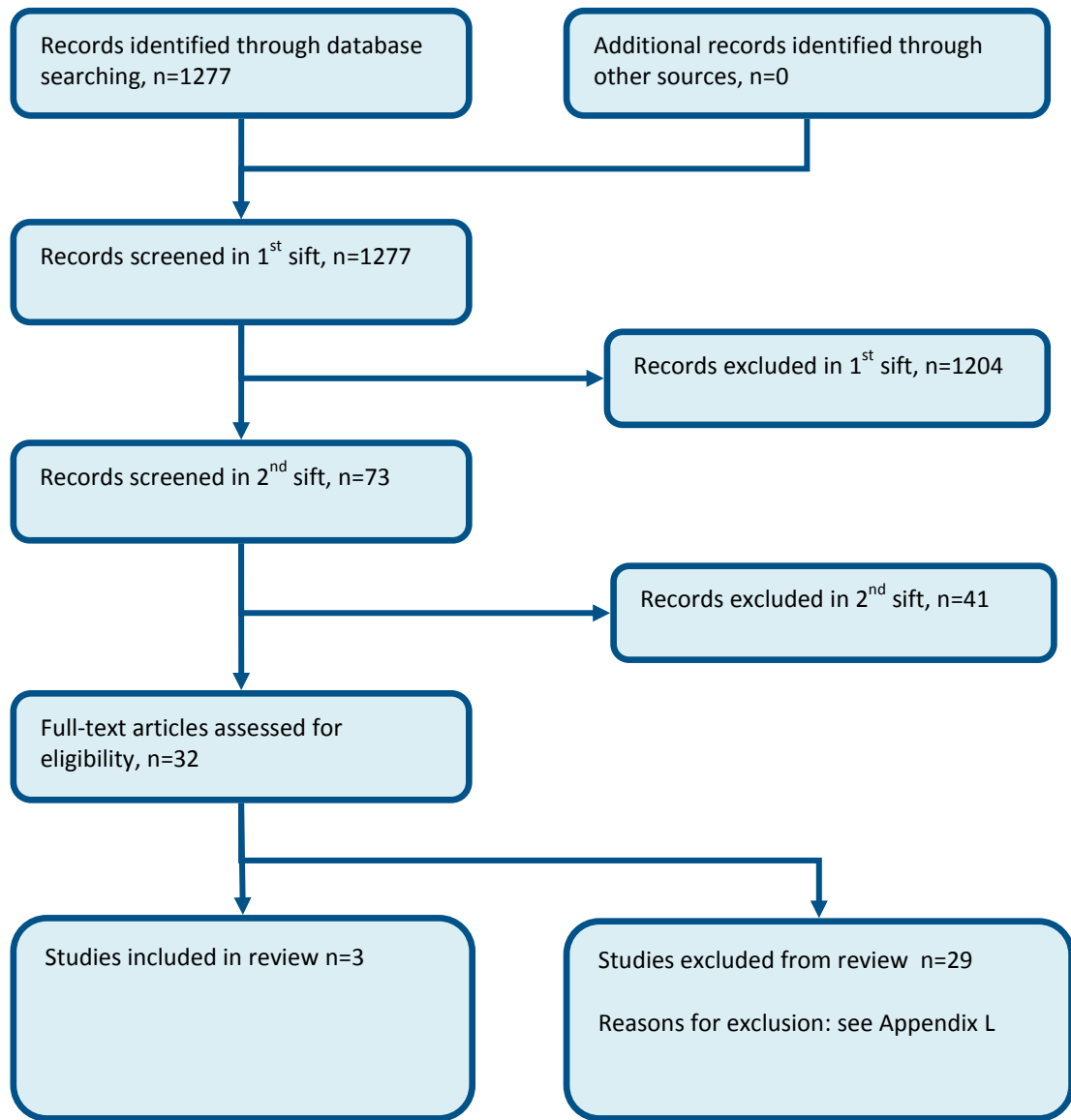
18 Figure 7: Flow chart of clinical article selection for the intervention: hygiene health promotion



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13.1.3 Physical activity

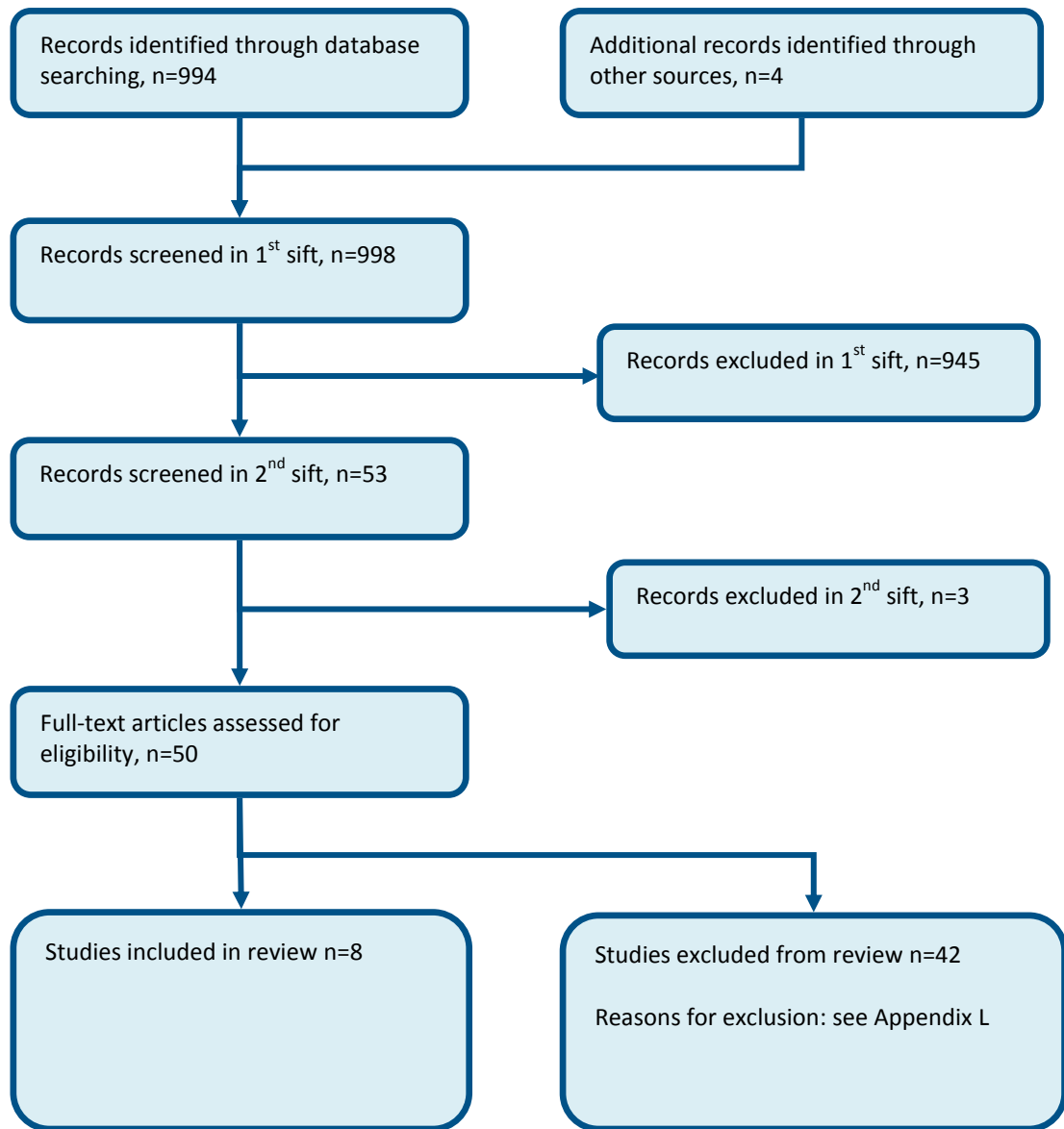
22 **Figure 8: Flow chart of clinical article selection for the intervention: physical activity health**
23 **promotion**



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16.1.4 Sexual health

27 Figure 9: Flow chart of clinical article selection for the intervention: sexual health promotion

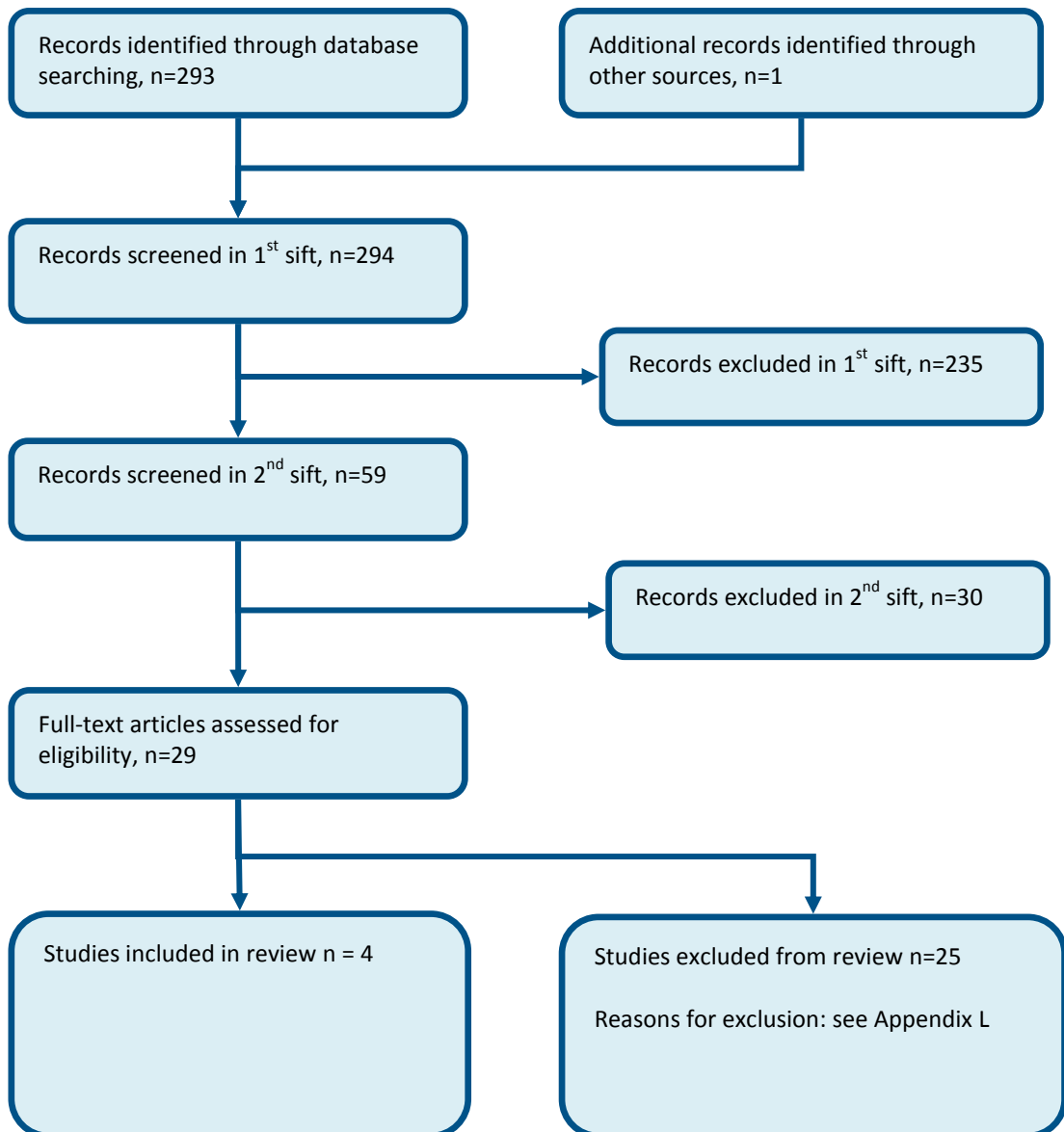


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13.1.5 Smoking cessation

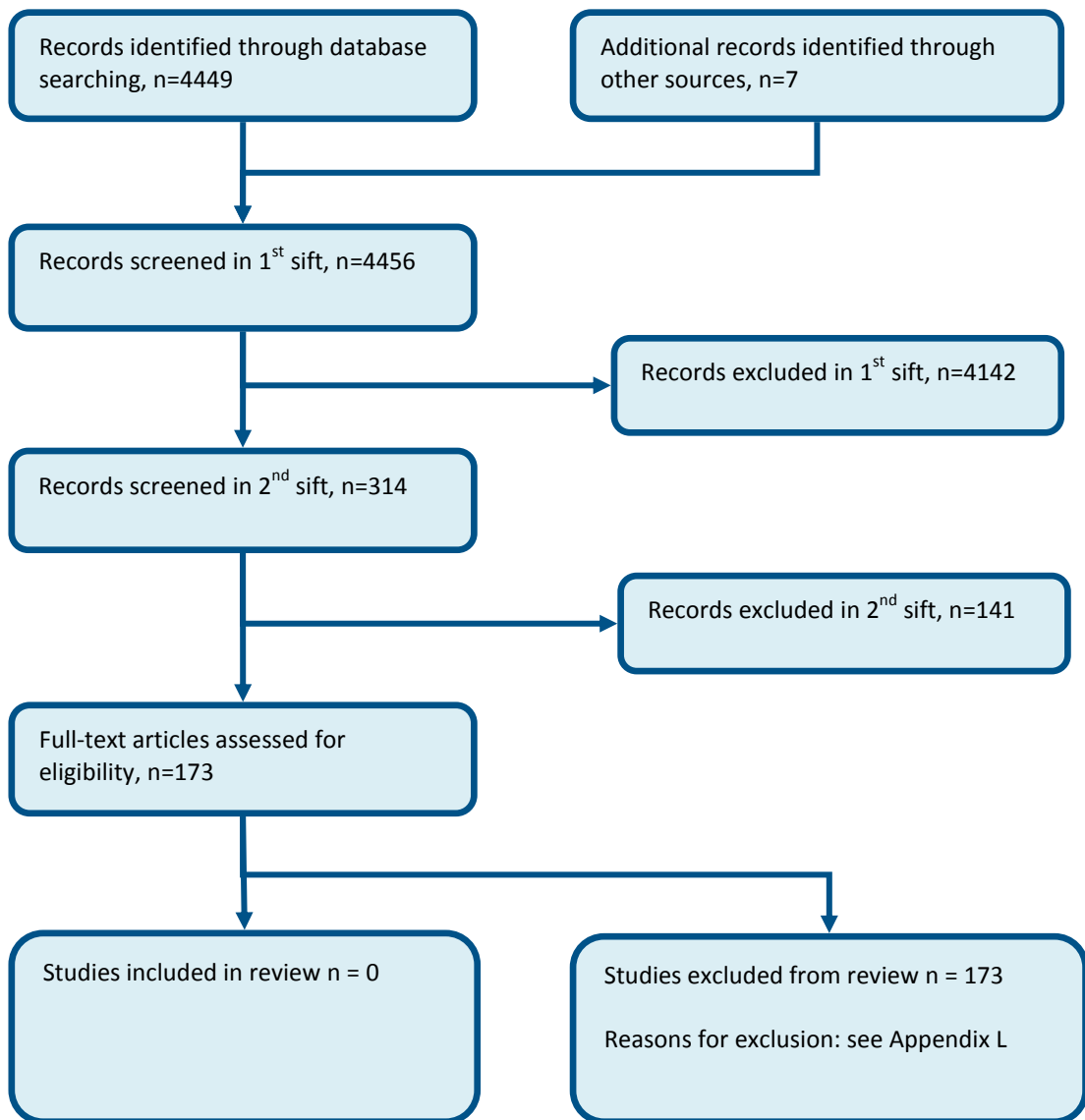
Figure 10: Flow chart of clinical article selection for the intervention: smoking cessation



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E.3.2 Methods of delivery

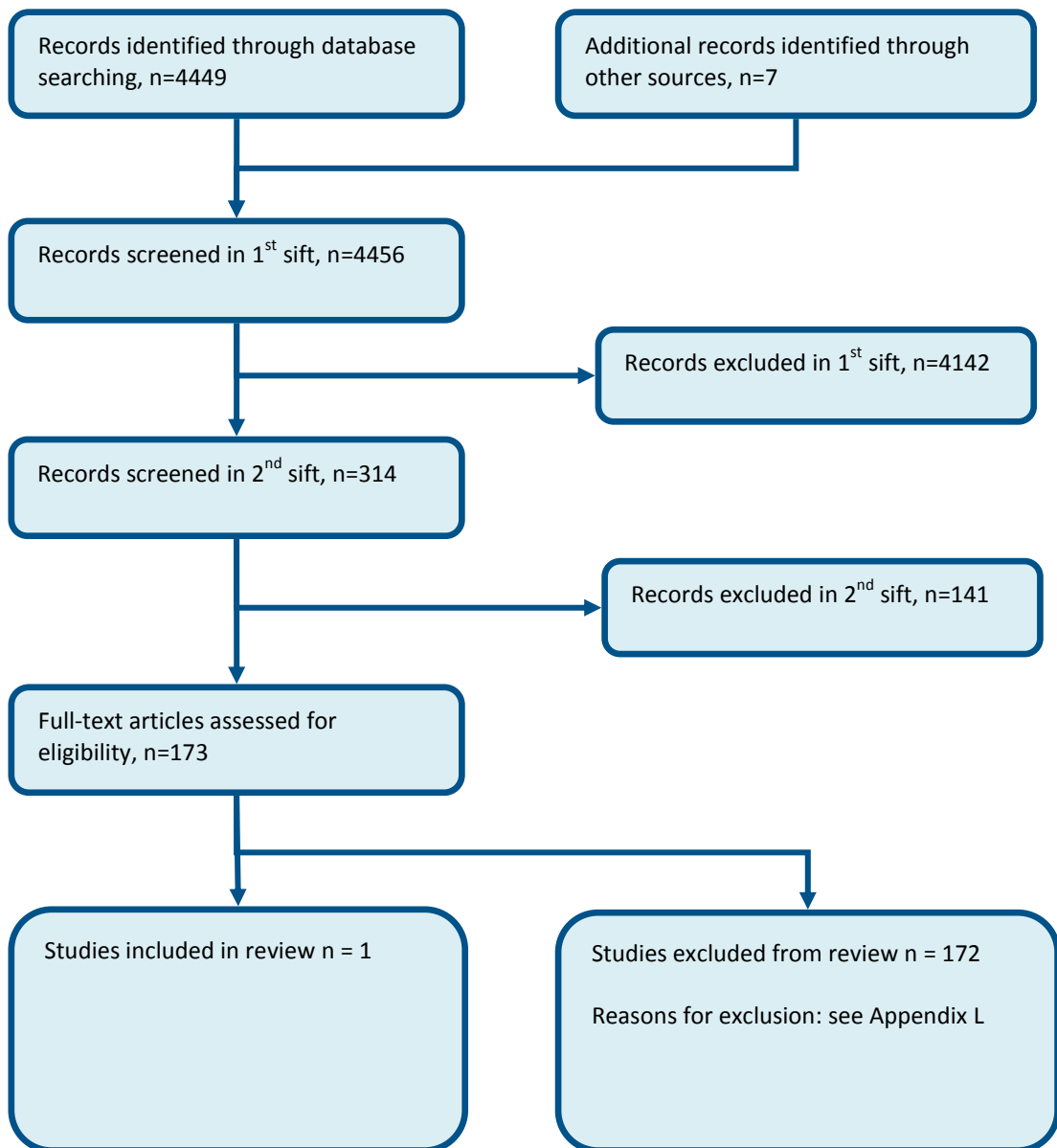
34 **Figure 11: Flow chart of clinical article selection for the review**



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E.3.3 Who should deliver

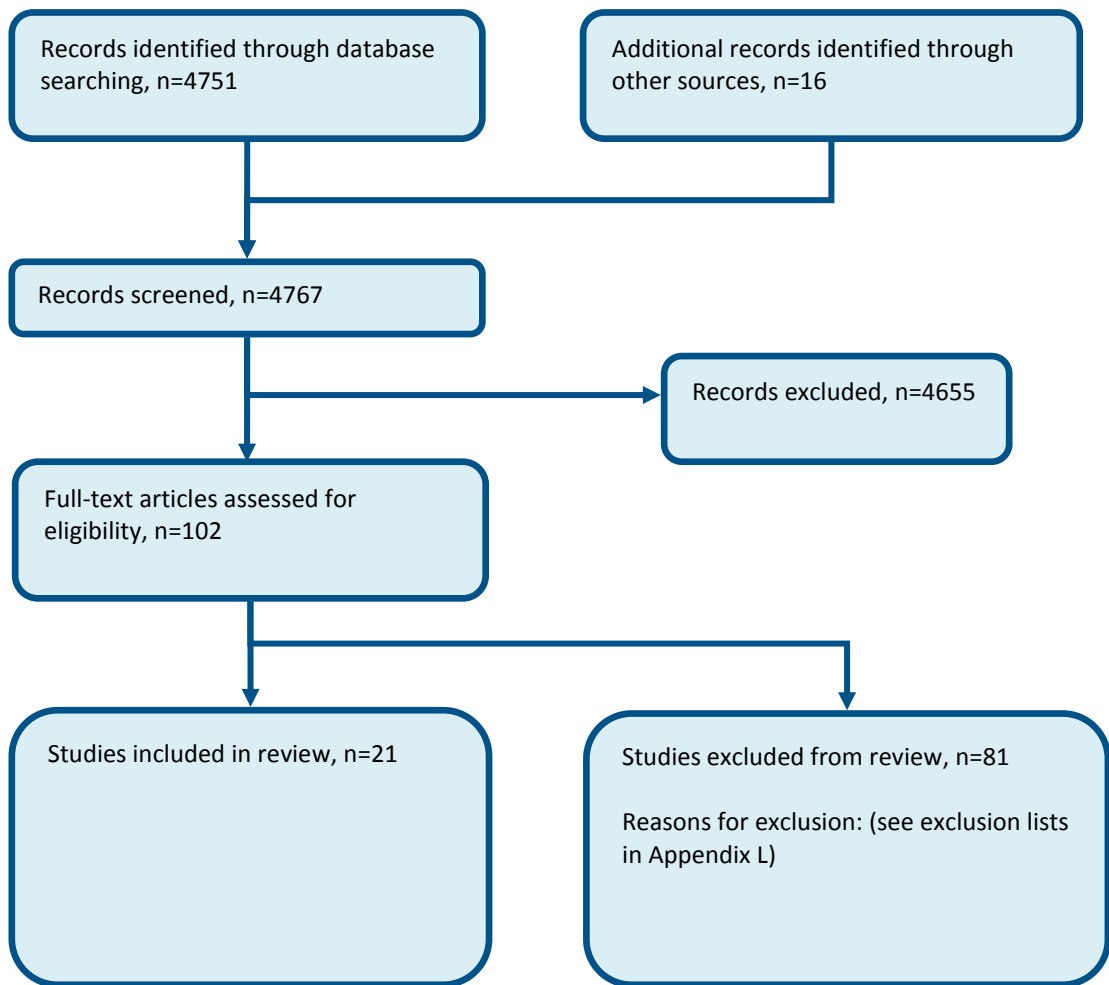
38 **Figure 12: Flow chart of clinical article selection for the review**



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E.3.14 Barriers and facilitators to health promotion

Figure 13: Flow chart of clinical article selection for the review of barriers and facilitators to health promotion



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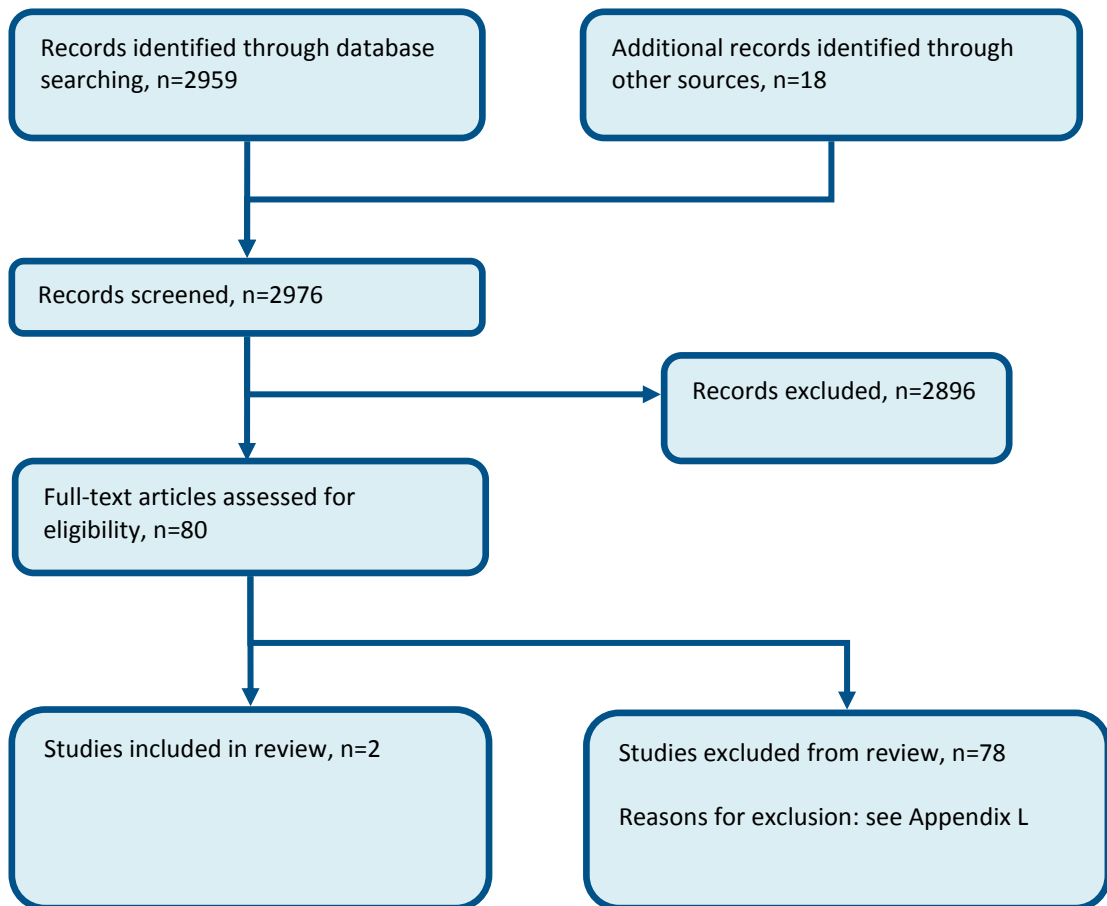
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E.4 Medication management

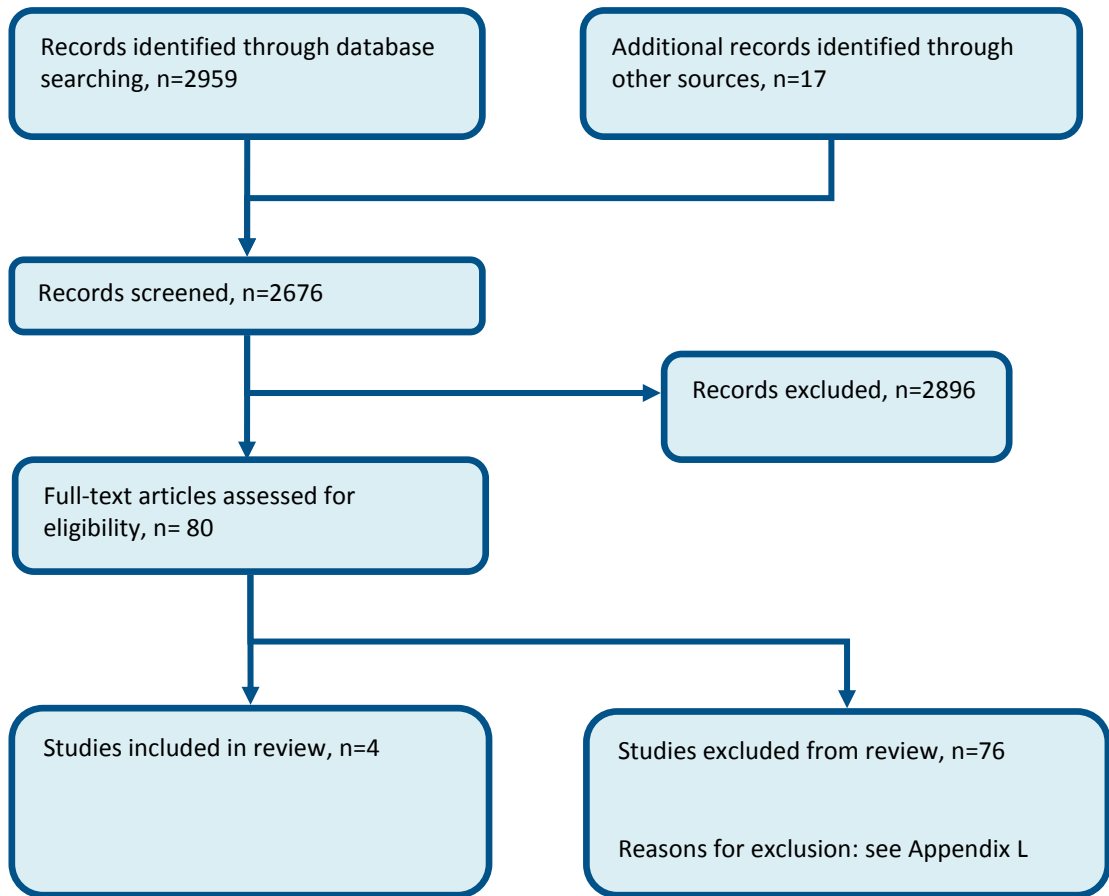
E.4.1 Methods to access medicines

Figure 14: Flow chart of clinical article selection for the review of access to medication in prison



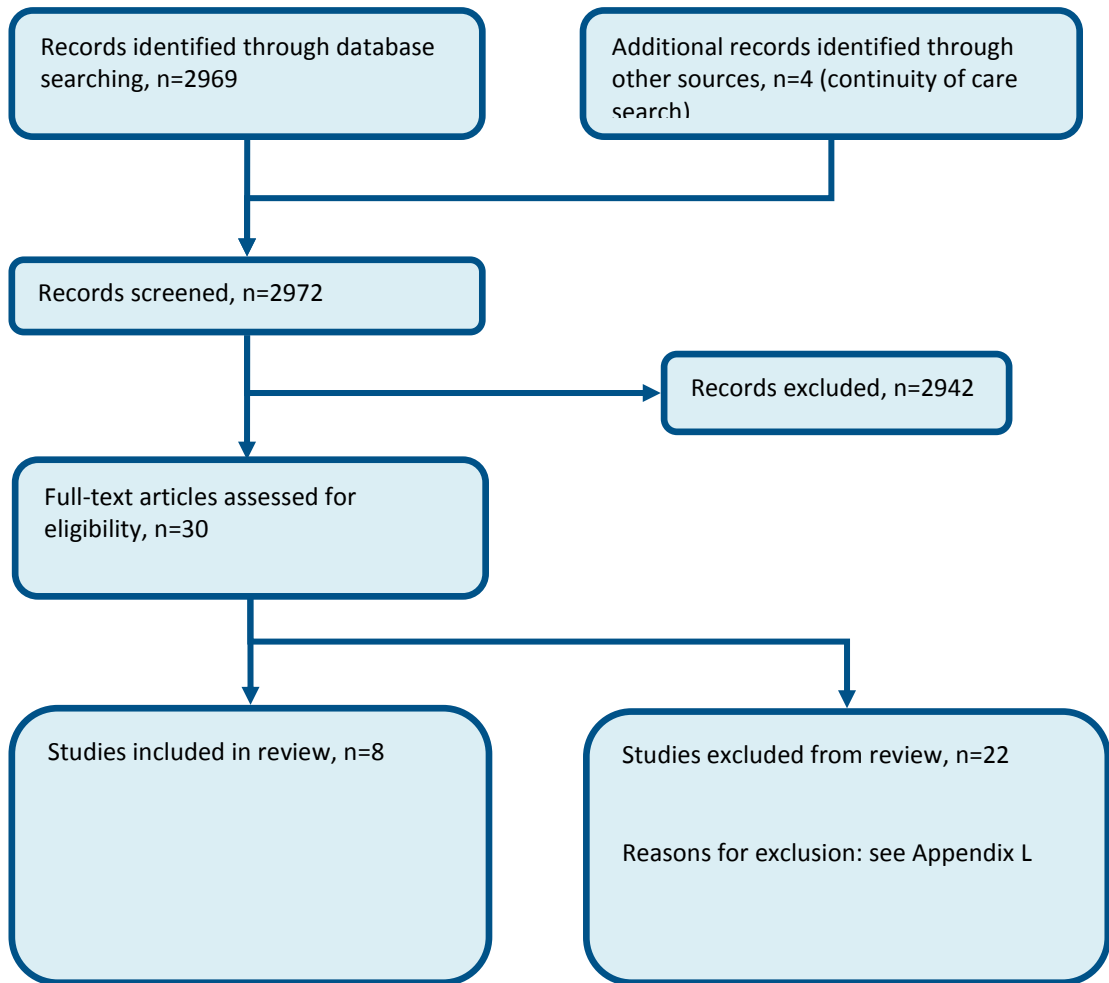
E.4.2 Methods for continuity of care

Figure 15: Flow chart of clinical article selection for the review of: what are the most effective methods for continuity of care for people to access medication?



E.4.6 Barriers and facilitators to ensuring access to medicines

Figure 16: Flow chart of clinical article selection for the review of barriers and facilitators to ensuring access to medicines



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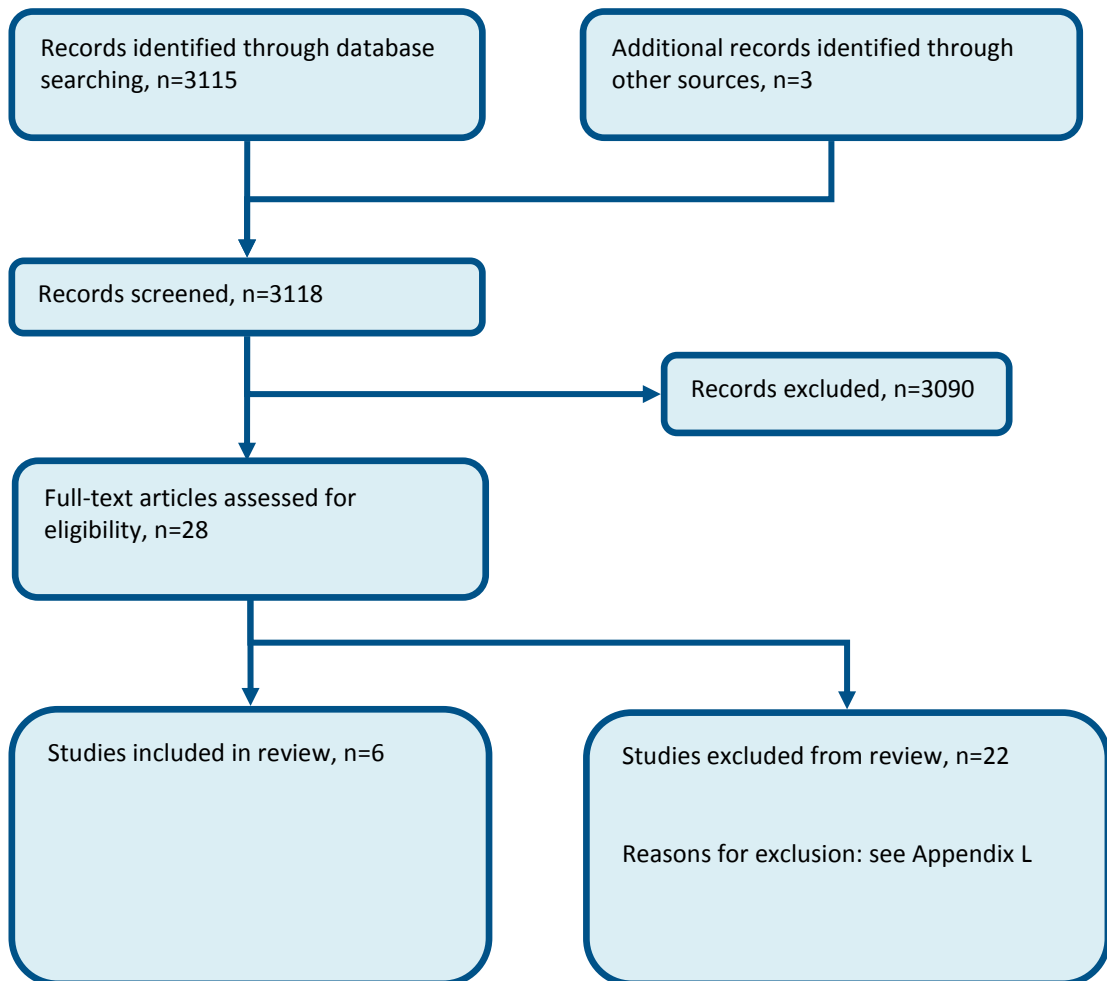
E.5 Monitoring chronic conditions

10 None.

E.6 Deteriorating health and emergency management

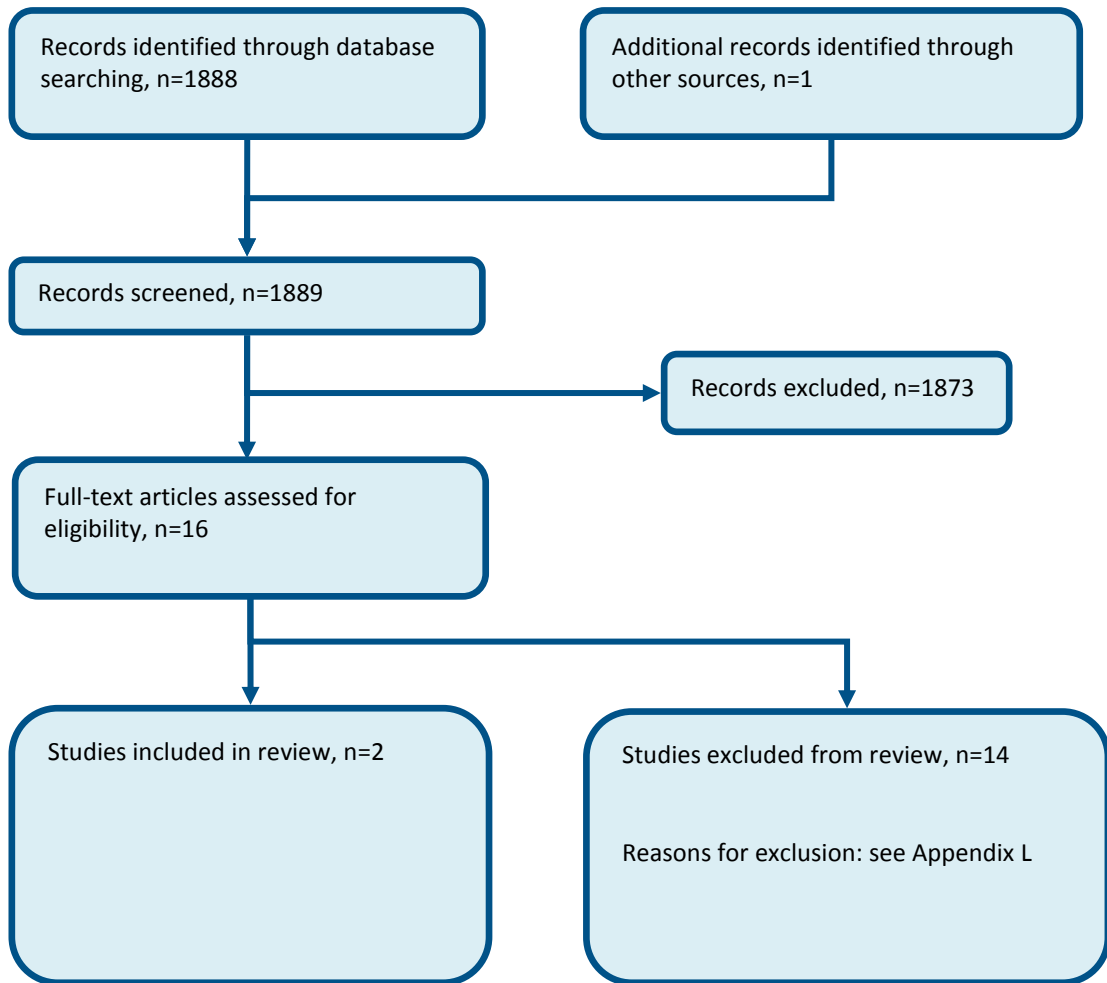
E.6.21 Deteriorating health

Figure 17: Flow chart of clinical article selection for the review of barriers and facilitators for recognising deteriorating health



E.62 Emergency situations

Figure 18: Flow chart of clinical article selection for the review of barriers and facilitators to managing emergency situations

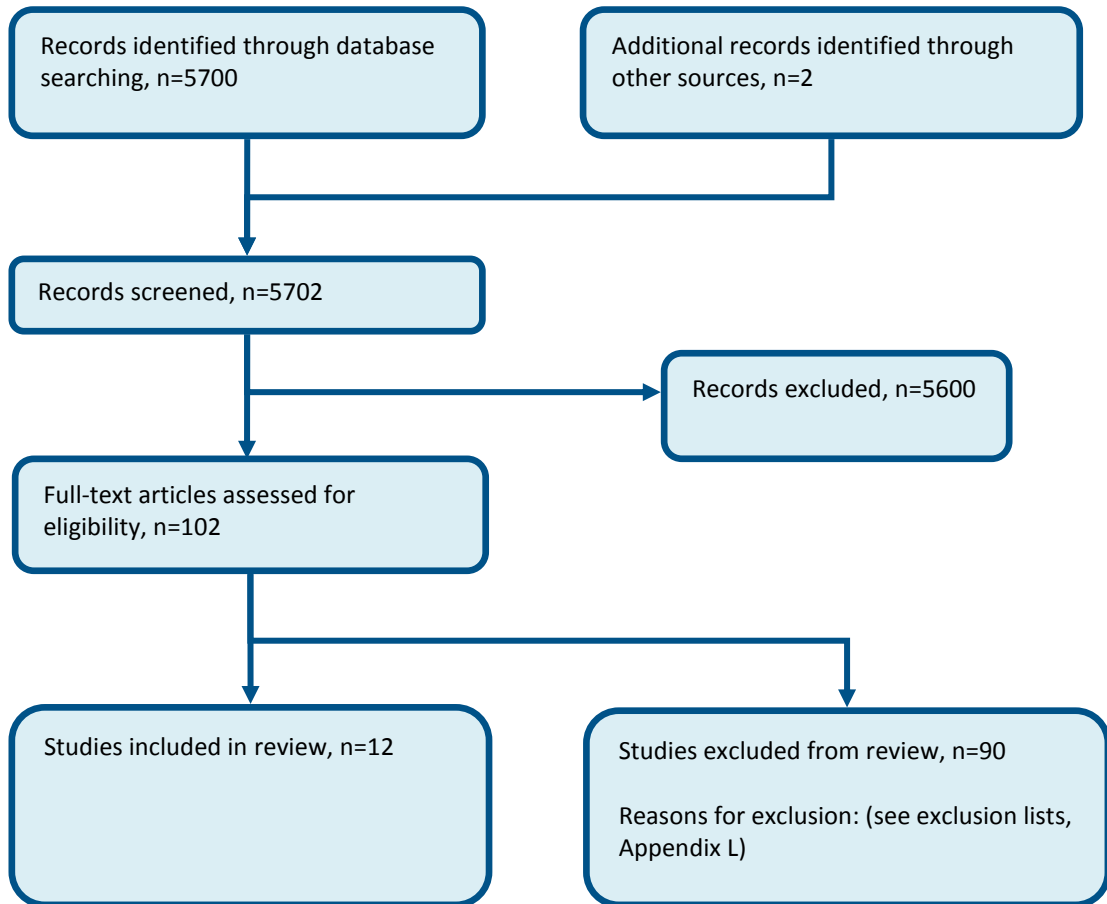


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E.7 Continuity of healthcare

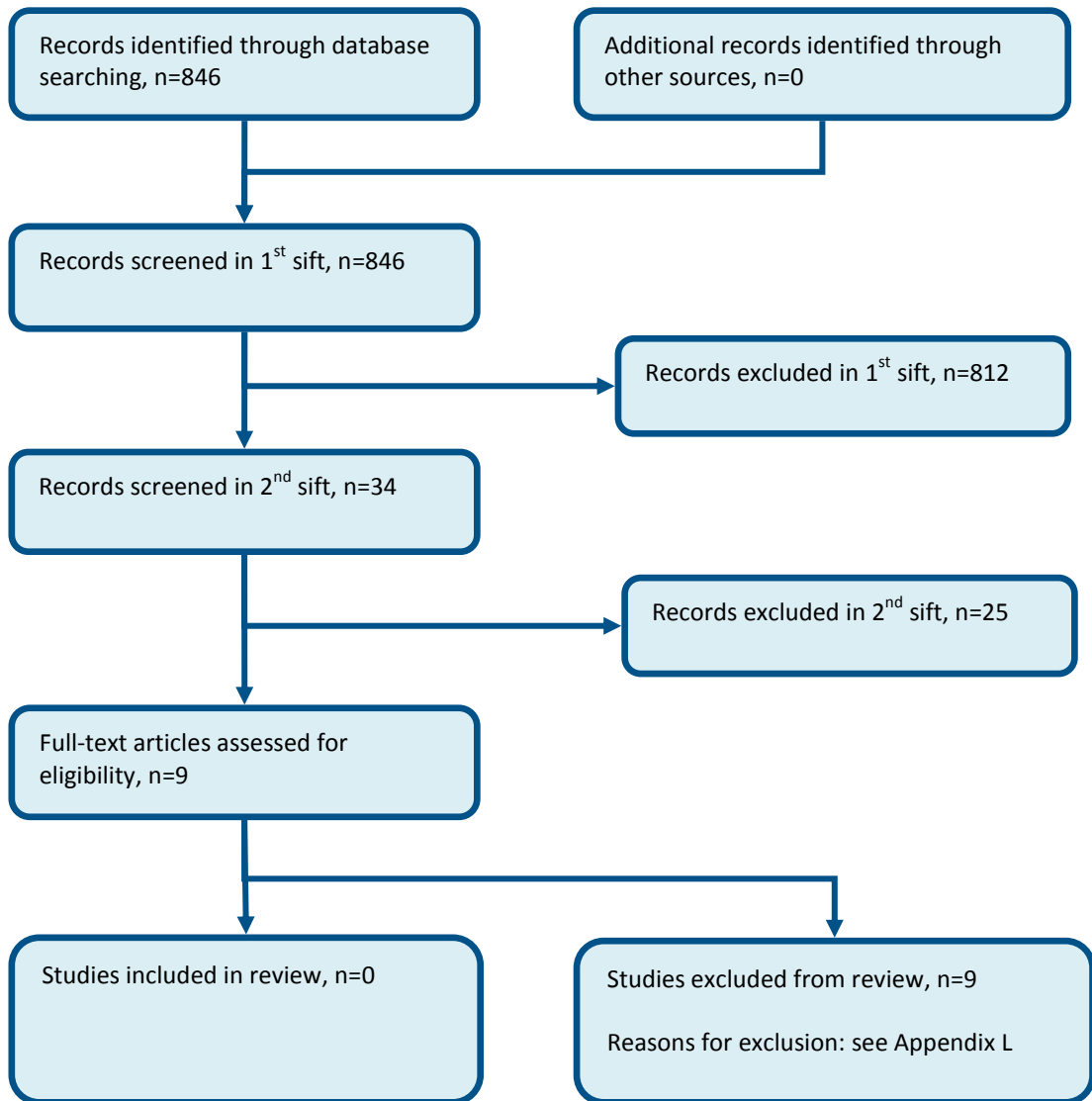
E.7.1 Barriers and facilitators to continuity of healthcare

Figure 19: Flow chart of clinical article selection for the review of barriers and facilitators to ensuring continuity of healthcare



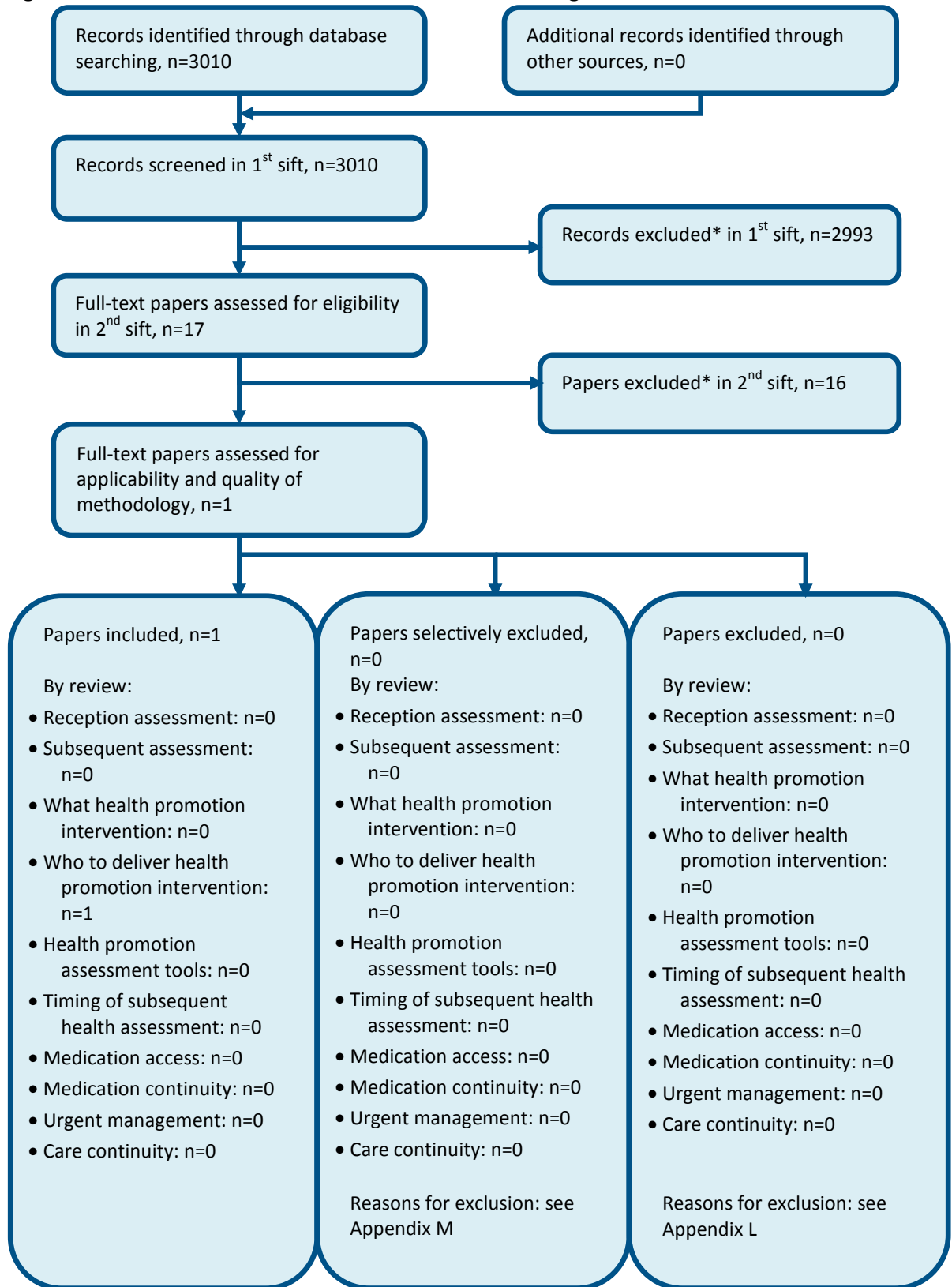
E.7.2 Systems to manage patient records

Figure 20: Flow chart of clinical article selection for the review of continuity record keeping



Appendix F: Health economic study selection

Figure 21: Flow chart of economic article selection for the guideline



* Non-relevant population, intervention, comparison, design or setting; non-English language

1 Appendix G: Literature search strategies

G.1 Contents

Introduction	Search methodology
Section G.2	Population search strategy
G.2.1	Standard prisons population This population was used for all search questions
Section G.3	Study filters and exclusions terms
G.3.1	Excluded study designs and publication types
G.3.2	Randomised controlled trials (RCT)
G.3.3	Systematic reviews (SR)
G.3.4	Health economic studies (HE)
G.3.5	Quality of life studies (QoL)
G.3.6	Observational studies (OBS)
G.3.7	Qualitative reviews (QUAL)
Section G.4	Searches for specific questions with intervention
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G.4.2	Health assessment
G.4.3	Communication and coordination, and continuity of healthcare
G.4.4	Promoting health and wellbeing
G.4.5	Medication management
G.4.6	Deteriorating health
G.4.7	Emergency management
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Section G.5	Health economics searches
G.5.1	Health economic reviews
G.5.2	Quality of life reviews
Section G.6	PubMed epub search

3 Search strategies used for the physical health of people in prison guideline are outlined below and
 4 were run in accordance with the methodology in the NICE guidelines manual.³²³ All searches were
 5 run up to **14 January 2016** unless otherwise stated. Any studies added to the databases after this
 6 date (even those published prior to this date) were not included unless specifically stated in the text.
 7 A search was run in PubMed on **21 January 2016** to identify electronic, ahead of print or ‘online
 8 early’ publications, see section G.6. Where possible searches were limited to retrieve material
 9 published in English.

10 **Table 2: Database date parameters**

Database	Dates searched
Medline	1946 – 14 January 2016
Embase	1974 – 14 January 2016
The Cochrane Library	Cochrane Reviews to Issue 1 of 12, January 2016

Database	Dates searched
	CENTRAL to Issue 12 of 12, December 2015 DARE and NHSEED to Issue 2 of 4, April 2015 HTA to Issue 4 of 4, October 2015
PsycINFO	Inception – 14 January 2016
Social Policy & Practice	Inception – 14 January 2016
CINAHL	Inception – 14 January 2016
PubMed	Inception – 21 January 2016

11 Searches for the **clinical reviews** were run in Medline (OVID), Embase (OVID), the Cochrane Library
12 (Wiley), PsycINFO (ProQuest), Social Policy & Practice (OVID) and CINAHL (EBSCO).

13 Searches for **intervention and diagnostic studies** were usually constructed using a PICO format
14 where population (P) terms were combined with Intervention (I) and sometimes Comparison (C)
15 terms. An intervention can be a drug, a procedure or a diagnostic test. Outcomes (O) are rarely used
16 in search strategies for interventions. Search filters were also added to the search where
17 appropriate.

18 Searches for the health economic reviews were run in Medline, Embase, the NHS Economic
19 Evaluations Database (NHS EED), the Health Technology Assessment (HTA) database and the Health
20 Economic Evaluation Database (HEED). NHS EED and HTA databases were hosted by the Centre for
21 Research and Dissemination (CRD). The Health Economic Evaluation Database (HEED) ceased
22 production in 2014 with access ceasing in January 2015. For the final dates of HEED searches, please
23 see individual economic questions.

24 For Medline and Embase an economic filter (instead of a study type filter) was added to the same
25 clinical search strategy. Searches in CRD and HEED were constructed using population terms only.

2G.2 Population search strategies

G.2.1 Standard prisons population

28 Medline search terms

1	prisons/
2	prisoners/
3	criminals/
4	((correctional or correction or custodial) adj2 (facilit* or setting* or institut* or centre or center or population)).ti,ab.
5	(remand adj2 (prison* or population or setting)).ti,ab.
6	((young* or youth* or juvenile*) adj3 (institut* or facilit*)).ti,ab.
7	(inmate* or prison* or offender* or jail* or gaol or gaols or penitentiary*).ti,ab.
8	((criminal* or incarcerat*) adj2 (population* or person* or people)).ti,ab.
9	(forensic adj2 (unit or units)).ti,ab.
10	((low or medium or region* or high or environment* or centre* or center*) adj2 secur*).ti,ab.
11	(police adj4 custod*).ti,ab.
12	(detention adj2 (place* or centre* or center*)).ti,ab.
13	((immigration or immigrant* or asylum) adj3 (detention or detain* or centre* or center* or hold* or unit or units or facilit*)).ti,ab.
14	or/1-13

29 **Embase search terms**

1	prison/
2	prisoner/
3	offender/
4	detention/
5	((correctional or correction or custodial) adj2 (facilit* or setting* or institut* or centre or center or population)).ti,ab.
6	(remand adj2 (prison* or population or setting)).ti,ab.
7	((young* or youth* or juvenile*) adj3 (institut* or facilit*)).ti,ab.
8	(inmate* or prison* or offender* or jail* or gaol or gaols or penitentiary*).ti,ab.
9	((criminal* or incarcerat*) adj2 (population* or person* or people)).ti,ab.
10	(forensic adj2 (unit or units)).ti,ab.
11	((low or medium or region* or high or environment* or centre* or center*) adj2 secur*).ti,ab.
12	(police adj4 custod*).ti,ab.
13	(detention adj2 (place* or centre* or center*)).ti,ab.
14	((immigration or immigrant* or asylum) adj3 (detention or detain* or centre* or center* or hold* or unit or units or facilit*)).ti,ab.
15	or/1-14

30 **Cochrane search terms**

#1	[mh ^prisons]
#2	[mh ^prisoners]
#3	[mh ^criminals]
#4	((correctional or correction or custodial) near/2 (facilit* or setting* or institut* or centre or center or population)):ti,ab
#5	(remand near/2 (prison* or population or setting)):ti,ab
#6	((young* or youth* or juvenile*) near/3 (institut* or facilit*)):ti,ab
#7	(inmate* or prison* or offender* or jail* or gaol or gaols or penitentiary*):ti,ab
#8	((criminal* or incarcerat*) near/2 (population* or person* or people)):ti,ab
#9	(forensic near/2 (unit or units)):ti,ab
#10	((low or medium or region* or high or environment* or centre* or center*) near/2 secur*):ti,ab
#11	(police near/4 custod*):ti,ab
#12	(detention near/2 (place* or centre* or center*)):ti,ab
#13	((immigration or immigrant* or asylum) near/3 (detention or detain* or centre* or center* or hold* or unit or units or facilit*)):ti,ab
#14	{or #1-#13}

31 **PscYINFO search terms**

1	((su.exact("legal detention") or su.exact("prisons") or su.exact("prisoners") or su.exact.explode("criminals") or ti,ab(forensic near/2 (unit or units)) or ti,ab((low or medium or region* or high or environment* or centre* or center*) near/2 secur*) or ti,ab(police near/4 custod*) or ti,ab(detention near/2 (place* or centre* or center*)) or ti,ab((immigration or immigrant* or asylum) near/3 (detention or detain* or centre* or center* or hold* or unit or units or facilit*)) or ti,ab((correctional or correction or custodial) near/2 (facilit* or setting* or institut* or centre or center or population)) or ti,ab(remand near/2 (prison* or population or setting)) or ti,ab((young* or youth* or juvenile*) near/3 (institut* or facilit*)) or ti,ab(inmate* or prison* or offender* or jail* or gaol or gaols or penitentiary*) or ti,ab((criminal* or incarcerat*) near/2 (population* or person* or people)))
---	---

32 **Social Policy and Practice search terms**

1	((correctional or correction or custodial) adj2 (facilit* or setting* or institut* or centre or center or population)).ti,ab.
2	(remand adj2 (prison* or population or setting)).ti,ab.
3	((young* or youth* or juvenile*) adj3 (institut* or facilit*)).ti,ab.
4	(inmate* or prison* or offender* or jail* or gaol or gaols or penitentiari*).ti,ab.
5	((criminal* or incarcerat*) adj2 (population* or person* or people)).ti,ab.
6	(forensic adj2 (unit or units)).ti,ab.
7	((low or medium or region* or high or environment* or centre* or center*) adj2 secur*).ti,ab.
8	(police adj4 custod*).ti,ab.
9	(detention adj2 (place* or centre* or center*)).ti,ab.
10	((immigration or immigrant* or asylum) adj3 (detention or detain* or centre* or center* or hold* or unit or units or facilit*)).ti,ab.
11	or/1-10

33 CINAHL search terms

S1	(mh "correctional facilities") or (mh "prisoners") or (mh "correctional health services") or (mh "correctional health nursing") or (mh "public offenders+")
S2	(correctional or correction or custodial) n2 (facilit* or setting* or institut* or centre or center or population)
S3	remand n2 (prison* or population or setting)
S4	(young* or youth* or juvenile*) n3 (institut* or facilit*)
S5	inmate* or prison* or offender* or jail* or gaol or gaols or penitentiari*
S6	(criminal* or incarcerat*) n2 (population* or person* or people)
S7	(forensic n2 (unit or units))
S8	((low or medium or region* or high or environment* or centre* or center*) n2 secur*)
S9	(police n4 custod*)
S10	(detention n2 (place* or centre* or center*))
S11	((immigration or immigrant* or asylum) n3 (detention or detain* or centre* or center* or hold* or unit or units or facilit*))
S12	S1 or S2 or S3 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or S11

3G.3 Study filter search terms

G.3.1 Excluded study designs and publication types

36 The following study designs and publication types were removed from retrieved results using the
37 NOT operator.

38 Medline search terms

1.	letter/
2.	editorial/
3.	news/
4.	exp historical article/
5.	anecdotes as topic/
6.	comment/
7.	case report/
8.	(letter or comment*).ti.
9.	or/1-8

10.	randomized controlled trial/ or random*.ti,ab.
11.	9 not 10
12.	animals/ not humans/
13.	exp animals, laboratory/
14.	exp animal experimentation/
15.	exp models, animal/
16.	exp rodentia/
17.	(rat or rats or mouse or mice).ti.
18.	or/11-17

39 **Embase search terms**

1.	letter.pt. or letter/
2.	note.pt.
3.	editorial.pt.
4.	case report/ or case study/
5.	(letter or comment*).ti.
6.	or/1-5
7.	randomized controlled trial/ or random*.ti,ab.
8.	6 not 7
9.	animal/ not human/
10.	nonhuman/
11.	exp animal experiment/
12.	exp experimental animal/
13.	animal model/
14.	exp rodent/
15.	(rat or rats or mouse or mice).ti.
16.	or/8-15

40 **CINAHL search terms**

S1.	pt anecdote or pt audiovisual or pt bibliography or pt biography or pt book or pt book review or pt brief item or pt cartoon or pt commentary or pt computer program or pt editorial or pt games or pt glossary or pt historical material or pt interview or pt letter or pt listservs or pt masters thesis or pt obituary or pt pamphlet or pt pamphlet chapter or pt pictorial or pt poetry or pt proceedings or pt "questions and answers" or pt response or pt software or pt teaching materials or pt website
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G.3.12 Randomised controlled trials (RCT) search terms

42 **Medline search terms**

1.	randomized controlled trial.pt.
2.	controlled clinical trial.pt.
3.	randomi#ed.ab.
4.	placebo.ab.
5.	randomly.ab.
6.	clinical trials as topic.sh.
7.	trial.ti.
8.	or/1-7

43 **Embase search terms**

1.	random*.ti,ab.
2.	factorial*.ti,ab.
3.	(crossover* or cross over*).ti,ab.
4.	((doubl* or singl*) adj blind*).ti,ab.
5.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
6.	crossover procedure/
7.	double blind procedure/
8.	single blind procedure/
9.	randomized controlled trial/
10.	or/1-9

44 **PsycINFO search terms**

1.	(su.exact.explode("clinical trials") or ti,ab((clinical or control*) near/3 trial*) or ti,ab((single* or double* or treble* or triple*) near/5 (blind* or mask*)) or ti,ab(volunteer* or control-group or controls) or su.exact("placebo") or ti,ab(placebo*))
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G.3.3 Systematic review (SR) search terms

46 **Medline search terms**

1.	meta-analysis/
2.	meta-analysis as topic/
3.	(meta analy* or metanaly* or metaanaly*).ti,ab.
4.	((systematic* or evidence*) adj3 (review* or overview*)).ti,ab.
5.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
6.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
7.	(search* adj4 literature).ab.
8.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
9.	cochrane.jw.
10.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
11.	or/1-10

47 **Embase search terms**

1.	systematic review/
2.	meta-analysis/
3.	(meta analy* or metanaly* or metaanaly*).ti,ab.
4.	((systematic or evidence) adj3 (review* or overview*)).ti,ab.
5.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
6.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
7.	(search* adj4 literature).ab.
8.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
9.	cochrane.jw.
10.	((multiple treatment* or indirect or mixed) adj2 comparison*).ti,ab.
11.	or/1-10

48 **PsycINFO search terms**

1.	(su.exact("literature review") or rtype(review) or ti(review) or me(literature review)) and (ti,ab(systematic or evidence or methodol* or quantitative*)) or (su.exact("meta analysis") or ti,ab(meta-analys* or metanalys* or metaanalys* or meta analys*) or ti,ab((systematic or evidence* or methodol* or quantitative*) near/3 (review* or overview*)) or ti,ab((pool* or combined or combining) near/2 (data or trials or studies or results)) or rtype(systematic or meta*) or me(meta analysis or systematic review))
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G.34 Health economics (HE) search terms

50 Medline search terms

1.	economics/
2.	value of life/
3.	exp "costs and cost analysis"/
4.	exp economics, hospital/
5.	exp economics, medical/
6.	economics, nursing/
7.	economics, pharmaceutical/
8.	exp "fees and charges"/
9.	exp budgets/
10.	budget*.ti,ab.
11.	cost*.ti.
12.	(economic* or pharmaco?economic*).ti.
13.	(price* or pricing*).ti,ab.
14.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
15.	(financ* or fee or fees).ti,ab.
16.	(value adj2 (money or monetary)).ti,ab.
17.	or/1-16

51 Embase search terms

1.	health economics/
2.	exp economic evaluation/
3.	exp health care cost/
4.	exp fee/
5.	budget/
6.	funding/
7.	budget*.ti,ab.
8.	cost*.ti.
9.	(economic* or pharmaco?economic*).ti.
10.	(price* or pricing*).ti,ab.
11.	(cost* adj2 (effective* or utilit* or benefit* or minimi* or unit* or estimat* or variable*)).ab.
12.	(financ* or fee or fees).ti,ab.
13.	(value adj2 (money or monetary)).ti,ab.
14.	or/1-13

G.35 Quality of life (QOL) search terms

53 Medline search terms

1.	quality-adjusted life years/
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2.	sickness impact profile/
3.	(quality adj2 (wellbeing or well-being)).ti,ab.
4.	sickness impact profile.ti,ab.
5.	disability adjusted life.ti,ab.
6.	(qal* or qtime* or qwb* or daly*).ti,ab.
7.	(euroqol* or eq5d* or eq 5d*).ti,ab.
8.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
9.	(health utility* or utility score* or disutilit*).ti,ab.
10.	(hui or hui1 or hui2 or hui3).ti,ab.
11.	health* year* equivalent*.ti,ab.
12.	(hye or hyes).ti,ab.
13.	rosser.ti,ab.
14.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
15.	(sf36 or sf 36 or short form 36 or shortform 36 or shortform36).ti,ab.
16.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
17.	(sf12 or sf 12 or short form 12 or shortform 12 or shortform12).ti,ab.
18.	(sf8 or sf 8 or short form 8 or shortform 8 or shortform8).ti,ab.
19.	(sf6 or sf 6 or short form 6 or shortform 6 or shortform6).ti,ab.
20.	or/1-19

54 **Embase search terms**

1.	quality adjusted life year/
2.	"quality of life index"/
3.	short form 12/ or short form 20/ or short form 36/ or short form 8/
4.	sickness impact profile/
5.	(quality adj2 (wellbeing or well-being)).ti,ab.
6.	sickness impact profile.ti,ab.
7.	disability adjusted life.ti,ab.
8.	(qal* or qtime* or qwb* or daly*).ti,ab.
9.	(euroqol* or eq5d* or eq 5d*).ti,ab.
10.	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
11.	(health utility* or utility score* or disutilit*).ti,ab.
12.	(hui or hui1 or hui2 or hui3).ti,ab.
13.	health* year* equivalent*.ti,ab.
14.	(hye or hyes).ti,ab.
15.	rosser.ti,ab.
16.	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
17.	(sf36 or sf 36 or short form 36 or shortform 36 or shortform36).ti,ab.
18.	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
19.	(sf12 or sf 12 or short form 12 or shortform 12 or shortform12).ti,ab.
20.	(sf8 or sf 8 or short form 8 or shortform 8 or shortform8).ti,ab.
21.	(sf6 or sf 6 or short form 6 or shortform 6 or shortform6).ti,ab.
22.	or/1-21

G.356 Observational studies (OBS) search terms

56 Medline search terms

1.	epidemiologic studies/
2.	exp case control studies/
3.	exp cohort studies/
4.	cross-sectional studies/
5.	case control.ti,ab.
6.	(cohort adj (study or studies or analys*)).ti,ab.
7.	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
8.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
9.	or/1-8

57 Embase search terms

1.	clinical study/
2.	exp case control study/
3.	family study/
4.	longitudinal study/
5.	retrospective study/
6.	prospective study/
7.	cross-sectional study/
8.	cohort analysis/
9.	follow-up/
10.	cohort*.ti,ab.
11.	9 and 10
12.	case control.ti,ab.
13.	(cohort adj (study or studies or analys*)).ti,ab.
14.	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab.
15.	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab.
16.	or/1-8,11-15

58 PsycINFO search terms

1.	(su.exact.explode("longitudinal studies") or su.exact.explode("followup studies") or ti,ab(cohort near/1 (study or studies or analys*)) or ti,ab((follow-up or observational or uncontrolled or non-randomi?ed or nonrandomi?ed or epidemiologic*) near/1 (study or studies)) or ti,ab((longitudinal or retrospective or prospective or cross-section) and (study or studies or review or analys* or cohort*)))
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G.397 Qualitative reviews (QUAL) search terms

60 Medline search terms

1.	qualitative research/ or narration/ or exp interviews as topic/ or exp questionnaires/ or health care surveys/
2.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*).ti,ab.
3.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded

	theory or constant compar* or (thematic* adj3 analys*) or theoretical sampl* or purposive sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).ti,ab.
4.	or/1-3

61 Embase search terms

1.	health survey/ or exp questionnaire/ or exp interview/ or qualitative research/ or narrative/
2.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*).ti,ab.
3.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic* adj3 analys*) or theoretical sampl* or purposive sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).ti,ab.
4.	or/1-3

62 PsycINFO search terms

1.	(su.exact("qualitative research") or (su.exact("narratives") or su.exact("interviews")) or (su.exact("questionnaires") or su.exact.explode("surveys")) or (qualitative or interview*) or (focus-group* or theme*) or (questionnaire* or survey*) or (metasynthes* or meta-synthes*) or (metasummar* or meta-summar*) or (metastud* or meta-stud*) or (metathem* or meta-them*) or ethno* or (emic or etic) or (phenomenolog* or "grounded theory") or (constant-compar* or thematic* near/3 analys*) or (theoretical-sampl* or purposive-sampl*) or (hermeneutic* or heidegger*) or (husserl* or colaizzi*) or (van-kaam* or van-manen*) or (giorgi* or glaser*) or (strauss* or ricoeur*) or (spiegelberg* or merleau*))
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63 Social Policy and Practice search terms

1.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*).ti,ab.
2.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic* adj3 analys*) or theoretical sampl* or purposive sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*).ti,ab.
3.	or/1-2

64 CINAHL search terms

S1.	(mh "qualitative studies+")
S2.	(mh "qualitative validity+")
S3.	(mh "interviews+") or (mh "focus groups") or (mh "surveys") or (mh "questionnaires+")
S4.	(qualitative or interview* or focus group* or theme* or questionnaire* or survey*)
S5.	(metasynthes* or meta-synthes* or metasummar* or meta-summar* or metastud* or meta-stud* or metathem* or meta-them* or ethno* or emic or etic or phenomenolog* or grounded theory or constant compar* or (thematic* adj3 analys*) or theoretical sampl* or purposive sampl* or hermeneutic* or heidegger* or husserl* or colaizzi* or van kaam* or van manen* or giorgi* or glaser* or strauss* or ricoeur* or spiegelberg* or merleau*)
S6.	S1 or s2 or S3 or S4 or S5

6.G.4 Searches for specific questions

G.4.1 Health assessment - reception

- 67 • What health assessment needs to be done at reception into prison?

68 Medline search terms

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	mass screening/
6.	triage/
7.	(triage* or triaging).ti,ab.
8.	screen*.ti,ab.
9.	((health or medical) adj2 (assess* or needs)).ti,ab.
10.	((reception or initial or entry or protocol* or policy or policies or tool*) adj2 assess*).ti,ab.
11.	medication reconciliation/
12.	(opportun* adj2 assess*).ti,ab.
13.	(assess* adj2 tool*).ti,ab.
14.	((prisoner* or custod*) adj2 (record* or form*)).ti,ab.
15.	systemone.ti,ab.
16.	induct*.ti,ab.
17.	((medicine* or medicat*) adj2 (reconcil* or histor* or confirm*)).ti,ab.
18.	(chat or chads).ti,ab.
19.	checklist/
20.	(checklist* or check list*).ti,ab.
21.	(health* adj2 check*).ti,ab.
22.	or/5-21
23.	4 and 22
24.	(reception or induction* or entry or enter* or early or landing or first line or first-line or admission* or ((new* or recent*) adj2 (prisoner* or inmate* or incarcerat* or admit*))).ti,ab.
25.	23 and 24
	Date parameters: see Table 2

69 **Embase search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	exp *screening/
6.	(triage* or triaging).ti,ab.
7.	screen*.ti,ab.
8.	((health or medical) adj2 (assess* or needs)).ti,ab.
9.	((reception or initial or entry or protocol* or policy or policies or tool*) adj2 assess*).ti,ab.
10.	*medication therapy management/
11.	(opportun* adj2 assess*).ti,ab.
12.	((prisoner* or custod*) adj2 (record* or form*)).ti,ab.
13.	systemone.ti,ab.
14.	induct*.ti,ab.
15.	((medicine* or medicat*) adj2 (reconcil* or histor* or confirm*)).ti,ab.
16.	(chat or chads).ti,ab.
17.	*checklist/

18.	(checklist* or check list*).ti,ab.
19.	(health* adj2 check*).ti,ab.
20.	or/5-19
21.	4 and 20
22.	(reception or induction* or entry or enter* or early or landing or first line or first-line or admission* or ((new* or recent*) adj2 (prisoner* or inmate* or incarcerat* or admit*))).ti,ab.
23.	21 and 22
	Date parameters: see Table 2

70 **Cochrane search terms**

#1.	Standard population [G.2.1]
#2.	[mh ^"mass screening"]
#3.	[mh ^triage]
#4.	(triage* or triaging):ti,ab
#5.	screen*:ti,ab
#6.	((health or medical) near/2 (assess* or needs)):ti,ab
#7.	((reception or initial or entry or protocol* or policy or policies or tool*) near/2 assess*):ti,ab
#8.	[mh ^"medication reconciliation"]
#9.	(opportun* near/2 assess*):ti,ab
#10.	(assess* near/2 tool*):ti,ab
#11.	((prisoner* or custod*) near/2 (record* or form*)):ti,ab
#12.	systmone:ti,ab
#13.	induct*:ti,ab
#14.	((medicine* or medicat*) near/2 (reconcil* or histor* or confirm*)):ti,ab
#15.	(chat or chads):ti,ab
#16.	{or #2-#15}
#17.	#1 and #16
	Date parameters: see Table 2

71 **PsycINFO search terms**

1.	Standard population [G.2.1]
2.	(su.exact.explode("screening tests") or su.exact.explode("screening") or ti,ab(triage* or triaging) or ti,ab(screen*) or ti,ab((health or medical or clinical) near/2 (assess* or needs)) or ti,ab((reception or initial or entry or protocol* or policy or policies or tool*) near/2 assess*) or su.exact("symptom checklists") or ti,ab(opportun* near/2 assess*) or ti,ab(assess* near/2 tool*) or ti,ab((prisoner* or custod*) near/2 (record* or form*)) or ti,ab(systmone) or ti,ab(induct*) or ti,ab((medicine* or medicat*) near/2 (reconcil* or histor* or confirm*)) or ti,ab(chat or chads) or ti,ab(checklist* or check-list*) or ti,ab(health* near/2 check*))
3.	ti,ab(reception or induction* or entry or enter* or early or landing or first line or first-line or admission* or ((new* or recent*) near/2 (prisoner* or inmate* or incarcerat* or admit*)))
4.	la.exact("English")
5.	1 and 2 and 3 and 4
	Date parameters: see Table 2

72 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	(triage* or triaging).ti,ab.
3.	screen*.ti,ab.

4.	((health or medical) adj2 (assess* or needs)).ti,ab.
5.	((reception or initial or entry or protocol* or policy or policies or tool*) adj2 assess*).ti,ab.
6.	(opportun* adj2 assess*).ti,ab.
7.	(assess* adj2 tool*).ti,ab.
8.	((prisoner* or custod*) adj2 (record* or form*)).ti,ab.
9.	systmone.ti,ab.
10.	induct*.ti,ab.
11.	((medicine* or medicat*) adj2 (reconcil* or histor* or confirm*)).ti,ab.
12.	(chat or chads).ti,ab.
13.	(checklist* or check list*).ti,ab.
14.	(health* adj2 check*).ti,ab.
15.	or/2-14
16.	(reception or induction* or entry or enter* or early or landing or first line or first-line or admission* or ((new* or recent*) adj2 (prisoner* or inmate* or incarcerat* or admit*))).ti,ab.
17.	1 and 15 and 16
	Date parameters: see Table 2

73 CINAHL search terms

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	1 not 2
S4.	Limit 3 to English language
S5.	(mh "triage") or (mh "health screening+")
S6.	triage* or triaging or screen*
S7.	(health or medical) n2 (assess* or needs)
S8.	((reception or initial or entry or protocol* or policy or policies or tool*) n2 assess*)
S9.	(mh "medication reconciliation") or (mh "checklists")
S10.	opportun* n2 assess*
S11.	systmone
S12.	induct*
S13.	((prisoner* or custod*) n2 record*)
S14.	(assess* n2 tool*)
S15.	((medicine* or medicat*) n2 (reconcil* or histor* or confirm*))
S16.	chat or chads
S17.	(checklist* or check list*)
S18.	(health* n2 check*)
S19.	S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 or S18
S20.	S4 and S19
S21.	(reception or induction* or entry or enter* or early or landing or first line or first-line or admission* or ((new* or recent*) n2 (prisoner* or inmate* or incarcerat* or admit*)))
S22.	S20 and S21
	Date parameters: see Table 2

G.4.2 Health assessment

75 Searches for the following three questions were run as one search:

- 76 • What subsequent health assessment(s) are clinically and cost-effective in prisons?

- 77 • What are the most effective and cost-effective assessment tools to determine the health
78 promotion needs of prisoners?
79 • When should subsequent health assessments be done in prisons?

80 **Medline search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	mass screening/
6.	triage/
7.	*needs assessment/
8.	(triage* or triaging).ti,ab.
9.	screen*.ti,ab.
10.	((health or medical or clinical) adj2 (assess* or needs)).ti,ab.
11.	((protocol* or policy or policies or tool*) adj2 assess*).ti,ab.
12.	self report/
13.	medical history taking/
14.	(assess* adj2 tool*).ti,ab.
15.	induct*.ti,ab.
16.	(health* adj2 check*).ti,ab.
17.	(self report* adj3 (health* or medical or clinical)).ti,ab.
18.	(histor* adj3 (medical or health* or clinical or gp)).ti,ab.
19.	(wellman or well man or wellmen or well men or wellwoman or well woman or wellwomen or well women).ti,ab.
20.	or/5-19
21.	4 and 20
	Date parameters: see Table 2

81 **Embase search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	exp *screening/
6.	*needs assessment/
7.	(triage* or triaging).ti,ab.
8.	screen*.ti,ab.
9.	((health or medical or clinical) adj2 (assess* or needs)).ti,ab.
10.	((protocol* or policy or policies or tool*) adj2 assess*).ti,ab.
11.	*self report/
12.	*anamnesis/
13.	*clinical assessment tool/
14.	(assess* adj2 tool*).ti,ab.
15.	induct*.ti,ab.
16.	(self report* adj3 (health* or medical or clinical)).ti,ab.

17.	(histor* adj3 (medical or health* or clinical or gp)).ti,ab.
18.	(wellman or well man or wellmen or well men or wellwoman or well woman or wellwomen or well women).ti,ab.
19.	or/5-18
20.	4 and 19
	Date parameters: see Table 2

82 Cochrane search terms

#1.	Standard population [G.2.1]
#2.	[mh ^"mass screening"]
#3.	[mh ^"triage"]
#4.	[mh ^"needs assessment"]
#5.	(triage* or triaging):ti,ab
#6.	screen*:ti,ab
#7.	((health or medical or clinical) near/2 (assess* or needs)):ti,ab
#8.	((protocol* or policy or policies or tool*) near/2 assess*):ti,ab
#9.	[mh ^"self report"]
#10.	[mh ^"medical history taking"]
#11.	(assess* near/2 tool*):ti,ab
#12.	induct*:ti,ab
#13.	(health* near/2 check*):ti,ab
#14.	(self next report* near/3 (health* or medical or clinical)):ti,ab
#15.	(histor* near/3 (medical or health* or clinical or gp)):ti,ab
#16.	(wellman or "well man" or wellmen or "well men" or wellwoman or "well woman" or wellwomen or "well women"):ti,ab
#17.	{or #2-#16}
#18.	#1 and #17
	Date parameters: see Table 2

83 PsycINFO search terms

1.	Standard population [G.2.1]
2.	(su.exact.explode("screening tests") or su.exact.explode("screening") or su.exact("needs assessment") or ti,ab(triage* or triaging) or ti,ab(screen*) or ti,ab((health or medical or clinical) near/2 (assess* or needs)) or ti,ab((protocol* or policy or policies or tool*) near/2 assess*) or su.exact("self report") or su.exact("patient history") or ti,ab(assess* near/2 tool*) or ti,ab (induct*) or ti,ab(health* near/2 check*) or ti,ab(self-report* near/3 (health* or medical or clinical)) or ti,ab(histor* near/3 (medical or health* or clinical or gp)) or ti,ab(wellman or well-man or wellmen or well-men or wellwoman or well-woman or wellwomen or well-women))
3.	la.exact("English")
4.	1 and 2 and 3
	Date parameters: see Table 2

84 Social Policy and Practice search terms

1.	Standard population [G.2.1]
2.	(triage* or triaging).ti,ab.
3.	screen*.ti,ab.
4.	((health or medical or clinical) adj2 (assess* or needs)).ti,ab.
5.	((protocol* or policy or policies or tool*) adj2 assess*).ti,ab.

6.	(assess* adj2 tool*).ti,ab.
7.	induct*.ti,ab.
8.	(health* adj2 check*).ti,ab.
9.	(self report* adj3 (health* or medical or clinical)).ti,ab.
10.	(histor* adj3 (medical or health* or clinical or gp)).ti,ab.
11.	(wellman or well man or wellmen or well men or wellwoman or well woman or wellwomen or well women).ti,ab.
12.	or/2-11
13.	1 and 12
	Date parameters: see Table 2

85 CINAHL search terms

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	S1 not S2
S4.	Limit S3 to English language
S5.	(mh "triage") or (mh "health screening+") or mm needs assessment
S6.	triage* or triaging or screen*
S7.	((health or medical or clinical) n2 (assess* or needs))
S8.	((protocol* or policy or policies or tool*) n2 assess*)
S9.	(mh "self report") or (mh "patient history taking+")
S10.	assess* n2 tool* OR induct* OR health* n2 check*
S11.	(self report* n3 (health* or medical or clinical))
S12.	(histor* n3 (medical or health* or clinical or gp))
S13.	(wellman or well man or wellmen or well men or wellwoman or well woman or wellwomen or well women)
S14.	S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13
S15.	S4 and S14
	Date parameters: see Table 2

G.43 Communication and coordination, and continuity of healthcare

- 87 Searches for the following two questions were run as one search:
- 88 • What are the barriers and facilitators to coordination, case management and communication
- 89 between healthcare professionals involved in primary care, mental healthcare, substance misuse
- 90 care and secondary care?
- 91 • What are the barriers and facilitators to ensuring continuity of healthcare, including management
- 92 of patient records, of people moving from:
- 93 – community to prison?
- 94 – prison to prison?
- 95 – prison to court?
- 96 – court to prison?
- 97 – prison to hospital?
- 98 – hospital to prison?
- 99 – prison to community?
- 100 – transport to or from other detention centres?

101

Medline search terms

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	"continuity of patient care"/ or patient handoff/
6.	case management/
7.	critical pathways/
8.	patient care planning/
9.	"forms and records control"/
10.	"delivery of health care, integrated"/
11.	interdisciplinary communication/
12.	interprofessional relations/
13.	documentation/
14.	medical records/ or health records, personal/ or medical record linkage/ or medical records, problem-oriented/ or exp medical records systems, computerized/
15.	information systems/ or health information systems/ or hospital information systems/ or medical order entry systems/ or integrated advanced information management systems/ or management information systems/ or clinical laboratory information systems/ or clinical pharmacy information systems/ or database management systems/ or operating room information systems/ or radiology information systems/ or reminder systems/
16.	((patient* or prisoner* or health* or medical or care) adj2 (record* or document* or note* or chart* or file*)).ti,ab.
17.	((electr* or phone* or telephone* or email* or e-mail*) adj2 (record* or document* or communicat*)).ti,ab.
18.	((record* or note* or inform*) adj2 (keep* or communicat* or share* or system* or consent*)).ti,ab.
19.	telemedicine/
20.	(telemed* or telecare* or telehealth* or tele-med* or tele-care* or tele-health*).ti,ab.
21.	(integrat* adj2 (care or service*)).ti,ab.
22.	(care adj2 (coordinat* or program* or continu*)).ti,ab.
23.	(case adj1 (manage* or plan*)).ti,ab.
24.	((discharge* or release* or transfer* or transport*) adj2 (summar* or letter* or record* or note* or document* or plan* or manage*)).ti,ab.
25.	(patient* adj2 navigat*).ti,ab.
26.	(care adj3 link*).ti,ab.
27.	(report* adj2 system*).ti,ab.
28.	(inreach* or in-reach*).ti,ab.
29.	((patient* or prisoner* or critical* or care or clinical*) adj2 (pathway* or protocol*)).ti,ab.
30.	or/5-29
31.	4 and 30
	Date parameters: see Table 2

102

Embase search terms

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language

5.	exp clinical handover/
6.	*health care planning/
7.	*patient care planning/
8.	*case management/
9.	*clinical pathway/
10.	*documentation/ or *medical documentation/ or *medical order/ or *medical record/ or *electronic medical record/
11.	*information system/ or *computerized provider order entry/ or *electronic prescribing/ or *decision support system/ or *hospital information system/ or *medical information system/ or *nursing information system/ or *reminder system/ or *computer system/
12.	*medical informatics/
13.	*integrated health care system/
14.	*interdisciplinary communication/
15.	*public relations/
16.	((patient* or prisoner* or health* or medical or care) adj2 (record* or document* or note* or chart* or file*)).ti,ab.
17.	((electr* or phone* or telephone* or email* or e-mail*) adj2 (record* or document* or communicat*)).ti,ab.
18.	((record* or note* or inform*) adj2 (keep* or communicat* or share* or system* or consent*)).ti,ab.
19.	exp *telemedicine/
20.	*hospital discharge/
21.	(telemed* or telecare* or teleheath* or tele-med* or tele-care* or tele-health*).ti,ab.
22.	(integrat* adj2 (care or service*)).ti,ab.
23.	(care adj2 (coordinat* or program* or continu*)).ti,ab.
24.	(case adj1 (manage* or plan*)).ti,ab.
25.	((discharge* or release* or transfer* or transport*) adj2 (summar* or letter* or record* or note* or document* or plan* or manage*)).ti,ab.
26.	(patient* adj2 navigat*).ti,ab.
27.	(care adj3 link*).ti,ab.
28.	(report* adj2 system*).ti,ab.
29.	(inreach* or in-reach*).ti,ab.
30.	((patient* or prisoner* or critical* or care or clinical*) adj2 (pathway* or protocol*)).ti,ab.
31.	or/5-30
32.	4 and 31`
	Date parameters: see Table 2

103 **Cochrane search terms**

#1.	Standard population [G.2.1]
#2.	[mh ^"continuity of patient care"]
#3.	[mh ^"patient handoff"]
#4.	[mh ^"case management"]
#5.	[mh ^"critical pathways"]
#6.	[mh ^"patient care planning"]
#7.	[mh ^"forms and records control"]
#8.	[mh ^"delivery of health care, integrated"]
#9.	[mh ^"interdisciplinary communication"]

#10.	[mh ^"interprofessional relations"]
#11.	[mh ^documentation]
#12.	[mh ^"medical records"]
#13.	[mh ^"health records, personal"]
#14.	[mh ^"medical record linkage"]
#15.	[mh ^"medical records, problem-oriented"]
#16.	[mh "medical records systems, computerized"]
#17.	[mh ^"information systems"]
#18.	[mh ^"health information systems"]
#19.	[mh ^"hospital information systems"]
#20.	[mh ^"medical order entry systems"]
#21.	[mh ^"integrated advanced information management systems"]
#22.	[mh ^"management information systems"]
#23.	[mh ^"clinical laboratory information systems"]
#24.	[mh ^"clinical pharmacy information systems"]
#25.	[mh ^"database management systems"]
#26.	[mh ^"operating room information systems"]
#27.	[mh ^"radiology information systems"]
#28.	[mh ^"reminder systems"]
#29.	((patient* or prisoner* or health* or medical or care) near/2 (record* or document* or note* or chart* or file*)):ti,ab
#30.	((electr* or phone* or telephone* or email* or e-mail* or e-mail*) near/2 (record* or document* or communicat*)):ti,ab
#31.	((record* or note* or inform*) near/2 (keep* or communicat* or share* or system* or consent*)):ti,ab
#32.	[mh ^telemedicine]
#33.	(telemed* or telecare* or teleheath* or tele-med* or tele-care* or tele-health*):ti,ab
#34.	(integrat* near/2 (care or service*)):ti,ab
#35.	(care near/2 (coordinat* or program* or continu*)):ti,ab
#36.	(case near/1 (manage* or plan*)):ti,ab
#37.	((discharge* or release* or transfer* or transport*) near/2 (summar* or letter* or record* or note* or document* or plan* or manage*)):ti,ab
#38.	(patient* near/2 navigat*):ti,ab
#39.	(care near/3 link*):ti,ab
#40.	(report* near/2 system*):ti,ab
#41.	(inreach* or in-reach*):ti,ab
#42.	((patient* or prisoner* or critical* or care or clinical*) near/2 (pathway* or protocol*)):ti,ab
#43.	{or #2-#42}
#44.	#1 and #43
	Date parameters: see Table 2

104

PsycINFO search terms

1.	Standard population [G.2.1]
2.	(su.exact.explode("medical records") or su.exact("information systems") or su.exact.explode("treatment planning") or su.exact("continuum of care") or su.exact.explode("case management") or su.exact("integrated services") or su.exact("interdisciplinary treatment approach") or su.exact("telemedicine") or ti,ab((patient*

	or prisoner* or health* or medical or care) near/2 (record* or document* or note* or chart* or file*) or ti,ab((discharge* or release* or transfer* or transport*) near/2 (summar* or letter* or record* or note* or document* or plan* or manage*)) or ti,ab((electr* or phone* or telephone* or email* or e-mail*) near/2 (record* or document* or communicat*)) or ti,ab((record* or note* or inform*) near/2 (keep* or communicat* or share* or system* or consent*)) or ti,ab(telemed* or telecare* or teleheath* or tele-med* or tele-care* or tele-health*) or ti,ab(integrat* near/2 (care or service*)) or ti,ab(care near/2 (coordinat* or program* or continu*)) or ti,ab(case near/1 (manage* or plan*)) or ti,ab((discharge* or release* or transfer* or transport*) near/2 (summar* or letter* or record* or note* or document* or plan* or manage*)) or ti,ab(patient* near/2 navigat*) or ti,ab(care near/3 link*) or ti,ab(report* near/2 system*) or ti,ab(inreach* or in-reach*) or ti,ab((patient* or prisoner* or critical* or care or clinical*) near/2 (pathway* or protocol*))
3.	la.exact("English")
4.	1 and 2 and 3
	Date parameters: see Table 2

105 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	((patient* or prisoner* or health* or medical or care) adj2 (record* or document* or note* or chart* or file*)).ti,ab.
3.	((electr* or phone* or telephone* or email* or e-mail*) adj2 (record* or document* or communicat*)).ti,ab.
4.	((record* or note* or inform*) adj2 (keep* or communicat* or share* or system* or consent*)).ti,ab.
5.	(telemed* or telecare* or teleheath* or tele-med* or tele-care* or tele-health*).ti,ab.
6.	(integrat* adj2 (care or service*)).ti,ab.
7.	(care adj2 (coordinat* or program* or continu*)).ti,ab.
8.	(case adj1 (manage* or plan*)).ti,ab.
9.	((discharge* or release* or transfer* or transport*) adj2 (summar* or letter* or record* or note* or document* or plan* or manage*)).ti,ab.
10.	(patient* adj2 navigat*).ti,ab.
11.	(care adj3 link*).ti,ab.
12.	(report* adj2 system*).ti,ab.
13.	(inreach* or in-reach*).ti,ab.
14.	((patient* or prisoner* or critical* or care or clinical*) adj2 (pathway* or protocol*)).ti,ab.
15.	or/2-14
16.	1 and 15
	Date parameters: see Table 2

106 **CINAHL search terms**

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	S1 not S2
S4.	Limit S3 to English language
S5.	(mh "continuity of patient care+") or (mh "hand off (patient safety)+") or (mh "case management") or (mh "patient navigation") or (mh "critical path") or (mh "patient care plans+") or (mh "health care delivery, integrated")
S6.	(mh "documentation") or (mh "medical records+") or (mh "information systems+")
S7.	(mh "interprofessional relations+") or (mh "intraprofessional relations") or (mh "telehealth+")
S8.	((patient* or prisoner* or health* or medical or care) n2 (record* or document* or note* or

	chart* or file*))
S9.	((electr* or phone* or telephone* or email* or e-mail*) n2 (record* or document* or communicat*))
S10.	((record* or note* or inform*) n2 (keep* or communicat* or share* or system* or consent*))
S11.	(telemed* or telecare* or teleheath* or tele-med* or tele-care* or tele-health*)
S12.	(integrat* n2 (care or service*))
S13.	(care n2 (coordinat* or program* or continu*))
S14.	(case n1 (manage* or plan*))
S15.	((discharg* or release* or transfer* or transport*) n2 (summar* or letter* or record* or note* or document* or plan* or manage*))
S16.	patient* n2 navigat*
S17.	care n3 link*
S18.	report* n2 system*
S19.	inreach* OR in-reach*
S20.	((patient* or prisoner* or critical* or care or clinical*) n2 (pathway* or protocol*))
S21.	S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 or S18 or S19 or S20
S22.	S4 and S21
	Date parameters: see Table 2

G1.4.74 Promoting health and wellbeing

108 Searches for the following four questions were run as six searches, one general health promotion
109 search and five additional searches covering the five areas specified in the review protocols (activity,
110 hygiene, nutrition, sexual health and smoking):

- 111 • What are the most clinically and cost-effective interventions that can be implemented to promote
112 health and wellbeing in prisons?
- 113 • What are the most clinically and cost-effective methods of delivering health promotion activities
114 in prison?
- 115 • Who should deliver health promotion activities in prison?
- 116 • What are the barriers and facilitators to information provision, support and mentoring for
117 prisoners to promote health and wellbeing?

G.1.4.81 Promoting health and wellbeing - general

119 **Medline search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	health promotion/
6.	((wellness or wellbeing or well-being) adj2 (promot* or campaign* or program*)).ti,ab.
7.	(health* adj2 (promot* or campaign*)).ti,ab.
8.	or/5-7
9.	4 and 8
	Date parameters: see Table 2

120 **Embase search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	*health promotion/
6.	((wellness or wellbeing or well-being) adj2 (promot* or campaign* or program*)):ti,ab.
7.	(health* adj2 (promot* or campaign*)):ti,ab.
8.	or/5-7
9.	4 and 8
	Date parameters: see Table 2

121 **Cochrane search terms**

#1.	Standard population [G.2.1]
#2.	[mh ^"health promotion"]
#3.	((wellness or wellbeing or well-being) near/2 (promot* or campaign* or program*)):ti,ab
#4.	(health* near/2 (promot* or campaign*)):ti,ab
#5.	{or #2-#14}
#6.	#1 and #5
	Date parameters: see Table 2

122 **PsycINFO search terms**

1.	Standard population [G.2.1]
2.	(su.exact("health promotion") or ti,ab((wellness or wellbeing or well-being) near/2 (promot* or campaign* or program*)) or ti,ab(health* near/2 (promot* or campaign*)))
3.	la.exact("English")
4.	1 and 2 and 3
	Date parameters: see Table 2

123 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	((wellness or wellbeing or well-being) adj2 (promot* or campaign* or program*)):ti,ab.
3.	(health* adj2 (promot* or campaign*)):ti,ab.
4.	or/2-3
5.	1 and 4
	Date parameters: see Table 2

124 **CINAHL search terms**

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	1 not 2
S4.	Limit 3 to English language
S5.	(mh "health promotion")
S6.	(health* n2 (promot* or campaign*))
S7.	((wellness or wellbeing or well-being) n2 (promot* or campaign* or program*))
S8.	S5 OR S6 OR S7
S9.	S4 and S8
	Date parameters: see Table 2

G.4.252 Promoting health and wellbeing - activity

126 Medline search terms

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	exp exercise/
6.	"physical education and training"/
7.	physical fitness/
8.	fitness centers/
9.	exercise*.ti,ab.
10.	(physical* adj2 (activit* or exert* or fit or fitness or train*)).ti,ab.
11.	((train* or fitness) adj2 program*).ti,ab.
12.	(gym* or workout*).ti,ab.
13.	(open air or yard or yards or open space* or outdoor*).ti,ab.
14.	or/5-13
15.	4 and 14
	Date parameters: see Table 2

127 Embase search terms

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	exp *exercise/
6.	*physical education/
7.	*fitness/
8.	exp *physical activity/
9.	exercise*.ti,ab.
10.	(physical* adj2 (activit* or exert* or fit or fitness or train*)).ti,ab.
11.	((train* or fitness) adj2 program*).ti,ab.
12.	(gym* or workout*).ti,ab.
13.	(open air or yard or yards or open space* or outdoor*).ti,ab.
14.	or/5-13
15.	4 and 14
	Date parameters: see Table 2

128 Cochrane search terms

#1.	Standard population [G.2.1]
#2.	[mh ^"physical education and training"]
#3.	[mh ^"physical fitness"]
#4.	[mh ^"fitness centers"]
#5.	exercise*:ti,ab
#6.	(physical* near/2 (activit* or exert* or fit or fitness or train*)):ti,ab
#7.	((train* or fitness) near/2 program*):ti,ab
#8.	(gym* or workout*):ti,ab

#9.	(open air or yard or yards or open space* or outdoor*):ti,ab
#10.	{or #2-#9}
#11.	#1 and #10
	Date parameters: see Table 2

129 **PsycINFO search terms**

1.	Standard population [G.2.1]
2.	(su.exact.explode("physical activity") or su.exact("physical fitness") or su.exact("physical education") or ti,ab(exercise*) or ti,ab(physical* near/2 (activit* or exert* or fit or fitness or train*)) or ti,ab((train* or fitness) near/2 program*) or ti,ab(gym* or workout*) or ti,ab(open air or yard or yards or open space* or outdoor*))
3.	la.exact("English")
4.	1 and 2 and 3
	Date parameters: see Table 2

130 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	exercise*.ti,ab.
3.	(physical* adj2 (activit* or exert* or fit or fitness or train*)).ti,ab.
4.	((train* or fitness) adj2 program*).ti,ab.
5.	(gym* or workout*).ti,ab.
6.	(open air or yard or yards or open space* or outdoor*).ti,ab.
7.	or/2-6
8.	1 and 7
	Date parameters: see Table 2

131 **CINAHL search terms**

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	S1 not S2
S4.	Limit S3 to English language
S5.	(mh "exercise+") or (mh "physical fitness+") or (mh "physical education and training") or (mh "fitness centers")
S6.	exercise*
S7.	(physical* n2 (activit* or exert* or fit or fitness or train*))
S8.	((train* or fitness) n2 program*)
S9.	gym* or workout*
S10.	"open air" or yard or yards or open space* or outdoor*
S11.	S5 or S6 or S7 or S8 or S9 or S10
S12.	S4 and S11
	Date parameters: see Table 2

G.4.3.3 Promoting health and wellbeing - hygiene

133 **Medline search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2

4.	Limit 3 to English language
5.	oral health/
6.	exp hygiene/
7.	self care/
8.	exp oral hygiene/
9.	hygien*.ti,ab.
10.	((oral or dental) adj2 (health* or care*)).ti,ab.
11.	((person* or self) adj2 care).ti,ab.
12.	unhygien*.ti,ab.
13.	exp hand hygiene/
14.	shower*.ti,ab.
15.	or/5-14
16.	4 and 15
	Date parameters: see Table 2

134

Embase search terms

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	exp *personal hygiene/
6.	*hygiene/
7.	*self care/
8.	*hand washing/
9.	*bath/
10.	hygien*.ti,ab.
11.	((oral or dental) adj2 (health* or care*)).ti,ab.
12.	((person* or self) adj2 care).ti,ab.
13.	unhygien*.ti,ab.
14.	shower*.ti,ab.
15.	or/5-14
16.	4 and 15
	Date parameters: see Table 2

135

Cochrane search terms

#1.	Standard population [G.2.1]
#2.	[mh ^"oral health"]
#3.	[mh hygiene]
#4.	[mh ^"self care"]
#5.	[mh "oral hygiene"]
#6.	[mh "hand hygiene"]
#7.	hygien*:ti,ab
#8.	((oral or dental) near/2 (health* or care*)):ti,ab
#9.	((person* or self) near/2 care):ti,ab
#10.	unhygien*:ti,ab
#11.	shower*:ti,ab

#12.	{or #2-#11}
#13.	#1 and #12
	Date parameters: see Table 2

136 **PsycINFO search terms**

1.	Standard population [G.2.1]
2.	(su.exact.explode("oral health") or su.exact("hygiene") or su.exact("self care skills") or ti,ab(hygien*) or ti,ab((oral or dental) near/2 (health* or care*)) or ti,ab((person* or self) near/2 care) or ti,ab(unhygien*) or ti,ab(shower*))
3.	la.exact("English")
4.	1 and 2 and 3
	Date parameters: see Table 2

137 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	hygien*.ti,ab.
3.	((oral or dental) adj2 (health* or care*)).ti,ab.
4.	((person* or self) adj2 care).ti,ab.
5.	unhygien*.ti,ab.
6.	shower*.ti,ab.
7.	or/2-6
8.	1 and 7
	Date parameters: see Table 2

138 **CINAHL search terms**

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	S1 not S2
S4.	Limit S3 to English language
S5.	(mh "hygiene") or (mh "oral hygiene+") or (mh "bathing and baths") or (mh "dental hygiene") or (mh "personal care (omaha)") or (mh "self care") or (mh "handwashing")
S6.	((oral or dental) n2 (health* or care*))
S7.	((person* or self) n2 care)
S8.	hygien* or unhygien* or shower*
S9.	S5 or S6 or S7 or S8
S10.	S4 and S9
	Date parameters: see Table 2

G.4.394 Promoting health and wellbeing - nutrition

140 **Medline search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	exp diet/
6.	nutrition assessment/
7.	exp food services/

8.	diet*.ti,ab.
9.	(food* adj2 (choice or choose or option* or snack)).ti,ab.
10.	nutrition*.ti,ab.
11.	(health* adj2 (food* or option*)).ti,ab.
12.	(health* adj2 eat*).ti,ab.
13.	canteen*.ti,ab.
14.	or/5-13
15.	(food security or food insecurity).ti,ab.
16.	14 not 15
17.	4 and 16
	Date parameters: see Table 2

141 **Embase search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	*nutrition/ or exp *diet/
6.	*nutritional assessment/
7.	*food availability/ or *meal/
8.	*catering service/
9.	diet*.ti,ab.
10.	(food* adj2 (choice or choose or option* or snack)).ti,ab.
11.	nutrition*.ti,ab.
12.	(health* adj2 (food* or option*)).ti,ab.
13.	canteen*.ti,ab.
14.	(health* adj2 eat*).ti,ab.
15.	*dietary intake/
16.	or/5-15
17.	(food security or food insecurity).ti,ab.
18.	16 not 17
19.	4 and 18
	Date parameters: see Table 2

142 **Cochrane search terms**

#1.	Standard population [G.2.1]
#2.	[mh diet]
#3.	[mh ^"nutrition assessment"]
#4.	[mh "food services"]
#5.	diet*.ti,ab
#6.	(food* near/2 (choice or choose or option* or snack)):ti,ab
#7.	nutrition*:ti,ab
#8.	(health* near/2 (food* or option*)):ti,ab
#9.	(health* near/2 eat*):ti,ab
#10.	canteen*:ti,ab
#11.	{or #2-#10}

#12.	#1 and #11
	Date parameters: see Table 2

143 **PsycINFO search terms**

1.	Standard population [G.2.1]
2.	(su.exact("diets") or su.exact("food") or su.exact("nutrition") or ti,ab(diet*) or ti,ab(food* near/2 (choice or choose or option* or snack)) or ti,ab(nutrition*) or ti,ab(health* near/2 (food* or option*)) or ti,ab(health* near/2 eat*) or ti,ab(canteen))
3.	la.exact("English")
4.	1 and 2 and 3
	Date parameters: see Table 2

144 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	diet*.ti,ab.
3.	(food* adj2 (choice or choose or option* or snack)).ti,ab.
4.	nutrition*.ti,ab.
5.	(health* adj2 (food* or option*)).ti,ab.
6.	(health* adj2 eat*).ti,ab.
7.	canteen*.ti,ab.
8.	or/2-7
9.	1 and 8
	Date parameters: see Table 2

145 **CINAHL search terms**

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	S1 not S2
S4.	Limit S3 to English language
S5.	(mh "nutrition+") or (mh "nutritional assessment") or (mh "food services+")
S6.	diet* or nutrition* or canteen*
S7.	(health* n2 (food* or option* or eat*))
S8.	(food* n2 (choice or choose or option* or snack))
S9.	S5 or S6 or S7 or S8
S10.	S4 and S9
	Date parameters: see Table 2

G.4.465 Promoting health and wellbeing – sexual health

147 **Medline search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	reproductive health/
6.	sex education/
7.	exp contraception/
8.	exp contraceptive devices/

9.	rubber dams/
10.	sexually transmitted diseases/ed, pc
11.	((sexual or reproductive) adj health).ti,ab.
12.	contracept*.ti,ab.
13.	((dental or rubber) adj dam*).ti,ab.
14.	((std or sexually transmitted disease*) adj2 (prevent* or educat* or control* or program*)).ti,ab.
15.	((safe or unsafe) adj sex).ti,ab.
16.	(condom* adj3 (access* or availab* or provi* or free* or implement* or distribut* or educat* or control* or program*)).ti,ab.
17.	or/5-16
18.	4 and 17
	Date parameters: see Table 2

148 **Embase search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	*sexual health/
6.	*sexual education/
7.	exp *contraception/
8.	exp *contraceptive device/
9.	*cofferdam/
10.	*sexually transmitted disease/pc [Prevention]
11.	((sexual or reproductive) adj health).ti,ab.
12.	contracept*.ti,ab.
13.	((dental or rubber) adj dam*).ti,ab.
14.	((std or sexually transmitted disease*) adj2 (prevent* or educat* or control* or program*)).ti,ab.
15.	((safe or unsafe) adj sex).ti,ab.
16.	(condom* adj3 (access* or availab* or provi* or free* or implement* or distribut* or educat* or control* or program*)).ti,ab.
17.	or/5-16
18.	4 and 17
	Date parameters: see Table 2

149 **Cochrane search terms**

#1.	Standard population [G.2.1]
#2.	[mh ^"reproductive health"]
#3.	[mh ^"sex education"]
#4.	[mh contraception]
#5.	[mh "contraceptive devices"]
#6.	[mh ^"rubber dams"]
#7.	MeSH descriptor: [sexually transmitted diseases] explode all trees and with qualifier(s): [prevention & control - PC]
#8.	((sexual or reproductive) next health):ti,ab

#9.	contracept*:ti,ab
#10.	((dental or rubber) next dam*):ti,ab
#11.	((std or sexually transmitted disease*) near/2 (prevent* or educat* or control* or program*)):ti,ab
#12.	((safe or unsafe) next sex):ti,ab
#13.	(condom* near/3 (access* or availab* or provi* or free* or implement* or distribut* or educat* or control* or program*)):ti,ab
#14.	{or #2-#13}
#15.	#1 and #14
	Date parameters: see Table 2

150 **PsycINFO search terms**

1.	Standard population [G.2.1]
2.	(su.exact("safe sex") or su.exact("contraceptive devices") or su.exact("birth control") or su.exact("sexually transmitted diseases") or ti,ab((sexual or reproductive) near/4 health) or ti,ab(contracept*) or ti,ab((dental or rubber) near/4 dam*) or ti,ab((std or "sexually transmitted disease*") near/2 (prevent* or educat* or control* or program*)) or ti,ab((safe or unsafe) near/4 sex) or ti,ab(condom* near/3 (access* or availab* or provi* or free* or implement* or distribut* or educat* or control* or program*)))
3.	la.exact("English")
4.	1 and 2 and 3
	Date parameters: see Table 2

151 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	((sexual or reproductive) adj health).ti,ab.
3.	contracept*.ti,ab.
4.	((dental or rubber) adj dam*).ti,ab.
5.	((std or sexually transmitted disease*) adj2 (prevent* or educat* or control* or program*)).ti,ab.
6.	((safe or unsafe) adj sex).ti,ab.
7.	(condom* adj3 (access* or availab* or provi* or free* or implement* or distribut* or educat* or control* or program*)).ti,ab.
8.	or/2-7
9.	1 and 8
	Date parameters: see Table 2

152 **CINAHL search terms**

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	S1 not S2
S4.	Limit S3 to English language
S5.	(mh "sexual health") or (mh "sex education") or (mh "contraception") or (mh "contraceptive devices+") or (mh "rubber dams") or (mh "sexually transmitted diseases+/ed/pc")
S6.	sexual health or reproductive health
S7.	contracept* or dental dam* or rubber dam*
S8.	safe sex or unsafe sex
S9.	((std or sexually transmitted disease*) n2 (prevent* or educat* or control* or program*))
S10.	(condom* n3 (access* or availab* or provi* or free* or implement* or distribut* or educat* or

	control* or program*))
S11.	S5 or S6 or S7 or S8 or S9 or S10
	Date parameters: see Table 2

G.4.36 Promoting health and wellbeing - smoking

154 Medline search terms

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	"tobacco use cessation"/ or smoking cessation/
6.	exp "tobacco use cessation products"/
7.	smoking/pc
8.	"tobacco use"/pc
9.	((smok* or tobacco or cigarette*) adj4 (stop* or quit* or cessat* or cease* or free or contol* or abstinen* or abstain* or service* or prevent* or restrict* or reduc* or "give up" or "giving up" or "gave up" or ban or bans or program* or interven* or treat*)):ti,ab.
10.	or/5-9
11.	4 and 10
	Date parameters: see Table 2

155 Embase search terms

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	*smoking cessation/
6.	smoking cessation program/
7.	exp *"tobacco use"/pc [prevention]
8.	exp smoking regulation/
9.	((smok* or tobacco or cigarette*) adj4 (stop* or quit* or cessat* or cease* or free or contol* or abstinen* or abstain* or service* or prevent* or restrict* or reduc* or "give up" or "giving up" or "gave up" or ban or bans or program* or interven* or treat*)):ti,ab.
10.	or/5-9
11.	4 and 10
	Date parameters: see Table 2

156 Cochrane search terms

#1.	Standard population [G.2.1]
#2.	[mh ^"tobacco use cessation"]
#3.	[mh ^"smoking cessation"]
#4.	[mh "tobacco use cessation products"]
#5.	MeSH descriptor: [tobacco use] explode all trees and with qualifier(s): [prevention & control - PC]
#6.	((smok* or tobacco or cigarette*) near/4 (stop* or quit* or cessat* or cease* or free or contol* or abstinen* or abstain* or service* or prevent* or restrict* or reduc* or "give up" or "giving up" or "gave up" or ban or bans or program* or interven* or treat*)):ti,ab

#7.	{or #2-#6}
#8.	#1 and #7
	Date parameters: see Table 2

157 **PsycINFO search terms**

1.	Standard population [G.2.1]
2.	(su.exact("smoking cessation") or su.exact("nicotine withdrawal") or mjsub.exact.explode("tobacco smoking") or ti,ab((smok* or tobacco or cigarette*) near/4 (stop* or quit* or cessat* or cease* or free or contol* or abstinen* or abstain* or service* or prevent* or restrict* or reduc* or "give up" or "giving up" or "gave up" or ban or bans or program* or interven* or treat*)))
3.	la.exact("English")
4.	1 and 2 and 3
	Date parameters: see Table 2

158 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	(smok* or tobacco or cigarette*).ti,ab.
3.	1 and 2
	Date parameters: see Table 2

159 **CINAHL search terms**

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	S1 not S2
S4.	Limit S3 to English language
S5.	(mh "smoking cessation") or (mh "smoking/pc") or (mh "smoking cessation programs")
S6.	((smok* or tobacco or cigarette*) n4 (stop* or quit* or cessat* or cease* or free or contol* or abstinen* or abstain* or service* or prevent* or restrict* or reduc* or "give up" or "giving up" or "gave up" or ban or bans or program* or interven* or treat*))
S7.	S5 or S6
S8.	S4 and S7
	Date parameters: see Table 2

G1405 Medication management

161 Searches for the following three questions were run as one search:

- 162 • What are the most clinically and cost-effective methods for people to access medicines in prisons
163 to maximise adherence and good health outcomes and reduce inappropriate use?
- 164 • What are the most clinically and cost-effective methods for continuity of care for people to access
165 medication to maximise adherence and good health outcomes and reduce inappropriate use
166 when:
- 167 – coming into prison?
168 – being transferred between prisons?
169 – discharged from prison?
- 170 • What are the barriers and facilitators to ensuring access to medicines to maximise adherence and
171 good health outcomes and reduce inappropriate use when:
- 172 – coming into prison?
173 – in prison?

- 174 – being transferred between prisons?
175 – discharged from prison?

176 **Medline search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	exp medication errors/
6.	prescription drugs/
7.	exp prescriptions/
8.	exp prescription drug misuse/
9.	prescription drug diversion/
10.	((medic* or drug*) adj4 (access* or administ* or suppl* or prescri*)).ti,ab.
11.	((medic* or drug*) adj3 (possess* or self* or supervis*)).ti,ab.
12.	((medic* or drug*) adj4 (monit* or adher* or check* or review* or reconcil* or concord* or complian*)).ti,ab.
13.	formulary.ti,ab.
14.	((electronic* or computer*) adj2 prescri*).ti,ab.
15.	((medic* or drug*) adj3 (stock* or named or label* or unlabel* or bulk)).ti,ab.
16.	drug labeling/ or drug storage/
17.	(ward suppl* or ("out of hours" adj2 (suppl* or cupboard*))).ti,ab.
18.	((omit* or delay* or miss*) adj2 (dose* or drug* or medic*)).ti,ab.
19.	mandatory drug test*.ti,ab.
20.	((medic* or drug*) adj3 (continu* or transfer* or discharge*)).ti,ab.
21.	((medic* or prescri* drug*) adj3 abuse*).ti,ab.
22.	((medic* or drug*) adj3 (bully* or violen* or diver* or misuse* or inappropriat*)).ti,ab.
23.	medication systems/
24.	medication adherence/
25.	directly observed therapy/
26.	(direct* adj (observ* or administ*) adj2 therap*).ti,ab.
27.	(self administ* adj therap*).ti,ab.
28.	daart.ti,ab.
29.	depot medicat*.ti,ab.
30.	or/5-29
31.	4 and 30
	Date parameters: see Table 2

177 **Embase search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	((medic* or drug*) adj4 (access* or administ* or suppl* or prescri*)).ti,ab.
6.	((medic* or drug*) adj3 (possess* or self* or supervis*)).ti,ab.
7.	((medic* or drug*) adj4 (monit* or adher* or check* or review* or reconcil* or concord* or complian*)).ti,ab.

8.	formulary.ti,ab.
9.	((electronic* or computer*) adj2 prescri*).ti,ab.
10.	((medic* or drug*) adj3 (stock* or named or label* or unlabel* or bulk)).ti,ab.
11.	(ward suppl* or ("out of hours" adj2 (suppl* or cupboard*))).ti,ab.
12.	((omit* or delay* or miss*) adj2 (dose* or drug* or medic*).ti,ab.
13.	mandatory drug test*.ti,ab.
14.	((medic* or drug*) adj3 (continu* or transfer* or discharge*).ti,ab.
15.	((medic* or prescri* drug*) adj3 abuse*).ti,ab.
16.	((medic* or drug*) adj3 (bully* or violen* or diver* or misuse* or inappropriat*).ti,ab.
17.	*medication error/
18.	*prescription drug/
19.	exp *"drug use"/
20.	*drug misuse/ or prescription drug diversion/
21.	*drug labeling/ or *drug storage/
22.	*medication compliance/
23.	directly observed therapy/
24.	*drug self administration/
25.	(direct* adj (observ* or administ*) adj2 therap*).ti,ab.
26.	(self administ* adj therap*).ti,ab.
27.	daart.ti,ab.
28.	depot medicat*.ti,ab.
29.	or/5-28
30.	4 and 29
	Date parameters: see Table 2

178 **Cochrane search terms**

#1.	Standard population [G.2.1]
#2.	((medic* or drug*) near/4 (access* or administ* or suppl* or prescri*)):ti,ab
#3.	((medic* or drug*) near/3 (possess* or self* or supervis*)):ti,ab
#4.	((medic* or drug*) near/4 (monit* or adher* or check* or review* or reconcil* or concord* or complian*)):ti,ab
#5.	formulary:ti,ab
#6.	((electronic* or computer*) near/2 prescri*):ti,ab
#7.	((medic* or drug*) near/3 (stock* or named or label* or unlabel* or bulk)):ti,ab
#8.	(ward next suppl* or ("out of hours" near/2 (suppl* or cupboard*)):ti,ab
#9.	((omit* or delay* or miss*) near/2 (dose* or drug* or medic*)):ti,ab
#10.	mandatory next drug next test*:ti,ab
#11.	((medic* or drug*) near/3 (continu* or transfer* or discharge*)):ti,ab
#12.	((medic* or prescri* drug*) near/3 abuse*):ti,ab
#13.	((medic* or drug*) near/3 (bully* or violen* or diver* or misuse* or inappropriat*)):ti,ab
#14.	[mh ^"medication adherence"]
#15.	[mh ^"medication systems"]
#16.	[mh ^"drug storage"]
#17.	[mh ^"drug labeling"]
#18.	[mh ^"prescription drug diversion"]
#19.	[mh "prescription drug misuse"]

#20.	[mh prescriptions]
#21.	[mh ^"prescription drugs"]
#22.	[mh "medication errors"]
#23.	[mh ^"directly observed therapy"]
#24.	(direct* next (observ* or administ*) near/2 therap*):ti,ab
#25.	(self next administ* next therap*):ti,ab
#26.	daart:ti,ab
#27.	depot next medicat*:ti,ab
#28.	{or #2-#27}
#29.	#1 and #28
	Date parameters: see Table 2

179 **PsycINFO search terms**

1.	Standard population [G.2.1]
2.	(ti,ab((medic* or drug*) near/4 (access* or administ* or suppl* or prescri*)) or ti,ab((medic* or drug*) near/3 (possess* or self* or supervis*)) or ti,ab((medic* or drug*) near/4 (monit* or adher* or check* or review* or reconcil* or concord* or complian*)) or ti,ab((medic* or drug*) near/4 (monit* or adher* or check* or review* or reconcil* or concord* or complian*)) or ti,ab((electronic* or computer*) near/2 prescri*) or ti,ab((medic* or drug*) near/3 (stock* or named or label* or unlabel* or bulk)) or ti,ab(ward suppl* or ("out of hours" near/2 (suppl* or cupboard*))) or ti,ab((omit* or delay* or miss*) near/2 (dose* or drug* or medic*)) or ti,ab("mandatory drug test*") or ti,ab((medic* or drug*) near/3 (continu* or transfer* or discharge*)) or ti,ab((medic* or "prescri* drug*") near/3 abuse*) or ti,ab((medic* or drug*) near/3 (bully* or violen* or diver* or misuse* or inappropriat*)) or su.exact("prescribing (drugs)") or su.exact("prescription drugs") or ti,ab(direct* near/4 (observ* or administ*) near/2 therap*) or ti,ab(self administ* near/4 therap*) or ti,ab(daart) or ti,ab("depot medicat*"))
3.	la.exact("English")
4.	1 and 2 and 3
	Date parameters: see Table 2

180 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	((medic* or drug*) adj4 (access* or administ* or suppl* or prescri*)):ti,ab.
3.	((medic* or drug*) adj3 (possess* or self* or supervis*)):ti,ab.
4.	((medic* or drug*) adj4 (monit* or adher* or check* or review* or reconcil* or concord* or complian*)):ti,ab.
5.	formulary.ti,ab.
6.	((electronic* or computer*) adj2 prescri*):ti,ab.
7.	((medic* or drug*) adj3 (stock* or named or label* or unlabel* or bulk)):ti,ab.
8.	(ward suppl* or ("out of hours" adj2 (suppl* or cupboard*)):ti,ab.
9.	((omit* or delay* or miss*) adj2 (dose* or drug* or medic*)):ti,ab.
10.	mandatory drug test*.ti,ab.
11.	((medic* or drug*) adj3 (continu* or transfer* or discharge*)):ti,ab.
12.	((medic* or drug*) adj3 (bully* or violen* or diver* or misuse* or inappropriat*)):ti,ab.
13.	(direct* adj (observ* or administ*) adj2 therap*):ti,ab.
14.	(self administ* adj therap*):ti,ab.
15.	daart.ti,ab.
16.	depot medicat*.ti,ab.

17.	or/2-16
18.	1 and 17
	Date parameters: see Table 2

181 **CINAHL search terms**

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	1 not 2
S4.	Limit 3 to English language
S5.	((medic* or drug*) n4 (access* or administ* or suppl* or prescri*))
S6.	((medic* or drug*) n3 (possess* or self* or supervis*))
S7.	((medic* or drug*) n4 (monit* or adher* or check* or review* or reconcil* or concord* or complian*))
S8.	formulary
S9.	((electronic* or computer*) n2 prescri*)
S10.	((medic* or drug*) n3 (stock* or named or label* or unlabel* or bulk))
S11.	(ward suppl* or ("out of hours" n2 (suppl* or cupboard*)))
S12.	((omit* or delay* or miss*) n2 (dose* or drug* or medic*))
S13.	mandatory drug test*
S14.	((medic* or drug*) n3 (continu* or transfer* or discharge*))
S15.	((medic* or prescri* drug*) n3 abuse*)
S16.	((medic* or drug*) n3 (bully* or violen* or diver* or misuse* or inappropriat*))
S17.	(mh "medication errors+") or (mh "prescriptions, drug") or (mh "drugs, prescription") or (mh "drug labeling") or (mh "drug storage") or (mh "medication systems") or (mh "medication compliance")
S18.	(mh "directly observed therapy")
S19.	direct* observ* therap* OR direct* administ* therap*
S20.	self* administ* therap*
S21.	daart
S22.	depot medicat*
S23.	S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14 or S15 or S16 or S17 or S18 or S19 or S20 or S21 or S22
S24.	S4 and S23
	Date parameters: see Table 2

G1426 Deteriorating health

- 183 • What are the barriers and facilitators to prison staff, healthcare workers and prisoners for
184 recognising deteriorating health?

185 **Medline search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	monit*.ti,ab.
6.	pain/
7.	pain*.ti,ab.

8.	exp consumer health information/
9.	patient acceptance of health care/
10.	((help* or health*) adj2 seek*).ti,ab.
11.	*health education/
12.	*health knowledge, attitudes, practice/
13.	*attitude of health personnel/
14.	((staff or officer* or governor*) adj4 (preference* or satisfaction or satisfied or satisfaction or satisfy or experience* or need* or facilitator or facilitation or facilitate or barrier* or relation* or attitude* or reticence*).ti,ab.
15.	((health* or condition*) adj3 (deteriorat* or worse* or poor* or inform* or train* or educat* or observ* or report* or support* or advice* or advise*).ti,ab.
16.	(ill health or unwell or sick).ti,ab.
17.	((doctor* or healthcare professional* or physician* or nurse* or clinic* or hospital*) adj6 (access* or want* or need* or desire*).ti,ab.
18.	(death* adj3 prevent*).ti,ab.
19.	((long term or chronic) adj2 (condition* or disease* or illness*).ti,ab.
20.	or/5-19
21.	4 and 20
22.	Study filters QUAL (G.3.7)
23.	21 and 22
	Date parameters: see Table 2

186

Embase search terms

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	exp *patient monitoring/
6.	monit*.ti,ab.
7.	*pain/
8.	pain*.ti,ab.
9.	*consumer health information/ or *patient information/
10.	*patient attitude/
11.	*help seeking behavior/
12.	((help* or health*) adj2 seek*).ti,ab.
13.	*health education/
14.	*attitude to health/
15.	exp *health personnel attitude/
16.	((staff or officer* or governor*) adj4 (preference* or satisfaction or satisfied or satisfaction or satisfy or experience* or need* or facilitator or facilitation or facilitate or barrier* or relation* or attitude* or reticence*).ti,ab.
17.	((health* or condition*) adj3 (deteriorat* or worse* or poor* or inform* or train* or educat* or observ* or report* or support* or advice* or advise*).ti,ab.
18.	(ill health or unwell or sick).ti,ab.
19.	((doctor* or healthcare professional* or physician* or nurse* or clinic* or hospital*) adj6 (access* or want* or need* or desire*).ti,ab.
20.	(death* adj3 prevent*).ti,ab.

21.	((long term or chronic) adj2 (condition* or disease* or illness*)):ti,ab.
22.	or/5-21
23.	4 and 22
24.	Study filters QUAL (G.3.7)
25.	23 and 24
	Date parameters: see Table 2

187 **Cochrane search terms**

#1.	Standard population [G.2.1]
#2.	monit*:ti,ab
#3.	[mh ^pain]
#4.	pain*:ti,ab
#5.	[mh "consumer health information"]
#6.	[mh ^"patient acceptance of health care"]
#7.	((help* or health*) near/2 seek*):ti,ab
#8.	[mh ^"health education"]
#9.	[mh ^"health knowledge, attitudes, practice"]
#10.	[mh ^"attitude of health personnel"]
#11.	((staff or officer* or governor*) near/4 (preference* or satisfaction or satisfied or satisfaction or satisfy or experience* or need* or facilitator or facilitation or facilitate or barrier* or relation* or attitude* or reticence*)):ti,ab
#12.	((health* or condition*) near/3 (deteriorat* or worse* or poor* or inform* or train* or educat* or observ* or report* or support* or advice* or advise*)):ti,ab
#13.	(ill health or unwell or sick):ti,ab
#14.	((doctor* or healthcare next professional* or physician* or nurse* or clinic* or hospital*) near/6 (access* or want* or need* or desire*)):ti,ab
#15.	(death* near/3 prevent*):ti,ab
#16.	((long term or chronic) near/2 (condition* or disease* or illness*)):ti,ab
#17.	{or #2-#16}
#18.	#1 and #17
	Date parameters: see Table 2

188 **PsycINFO search terms**

1.	Standard population [G.2.1]
2.	(mjsub.exact("monitoring") or ti,ab(monit*) or su.exact("pain") or ti,ab(pain*) or mjsub.exact("health education") or su.exact("client attitudes") or su.exact.explode("health personnel attitudes") or su.exact("physical illness (attitudes toward)") or ti,ab((help* or health*) near/2 seek*) or su.exact.explode("help seeking behavior") or su.exact("health knowledge") or su.exact("health attitudes") or ti,ab((staff or officer* or governor*) near/4 (preference* or satisfaction or satisfied or satisfaction or satisfy or experience* or need* or facilitator or facilitation or facilitate or barrier* or relation* or attitude* or reticence*)) or ti,ab((health* or condition*) near/3 (deteriorat* or worse* or poor* or inform* or train* or educat* or observ* or report* or support* or advice* or advise*)) or ti,ab(ill-health or unwell or sick) or ti,ab((doctor* or healthcare) near/6 (access* or want* or need* or desire*)) or ti,ab((professional* or physician* or nurse* or clinic* or hospital*) near/6 (access* or want* or need* or desire*)) or ti,ab(death* near/3 prevent*) or ti,ab(("long-term" or chronic) near/2 (condition* or disease* or illness*)))
3.	la.exact("English")
4.	1 and 2 and 3
5.	Study filters QUAL (G.3.7)

6.	4 and 5
	Date parameters: see Table 2

189 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	monit*.ti,ab.
3.	pain*.ti,ab.
4.	((help* or health*) adj2 seek*).ti,ab.
5.	((staff or officer* or governor*) adj4 (preference* or satisfaction or satisfied or satisfaction or satisfy or experience* or need* or facilitator or facilitation or facilitate or barrier* or relation* or attitude* or reticence*).ti,ab.
6.	((health* or condition*) adj3 (deteriorat* or worse* or poor* or inform* or train* or educat* or observ* or report* or support* or advice* or advise*).ti,ab.
7.	(ill health or unwell or sick).ti,ab.
8.	((doctor* or healthcare professional* or physician* or nurse* or clinic* or hospital*) adj6 (access* or want* or need* or desire*).ti,ab.
9.	(death* adj3 prevent*).ti,ab.
10.	((long term or chronic) adj2 (condition* or disease* or illness*).ti,ab.
11.	or/2-10
12.	1 and 11
13.	Study filters QUAL (G.3.7)
14.	12 and 13
	Date parameters: see Table 2

190 **CINAHL search terms**

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	S1 not S2
S4.	Limit S3 to English language
S5.	(mh "pain") or (mh "consumer health information") or (mh "health information") or (mh "attitude of health personnel+") or (mh "consumer attitudes") or (mh "patient attitudes") or (mh "health knowledge") or (mh "health education") or (mh "help seeking behavior")
S6.	monit* OR pain*
S7.	help* n2 seek* OR health* n2 seek*
S8.	((staff or officer* or governor*) n4 (preference* or satisfaction or satisfied or satisfaction or satisfy or experience* or need* or facilitator or facilitation or facilitate or barrier* or relation* or attitude* or reticence*))
S9.	((health* or condition*) n3 (deteriorat* or worse* or poor* or inform* or train* or educat* or observ* or report* or support* or advice* or advise*))
S10.	ill health OR unwell OR sick
S11.	((doctor* or healthcare professional* or physician* or nurse* or clinic* or hospital*) n6 (access* or want* or need* or desire*))
S12.	death* n3 prevent*
S13.	((long term or chronic) n2 (condition* or disease* or illness*))
S14.	S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13
S15.	S4 and S14
S16.	Study filters QUAL (G.3.7)
S17.	S15 and S16

	Date parameters: see Table 2
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G1417 Emergency management

- 192 • What are the barriers and facilitators for prison staff, healthcare workers and prisoners in
193 managing emergency situations including first person on the scene?

194 Medline search terms

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	emergency medical technicians/
6.	emergency medical services/
7.	((emergency or rescue) adj2 (respon* or worker* or team* or service technician or paramedic* or medic* or personnel)).ti,ab.
8.	first on the scene.ti,ab.
9.	first respon*.ti,ab.
10.	exp emergency treatment/
11.	((medical or emergenc*) adj2 (urgent or assess* or incident* or situation* or accident* or care or treatment* or response* or intervention* or trauma)).ti,ab.
12.	ambulances/
13.	((communicat* or alert* or contact or phon* or call*) adj4 (emergency service* or ambulance* or emergency medical service* or "911" or "999" or "112" or "111")).ti,ab.
14.	(medical adj4 (protocol* or policy or policies or code* of conduct)).ti,ab.
15.	(first aid or first-aid or basic life support or cpr or cardiopulmonary compression* or aed or defib*).ti,ab.
16.	(medic* equipment or first aid or first-aid or grab bag or grab-bag).ti,ab.
17.	naloxone/ or naloxone.ti,ab.
18.	or/5-17
19.	4 and 18
	Date parameters: see Table 2

195 Embase search terms

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	rescue personnel/
6.	emergency health service/
7.	((emergency or rescue) adj2 (respon* or worker* or team* or service technician or paramedic* or medic* or personnel)).ti,ab.
8.	first on the scene.ti,ab.
9.	first respon*.ti,ab.
10.	exp emergency treatment/
11.	((medical or emergenc*) adj2 (urgent or assess* or incident* or situation* or accident* or care or treatment* or response* or intervention* or trauma)).ti,ab.
12.	ambulance/
13.	((communicat* or alert* or contact or phon* or call*) adj4 (emergency service* or ambulance*

	or emergency medical service* or "911" or "999" or "112" or "111"))).ti,ab.
14.	(medical adj4 (protocol* or policy or policies or code* of conduct)).ti,ab.
15.	(first aid or first-aid or basic life support or cpr or cardiopulmonary compression* or aed or defib*).ti,ab.
16.	(medic* equipment or first aid or first-aid or grab bag or grab-bag).ti,ab.
17.	naloxone/ or naloxone.ti,ab.
18.	or/5-17
19.	4 and 18
	Date parameters: see Table 2

196

Cochrane search terms

#1.	Standard population [G.2.1]
#2.	MeSH descriptor: [emergency medical technicians] explode all trees
#3.	MeSH descriptor: [emergency medical services] this term only
#4.	((emergency or rescue) near/2 (respon* or worker* or team* or service technician or paramedic* or medic* or personnel)):ti,ab
#5.	first on the scene:ti,ab
#6.	first respon*:ti,ab
#7.	MeSH descriptor: [emergency treatment] explode all trees
#8.	((medical or emergenc*) near/2 (urgent or assess* or incident* or situation* or accident* or care or treatment* or response* or intervention* or trauma)):ti,ab
#9.	MeSH descriptor: [ambulances] this term only
#10.	((communicat* or alert* or contact or phon* or call*) near/4 (emergency service* or ambulance* or emergency medical service* or "911" or "999" or "112" or "111")):ti,ab
#11.	(medical near/4 (protocol* or policy or policies or code* of conduct)):ti,ab
#12.	(first aid or first-aid or basic life support or cpr or cardiopulmonary compression* or aed or defib*):ti,ab
#13.	(medic* equipment or first aid or first-aid or grab bag or grab-bag):ti,ab
#14.	MeSH descriptor: [naloxone] this term only
#15.	naloxone:ti,ab
#16.	{or #2-#15}
#17.	#1 and #16
	Date parameters: see Table 2

197

PsycINFO search terms

1.	Standard population [G.2.1]
2.	(su.exact("emergency services") or su.exact("first responders") or su.exact("rescue workers") or su.exact("naloxone") or ti,ab((medical or emergenc*) near/2 (urgent or assess* or incident* or situation* or accident* or care or treatment* or response* or intervention* or trauma)) or ti,ab(first aid or first-aid or basic life support or cpr or cardiopulmonary compression* or aed or defib*) or ti,ab(medic* equipment or first aid or first-aid or grab bag or grab-bag) or ti,ab(naloxone) or ti,ab((emergency or rescue) near/2 (respon* or worker* or team* or "service technician" or paramedic* or medic* or personnel)) or ti,ab(medical near/4 (protocol* or policy or policies or "code* of conduct")) or ti,ab((communicat* or alert* or contact or phon* or call*) near/4 ("emergency service*" or ambulance* or "emergency medical service*" or "911" or "999" or "112" or "111"))))
3.	la.exact("English")
4.	1 and 2 and 3
	Date parameters: see Table 2

198 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	((emergency or rescue) adj2 (respon* or worker* or team* or service technician or paramedic* or medic* or personnel)).ti,ab.
3.	first respon*.ti,ab.
4.	((medical or emergenc*) adj2 (urgent or assess* or incident* or situation* or accident* or care or treatment* or response* or intervention* or trauma)).ti,ab.
5.	((communicat* or alert* or contact or phon* or call*) adj4 (emergency service* or ambulance* or emergency medical service* or "911" or "999" or "112" or "111")).ti,ab.
6.	(medical adj4 (protocol* or policy or policies or code* of conduct)).ti,ab.
7.	(first aid or first-aid or basic life support or cpr or cardiopulmonary compression* or aed or defib*).ti,ab.
8.	(medic* equipment or first aid or first-aid or grab bag or grab-bag).ti,ab.
9.	naloxone.ti,ab.
10.	or/2-9
11.	1 and 10
	Date parameters: see Table 2

199 **CINAHL search terms**

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	S1 not S2
S4.	Limit S3 to English language
S5.	(mh "emergency medical technicians") or (mh "emergency medical services") or (mh "emergency treatment+") or (mh "ambulances") or (mh "naloxone")
S6.	((emergency or rescue) n2 (respon* or worker* or team* or service technician or paramedic* or medic* or personnel))
S7.	first on the scene
S8.	first respon*
S9.	((medical or emergenc*) n2 (urgent or assess* or incident* or situation* or accident* or care or treatment* or response* or intervention* or trauma))
S10.	((communicat* or alert* or contact or phon* or call*) n4 (emergency service* or ambulance* or emergency medical service* or "911" or "999" or "112" or "111"))
S11.	(medical n4 (protocol* or policy or policies or code* of conduct))
S12.	(first aid or first-aid or basic life support or cpr or cardiopulmonary compression* or aed or defib*)
S13.	(medic* equipment or first aid or first-aid or grab bag or grab-bag)
S14.	naloxone
S15.	S5 or S6 or S7 or S8 or S9 or S10 or S11 or S12 or S13 or S14
S16.	S4 and S15
	Date parameters: see Table 2

G2408 Continuity of healthcare - patient records

- 201 • What are the most clinically and cost-effective systems to manage patient records, to ensure
202 continuity of healthcare of people moving from one prison to another, or between prison and the
203 community or hospital?

204 **Medline search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	documentation/
6.	"forms and records control"/
7.	medical records/ or health records, personal/ or medical record linkage/ or medical records, problem-oriented/ or exp medical records systems, computerized/
8.	information systems/ or health information systems/ or hospital information systems/ or medical order entry systems/ or integrated advanced information management systems/ or management information systems/ or clinical laboratory information systems/ or clinical pharmacy information systems/ or database management systems/ or operating room information systems/ or radiology information systems/ or reminder systems/
9.	((patient* or prisoner* or health* or medical or care) adj2 (record* or document* or note* or chart* or file*)).ti,ab.
10.	((discharge* or release* or transfer* or transport*) adj2 (summar* or letter* or record* or note* or document*)).ti,ab.
11.	((electr* or phone* or telephone* or email* or e-mail*) adj2 (record* or document* or communicat*)).ti,ab.
12.	((record* or note*) adj2 (keep* or communicat* or share* or system*)).ti,ab.
13.	(system-1 or system1 or systemone or system-one or systmone or systm-one or emis or oasis).ti,ab.
14.	or/5-13
15.	4 and 15
16.	Study filters RCT (G.3.2) or SR (G.3.3) or OBS (G.3.6)
17.	16 and 17
	Date parameters: see Table 2

205 **Embase search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	*documentation/ or *medical documentation/ or *medical order/ or *medical record/ or *electronic medical record/
6.	*information system/ or *computerized provider order entry/ or *electronic prescribing/ or *decision support system/ or *hospital information system/ or *medical information system/ or *nursing information system/ or *reminder system/ or *computer system/
7.	*medical informatics/
8.	((patient* or prisoner* or health* or medical or care) adj2 (record* or document* or note* or chart* or file*)).ti,ab.
9.	((discharge* or release* or transfer* or transport*) adj2 (summar* or letter* or record* or note* or document*)).ti,ab.
10.	((electr* or phone* or telephone* or email* or e-mail*) adj2 (record* or document* or communicat*)).ti,ab.
11.	((record* or note*) adj2 (keep* or communicat* or share* or system*)).ti,ab.
12.	(system-1 or system1 or systemone or system-one or systmone or systm-one or emis or oasis).ti,ab.
13.	or/5-12

14.	4 and 13
15.	Study filters RCT (G.3.2) or SR (G.3.3) or OBS (G.3.6)
	Date parameters: see Table 2

206

Cochrane search terms

#1.	Standard population [G.2.1]
#2.	[mh ^documentation]
#3.	[mh ^"forms and records control"]
#4.	[mh ^"medical records"]
#5.	[mh ^"health records, personal"]
#6.	[mh ^"medical record linkage"]
#7.	[mh ^"medical records, problem-oriented"]
#8.	[mh "medical records systems, computerized"]
#9.	[mh ^"information systems"]
#10.	[mh ^"health information systems"]
#11.	[mh ^"hospital information systems"]
#12.	[mh ^"medical order entry systems"]
#13.	[mh ^"integrated advanced information management systems"]
#14.	[mh ^"management information systems"]
#15.	[mh ^"clinical laboratory information systems"]
#16.	[mh ^"clinical pharmacy information systems"]
#17.	[mh ^"database management systems"]
#18.	[mh ^"operating room information systems"]
#19.	[mh ^"radiology information systems"]
#20.	[mh ^"reminder systems"]
#21.	((patient* or prisoner* or health* or medical or care) near/2 (record* or document* or note* or chart* or file*)):ti,ab
#22.	((discharge* or release* or transfer* or transport*) near/2 (summar* or letter* or record* or note* or document*)):ti,ab
#23.	((electr* or phone* or telephone* or email* or e-mail*) near/2 (record* or document* or communicat*)):ti,ab
#24.	((record* or note*) near/2 (keep* or communicat* or share* or system*)):ti,ab
#25.	(system-1 or system1 or systemone or system-one or systmone or systm-one or emis or oasis):ti,ab
#26.	{or #2-#25}
#27.	#1 and #26
	Date parameters: see Table 2

207

PsycINFO search terms

1.	Standard population [G.2.1]
2.	(su.exact.explode("medical records") or su.exact("information systems") or ti,ab((patient* or prisoner* or health* or medical or care) near/2 (record* or document* or note* or chart* or file*)) or ti,ab((discharge* or release* or transfer* or transport*) near/2 (summar* or letter* or record* or note* or document*)) or ti,ab((electr* or phone* or telephone* or email* or e-mail*) near/2 (record* or document* or communicat*)) or ti,ab((record* or note*) near/2 (keep* or communicat* or share* or system*)) or ti,ab(system-1 or system1 or systemone or system-one or systmone or systm-one or emis or oasis))
3.	la.exact("English")

4.	1 and 2 and 3
5.	Study filters RCT (G.3.2) or SR (G.3.3) or OBS (G.3.6)
6.	4 and 5
	Date parameters: see Table 2

208 **Social Policy and Practice search terms**

1.	Standard population [G.2.1]
2.	((patient* or prisoner* or health* or medical or care) adj2 (record* or document* or note* or chart* or file*)).ti,ab.
3.	((discharge* or release* or transfer* or transport*) adj2 (summar* or letter* or record* or note* or document*)).ti,ab.
4.	((electr* or phone* or telephone* or email* or e-mail*) adj2 (record* or document* or communicat*)).ti,ab.
5.	((record* or note*) adj2 (keep* or communicat* or share* or system*)).ti,ab.
6.	(system-1 or system1 or systemone or system-one or systmone or systm-one or emis or oasis).ti,ab.
7.	or/2-6
8.	1 and 7
	Date parameters: see Table 2

209 **CINAHL search terms**

S1.	Standard population [G.2.1]
S2.	Excluded study designs and publication types [G.3.1]
S3.	1 not 2
S4.	Limit 3 to English language
S5.	(mh "documentation") or (mh "medical records+") or (mh "information systems+")
S6.	((patient* or prisoner* or health* or medical or care) n2 (record* or document* or note* or chart* or file*))
S7.	((discharge* or release* or transfer* or transport*) n2 (summar* or letter* or record* or note* or document*))
S8.	((electr* or phone* or telephone* or email* or e-mail*) n2 (record* or document* or communicat*))
S9.	((record* or note*) n2 (keep* or communicat* or share* or system*))
S10.	(system-1 or system1 or systemone or system-one or systmone or systm-one or emis or oasis)
S11.	S5 or S6 or S7 or S8 or S9 or S10
S12.	S4 and S11
	Date parameters: see Table 2

210 **G.5 Health economics search**

G.5.1 Health economic (HE) reviews

212 Economic searches were conducted in Medline, Embase, HEED, and NHS EED and HTA via the CRD
213 interface.

214 **Medline & Embase search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2

4.	Limit 3 to English language
5.	Study filter HE (G.3.4)
6.	4 and 5
	Date parameters: 2013 – 14 January 2016

215 **CRD search terms**

#1.	MeSH DESCRIPTOR prisons IN NHSEED,HTA
#2.	MeSH DESCRIPTOR prisoners EXPLODE ALL TREES IN NHSEED,HTA
#3.	MeSH DESCRIPTOR criminals IN NHSEED,HTA
#4.	((correctional or correction or custodial) adj2 (facilit* or setting* or institut* or centre or center or population)) IN NHSEED, HTA
#5.	(remand adj2 (prison* or population or setting)) IN NHSEED, HTA
#6.	((young* or youth* or juvenile*) adj3 (institut* or facilit*)) IN NHSEED, HTA
#7.	(inmate* or prison* or offender* or jail* or gaol or gaols or penitentiary*) IN NHSEED, HTA
#8.	((criminal* or incarcerat*) adj2 (population* or person* or people)) IN NHSEED, HTA
#9.	((forensic adj2 (unit or units))) IN NHSEED, HTA
#10.	((low or medium or region* or high or environment* or centre* or center*) adj2 secur*) IN NHSEED, HTA
#11.	((police adj4 custod*)) IN NHSEED, HTA
#12.	((detention adj2 (place* or centre* or center*))) IN NHSEED, HTA
#13.	((immigration or immigrant* or asylum) adj3 (detention or detain* or centre* or center* or hold* or unit or units or facilit*)) IN NHSEED, HTA
#14.	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13
	Date parameters: Inception – 14 January 2016

216 **HEED search terms**

1.	ax=prison* or criminal* or inmate* or offender* or jail* or gaol or gaols or penitentiary*
2.	ax=correctional or custodial
3.	ax=remand
4.	ax=incarcerat*
5.	cs=1 or 2 or 3 or 4
	Date parameters: Inception – 05 December 2014

G5.2 Quality of life (QOL) reviews

218 Economic searches were conducted in Medline and Embase only.

219 **Medline & Embase search terms**

1.	Standard population [G.2.1]
2.	Excluded study designs and publication types [G.3.1]
3.	1 not 2
4.	Limit 3 to English language
5.	Study filter QOL (G.3.5)
6.	4 and 5
	Date parameters: see Table 2

220 G.6 PubMed epub search

221 A search was run in PubMed to identify electronic, ahead of print or 'online early' publications that
222 are in the public domain but would not yet have been included in Medline.

223 PubMed search terms

#1.	(criminal*[tiab] or incarcerat*[tiab] or inmate*[tiab] or prison*[tiab] or offender*[tiab] or jail*[tiab] or gaol[tiab] or gaols[tiab] or penitentiary*[tiab])
#2.	(animals[tiab] or animal[tiab] or mice[tiab] or mus[tiab] or mouse[tiab] or murine[tiab] or woodmouse[tiab] or rats[tiab] or rat[tiab] or murinae[tiab] or muridae[tiab] or cottonrat[tiab] or cottonrats[tiab] or hamster[tiab] or hamsters[tiab] or cricetinae[tiab] or rodentia[tiab] or rodent[tiab] or rodents[tiab] or pigs[tiab] or pig[tiab] or swine[tiab] or swines[tiab] or piglets[tiab] or piglet[tiab] or boar[tiab] or boars[tiab] or "sus scrofa"[tiab] or ferrets[tiab] or ferret[tiab] or polecat[tiab] or polecats[tiab] or "mustela putorius"[tiab] or "guinea pigs"[tiab] or "guinea pig"[tiab] or cavia[tiab] or callithrix[tiab] or marmoset[tiab] or marmosets[tiab] or cebuella[tiab] or hapale[tiab] or octodon[tiab] or chinchilla[tiab] or chinchillas[tiab] or gerbillinae[tiab] or gerbil[tiab] or gerbils[tiab] or jird[tiab] or jirds[tiab] or merione[tiab] or meriones[tiab] or rabbits[tiab] or rabbit[tiab] or hares[tiab] or hare[tiab] or diptera[tiab] or flies[tiab] or fly[tiab] or dipteral[tiab] or drosophila[tiab] or drosophilidae[tiab] or cats[tiab] or cat[tiab] or carus[tiab] or felis[tiab] or nematoda[tiab] or nematode[tiab] or nematoda[tiab] or nematode[tiab] or nematodes[tiab] or sipunculida[tiab] or dogs[tiab] or dog[tiab] or canine[tiab] or canines[tiab] or canis[tiab] or sheep[tiab] or sheeps[tiab] or mouflon[tiab] or mouflons[tiab] or ovis[tiab] or goats[tiab] or goat[tiab] or capra[tiab] or capras[tiab] or rupicapra[tiab] or chamois[tiab] or haplorhini[tiab] or monkey[tiab] or monkeys[tiab] or anthropoidea[tiab] or anthropoids[tiab] or saguinus[tiab] or tamarin[tiab] or tamarins[tiab] or leontopithecus[tiab] or hominidae[tiab] or ape[tiab] or apes[tiab] or pan[tiab] or paniscus[tiab] or "pan paniscus"[tiab] or bonobo[tiab] or bonobos[tiab] or troglodytes[tiab] or "pan troglodytes"[tiab] or gibbon[tiab] or gibbons[tiab] or siamang[tiab] or siamangs[tiab] or nomascus[tiab] or symphalangus[tiab] or chimpanzee[tiab] or chimpanzees[tiab] or prosimians[tiab] or "bush baby"[tiab] or prosimian[tiab] or bush babies[tiab] or galagos[tiab] or galago[tiab] or pongidae[tiab] or gorilla[tiab] or gorillas[tiab] or pongo[tiab] or pygmaeus[tiab] or "pongo pygmaeus"[tiab] or orangutans[tiab] or pygmaeus[tiab] or lemur[tiab] or lemurs[tiab] or lemuridae[tiab] or horse[tiab] or horses[tiab] or pongo[tiab] or equus[tiab] or cow[tiab] or calf[tiab] or bull[tiab] or chicken[tiab] or chickens[tiab] or gallus[tiab] or quail[tiab] or bird[tiab] or birds[tiab] or quails[tiab] or poultry[tiab] or poultries[tiab] or fowl[tiab] or fowls[tiab] or reptile[tiab] or reptilia[tiab] or reptiles[tiab] or snakes[tiab] or snake[tiab] or lizard[tiab] or lizards[tiab] or alligator[tiab] or alligators[tiab] or crocodile[tiab] or crocodiles[tiab] or turtle[tiab] or turtles[tiab] or amphibian[tiab] or amphibians[tiab] or amphibia[tiab] or frog[tiab] or frogs[tiab] or bombina[tiab] or salientia[tiab] or toad[tiab] or toads[tiab] or "epidalea calamita"[tiab] or salamander[tiab] or salamanders[tiab] or eel[tiab] or eels[tiab] or fish[tiab] or fishes[tiab] or pisces[tiab] or catfish[tiab] or catfishes[tiab] or siluriformes[tiab] or arius[tiab] or heteropneustes[tiab] or sheatfish[tiab] or perch[tiab] or perches[tiab] or percidae[tiab] or perca[tiab] or trout[tiab] or trouts[tiab] or char[tiab] or chars[tiab] or salvelinus[tiab] or "fathead minnow"[tiab] or minnow[tiab] or cyprinidae[tiab] or carps[tiab] or carp[tiab] or zebrafish[tiab] or zebrafishes[tiab] or goldfish[tiab] or goldfishes[tiab] or guppy[tiab] or guppies[tiab] or chub[tiab] or chubs[tiab] or tinca[tiab] or barbels[tiab] or barbuis[tiab] or pimphales[tiab] or promelas[tiab] or "poecilia reticulata"[tiab] or mullet[tiab] or mullets[tiab] or seahorse[tiab] or seahorses[tiab] or mugil curema[tiab] or atlantic cod[tiab] or shark[tiab] or sharks[tiab] or catshark[tiab] or anguilla[tiab] or salmonid[tiab] or salmonids[tiab] or whitefish[tiab] or whitefishes[tiab] or salmon[tiab] or salmons[tiab] or sole[tiab] or solea[tiab] or "sea lamprey"[tiab] or lamprey[tiab] or lampreys[tiab] or pumpkinseed[tiab] or sunfish[tiab] or sunfishes[tiab] or tilapia[tiab] or tilapias[tiab] or turbot[tiab] or turbots[tiab] or flatfish[tiab] or flatfishes[tiab] or sciuridae[tiab] or squirrel[tiab] or squirrels[tiab] or chipmunk[tiab] or chipmunks[tiab] or suslik[tiab] or susliks[tiab] or vole[tiab] or voles[tiab] or lemming[tiab] or lemmings[tiab] or muskrat[tiab] or muskrats[tiab] or lemmus[tiab] or otter[tiab] or otters[tiab] or marten[tiab] or martens[tiab] or martes[tiab] or weasel[tiab] or badger[tiab] or

	badgers[tiab] or ermine[tiab] or mink[tiab] or minks[tiab] or sable[tiab] or sables[tiab] or gulo[tiab] or gulos[tiab] or wolverine[tiab] or wolverines[tiab] or minks[tiab] or mustela[tiab] or llama[tiab] or llamas[tiab] or alpaca[tiab] or alpacas[tiab] or camelid[tiab] or camelids[tiab] or guanaco[tiab] or guanacos[tiab] or chiroptera[tiab] or chiropteras[tiab] or bat[tiab] or bats[tiab] or fox[tiab] or foxes[tiab] or iguana[tiab] or iguanas[tiab] or xenopus laevis[tiab] or parakeet[tiab] or parakeets[tiab] or parrot[tiab] or parrots[tiab] or donkey[tiab] or donkeys[tiab] or mule[tiab] or mules[tiab] or zebra[tiab] or zebras[tiab] or shrew[tiab] or shrews[tiab] or bison[tiab] or bisons[tiab] or buffalo[tiab] or buffaloes[tiab] or deer[tiab] or deers[tiab] or bear[tiab] or bears[tiab] or panda[tiab] or pandas[tiab] or "wild hog"[tiab] or "wild boar"[tiab] or fitchew[tiab] or fitch[tiab] or beaver[tiab] or beavers[tiab] or jerboa[tiab] or jerboas[tiab] or capybara[tiab] or capybaras[tiab])
#3.	#1 not #2
#4.	Limit #3 to English language
#5.	publisher[sb]
#6.	#4 and #5
	Date parameters: see Table 2

1 Appendix H: Clinical evidence tables

H.1 Health assessment

H.1.1 Reception assessment

Study	Grubin 2002 ¹⁶²
Study type	Diagnostic cohort study (prospective)
Study aim	To validate the Grubin reception screen
Number of studies (number of participants)	1 (n=150)
Countries and Settings	England 6 adult male remand prisons (Leeds, Wandsworth, Holme House, Liverpool, Manchester and Durham) 2 female remand prisons (Eastwood Park and New Hall) 2 YOIs (Feltham and Glen Parva)
Funding	Not stated
Duration of study	6 months
Age, gender, ethnicity	Age: Adult male remand prisons – 18 years or older Female remand prisons – 16 years or older YOIs – 18-21 years Gender (M:F): 8:2 Ethnicity: not stated
Patient characteristics	New remand prisoners

Study	Grubin 2002 ¹⁶²
Index test	<p>Grubin reception screen</p> <p><u>For physical health:</u></p> <ol style="list-style-type: none"> 1. In the last few months have you seen a doctor? If so, why? Do you have any outstanding hospital or doctor's appointment? When? With whom? 2. Are you receiving any prescribed medication? What type of treatment? 3. Have you received any physical injuries over the last few days? If yes, when and what injuries, what treatment received? 4. Do you have problems with: asthma, diabetes, epilepsy or fits, chest pain, tuberculosis, sickle cell disease, allergies? 5. Do you have any (other) concerns about your physical health? <p>Females only:</p> <ol style="list-style-type: none"> 6. Have you any reason to believe that you are pregnant? If yes, note details 7. Would you like a pregnancy test? <p>Screening staff should document any health related observations about the prisoner's physical appearance.</p> <p>If "yes" is recorded to any of questions 2-7 a referral is made to a doctor or relevant clinic for further assessment.</p>
Reference standard	<p>Structured interview 1-8 days after entering prison; information obtained included: current and past physical and mental health, and alcohol and drug use. Blood pressure, pulse, respiratory flow rate and general physical observations were recorded.</p>
<u>Target condition</u>	<p>Physical health conditions e.g. asthma, diabetes, epilepsy or fits, chest pain, tuberculosis, sickle cell disease, allergies</p> <p>Mental health conditions</p> <p>Risk of deliberate self-harm</p> <p>Risk of withdrawal from alcohol or drugs</p>
<p><u>Results:</u></p> <p>Sensitivity 95%</p> <p>Specificity 73%</p>	

Study	Grubin 2002 ¹⁶²
	PPV 59% NPV 98%
	<u>General limitations according to QUADAS-2</u> <ul style="list-style-type: none"> • Risk of selection bias: unclear which method of randomisation used; unclear if study made inappropriate exclusions • Risk of measurement bias: unclear if participants received same reference standard • Risk of outcome reporting bias: unclear if all participants included in the analysis

4

Study	Chitsabesan 2014 ⁷⁷
Study type	Diagnostic cohort study (prospective)
Study aim	To validate the comprehensive health assessment tool (CHAT)
Number of studies (number of participants)	1 (n=127)
Countries and Settings	England 1 YOI (Hindley)
Funding	Offender Health Research Network (OHRN)
Duration of study	2 years
Age, gender, ethnicity	Age: 15-18 years Gender: male Ethnicity: not stated
Patient characteristics	New on remand or sentenced young males admitted to 1 YOI
Index test	Comprehensive health assessment tool (CHAT), physical health section completed by general nurse. <u>For physical health:</u> <ol style="list-style-type: none"> 1. Do you have any DIETARY requirements related to a medical health need or cultural belief? E.g. diabetes, celiac disease, lactose intolerance, vegetarian or halal. 2. Do you have any ALLERGIES? E.g. to medication, nuts, pollen or latex.

Study	Chitsabesan 2014 ⁷⁷
	<ol style="list-style-type: none"> 3. Do you have any CURRENT BREATHING problems? E.g. asthma; wheezing; coughing; chest infection. Do not include Upper Respiratory Tract Infections or runny nose 4. Do you have any known HEART problems? E.g. congenital disorders or current symptoms suggestive of HEART problems e.g. shortness of breath or unexplained chest pain. 5. Do you have DIABETES MELLITUS? 6. Do you have a history of fits, faints or seizures (EPILEPSY)? 7. Are you in PAIN at this moment? 8. FEMALES – Are you PREGNANT or could you be pregnant? 9. Have you ever been diagnosed with HIV or HEPATITIS B? 10. Do you have a PHYSICAL DISABILITY? E.g. blindness, deafness, immobility etc. 11. Are you taking any prescribed MEDICATION? 12. Are there any unexplained SKIN rashes or spots? These may be indicative of communicable infection but do not include acne, eczema, or sweat rashes. 13. Have you suffered a RECENT TRAUMA (within last 2 weeks)? - E.g. wounds, sutures, bandages or bruising. May attempt to cover-up any injuries sustained during custody/enroute to custody (establish if safeguarding referral is needed) 14. Are vital signs abnormal? E.g. blood pressure, pulse, respirations. 15. Is there evidence of SHOCK? – is there evidence of pallor, fainting, thready pulse etc. 16. Is the young person disorientated in time, place and/or person? <p>If “yes” is recorded for questions 3-16 then complete relevant sections of the Physical Health Assessment before the first night. Otherwise complete within 3 days.</p>
Reference standard	Clinical history and physical health exam by GP, blind to the findings of CHAT
Target condition	Physical health conditions Mental health conditions Substance misuse Neurodisability (traumatic brain injury; speech, language and communication impairment; learning disability and educational needs; autism spectrum disorder)
<u>Results</u> Physical health overall: Sensitivity 64%; Specificity 59%; PPV 84%; NPV 33%; Accuracy 63%	

Study	Chitsabesan 2014 ⁷⁷
Appetite:	Sensitivity NA; Specificity 98%; PPV NA; NPV 100%
Weight:	Sensitivity 29%; Specificity 97%; PPV 29%; NPV 97%
Fatigue:	Sensitivity 0%; Specificity 98%; PPV 0%; NPV 98%
Febrile illness:	Sensitivity NA; Specificity 98%; PPV NA; NPV 100%
Allergies:	Sensitivity 20%; Specificity 90%; PPV 14%; NPV 93%
Respiratory system:	Sensitivity 0%; Specificity 99%; PPV 0%; NPV 96%
Asthma:	Sensitivity 62%; Specificity 92%; PPV 36%; NPV 96%
Cardiovascular:	Sensitivity 0%; Specificity 99%; PPV 0%; NPV 96%
Gastrointestinal:	Sensitivity 0%; Specificity 99%; PPV 0%; NPV 99%
Genito-urinary:	Sensitivity 29%; Specificity 91%; PPV 15%; NPV 96%
Endocrine system:	Sensitivity NA; Specificity 99%; PPV NA; NPV 100%
Nervous system:	Sensitivity 67%; Specificity 98%; PPV 50%; NPV 99%
Muscular-skeletal:	Sensitivity 0%; Specificity 99%; PPV 0%; NPV 94%
Nose & throat:	Sensitivity 0%; Specificity 100%; PPV 0%; NPV 93%
Oral health:	Sensitivity 22%; Specificity 95%; PPV 72%; NPV 62%
Vision:	Sensitivity 23%; Specificity 89%; PPV 19%; NPV 91%
Hearing:	Sensitivity 0%; Specificity 99%; PPV 0%; NPV 98%
Recent injury:	Sensitivity 20%; Specificity 91%; PPV 8%; NPV 97%
Skin problems:	Sensitivity 48%; Specificity 88%; PPV 19%; NPV 86%
Current medication:	Sensitivity 64%; Specificity 59%; PPV 84%; NPV 33%
<u>General limitations according to QUADAS-2</u>	
<ul style="list-style-type: none"> • Indirectness: indirect population (15-18 year old males) • Risk of selection bias: participants recruited consecutively; unclear if study made inappropriate exclusions • Risk of measurement bias: unclear if participants received same reference standard • Risk of outcome reporting bias: unclear if all participants included in the analysis 	

H.152 Subsequent assessment

Study	Bai 2014 ²⁶
Study type	Prospective diagnostic cohort study
Number of studies (number of participants)	1 (679)
Country and setting	2 maximum security prisons in New York, USA (Bedford Hills Correctional Facility for Women; Sing Sing Correctional Facility for Men)
Funding	US National Institutes of Health
Duration of study	April 2010 - February 2013
Age, gender, ethnicity	<p>Age:</p> <ul style="list-style-type: none"> <25 years 15.9% 26-35 years 30.9% 36-50 years 43.2% > 51 years 10% <p>Gender:</p> <ul style="list-style-type: none"> Male 44.5% Female 55.5% <p>Ethnicity:</p> <ul style="list-style-type: none"> White, non-hispanic 22.5% Black, non-hispanic 53.5% Hispanic 21.4% Other 2.65%
Index test	<p>Structured questionnaire administered by a trained research assistant.</p> <p><u>Physical health section:</u></p> <ul style="list-style-type: none"> • Do you have any of the following conditions?:

Study	Bai 2014 ²⁶
	<ul style="list-style-type: none"> • diabetes, heart condition (e.g. hypertension, high blood pressure, endocarditis) • pulmonary disease (e.g. asthma, emphysema, bronchitis, pneumonia) • kidney disease (e.g. kidney stones, renal failure, dialysis) • liver disease (e.g. hepatitis, cirrhosis) • cancer (e.g. tumour, malignancy) • HIV • Skin rashes or skin condition (e.g. psoriasis, acne, eczema) • Other chronic or long standing medical condition that has not been mentioned? <p>Skin problems and staphylococcus infections:</p> <ul style="list-style-type: none"> • Skin boil that drains pus or a wound that won't heal? (ex: skin abscess or boil) – ever? Past 6 months? How many? Where? Treated? • Insect bites which caused boils or sores? – ever? Past 6 months? How many? Where? Treated? • Any skin problem or infection similar to the one pictured? – ever? Past 6 months? How many? Where? Treated? • Staphylococcus Infection? – ever? Past 6 months? How many? Where on body? Where told? Hospitalised? <p>Antibiotic use:</p> <ul style="list-style-type: none"> • Have you used antibiotics in the past 6 months for any reason including treatment or prevention of an infection? Yes/no/don't know • Do you take oral steroids such as Prednisone? (Sometimes taken for asthma, weightlifting, or arthritis) Yes/no/don't know • Have you used any type of nasal spray, such as antihistamines, in the past 6 month? Yes/no/don't know • Have you used any type of antibiotic cream for the skin such as Neosporin or Bacitracin in the past 6 months? Yes/no/don't know • Have you used any type of antibiotic cream in your nose in the past 6 months? Yes/no/don't know <p>Tattoos and piercings</p> <ul style="list-style-type: none"> • Have you ever had a tattoo? – ever? Past 6 months? How many? Where? If the tattoo was obtained before you were incarcerated at this prison, where did you have it done?

Study	Bai 2014²⁶
	<ul style="list-style-type: none"> • Have you ever had a piercing? If was obtained before you were incarcerated at this prison, where did you have it done? <p>Sexual relationships:</p> <ul style="list-style-type: none"> • Have you been sexually active in the past 6 months? Yes/no/don't know. How many female partners have you had sexual relations with in the past 6 months? How many male partners have you had sexual relations with in the past 6 months? • Have you had conjugal visits in the last 6 months? Yes/no/don't know
Reference standard	Medical records, collected independently following the interviews
Target condition	Physical health conditions
Results:	<p><u>Sensitivity</u></p> <p>HIV – 86%</p> <p>Diabetes – 81.6%</p> <p>Asthma – 76.9%</p> <p>Hepatitis C - 56.4%</p> <p>Hypertension – 54.8%</p> <p>Renal/kidney disease – 50%</p> <p><u>Specificity</u></p> <p>HIV – 99.5%</p> <p>Diabetes – 98.9%</p> <p>Asthma – 98.5%</p> <p>Hepatitis C – 99.1%</p> <p>Hypertension – 95.6%</p> <p>Renal/kidney disease – 98.8%</p> <p><u>k coefficient</u></p> <p>HIV – male 0.76, female 0.91</p> <p>Diabetes – male 0.81, female 0.82</p>

Study	Bai 2014 ²⁶
	<p>Asthma – male 0.73, female 0.82 Hepatitis C – male 0.55, female 0.71 Hypertension – male 0.51, female 0.6 Renal/kidney disease – male 0.44, female 0.52</p> <p><u>General limitations (according to QUADAS-2)</u></p> <ul style="list-style-type: none"> • Risk of selection bias: participants were recruited consecutively on reception to prison • Indirectness: indirect population (aged 16 or older); indirect comparison (medical records rather than other validated health assessment tool)

H.163 When should subsequent assessments be done

7 None.

H.184 Assessment tools

9 None.

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H2 Coordination and communication

Study (ref id)	Dyer 2013 ¹¹⁶
Aim	To explore prison health discharge planning in four North East prisons in the UK
Population	n=17 staff members including GPs, nurses, nursing assistants and healthcare support workers, members of the Mental Health In-Reach Teams, pharmacy and CARATs (Counselling, Assessment, Referral, Advice and Throughcare) staff. Age: not stated Gender: not stated Ethnicity: not stated Inclusion/exclusion criteria: not stated
Setting	UK Four prisons: a male high security dispersal prison, a male category B local prison, a category C male training prison and a category C and D male resettlement prison
Study design	Interviews and focus groups
Methods and analysis	Interviews were conducted face to face or by telephone. interviews explored existing institutional discharge and transfer policy and practice; their effectiveness at ensuring equivalence of care; the strengths and weaknesses of current pathways arrangements; and possible improvements and priority areas where improvements are most needed. Where possible, interviews were recorded. When security requirements prevented recording, notes were made and written up immediately afterwards.
Themes with findings	Challenges <ul style="list-style-type: none"> • Several interviewees expressed concerns that individual staff working in prison healthcare tend to have generic roles, rather than have expertise in one or a small number of specialist areas. For example, mental health staff are often required to advise on prisoners mental state, as non-mental health staff felt they lacked the knowledge to judge this themselves, when perhaps with further training, information and guidance, non-mental health staff could have a greater role in identifying problems and triaging patients, consequently freeing-up mental health specialists to focus on discharge planning for those prisoners with a mental health need. • No quotations included.
Limitations and applicability of evidence	<ul style="list-style-type: none"> • Very serious limitations: role of researcher not clearly described; data collection not rigorous - where recording not possible, notes were made and written up afterwards; data analysis methods not reported; data not rich • Very applicable

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Study (ref id)	Joanna 2008 ²¹³
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Study (ref id)	Joanna 2008 ²¹³
Aim	To explore the continuity of care experienced by prisoners before and after release
Population	<p>n= 70 (45 former prisoners; 25 professionals in prisons and community services)</p> <p>Former prisoners: Mainly adults (aged 17 years or older) Male/female ratio 18:27</p> <p>Age: 17 n=1; 18-21 n=1; 22-30 n=16; 31-40 n=12; 41-50 13; 51 or older n=2</p> <p>White British n=32 White Irish n=3 Other White n=1 White / Black Caribbean n=2 White / Black African n=2 White / Asian n=1 Asian n=1 Black African n=1 Spanish n=1</p> <p>Professionals: 4 based in prison, 21 worked predominately in the community From statutory agencies – including: psychiatric nurses, GPs, substance misuse workers Non-statutory agencies – provided services including: generic resettlement assistance, employment advice, assistance with housing needs</p>
Setting	1 male and 1 female prison, England
Study design	Interviews with prisoners, interviews and focus groups with professionals in prisons and community services
Methods and analysis	<p>The local inmate database system (LIDS) was used to identify prisoners who were due for release within a month. These prisoners were then approached to take part in a semi-structured interview. The interview consisted of questions regarding:</p> <ul style="list-style-type: none"> • Mental health problems prior to or during their sentence; • Mental health care they had received in prison;

Study (ref id)	Joanna 2008 ²¹³
	<ul style="list-style-type: none"> • Plans for release, for example employment and accommodation; • Agencies or professionals they had worked with; • Opinions about the help they had received. <p>To facilitate tracking on release, prisoners were asked to provide contact details for themselves, family and agencies they might engage with in the community. Approximately two weeks after release the researchers attempted to contact prisoners to interview them for a second time to explore their experiences of resettlement, and find out about their mental health concerns and what agencies they had engaged with since release. Initially the researchers planned to interview people a third time, but due to problems in contacting prisoners on release, interviews were conducted when possible regardless of the time since release.</p> <p>Interviews and focus groups were conducted with professionals. Professionals in prisons and community services were also invited to take part in an interview or focus group. These explored the roles they fulfil in the resettlement of prisoners, their views on continuity of care and what barriers exist to engaging with released prisoners.</p> <p>Researchers also explored the role of informal support provided by family and friends of prisoners through two focus groups. These were arranged through an organisation that runs a regular support group for friends and families of prisoners.</p> <p>Each interview (when tape recorded) was transcribed in full by the researchers, and where interviews could not be tape-recorded detailed notes were made. These were analysed by the research team and four sets of themes were developed which represented the experiences of males, females, professionals and families of continuity of care and resettlement. These were incorporated to produce broader themes, which highlighted the key areas of continuity and resettlement for prisoners and professionals.</p>
Themes with findings	<p>Prison healthcare</p> <ul style="list-style-type: none"> • Professionals reported that the prison struggles to transfer information within the same prison: “Neither do they pass on information within the prison, so if someone’s going from the mental health wing to the general wing they don’t pass information over ... and the prisoner’s going to be saying ‘hang on I need to be taking my medication’ ... If they don’t pass it on within the same prison you can guarantee they won’t pass it on between different prisons.” (Resettlement agency) <p>Substance misuse</p> <ul style="list-style-type: none"> • Prisoners with substance misuse issues will have multiple needs that require support and treatment. It is important that the importance the prison and relevant agencies work together to provide appropriate care. • “Our [CARAT workers] intervention is psychosocial, and the detox team are obviously the prescribers. We have an alright relationship with them. There’s definite room for improvement ... The prison are recruiting new staff to help with that link, because I think they’re very very under-resourced and they’re very busy and there’s a limit to what they can actually do in relation to working with CARATs and joint care planning.” (Substance misuse worker)

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Study (ref id)	Joanna 2008²¹³
Limitations and applicability of evidence	<ul style="list-style-type: none"> • Serious limitations: role of researcher not clearly described; data analysis methods not clearly described • Very applicable

Study (ref id)	Powell 2010³⁶⁴
Aim	To explore views and experiences of nurses and other prison healthcare staff about their roles and the nursing care they provide to prisoners
Population	<p>n=80 (67 nurses working in prison healthcare centres including nurse managers, community psychiatric nurses/mental health nurses, substance misuse nurses and in-patient nurses; 13 healthcare assistants/healthcare workers/nursing auxiliaries)</p> <p>Adults (aged 24-58 years) Male/female ratio: 21:59</p> <p>Ethnicity: not stated Inclusion/exclusion criteria: not stated</p>
Setting	12 prisons (Category A, B, C, D, Women’s and Young offenders’ institution), England.
Study design	12 interviews, 12 focus groups
Methods and analysis	<p>Recruitment of nurses for interview was aimed at those working in primary care; however, where there were small teams, or teams where nursing tasks were shared or where nurses were keen to be involved in the interviews, then this was accommodated by the research team. Recruitment for the focus groups was aimed at nurses as key informants working in primary healthcare, but other healthcare staff were included if they wished to be.</p> <p>Healthcare leads and managers were interviewed separately following the first focus group discussion, in which a primary care lead was included. The focus group facilitators observed that participants in this group tended to defer to their manager. It was anticipated that participants in the remaining focus groups would feel more able to express their true feelings without a manager’s presence. Interviewing the healthcare leads separately gave a manager’s perspective, often generating information about strategic issues related to nursing care in prisons.</p> <p>Focus group discussions with healthcare staff and individual interviews with primary care and healthcare managers were conducted using the following semi-structured interview schedule:</p> <ol style="list-style-type: none"> 1. Background: Gender, Age, Ethnic group, Confirm qualifications, Job title 2. Are you already taking part in a research project? (If participant already taking part in a research project, consider whether to proceed)

Study (ref id)	Powell 2010 ³⁶⁴
	<p>3. Tell me about your role as a nurse working in this prison. What would you do in a typical day?</p> <p>4. What are the main health problems that you come across in this prison? (Check frequency and extent of need for the following- e.g. does that come up a lot/is that common? Is that a big problem for people in this prison?) Asthma, Diabetes, Coronary Heart Disease, Cancer, Epilepsy, Communicable disease, e.g. STI, hepatitis, HIV, TB. Minor ailments, Trauma and minor injury, Primary care mental health problems, e.g. anxiety, depression, bereavement. Self-harm, substance misuse (alcohol, smoking, drugs)</p> <p>5. Which prisoners do you think have the highest health needs? Why is that? Older, Younger, Black and Asian, other minority ethnic group, Prisoners with disabilities, Substance misusers, any others?</p> <p>6. How do you and the rest of the primary care team try to meet the health needs of prisoners?</p> <p>7. How do you identify the need and what services do you provide? Reception, Primary/Secondary health needs assessment, Triage system, Request slip system, Prison officers, Treatment room, Anything offered on wing?, Drop in clinics for prisoners, Referral to health services outside prison</p> <p>8. What effect do you think prison has on prisoners' health? Better/worse in prison? Physical health Mental health Better health care inside or outside? e.g., access to health services (including treatment, immunizations, detoxification/maintenance, health promotion, referral) Look after health differently Inside and outside? Health eating/diet Exercise Family relationships</p> <p>9. What are the frustrations of working as a nurse in prison?</p> <p>10. What are the barriers to providing a good service?</p> <p>11. What improvements could be made?</p> <p>12. What is satisfying about working as a nurse in prison?</p> <p>13. What works well?</p> <p>14. What do you do well in this prison?</p> <p>Focus group interviews lasted between one and one and a half hours, and most individual interviews with healthcare managers lasted just over an hour. These were audiotaped and transcribed verbatim. The four-person multidisciplinary research team worked in pairs to facilitate the focus groups and interview the nurse leads. The data were collected in the prison healthcare centres.</p> <p>Thematic analysis was undertaken using the analytical framework developed by Ritchie and Spencer (1994). Atlas.ti software was used to assist with coding and sorting of the data. Data analysis was conducted in four key stages: identifying initial concepts, coding the data, sorting the data by theme and developing a theoretical framework. The four researchers worked as a group rather than as four individuals to develop and test the codes and identify the emerging themes. This group researcher process enhanced the credibility of the themes generated, as individual interpretations were modified by a consensus process. The dependability of the resulting group interpretation was supported through discussion in steering group meetings. Data from the focus groups and interviews were analysed the same way.</p>

Study (ref id)	Powell 2010 ³⁶⁴
Themes with findings	<p>Meeting the needs of individuals</p> <ul style="list-style-type: none"> • Nurse led clinics – in a category A prison a diabetes nurse specialist had to conduct his clinic by visiting individuals in their cells because it was too complicated and time-consuming to take prisoners to a centralised clinic • Referral - Participants described lack of prison officers to escort to appointments as a barrier to attending secondary care referral: “if the officers aren’t there to do it, we can’t do it” (Healthcare Manager, category B prison). Participants noted that emergency referrals were not as severely affected: “emergency care is probably the easiest, because the prison has to find staff – there’s no option.” (healthcare manager) • Mental health - Participants noted that much of mental healthcare could be managed by primary healthcare: “[GPs] just refer them straight to the mental health team...we need to stop this... a lot of the neurotic illnesses don’t really need a psychiatrist’s input.” (Healthcare Manager, category B prison). Some participants thought that this was due to the underdevelopment of primary care services <p>Custody versus care</p> <ul style="list-style-type: none"> • Nurses noted they sometimes they were required to undertake security duties: “And we’ve started a vaccination clinic which the nurse is working independently on her own, but she’s actually running and fetching the prisoners so that they can get their vaccinations. So it’s actually taking longer to do that job, and it’s taking them away from the job. It’s wasting our time.” (Nurse, focus group participant, category B prison)
Limitations and applicability of evidence	<ul style="list-style-type: none"> • Serious limitations: data not rich • Very applicable

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Study (ref id)	Ricketts 2007 ³⁸⁹
Aim	To explore the impact of prison mental health in-reach teams
Population	n=62 (6 in-reach team manager, 20 in-reach team member, 15 healthcare staff, 2 prison governor, 19 discipline staff)
Setting	6 prisons: remand, sentenced, female, open, young offenders and high secure UK
Study design	Semi-structured interviews and focus groups
Methods and analysis	<p>This study formed part of a larger national study evaluating the implementation of mental health in-reach teams.</p> <p>Interviews lasted approximately 60 minutes. Focus groups were conducted with 17 discipline staff and lasted 60-90 minutes. Interviews and focus groups were structured around the same themes. All sessions were audiotaped, transcribed and analysed using QSR NUD*IST 4. A constant comparative method was used to analyse data from each case, using the aims-processes-effects framework to organise the data for each site. To enhance validity 2 analysts shared the analytic task, independently analysing data from the first 2 study sites, before merging the product of the analysis. Following analysis from 3 cases, cross-case analysis commenced. This involved the comparison of frameworks and the development of</p>

Study (ref id)	Ricketts 2007³⁸⁹
	categories with dimensional range in order to construct a framework of processes and relationships associated with particular outcomes. This framework was then tested and revised using data from the remaining 3 study sites. This process involved analysts using the developed sub-categories as the basis for analysis of data from the latter 3 case study sites and then revising the framework so that it could account for all of the data.
Themes with findings	<ul style="list-style-type: none"> • “There’s great animosity between the mm some of er, the [private prison] staff and the in-reach team I think it’s probably a new service, always arouses suspicion? I’m not really sure whether their animosity is with us of with the primary care trust” • Participants emphasised the importance of relationship building to the development of a team: “it’s been a long process really built on sort of relationships that we formed here and the experience of the kind of people that are here and how we work with them and they’ve been developed over time...” (in-reach team leader) • Person-to-person relationships were seen as crucial in making referrals more likely to come through and were reported as being valued by prison staff: “I think it’s a good relationship with [NAME], it’s wonderful we can just pick up the phone and say ‘I’ve got his er...’ you know there’s no big paperwork thing going on and so it makes it easier for us and I quite like that” (prison officer) • The building up of networks was seen as particularly important although all teams were not equally successful: “there’s been an awful lot of resistance and barriers... so one of the greatest challenges has been networking but the one of the greatest accomplishments has been establishing a place within both prisons we work in and being able to work effectively with a lot of our colleagues” (in-reach team member social worker)
Limitations and applicability of evidence	<ul style="list-style-type: none"> • No serious limitations: unclear aims of study; role of the researcher not clearly described • Very applicable

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Study (ref id)	Wright 2014⁵¹¹
Aim	To explore the links between social and structural aspects of the penal setting, the provision of mental healthcare in prisons, and mental health work in this environment
Population	n=23 (1 admin staff, 1 clinical psychologist, 1 dual trained nurse, 1 GP, 2 psychiatrist, 8 RGN, 7 RMN, 2 service manager)
Setting	3 HMPS sites, UK
Study design	semi-structured interviews
Methods and analysis	The analysis is drawn from a larger piece of work which evaluated the mental health commissioning and providing arrangements within three male HMPS establishments.
	The study team was based at the Centre for Health and Justice at the Institute of Mental Health and included a mental health nurse, sociologist

Study (ref id)	Wright 2014 ⁵¹¹
	<p>and a specialist in secure services provision.</p> <p>Participants were recruited from primary and secondary healthcare services. They included both mental health specialist staff, for example Registered Mental Health Nurses (RMNs), Clinical Psychologists and Psychiatrists, as well as non-specialist staff such as Registered General Nurses (RGNs) and General Practitioners (GPs).</p> <p>The overall study was commissioned by a NHS Primary Care Trust and recruitment occurred via healthcare service leads and managers. These individuals informed their staff about the aims of the study and what their involvement would entail. Participant Information Sheets and Consent Forms were given to all those involved and individuals were reminded that they could withdraw their consent at any time. They were also informed that the interviews were being audio recorded but they could request for this to stop should they wish to do so. A semi-structured interview schedule was developed – with themes identified from the literature and relevant policy documents. Table 2 summarises the key topics included. Prompts were also used to encourage more detailed responses, where necessary. Interviews were completed in April 2013 and lasted between 30 and 90 min.</p> <p>Subject areas used to guide the data collection interviews -</p> <ul style="list-style-type: none">• Services and pathways: Roles and responsibilities in relation to mental health; Inter-agency collaboration.• Availability and appropriateness: Prescribing practices in relation to mental health medication; Recruitment and retention of mental health staff.• Communication and data sharing: Governance and sharing of mental health information; Workplace relations between different personnel; the mental health knowledge of custody staff.• Guidance and recommendations: Identification and screening; the in-reach focus on severe and enduring mental health problems; Implementation of the Care Programme Approach (CPA); Service user groups whose needs are not met.• Resources and provision: Adequacy of resourcing for mental health care; Resourcing and the ability to plan care in the short, medium and long term. <p>The audio files were transcribed verbatim and thematic analysis was conducted on the data. This involved a detailed reading and preliminary coding of the transcripts. These initial codes were then extrapolated and combined to produce overarching themes. The themes explaining the data were based on the aims of the study. The first two authors independently analysed the data before discussing their coding with each other. Good agreement was found between the identified concepts and themes.</p>

Study (ref id)	Wright 2014 ⁵¹¹
Themes with findings	<p>Desire and practicalities of doing mental health work</p> <ul style="list-style-type: none"> • mental healthcare in prisons can be conducted by those who are not primary experts in the field (e.g. at the reception screening stage by RGNs). • Participants, in particular primary health staff, reported feeling that they were ‘picking up after mental health’: “I feel like I’ve moaned massively but that’s because there is a bit of an issue in here regarding how much we do for everybody else I guess” (P001) • primary care staff stated that it was not a lack of desire to do mental health work which was difficult for them, but a concern about operating outside their sphere of practice with little supervision. Many primary care staff stated that they would be willing to complete training to become dual registered nurses in both adult general and mental healthcare: “Yeah we are not mentally health trained, I would like to be dual trained, and I think it would be really beneficial, but they are not going to train me to do that. So we just kind of have to keep asking questions – Is this the right thing to do? Am I approaching this the right way?” (P001). • fragmentation in commissioning and provision can lead to a lack of clarity and/or competition regarding roles and responsibilities for staff (e.g. the gap between primary and secondary mental healthcare) • communication in relation to mental health work is often dependent on informal social networks – rather than, or in addition to, the official written records. • interviewees identified structural and political divisions and gaps between the various health and prison services in relation to mental healthcare: “The inter-play between provider organisations is not always seamless” (P010). • Disagreements between services about who should see a particular prisoner for their mental health needs and at what point in the care process were felt to hinder early intervention for the individuals benefit. An often cited example was the referral route to secondary services. In-reach staff described being approached directly by prison officers and prisoners for help rather than contacting primary care first: “Sometimes there maybe needs to be some clearer, erm, what’s the word I’m looking for, direction for the [prison] staff about who they’re referring to ... I get an awful lot of requests ... to in-reach directly from prisoners, ... The minute I walk down a wing I get, ‘I need to be seen by you’, I say, ‘Well it actually needs to go through, you know, primary first’, with which the prisoner is fine but the [wing] staff seem to be a bit unclear generally ... I suppose nobody’s really sat them down and explained what the difference is [between primary and secondary] ... When they think of mental health they directly, especially if something’s going wrong, they directly seem to think of the in-reach team rather than primary, and I think they struggle to differentiate between the two” (P008). • In-reach staff described an assumption that they would be involved with all prisoners who self-harmed whether or not they had a mental health problem. Although policy drivers such as the Care Programme Approach (CPA) were seen to provide a possible structure for interagency collaboration and joint working, its implementation in practice did not fully support or generate this ideal multi-stakeholder model. The Care Programme Approach provides a mechanism for delivering and coordinating community services to individuals diagnosed with mental health problems (DH, 2008). Individuals who require complex, multi-stakeholder care packages from specialist, secondary care services are described as being “on CPA”. Whereas those who require only short term, single agency or primary mental healthcare are not subject to CPA (DH, 2008). Prisons are considered to be community settings for mental health services and therefore the principles of CPA apply within this context. • However, data from this study found that there were contradictory understandings of who should or should not be ‘on CPA’. In addition, the completion of documentation was occasionally prioritised over and above the actual practical use of CPA as a means of bringing people together in the spirit of collaborative working. <ul style="list-style-type: none"> • Fragmentation and a lack of ownership over mental health work in the prison setting also led to a duplication of provision. One in-reach CPN stated that she had been unaware that as well as seeing her, a prisoner on her caseload was also seeing a counsellor from the prison service:

Study (ref id)	Wright 2014 ⁵¹¹
	<p>Prison staff as mental health work allies</p> <ul style="list-style-type: none"> • prison healthcare staff suggested that case identification for mental illness required development. The role of prison wing staff as intentional observers and gatekeepers to the referral process was highlighted as a potential solution. Prison staff on the wing could usefully be recruited to play a more active role in case identification and referral. • However, concern was raised by interviewees about the adequacy of the mental health knowledge held by prison staff in order to accurately identify and refer prisoners to services. This was particularly the case for those individuals who were quiet on the prison wings and did not present a management problem or have overt signs of mental illness. “Education for officers regarding mental health issues is inconsistently provided” (P010).
Limitations and applicability of evidence	<ul style="list-style-type: none"> • Serious limitations data analysis methods not described clearly • Very applicable

H.3 Promoting health and wellbeing

H.3.1 Interventions

H.3.1.1 Hygiene

Study	Cutler 1979 ⁹⁴
Study type	Before and after study
Number of studies (number of participants)	1 (n = 52)
Countries and setting	USA (Nashville) - minimum security
Duration of study	Follow-up 2 months
Stratum	None
Subgroup analysis within study	None Applicable
Inclusion criteria	Voluntary self-selection of convenience sample
Exclusion criteria	Unclear exclusion of illegible participants, only example - 'such as denture wearers'. Implication in article that 40 prisoners either stopped participation or were excluded after preliminary questionnaire
Age, gender and ethnicity	No stated age Female USA – no stated ethnicity
Further population details	None
Extra comments	Literature search indicates that the names of the two indexes used in this study were transposed.
Indirectness of population	No Indirectness
Interventions	3 educational workshops run by a dental assistant (n=52) 1 hour per week for three weeks plus a dental kit (brush, floss disclosing tablets and mirror) participants were measured pre-education (n=52)
Funding	Nashville DAS

Study	Cutler 1979 ⁹⁴
	Outcome 1: Russell's Oral Hygiene Index Pre-test: 1.11 Post-test: 1.01 Outcome 2: Green's and Vermillion's Periodontal Index Pre-test: 0.52 Post-test: 0.85
Risk of Bias	Very High
Indirectness of outcome	No indirectness
Protocol outcomes not reported by the study	patient-reported satisfaction Uptake of screening programmes. Mortality. Health-related quality of life

B.1.2 Nutrition

Study	Firth 2015
Study type	Non randomised controlled trial
Number of studies (number of participants)	1 (n = 63)
Countries and setting	USA (Oregon) - minimum and maximum security
Duration of study	Follow-up 1 year
Stratum	None
Subgroup analysis within study	None Applicable
Inclusion criteria	Females in prison with a diagnosis of diabetes.
Exclusion criteria	None stated
Age, gender and ethnicity	45.9 ± 11.6 Female White non-hispanic - 47 Black non-hispanic - 5 Hispanic - 6 American Indian - 3 Asian - 2
Further population details	None
Extra comments	Extra calories could be purchased (an average of 1094 per day). Similar across groups, but on average 172 fewer per day in intervention.
Indirectness of population	No Indirectness
Interventions	Reduced calorie menu that labelled the caloric content and incorporated garden produce into the meals. Daily menu was reduced by an average 800 calories per day (from 3000 to 2200). Small classes and training opportunities related to nutrition and gardening were offered. Intervention was in the minimum security prison, control was in the medium security facility. Women were considered to have received the intervention if they resided in the minimum security facility for at least 90 days after the reduced calorie menu was implemented.

Study	Firth 2015
Funding	Supported by a 3 year Kaiser Permanente Community Benefit Fund grant
Outcomes	Outcome 1: BMI Intervention: 31.3 ± 4.3 Control: 34.5 ± 7.7 Post-test: 1.01
Risk of Bias	Very High
Indirectness of outcome	No indirectness
Protocol outcomes not reported by the study	patient-reported satisfaction Uptake of screening programmes. Mortality. Health-related quality of life

3.1.3 Physical activity

Study	Battaglia 2013 ³⁵
Study type	RCT
Number of studies (number of participants)	75
Countries and setting	Maximum security prison, Italy
Duration of study	9 months
Stratum	None reported
Subgroup analysis within study	None reported
Inclusion criteria	More than 1 year detention and age \leq 50 years (to allow for random assignment to high intensity protocol).
Exclusion criteria	Subjects with severe orthopaedic, cardiovascular or respiratory conditions that would preclude participation in an exercise programme, or those with a medical condition listed in the American College of Sports Medicine absolute exercise contraindications.
Age, gender and ethnicity	Men CRT n = 25; mean age 30.9 \pm 8.9 years HIST n = 25; mean age 33.9 \pm 6.8 years Control n = 25; mean age 32.9 \pm 8.39 years
Further population details	17 subjects dropped out due to voluntary decision (n = 10) or were moved to another prison (n = 7). Numbers analysed were CRT n = 21, HIST n = 19 and Control n = 18.
Indirectness of population	To check note that this is in males aged 50 or under. -
Interventions	Cardiovascular plus resistance training (CRT) High intensity strength training (HIST) Control received no treatment The experimental groups (CRT and HIST) followed nine months of supervised fitness training protocols. For nine months, experimental groups took part one hour/twice weekly in the assigned training protocols. CRT: Training session: 10 min of general warm up, 40 min of aerobic exercises (pedalling on a cycle ergometer or running on treadmill for 20 min. at 70% of the age-predicted maximum heart rate reserve (HRR) alternated with resistance strength exercises and 10 min of stretching

Study	Battaglia 2013 ³⁵
	<p>and muscle relaxing exercises. The duration and intensity of the sessions were gradually increased during the nine month period, up to 45 min of activity at 80% of HRR by the end of the training programme. Resistance training included exercises that engaged the major muscle groups (chest press, leg curl, leg press, leg calf rice, abdominal crunch, low back extension, arm curl, arm extension, and lateral pull down). In the initial protocol subjects performed three sets with a resistance that allowed 12–15 repetitions (12–15 repetition maximum-RM) with 90 s rest.</p> <p>HIST: Training session: 10 min of moderate bike warm up, 40 min of anaerobic exercises alternated by maximal strength exercises and active recovery, and 10 min of cool down with relaxing exercises. The anaerobic training consisted of three sets of sprint training at 90% of the age-predicted maximum HRR, with 2 min. rest, and 30 s max effort sprint on bike alternated with 3 min of easy pedalling. The duration and intensity of the sessions were gradually increased during the nine month-period, up to five sets of sprint training at 95% of the age-predicted maximum HRR, with 2 min. rest, and 40 s max effort sprint on bike alternated with 2 min of easy pedalling. Intensive strength training included exercises engaging the major muscle groups with a resistance that allowed 4–6 repetitions (6–8 repetition maximum RM) of triceps bench dips, hip lifts, prone planks (30 s hold), standing biceps curl, dumbbell (DB) squats, DB press, DB pullover, push-ups standing DB lateral raise, DB split squat right and left leg, abdominal crunch. Concentric, Eccentric and Isometric muscle contractions were performed. Successively the resistance used has been individually adjusted to allow the completion of 1–6 repetitions (1–6 repetition maximum RM).</p> <p>During the experimental period, control subjects performed their habitual activities, receiving no physical activity treatment.</p>
Funding	None stated
<p>RESULTS (AVAILABLE CASE ANALYSIS) AND RISK OF BIAS FOR COMPARISON: Cardiovascular plus resistance training (CRT) versus usual care, High intensity strength training (HIST) versus usual care</p> <p>Outcome 1 Mean Body Mass index (BMI) Kg/m² CRT pre-test, 29.6 (SD 4.1), post-test, 28 (SD 3.5) HIST pre-test 27.8 (SD 3.8), post-test 27.5 (SD 2.6) Control pre-test 28.3 (SD 2.7), post-test 28.7 (SD 2.7)</p> <p>Outcome 2 Systolic blood pressure (mmHg) CRT pre-test 124.7 (SD 8.1), post-test 113 (SD 11.9) HIST pre-test 121.0 (SD 8.9), post-test 119.3 (SD 11) Control pre-test 68.5 (SD 9.0), post-test 71.9 (SD 7.5)</p>	

Study	Battaglia 2013 ³⁵
	<p>Outcome 3 Diastolic blood pressure (mmHg) CRT pre-test 73.3 (SD 7.0), post-test 67.3 (SD 7.0) HIST pre-test 74.0 (SD 5.1), post-test 70.0 (SD 4.1) Control pre-test 68.5 (SD 68.5), post-test 71.9 (SD 7.5)</p> <p>Outcome 4 Coronary heart disease risk index (calculated from ratio = total cholesterol/high density lipoprotein) CRT pre-test 4.6 (SD 1.8)), post-test 3.8 (SD 1.1) HIST pre-test 5.0 (SD 2.6), post-test 4.3 (SD 1.8) Control pre-test 4.7 (SD 1.9), post-test 4.4 (SD 1.8)</p> <p>Risk of bias: Very high; Indirectness of outcome: No indirectness Note that change scores have not been used and that there is some variation in baseline outcomes.</p>
<p>Protocol outcomes not reported by the study</p>	<p>Uptake of screening programmes. Morbidity. Mortality. Health-related quality of life</p>

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Study	Cashin 2008 ⁶⁷
Study type	RCT
Number of studies (number of participants)	20
Countries and setting	Correctional facility, Australia
Duration of study	12 weeks
Stratum	None reported
Subgroup analysis within study	None reported
Inclusion criteria	Male inmates that had a chronic illness, two or more risk factors for developing a chronic illness or who were over the age of 40 years.

Study	Cashin 2008⁶⁷
	The first 20 recruited volunteers were recruited into the study and were randomly assigned to an exercise or waitlist.
Exclusion criteria	None stated.
Age, gender and ethnicity	Male Age, intervention = 48.2, control 53.9 Diastolic blood pressure, intervention 79.10 mmHg (SD 9.51), control 90.64 (SD 8.79) - paper explains that this may be due to the control group having 3 people with a primary diagnosis of hypertension, compared to intervention group having none.
Indirectness of population	Male inmates with chronic illness, two risk factors for chronic illness or aged over 40 years.
Interventions	Exercise - 12 weeks of structured exercise facilitated by the Department of Correctional Services Activities Officer and lead by the inmate peer leaders. This included cardiorespiratory endurance, strength and flexibility training. The programme was group based, although each individual participant received a tailored fitness plan. The plan included the approach to alternating aerobics and resistance training to facilitate physiological adaptation before moving to a mixed training session. The programme used stationary bikes, an outdoor training area and training machines with fixed plates. Control - continued usual exercise regimes and had the opportunity to participate in the exercise programme in the following cycle.
Funding	None stated

RESULTS (AVAILABLE CASE ANALYSIS) AND RISK OF BIAS FOR COMPARISON: Structured exercise versus usual care

Outcome 1 Resting heart rate

Mean difference -19.844 (std error difference, 6.235)

Outcome 2 Resting systolic blood pressure

Mean difference -2.556 (std error difference, 6.207)

Outcome 3 Resting diastolic blood pressure

Mean difference -9.289 (std error difference, 3.878)

Outcome 4 Body mass index

Study	Cashin 2008 ⁶⁷
Mean difference -1.6622 (std error difference, 2.4305)	
Risk of bias: Very high; Indirectness of outcome: No indirectness Attrition - 5 from intervention and 2 from control group dropped out of the study before follow up, therefore no post programme results could be measured for 7/20 participants.	
Protocol outcomes not reported by the study	Uptake of screening programmes. Morbidity. Mortality. Health-related quality of life

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Study	Martin 2013 ²⁷⁸
Study type	Observational (before and after)
Number of studies (number of participants)	16
Countries and setting	Medium security correctional centre, Canada
Duration of study	6 weeks
Stratum	None stated
Subgroup analysis within study	None stated
Inclusion criteria	Inmate research team invited all incarcerated women through word of mouth and posters in all living units to an introductory seminar and then invited them to sign up to the study. All participants were interviewed by the project coordinator to ensure their safety for commencing the personal fitness component.
Exclusion criteria	None stated
Age, gender and ethnicity	Women N = 28 completed assessment and body measures N = 16 completed programme (fitness programme and feedback questionnaire) Age: 18 - 29 n= 6, 30 - 39 n= 6, 40+ n =4

Study	Martin 2013²⁷⁸
Further population details	None
Indirectness of population	No indirectness
Interventions	<p>A member of the participatory research team and a certified instructor of health and fitness led the project as project coordinator. Intervention included a nutritional component. Participants given the Canadian Good Food Guide and a personalised food chart that enabled them to self-monitor their progress in eating behaviour for 6 weeks.</p> <p>This paper focuses on the exercise component. Interested women attended a general gym facility orientation, during which proper use and maintenance of the fitness equipment was demonstrated. All participants were offered the option of exercising in a group circuit classes or of developing an individual exercise programme. Group exercise classes included a group cardio warm up; circuit stations integrating equipment, free weights and free standing movements that targeted core, strength, balance and agility; cardio intervals; group cool-down and flexibility. The circuit stations and aerobic routine were altered every two weeks and group circuit sessions were held twice a day. Participants were given an exercise programme card to assist in tracking their progress in cardio, strength and flexibility measures. The card and complementary training enabled participants to practice personal healthy goal setting, follow through with personal commitments, and to establish healthy habits and routines.</p>
Funding	Grant from BC Medical Services Foundation of the Vancouver Foundation and collaborative funding support from the Fraser Health Authority, Women’s Health Research Institute and BC Women’s Hospital.
<p>RESULTS (AVAILABLE CASE ANALYSIS) AND RISK OF BIAS FOR COMPARISON: Exercise and nutrition versus usual care</p> <p>Outcome 1 BMI (n = 15 - reports that there is missing data from one person in both “did not complete programme” and “completed programme” Pre-programme: mean 27.00, SD 4.78. Post programme: mean 26.27, SD 4.11</p> <p>Risk of bias: Very high; Indirectness of outcome: Noted that this intervention also includes a nutrition component.</p>	
Protocol outcomes not reported by the study	<p>Uptake of screening programmes.</p> <p>Morbidity.</p> <p>Mortality.</p> <p>Health-related quality of life</p>

16.1.4 Sexual health

Study	Bryan 2006 ⁵³
Study type	Multisite Before and After
Number of studies (number of participants)	1 (n = 192)
Countries and setting	USA (Connecticut) - five level 2, three level 3 and six level 4 facilities
Duration of study	Follow-up 6 weeks
Stratum	None
Subgroup analysis within study	None Applicable
Inclusion criteria	Voluntary self-selection - programme was compulsory in 2 minimum security prisons but filling in of evaluation form was not
Exclusion criteria	Not stated
Age, gender and ethnicity	Mean - 30.4; range - 17-60 90% male African American - 40% Hispanic - 28% Caucasian - 22% Native American - 1% Mixed race - 7% Other - 3%
Further population details	None
Extra comments	None
Indirectness of population	Range of population slightly under 18 - not downgraded
Interventions	"Beyond Fear" programme (n=196) - structured groups (median size 6) for a weekly 90 minute session during a 6 week period. Group sessions lead by certified HIV/AIDS educator. Participants practiced skills in role-plays and simulated situational exercises while receiving coaching and feedback from the facilitators and other members participants were measured pre-education (n=196)
Funding	Community partners in action

Study	Bryan 2006⁵³
Outcome 1: Knowledge pre-test (n=196): 10.71 (1.64) post-test (n=196): 9.48 (2.03)	
Risk of Bias	Very High
Indirectness of outcome	Surrogate outcome - knowledge
Protocol outcomes not reported by the study	Decrease in STD diagnosis from in-prison Accessing barrier methods and sexual health clinics Uptake of screening programmes. Morbidity. Mortality. Health-related quality of life

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Study (preceding papers)	Butler 2013⁶¹ (Butler 2010⁶², Butler 2013⁶⁰)
Study type	Cohort
Number of studies (number of participants)	1 (n = 2018)
Countries and setting	Australia - New South Wales (23 prisons) and Queensland (11 prisons)
Duration of study	Condom dispensing machines were introduced to New South Wales prisons in 1996. Data collection was between 09/2006 - 12/2006 in New South Wales and between 09/2007 - 06/2008 in Queensland
Stratum	None
Subgroup analysis within study	None Applicable
Inclusion criteria	Male prisoners randomly selected to target sample size greater than 13% per prison in New South Wales and 18% in Queensland. Supplementary randomisation was undertaken to replace excluded participants or refusals
Exclusion criteria	Excluded participants for inmates who did not speak sufficient English, those with profound intellectual disabilities, inmates who were acutely mentally ill, inmates who in the opinion of custodial officers could not safely be moved to the interview area, inmates who were unavailable because they were being transferred between prisons, were in court or hospital, or who could not be released from their work, those who refused to provide written consent, those who had previously been selected for interview at another prison.

Study (preceding papers)	Butler 2013 ⁶¹ (Butler 2010 ⁶² , Butler 2013 ⁶⁰)
Age, gender and ethnicity	<p>New South Wales: median - 33 (19-76) Queensland: median - 31.5 (18-78)</p> <p>male</p> <p>New South Wales: Australia: 78.8% Oceania: 5.7% Asia: 5.7% Europe: 4.3% Middle East: 3.2% Americas: 1.4% Africa: 0.8%</p> <p>Queensland: Australia: 87.6% Oceania: 6.3% Asia: 1.8% Europe: 2.9% Middle East: 0.1% North America: 0.3% South America: 0.1% Africa: 0.9%</p>
Further population details	18.3% of New South Wales and 25.6% of Queensland prisoners identified themselves as Aboriginal and/or Torres Strait Islander background
Extra comments	Methodology and baselines presented in two preceding articles: Butler 2010 ⁶² and Butler 2013 ⁶⁰ Missing data for outcome 1: Ever used a condom for anal sex with another prison inmate (if had sex in prison) New South Wales: 24.3% and Queensland 18.8%
Indirectness of population	No Indirectness
Interventions	<p>New South Wales prisoners (n=1118) who had access to condom dispensing machines which dispensed condom kits - each containing one condom, a sachet of lubricant, information on the correct use of condoms and a plastic zip-lock bag</p> <p>Queensland prisoners (n=900) who had no "readily available" access to condoms</p>

Study (preceding papers)	Butler 2013⁶¹ (Butler 2010⁶², Butler 2013⁶⁰)
Funding	National Health and Medicine council grant number 350860
	Outcome 1: Ever used a condom for anal sex with another prison inmate (if had sex in prison) Queensland – no "readily available" access to condoms (n=32): 3.1% (18.8% missing) New South Wales – access to condom dispensers (n=37): 56.8% (24.3% missing) Outcome 2: Ever used a condom for anal sex with another prison inmate Queensland – no "readily available" access to condoms (n=900): 0.1% (0.6% missing) New South Wales – access to condom dispensers (n=1118): 1.88% (0.81% missing)
Risk of Bias	Very High
Indirectness of outcome	No indirectness
Protocol outcomes not reported by the study	Decrease in STD diagnosis from in-prison Uptake of screening programmes. Morbidity. Mortality. Health-related quality of life

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Study	Grinstead 1997¹⁶⁰
Study type	Quasi-experimental - natural randomisation
Number of studies (number of participants)	1 (n = 2295)
Countries and setting	USA (California) State prison
Duration of study	Follow-up 60-90 minutes
Stratum	None
Subgroup analysis within study	None Applicable
Inclusion criteria	Male prisoners entering prison - quasi-randomised by alternating weeks of the interventions
Exclusion criteria	Too ill or judged a security risk (25%)
Age, gender and	Mean - 32.1

Study	Grinstead 1997 ¹⁶⁰
ethnicity	male Percentage age in control/peer education/professional education African American - 37.3/35.1/42.9 Hispanic - 15.0/19.2/12.7 Caucasian - 36.4/35.4/36.3 Other - 11.3/10.3/8.1
Further population details	None
Extra comments	None
Indirectness of population	No Indirectness
Interventions	Education by Professional Educator for one 60-90 minute session at entry to prison (n=648). Educator was African-American woman with bachelor's degree and four years of HIV and substance abuse education. Peer education for one 60-90 minute session at entry to prison (n=1169). Peers were HIV+ inmates trained in a four day workshop, mostly African-American. normal entry to prison (n=478)
Funding	None Stated
	Outcome 1: Knowledge Control (n=478): 7.8 Peer Educator (n=1169): 8.1 Professional Education (n=648): 8.3 Outcome 2: Intention Control (n=478): 2.28 (0.78) Peer Educator (n=1169): 2.53 (1.05) Professional Education (n=648): 2.48 (0.96) Outcome 3: Uptake of HIV screening Control (n=478): not offered Peer Educator (n=1169): 42.5% Professional Education (n=648): 45%

Study	Grinstead 1997 ¹⁶⁰
Risk of Bias	Very High
Indirectness of outcome	Surrogate outcome - knowledge surrogate outcome - intention
Protocol outcomes not reported by the study	Decrease in STD diagnosis from in-prison Accessing barrier methods and sexual health clinics Morbidity. Mortality. Health-related quality of life

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Study	Lawrence 1997 ²³²
Study type	Before and After
Number of studies (number of participants)	1 (n = 90)
Countries and setting	USA (southern urban jail)
Duration of study	Follow-up 6 weeks
Stratum	None
Subgroup analysis within study	None applicable
Inclusion criteria	Randomised to two professionally led intervention groups - Selection of initial sample not stated
Exclusion criteria	Not stated
Age, gender and ethnicity	Mean - 31.61; SD - 7.7; range - 17-53 female African American - 80.7% Caucasian - 19.3%
Further population details	None
Extra comments	None
Indirectness of	Range of population slightly under 18 - not downgraded

Study	Lawrence 1997²³²
population	
Interventions	Two Education interventions 'Social cognitive theory' (SCT) or 'gender and power' (TGP). In total n=90. Group sessions met once a week for 6 weeks and lasted 90 minutes per session. These were led by same gender facilitators experience in providing interventions for low-income minority women. Pre-intervention self-administered measures packet (n=90)
Funding	National Institute on Child Health and Human Development; National Institute of Mental Health
	Outcome 1: Knowledge Pre-test TGP (n=45): 21.0 (3.9) Post-test TGP (n=45): 22.2 (2.9) Pre-test SCT (n=45): 20.7 (4.3) Post-test SCT (n=45): 21.4 (3.9) Outcome 2: Intention Pre-test TGP (n=45): 4.2 (1.4) Post-test TGP (n=45): 4.6 (0.9) Pre-test SCT (n=45): 4.5 (1.0) Post-test SCT (n=45): 4.8 (0.8)
Risk of Bias	Very high
Indirectness of outcome	Surrogate outcome - knowledge
Protocol outcomes not reported by the study	Decrease in STD diagnosis from in-prison Accessing barrier methods and sexual health clinics Uptake of screening programmes. Morbidity. Mortality. Health-related quality of life

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Study	Sylla 2010⁴⁴⁸
Study type	Before and after
Number of studies	1 (n = 146)

Study	Sylla 2010 ⁴⁴⁸
(number of participants)	
Countries and setting	USA (San Francisco) County Jail
Duration of study	Follow-up 4 months
Stratum	None
Subgroup analysis within study	None Applicable
Inclusion criteria	Voluntary self-inclusion - recruited by announcement of voluntary survey in housing units, during recreation periods and during a transgender health class.
Exclusion criteria	Not stated
Age, gender and ethnicity	<p>Percentage in pre-test/post-test</p> <p>18-34 - 35%/19%</p> <p>35-44 - 34%/38%</p> <p>>44 - 31%/44%</p> <p>Male - 88%/88%</p> <p>Transgender/female/other - 12%/12%</p> <p>Black - 57%/53%</p> <p>White - 21%/35%</p> <p>Hispanic - 12%/0%</p> <p>Asian - 11%/11%</p>
Further population details	None
Extra comments	None
Indirectness of population	No Indirectness
Interventions	<p>Have had access to condom machine (n=69) for four months, machine dispensed individually wrapped condoms.</p> <p>Lower number of Hispanics and young people surveyed post-intervention</p> <p>Before intervention (n=77) - had access to condoms 1 at a time via 1-to-1 meeting with the Forensic AIDS project (FAP) of the county health department</p>

Study	Sylla 2010 ⁴⁴⁸
Funding	Centre for AIDS Prevention Studies of the university of California Grant HP08-LA-001
	<p>Outcome 1: Ever used a condom for anal sex with another prison inmate (if had sex in prison) Before Installation of condom dispensing machine (n=3): 33.3% (off graph) After Installation of condom dispensing machine (n=6): 83.3% (off graph)</p> <p>Outcome 1: Ever used a condom for anal sex with another prison inmate Before Installation of condom dispensing machine (n=77): 1.30% (off graph) After Installation of condom dispensing machine (n=69): 7.25% (off graph)</p> <p>Outcome 2: Obtained condoms Before Installation of condom dispensing machine (n=77): 5.20% (off graph) After Installation of condom dispensing machine (n=69): 24.64% (off graph)</p>
Risk of Bias	Very High
Indirectness of outcome	No Indirectness
Protocol outcomes not reported by the study	<p>Decrease in STD diagnosis from in-prison</p> <p>Uptake of screening programmes.</p> <p>Morbidity.</p> <p>Mortality.</p> <p>Health-related quality of life</p>

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Study	Vaz 1996 ⁴⁷⁰
Study type	Before and after
Number of studies (number of participants)	1 (n = 300)
Countries and setting	Mozambique (Machava prison)
Duration of study	Follow-up after 6 months
Stratum	None
Subgroup analysis within study	None Applicable

Study	Vaz 1996 ⁴⁷⁰
Inclusion criteria	Consecutively selected on entry into prison
Exclusion criteria	Excluded if prison term is less than 1 year
Age, gender and ethnicity	Mean - 26; range - 15-70 not stated Mozambique - not stated
Further population details	None
Extra comments	GDG downgraded for indirectness of setting (Mozambique)
Indirectness of population	Range of population significantly under 18
Interventions	Education by Prisoner-activists (n=300) 3 educational sessions of AIDS and STD run by prisoner-activists - sessions carried out in groups of 30 and lasted 30 min. Also creation of a theatre group comprised of prisoners lead by a semi-professional drama instructor to put on monthly informative shows pre-intervention measured on entry to prison
Funding	African Groups of Sweden
	Outcome 1: Knowledge pre-test Low education (n=235): 43.98% post-test Low education (n=235): 83.83% pre-test High education (n=65): 69.23% post-test High education (n=65): 93.85%
Risk of Bias	Very high
Indirectness of outcome	Surrogate outcome - knowledge
Protocol outcomes not reported by the study	Decrease in STD diagnosis from in-prison Accessing barrier methods and sexual health clinics Uptake of screening programmes. Morbidity. Mortality. Health-related quality of life

B3.1.5 Smoking cessation

Study	Cropsey 2008 ⁹⁰
Study type	RCT (crossover - 6 month waitlist control group who crossed over to the active intervention after 6 months)
Number of studies (number of participants)	250 - intervention 289 - control (360 randomised to: Intervention started immediately n = 71, waitlist control group started intervention after 6 months n = 179, intervention group never started intervention n = 11, waitlist control never started intervention n = 99). 116 - completed intervention 134 - did not complete intervention (115 not interested, 19 transferred/segregated)
Countries and setting	State prison, USA
Duration of study	6 months
Stratum	None reported
Subgroup analysis within study	None reported
Inclusion criteria	Adult smokers who smoked at least 5 cigarettes a day, interest in smoking cessation treatment, ability to participate in group psychotherapy, no contraindications for nicotine replacement (e.g. not within 6 months after myocardial infarction), housed in general population (e.g. not in segregated housing or in acute mental health wing), and with at least 1 year left to serve.
Exclusion criteria	Not stated.
Age, gender and ethnicity	Women Mean age 33.8 (SD = 9.0 years) 41% completed high school or had a graduate equivalency degree, and 32% had a greater than a high school education. 67% reported history of treatment for mental illness and 58%, substance abuse.
Further population details	Participants attended a mean of 6.7 (SD = 3.1) of 10 group sessions 43.3% (SD = 33.7%) of all possible doses of nicotine replacement were used (low compliance to medication)
Indirectness of population	Note that the population is women only.
Interventions	Behavioural intervention based on mood management training to prevent smoking relapse. 10 session group intervention was modified for delivery in prison and include examples of smoking triggers encountered in prison and coping strategies that were feasible and appropriate for that environment. Intervention delivered over 10 weeks with 1 session per week. All participants received NicoDerm CQ nicotine replacement patches (GSK, England) starting in week 3 of the intervention, following the manufacturer's suggested dosing. Side effects were assessed and patches were distributed at weekly group sessions. Participants were asked to make a quit attempt between weeks 3 and 4, immediately after receiving their first supply if nicotine replacement patches.

Study	Cropsey 2008 ⁹⁰
	<p>Wait list control group completed a baseline assessment and follow-up assessment at 10 weeks, 3 months and 6 months and then crossed over to intervention group. Waitlist participants were not given instructions or advice to quit or reduce smoking.</p> <p>Participants who withdrew from the intervention were coded as smoking. Participants who were transferred to another facility or were released after the intervention ended (n = 42) had their last assessment (n = 6 abstinent and n = 36 smoking) carried forward for subsequent follow-up points. All other participants with missing data (e.g. return to court, segregation) during follow-up were coded as smoking.</p>
Funding	National Institute on Drug Abuse of the National Institutes of Health. Product support provided by GSK.
<p>RESULTS (INTENTION TO TREAT ANALYSIS) AND RISK OF BIAS FOR COMPARISON: Behavioural intervention plus nicotine patch versus usual care in women prisoners</p> <p>Outcome 1 Smoking status (abstinent or smoking, abstinent defined as self-reported continuous abstinence for the previous week confirmed by CO exhalation of 2ppm or less)</p> <p>Intervention: 18.4% at end of treatment (10 weeks), 16.8% at 3-month follow up and 14% at 6 months.</p> <p>Control: 1% (estimated off graph) at end of treatment (10 weeks), 2.5% (estimated off graph) at 3-month follow up, 2.8% at 6 month follow up</p> <p>Risk of bias: Very high; Indirectness of outcome: No indirectness</p> <p>Outcome 2 number of sessions attended (intervention group) n = 250</p> <p>End of treatment, abstinent 8.9 (SD 1.5) smoking 6.2 (3.1)</p> <p>6 month follow up, abstinent 7.9 (SD 2.6) smoking 6.5 (3.1)</p> <p>Risk of bias: Very high; Indirectness of outcome: No indirectness</p> <p>Outcome 3 medication compliance(intervention group) n = 250</p> <p>End of treatment, abstinent 60.9 (SD 29.0) smoking 39.3 (33.5)</p> <p>6 month follow up, abstinent 48.3 (SD 30.4) smoking 42.5 (34.2)</p>	
Protocol outcomes not reported by the study	Uptake of screening programmes. Morbidity.

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Study	Cropsey 2008⁹⁰
	Mortality. Health-related quality of life
Study	Jalali 2015²⁰²
Study type	RCT
Number of studies (number of participants)	213
Countries and setting	Mashhad Central Prison, Iran
Duration of study	1 year (90 day follow-up)
Stratum	None reported
Subgroup analysis within study	None reported
Inclusion criteria	347 male inmates voluntarily applied for service in this clinic, and 253 of them were eligible for the intervention based on the following criteria: 1. Imprisoned for more than six months 2. Smoke more than 10 cigarettes per day and express an intention or motivation to quit 3. Scheduled to be imprisoned for another six months to enable follow-up 4. No use of other drugs for mental or physical issues.
Exclusion criteria	None
Age, gender and ethnicity	Men Average age = 37.59 ± 8.76.
Further population details	Mean duration of imprisonment = 3.3 +/- 1.0 years, and 38% of the prisoners were imprisoned for the first time.
Indirectness of population	Note men only
Interventions	The participants completed a baseline assessment that consisted of demographic information, smoking history, nicotine dependency, and the concentration of CO in expired air measured by Bedfont Micro-Smokerlyzer (Bedfont Scientific, Ltd., UK). The degree of nicotine dependency was assessed by Fagerström's test (Fagerström & Schneider, 1989). According to the answers each smoker provided for the questions, a certain score was obtained that varied from 0 to 10 points. The extent of the dependency was considered to be low when the

Study	Jalali 2015²⁰²
	score was in the range of 0 to 3 points; moderate dependency was from 4 to 6 points; and high dependency was 7 or more points. The members of the control group were not instructed or advised to quit smoking or to reduce the frequency of smoking. All of the prisoners who were in the MI and MI-NRT groups received five, 30-minute, face-to-face counselling sessions every week that were designed to enhance their motivation to quit smoking and help them develop the skills required to do so. Each participant in the MI with NRT group received NRT doses based on their smoking level at the time. The participants used one 2-mg piece of gum for every cigarette they smoked during the day. They were encouraged to use NRT for five weeks to minimize their nicotine-withdrawal symptoms.
Funding	None stated
<p>RESULTS (NUMBERS REPORTED) AND RISK OF BIAS FOR COMPARISON: Behavioural intervention versus usual care in male prisoners</p> <p>CO concentrations in their expired air during each visit. The Bedfont Micro-Smokerlyzer was used for this purpose, and it was adjusted and calibrated by the manufacturer. Concentrations of >10 ppm of CO indicated that the participants were smokers; 6–10 ppm indicated sporadic smokers, and < 6 ppm indicated non-smokers (9). Smoking statuses were assessed when the intervention was completed and at the 90-day follow-up. The assessment consisted of determining the number of cigarettes smoked per day, the degree of nicotine dependency according to Fagerström’s test, and the CO concentration in the expired air of the participants in the MI group, the MI-NRT group, and the control group.</p> <p><u>Outcome 1 Mean change in CO oximetry (pre-test and follow-up)</u> Motivational intervention (MI) = 7.8 ± 4.34 SD Motivational intervention + nicotine replacement therapy (MI - NRT) Control = 10.87 ± 4.53 SD Control = 0.36 ± 2.36 SD</p> <p><u>Outcome 1 Mean change in CO oximetry (post-test and follow up)</u> Motivational intervention (MI) = 7.81 ± 4.8 SD Motivational intervention + nicotine replacement therapy (MI - NRT) Control = 11.24 ± 3.82 SD Control = 0.37 ± 1.74 SD</p> <p><u>Outcome 2 Mean change in cigarettes smoked per day (pre-test and post-test)</u> Motivational intervention (MI) = 9.38 ± 8.34 SD Motivational intervention + nicotine replacement therapy (MI - NRT) Control = 9.81 ± 5.32 SD Control = 0.4 ± 4.49 SD</p> <p><u>Outcome 2 Mean change in cigarettes smoked per day (pre-test and follow-up)</u></p>	

Study	Jalali 2015 ²⁰²
	<p>Motivational intervention (MI) = 5.9 ± 9.57 SD Motivational intervention + nicotine replacement therapy (MI - NRT) Control = 10.15 ± 3.27 SD Control = 0.09 ± 3.33 SD</p> <p><u>Outcome 2 Mean change in cigarettes smoked per day (post-test and follow-up)</u> Motivational intervention (MI) = 3.47 ± 3.29 SD Motivational intervention + nicotine replacement therapy (MI - NRT) Control = 0.33 ± 5.68 SD Control = -0.31 ± 4.07 SD</p> <p><u>Outcome 3 Mean change in Fagerström's test score (pre-test and post-test)</u> Motivational intervention (MI) = 2.88 ± 2.47 SD Motivational intervention + nicotine replacement therapy (MI - NRT) Control = 6.5 ± 2.41 SD Control = 0.21 ± 2.09 SD</p> <p><u>Outcome 3 Mean change in Fagerström's test score (pre-test and follow-up)</u> Motivational intervention (MI) = 3.62 ± 2.97 SD Motivational intervention + nicotine replacement therapy (MI - NRT) Control = 7.81 ± 2.6 SD Control = -0.7 ± 1.61 SD</p> <p><u>Outcome 3 Mean change in Fagerström's test score (post-test and follow-up)</u> Motivational intervention (MI) = 0.73 ± 1.51 SD Motivational intervention + nicotine replacement therapy (MI - NRT) Control = 1.31 ± 1.27 SD Control = -0.91 ± 2.51 SD</p>
Protocol outcomes not reported by the study	Uptake of screening programmes. Morbidity. Mortality. Health-related quality of life

Study	Naik 2014 ³¹⁹
Study type	RCT
Number of studies (number of participants)	600 (300 intervention and 300 control)
Countries and setting	Central Jail, Bangalore city, India
Duration of study	6 months
Stratum	None reported
Subgroup analysis within study	None reported
Inclusion criteria	Current adult smokers who used any tobacco product either daily or occasionally at the time of the study, convicted male prisoners with at least 1 year left to serve, and prisoners giving informed consent to quit smoking.
Exclusion criteria	Inmates with acute mental illness (current suicidal ideation/actively psychotic) or mental retardation such that they could not provide informed consent and medically compromised inmates (like those with respiratory disorders).
Age, gender and ethnicity	Men
Further population details	Fagerström questionnaire was used to determine the level of nicotine addiction. The degree of nicotine dependency was assessed by Fagerström test. Smokerlyser, the micro CO monitor, was used to measure alveolar carbon monoxide in ppm concentrations,
Indirectness of population	Includes both chewable and smoking tobacco. Participants used both chewable and smoking tobacco. 5.3% chewing tobacco and 2.1% chewable and smoking tobacco.
Interventions	Motivational intervention was given for the study group. Topics included introduction to tobacco, prevalence of tobacco use, effects of tobacco use on general health and dental health, psychosocial factors influencing tobacco use, healthy diet and behavioural intervention for prevention of tobacco use. Follow-up was done for both study and control groups at the end of the 6 month using the same proforma and Fagerström test and carbon monoxide grade was determined.
Funding	None stated
RESULTS (NUMBERS REPORTED) AND RISK OF BIAS FOR COMPARISON: Behavioural intervention versus usual care in male prisoners	
Outcome 1 Stopped smoking	
Intervention 48/300	
Control 6/300	

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Study	Naik 2014 ³¹⁹
Outcome 2 Attempt to quit (yes) Intervention 235/300 Control 92/300	
Outcome 3 Willing to quit (yes) Intervention 206/300 Control 184/300	
Risk of bias: Very high (Unclear method of randomisation and poor description of motivational intervention used.) Indirectness of outcome: Serious indirectness	
Protocol outcomes not reported by the study	Uptake of screening programmes. Morbidity. Mortality. Health-related quality of life

Study	Richmond 2013 ³⁸⁷
Study type	RCT
Number of studies (number of participants)	425 Treatment 206 Control 219
Countries and setting	Prisons in New South Wales (17) and Queensland (1), Australia
Duration of study	12 months
Stratum	None reported
Subgroup analysis within study	None reported
Inclusion criteria	Male prisoners aged over 18 years, incarcerated for 1 or more months, with at least 6 months of current sentence remaining, English speaking, score of 5 or more on the Fagerström Test for Nicotine dependence (FTND - indicating moderate/high nicotine dependence) and readiness to quit.

Study	Richmond 2013 ³⁸⁷
Exclusion criteria	Females, current significant cardiovascular or mental illness (major depressive disorder, bipolar disorder, threats of suicide or repeated deliberate self-harm), current use of antidepressant or antipsychotic medication, use of monoamine oxidase inhibitors within 2 weeks, known allergies to the study drugs or a life-threatening illness.
Age, gender and ethnicity	Men Treatment - Mean age 32.8 (SD 10.1), Left school with no qualification 43.2%, incarcerated 5+ years at baseline 17% Control - Mean age 34.1 (SD 10.3), Left school with no qualification 43.8%, incarcerated 5+ years at baseline 19.2%
Indirectness of population	No indirectness
Interventions	<p>Intervention: Multicomponent intervention and nortriptyline (NOR, Zyban). The multicomponent intervention consisted of brief cognitive behavioural therapy (2 face to face sessions lasting 30 minutes delivered by a councillor in weeks 3 and 5 and 6), active transdermal patch (nicotine replacement therapy, NRT), a booklet to assist prisoners at times of stress, a quit calendar developed by prisoners in the pilot trial and access to the Quitline telephone counselling service (provided to the community by the NSW Health Department).</p> <p>Subjects commenced medication 2 weeks prior to their quit date to ensure therapeutic levels of NOR were reached. Subsequent therapy lasted a further 10 weeks</p> <p>NOR dosage 25mg/day (one tablet) for 3 days and then 50mg/day (two tablets) for 4 days, then 75mg/day for the remaining 11 weeks. After this the dose dropped to 50mg/day for 4 days, then 25mg/day for 3 days then discontinued.</p> <p>Control: Multicomponent intervention and placebo.</p> <p>NOR and placebo provided in identical tablet form. All medications were dispensed daily by nurses at the prison clinic</p>
Funding	National Health and Medical Research Council. NRT patches provided free of charge from GSK.
<p>RESULTS (INTENTION TO TREAT ANALYSIS) AND RISK OF BIAS FOR COMPARISON: Behavioural intervention plus nicotine patch plus nortriptyline (NOR) versus behavioural intervention plus nicotine patch in male prisoners</p> <p>Point prevalence abstinence defined as abstinence at 3, 6 and 12 months.</p> <p>Continuous abstinence defined as abstinence between quit day and a specified follow up point (3, 6 and 12 months)</p> <p>Smoking reduction based on self-assessment of whether participants had reduced their daily consumption of cigarettes by 50% or greater (including abstinence), relative to baseline.</p> <p>Those participants who missed a follow-up assessment were regarded as smokers. At 3, 6 or 12 month, subjects who reported any smoking whatsoever or whose</p>	

Study	Richmond 2013 ³⁸⁷
	expired CO levels were 10 parts per million or over were classified as continuing smokers.
	Outcome 1 Continuous abstinence
	3 months (383)
	Treatment (n =206) 23.8% Control (n = 219) 16.4%
	6 months (369)
	Treatment (n =206) 17.5% Control (n = 219) 12.3%
	12 months (342)
	Treatment (n =206) 11.7% Control (n = 219) 11.9%
	Outcome 2 Point prevalence
	3 months (383)
	Treatment (n =206) 27.7% Control (n = 219) 19.6%
	6 months (369)
	Treatment (n =206) 19.4% Control (n = 219) 14.2%
	12 months (342)
	Treatment (n =206) 12.1% Control (n = 219) 14.6%
	Outcome 3 Smoking reduction of 50% or greater relative to baseline
	3 months (383)
	Treatment (n =206) 89.9% Control (n = 219) 88.8%
	6 months (369)
	Treatment (n =206) 81.5% Control (n = 219) 77.4%
	12 months (342)
	Treatment (n =206) 72.0% Control (n = 219) 77.4%
	Follow up assessment completed for intervention arm:
	3 months (n = 188, 91%) 6 months (n = 179, 87%) 12 months (n = 166, 81%)
	Follow up assessment completed for control arm:
	3 months (n = 195, 89%) 6 months (n = 190, 87%) 12 months (n = 176, 80%)

Study	Richmond 2013 ³⁸⁷
<p>Risk of bias: Very high; Indirectness of outcome: No indirectness Attrition bias - Attrition bias. 40% of intervention arm and 45% of control arm had less than 75% medication adherence.</p>	
Protocol outcomes not reported by the study	<p>Uptake of screening programmes. Morbidity. Mortality. Health-related quality of life</p>

H.362 Methods of delivery

37 None.

H.388 Who should deliver

Study	Grinstead 1997 ¹⁶⁰
Study type	Quasi-experimental - natural randomisation
Number of studies (number of participants)	1 (n = 2295)
Countries and setting	USA (California) State prison
Duration of study	Follow-up 60-90 minutes
Stratum	None
Subgroup analysis within study	None Applicable
Inclusion criteria	Male prisoners entering prison - quasi-randomised by alternating weeks of the intervention
Exclusion criteria	Too ill or judged a security risk. 25% overall, not reported by group
Age, gender and ethnicity	<p>Mean age - 32.1 male Percentage in control/peer education/professional education African American - 37.3/35.1/42.9 Hispanic - 15.0/19.2/12.7</p>

Study	Grinstead 1997¹⁶⁰
	Caucasian - 36.4/35.4/36.3 Other - 11.3/10.3/8.1
Further population details	None
Extra comments	None
Indirectness of population	No Indirectness
Interventions	Education by Professional Educator for one 60-90 minute session at entry to prison (n=648). Educator was African-American woman with bachelor's degree and four years of HIV and substance abuse education. Peer education for one 60-90 minute session at entry to prison (n=1169). Peers were HIV+ inmates trained in a four day workshop, mostly African-American. normal entry to prison (n=478)
Funding	None Stated
	Outcome 1: Knowledge Control (n=478): 7.8 Peer Educator (n=1169): 8.1 Professional Education (n=648): 8.3 Outcome 2: Intention Control (n=478): 2.28 (0.78) Peer Educator (n=1169): 2.53 (1.05) Professional Education (n=648): 2.48 (0.96) Outcome 3: Uptake of HIV screening Control (n=478): not offered Peer Educator (n=1169): 42.5% Professional Education (n=648): 45%
Risk of Bias	Very High
Indirectness of outcome	Surrogate outcome - knowledge surrogate outcome - intention

Study	Grinstead 1997 ¹⁶⁰
Protocol outcomes not reported by the study	Decrease in STD diagnosis from in-prison Accessing contraception and sexual health clinics Morbidity. Mortality. Health-related quality of life

H.394 Barriers and facilitators to health promotion

Study (ref id)	Alves 2015 ⁸
Aim	To investigate the health of detained women and the influence of incarceration from their perspective
Population	n=14 Adults (mean age 39±12.91 years) Female In prison On remand n=6, sentenced n=9
Setting	1 women's prison, Portugal
Study design and methodology	3 focus groups the prison director authorised the individual distribution of materials to each inmate that had already participated in the quantitative part of the study, including: a personal letter explaining the purpose of the qualitative study (goals, methods, terms, dates), a request for their participation, informed consent form, consent for audio recording. Inmates were to sign the letter and forms if they agreed to participate and allowed an audio recording of their participation. Participants were instructed to deliver their recruitment materials in a sealed envelope, labelled with participant number to a prison guard who then delivered them to the researchers, ensuring confidentiality. Participants were distributed into groups that accounted for the socio-demographic characteristics and legal status of the participants (purposive sampling). Focus groups took place in a private room of the prison and each group consisted of 4-6 participants. Prison officers were not present during the focus groups and the room was not monitored by video recording. Focus groups lasted 60-90 minutes. Focus groups were guided by a semi-structured schedule that was designed to explore women prisoners' perceptions about their health status and health behaviours prior to incarceration and the influence of imprisonment on their health:

Study (ref id)	Alves 2015 ⁸
	<ol style="list-style-type: none"> 1. Was being healthy important to you before coming to prison? [when thinking about all the things going on in your life before you came to prison, would you say being healthy was a concern for you then? What did you do to be healthy?] 2. Was there any impact of imprisonment on your health? [think about when you first came into prison during this instance. On the floor there are 4 pieces of paper that say “excellent”, “good”, “fair” and “poor”. We would like you to rate your health when you came into prison and stand by the corresponding piece of paper. Each individual is then asked to explain why they chose the particular rating. The exercise is then repeated for their current health status] 3. How does prison affect your health? [when thinking about all the things that you currently have or all the things that have happened in prison, what effects your health? Why?] <p>Two researchers ran the focus groups and assumed a role of engaging discourse, facilitating the sharing of insight and ensuring that all participants had the opportunity to speak and provide their view on the topic. The author noted recognising the active role of the researcher in focus groups in the creation of discussion for specific data collection purposes, and the group interactions as sources of data.</p> <p>The English translation of the discourse was carried out by the authors with the supervision of a bilingual (Portuguese/English). Later, all the text was edited by a native English speaker.</p>
Analysis methods	<p>Inductive thematic analysis.</p> <p>The researchers read and reread the text to familiarise themselves with the data. Then an initial coding system was generated, themes were searched for and themes were named. On going meetings took place with a 2nd researcher who was consulted as an auditor. These meetings allowed discussion of the analysis and authenticity of specific coded and categories.</p>
Themes with findings	<p>Prison environment</p> <ul style="list-style-type: none"> • Routines of daily life: work in prison was noted to be an obstacle to the maintenance of health behaviours: “I cannot go to the gym because in the afternoon I work at cleaning, and I have classes in the morning” • Cost of essential goods: unemployed people reported that a lack of money and excessive costs of necessities and good inside prison have a negative influence on health: “its very expensive... and salaries? I do not even talk about it, then we go to the store and shower gel costs almost 6 euros... we have to buy the things we need, like toilet paper, cleaners and so on” • Quality of food: quality of food was mentioned to have a significantly negative impact on health. One person with a stomach illness said, “ I should eat a diet without salt, and they give me food that they should not give. The diet here is pork, it is not a diet. The problem here is the food, the food kills me”. Another person stated. “food is something to forget, because the food is terrible here; we have to be vegetarian to eat vegetables, I do not think it is part of a good diet”
Limitations	No limitations
Applicability of evidence	Applicable (Portugal)

Study (ref id)	Condon 2007 ⁸¹
Aim	To explore the views of prisoners about health services provided in prisons
Population	<p>n=111</p> <p>Prisoners</p> <p>91% male 9% female</p> <p>18% young offenders (aged 16-20 years) 5% aged over 60 years</p> <p>12% Black prisoners 3% Asian prisoners</p>
Setting	<p>12 prisons, England, UK</p> <p>Male, Cat A prison, n=1 Male, Cat B prison, n=5 Male, Cat C prison, n=2 Male, Cat D prison, n=1 Women's prison, n=1 YOIs n=2</p>
Study design and methodology	<p>Semi-structured interviews</p> <p>Recruited by means of a poster, which described the project and invited potential volunteers to complete a reply slip or inform prison staff of their interest. Exclusion of people for whom participation might present a risk to the physical or mental health of either the individual or the researchers. Researchers made a random selection of 10 participants from the names provided by each prison.</p> <p>Each interview was carried out by two members of the multidisciplinary research team. All interviews were conducted in privacy, to the extent that health or prison staff were not within listening distance of the interview, and took place in a variety of venues from consulting rooms to prisoner's</p>

Study (ref id)	Condon 2007⁸¹
	cells. Interviews were audiotaped and transcribed verbatim, with the transcripts creating the text for analysis.
Analysis methods	Thematic analysis was undertaken using the analytical framework developed by Ritchie and Spencer (1994) and assisted by Atlas.ti software. Stages of analysis were: identifying initial concepts, coding the data, sorting the data by theme and developing a conceptual framework.
Themes with findings	Health promotion <ul style="list-style-type: none"> The study states that although smoking cessation services were available in many prisons, they were sometimes hard to access because of nursing staff shortages or high demand
Limitations	Data are not rich
Applicability of evidence	Indirect: included participants under the age of 18 (18% aged 16-20 years)

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Study (ref id)	Condon 2008⁸⁰
Aim	To explore the views of prisoners of making healthy choices in prison
Population	n=111 Prisoners 91% male 9% female 18% young offenders (aged 16-20 years) 5% aged over 60 years 12% Black prisoners 3% Asian prisoners
Setting	12 prisons in England, UK Male, Cat A prison, n=1 Male, Cat B prison, n=5

Study (ref id)	Condon 2008⁸⁰
	Male, Cat C prison, n=2 Male, Cat D prison, n=1 YOI, n=2 Women's prison, n=1
Study design and methodology	1:1 interview Volunteers were recruited by means of posters advertising the study. Participants were selected randomly from lists of names of those who volunteered. Prisoners were interviewed individually by pairs of interviewers, and interviews were audiotaped and transcribed. Interviews explored prisoner's views on health services.
Analysis methods	Data was analysed thematically. Atlas.ti software was used to facilitate process of coding and data handling
Themes with findings	<p>Reducing the number of people who smoke</p> <ul style="list-style-type: none"> • The study reported that interviewees described long waiting lists to go on smoking cessation courses and that persistence was required to gain a place • The study reported that non-smoking prisoners commonly described passive smoking as a problem and that non-smokers were put in cells with smokers, despite having requested a non-smoking cell <p>Reducing obesity and improving diet and nutrition</p> <ul style="list-style-type: none"> • The study reported that interviewees described a wide disparity between prisons in ease of access to low-fat, high fibre and low sugar foods and that the majority of interviewees supplemented their diet by buying food from the prison canteen. Unhealthy food such as fizzy drinks, crisps and chocolate bars were the most common purchases • "the kitchen man is an empire of his own. Nurse X and Mr Y, the kitchen man, came over to my wing... we had to sit down and talk. All Mr Y said was, I'm not going to give anyone skimmed milk, because it is not part of my contract. One. Number Two, he said, it is a struggle for them to give me two [pieces of] brown bread" • The study reported that most prisoners considered canteen foods vastly overpriced and that purchasing canteen food had to be balanced against other purchases, for example phone credit, tobacco <p>Increasing exercise</p> <ul style="list-style-type: none"> • The study reported that access to both exercise and gym facilities could be constrained by the prison environment, particularly in high security prisons. It was noted that procedures varied for getting access to the gym: some prisoners described scrupulously fair procedures, whilst others, in all categories of prison, seemed to find themselves the victim of an arbitrary system under which access to the gym was infrequent or non-existent. • It was reported that access to the outdoors varied across prisons: in some prisons inmates had the opportunity to walk outside every day; in other prisons exercise was regularly cancelled.

Study (ref id)	Condon 2008 ⁸⁰
	<p>Improving sexual health</p> <ul style="list-style-type: none"> • The study reported that young offenders often found the thought of attending hospital under guard was so humiliating that they deterred from seeking help for STI symptoms and that they were concerned about being teased about STI medication • The study reported a frequent lack of confidentiality in providing services: a number of prisoners reported attending appointments at STI clinics outside the prison, which meant having to be escorted by prison officers, and, in come case, being examined while handcuffed to two officers. One female prisoner described her relief when the doctor she was consulting for a sexual health condition insisted that the officers waited outside during the examination
Limitations	Data are not rich
Applicability of evidence	Indirect: included participants under the age of 18 (18% aged 16-20 years)

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Study (ref id)	Douglas 2009 ¹¹³
Aim	To explore the views of women prisoners of the impact of imprisonment on their health
Population	<p>1:1 interview n=12 Focus groups n=37</p> <p>Prisoners, both remand and sentenced, Detained for at least 1 month Female Adult</p> <p>Interviews: Aged 19-46 years British, n=11 Irish, n=1 Black (African or African-Caribbean), n=4 White, n=8</p> <p>Focus groups: Aged 17-50 years</p>

Study (ref id)	Douglas 2009 ¹¹³
	<p>Young offenders (aged 21 and under), n=11 British African-Caribbean, n=5 Jamaican, n=11 African, n=7</p>
Setting	2 closed prisons in England, UK
Study design and methodology	<p>12 1:1, semi-structured interviews 6 focus groups</p> <p>Potential participants were identified using the Local Inmate Directory. Eligible women were approached by researchers and provided with a written information sheet and verbal explanation. Most of those recruited had previously participated in a related questionnaire and were known to the researchers. Written informed consent was obtained from each woman before the each group/interview.</p> <p>Groups/interviews were guided by a prepared semi-structured schedule which aimed to explore: women’s perceptions of health and healthiness; health problems of women in prison; personal health status prior to imprisonment; impact of prison on health; experience of prison healthcare services; and recommendations for service development. For groups/interviews both researchers were female and no prison or other staff members were present. Groups ran for 1.5-2 hours, with a refreshment break. Interviews were 30-60 minutes. All discussions were tape recorded and fully transcribed.</p>
Analysis methods	Simple thematic analysis. Coded the recorded speech, categorising and collating major themes and subthemes. Deviant cases were also searched for. Interpretations were reviewed and discussed, and minor differences in coding were resolved. Interpretation was not verified with the participants as most had been released or transferred. Interpretations were refined with key professional stakeholders at a feedback meeting.
Themes with findings	<p>Disempowerment</p> <ul style="list-style-type: none"> • The study reported that prisoners were frustrated that basic self-care equipment and self-medication was denied • “you can’t even get Ibuprofen... the nurses are going on like its cocaine to you” (focus group) • “there’s no Derbec or Lyclear. You know, if I was at home and I thought the kids have nits, I’d just give myself a treatment just to make sure that I didn’t have them” (focus group) • “you can’t even get Ibuprofen... the nurses are going on like its cocaine to you” (focus group) <p>Resilience and coping strategies</p> <ul style="list-style-type: none"> • The study reported that prison put considerable psychological stress on the female prisons, often accompanied with anxiety and extreme frustration <p>Hygiene and cleanliness</p>

Study (ref id)	Douglas 2009¹¹³
	<ul style="list-style-type: none"> • Women complained of unclean facilities, and several accounts of vermin infestation were reported... women were disgusted by the evidence of vermin present in areas where they ate, slept and stored their personal food items. Women also felt that more should be done by the prison authorities to prevent the spread of infestations
	<p>Activity and nutrition</p> <ul style="list-style-type: none"> • It was reported that prisoners often felt compelled to choose between working (which was important in providing much needed money) and going to the gym • “if you have to work or take education classes you cannot go to the gym” (focus group) • The study reported that prisoners felt bored and aimless and that access to activities that may alleviate boredom (for example exercise, education, work) was limited. In particular it was noted that education become tedious as the curriculum was repeated to accommodate the high turnover of inmates • “now it’s boredom, and boredom is where you eat a lot... there’s nothing constructive in prison” (interview)
Limitations	<p>Research methods not rigorous - self-selected, non-random sample</p> <p>Data not rich</p>
Applicability of evidence	Indirect – focus group included participants under the age of 18 (aged 17-50 years)

Study (ref id)	Harner 2013¹⁶⁵
Aim	To explore barriers to good physical health in incarcerated women
Population	n=65 Prisoners Female Adult (aged 23-46) 62% White
Setting	Maximum security prison, USA
Study design and methodology	12 focus groups Housing units within the prison's general population were chosen by prison administrators based on unit's security level and probability of women being present during the day. Did not have access to higher security units, including mental health unit and restricted housing unit. Prison administrators announced to the housing unit that health-related focus groups were being conducted and that anyone interested could go to the dayroom and ask questions. Once women arrived the purpose of the study was described and it was explained that participation was voluntary and anonymous. No incentives or payment for participation was given. Focus groups were conducted in English and included 4-6 women. During each focus group women were asked, 'how has prison affected your physical health?'. Women were free to discuss any side of prison life they believed to affect their physical health. Open-ended probing questions were used to facilitate discussion or gain clarity. Focus groups lasted 1.5-2 hours. Notes were taken of prisoner's responses, audiotaping was not permitted for security reasons.
Analysis methods	Content analysis. Read and reread all focus group data, identified any common broad themes, coding reviewed and discussed, and any discrepancies were reconciled.
Themes with findings	<ul style="list-style-type: none"> • The study reported that prisoners found the prison environment stressful and often described using cigarettes to deal with the stressors; prison was described as "the worst place in the world to stop smoking" • The study noted that conditions of the institution kitchen and meal preparation was frequently described as "disgusting" and that prisoners gave accounts of eating undercooked meat and spoiled food and described infestations of insects and other vermin. • The study reported that prisoners often purchased food from the canteen, whose items are generally nutritionally poor. It was noted that many prisons felt angry that healthier food options, previously available on the commissary list, were removed: "our diet consists of processed meats, no fresh vegetables, and low-dairy products with no iron-enhanced food... the diet is poor and there aren't good items on commissary" • It was reported that prisoners' financial resources restricted the purchase of health promoting items, e.g. food from canteen, trainers for

Study (ref id)	Harner 2013¹⁶⁵
	exercise: "I am destitute in here and I can't afford to feed myself from the commissary"
	<ul style="list-style-type: none"> • The study reported that prisoners described few consistent opportunities to be physically active in prison • "the [physical exercise] classes are always full or during work" • The study reported that prisoners felt that health care professionals did not take their reports seriously and that they seemed "too busy" or "didn't care"
Limitations	Research methods not rigorous - self-selected, non-random sample Data collection not rigorous – handwritten notes only
Applicability of evidence	Limited applicability – USA setting

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Study (ref id)	Hatton 2006¹⁷¹
Aim	To explore healthcare from the perspective of incarcerated women
Population	n=78 Inmates (n=60) and former inmates (n=18) Female Adults (aged 19-61) White 39% African American 25% Hispanic 19% Native American 4% Asian 1% Days incarcerated mean 69.33 (3-240)
Setting	1 county jail, USA

Study (ref id)	Hatton 2006 ¹⁷¹
Study design and methodology	<p>Focus groups</p> <p>Former inmates were recruited from 3 Saturday support group conducted by a faith-based community organisation. Women were eligible if they had a former history of incarceration. Current inmates were informed about the study and were invited to participate by the staff counsellor. No women in the facilities' psychiatric unit were recruited for this project, but inmates residing in all other units were eligible.</p> <p>Custody staff transported inmates to classrooms within the detention facility for the focus groups. When the women arrived in the classroom, the focus group moderator (former prisoner) and research assistant introduced themselves. Groups consisted of 8-10 members. Team asked the following questions: tell us about your health problems; how are these health problems being taken care of; what solutions do you recommend for making healthcare better for women in jail? All participants received a \$20 gift card for a local merchant, which they received after release. Discussions lasted 45-60 minutes. Sessions were audio taped and transcribed verbatim.</p>
Analysis methods	<p>Researchers read all coded data and coded it line by line. A summary of each focus group was developed that included a list of the most salient codes, and as the data collection progressed, the research developed theoretical memos that analysed the emerging themes across groups. The researchers collapsed initial codes into larger categories and explored their linkages. On-going meetings allowed for discussion of data collection and analysis, including consideration and agreement of the authenticity of specific codes and categories. Staff from the community organisation read all transcriptions and verified major findings. Data collection and analysis proceeded concomitantly. By the last 3 focus groups, data clearly reached saturation</p>
Themes with findings	<ul style="list-style-type: none"> • The study reported that prisoners tried to help each other with health problems whilst incarcerated. It was recommended that they should receive training in providing support. • The study reported that staff had negative attitudes towards prisoners: "they treat most of us like we're morons"; "they start to make you feel like you're nuts"; "they are very rude"; "they have attitudes like I don't give a damn" • The study reported that prisoners lacked provisions needed in order to maintain good hygiene, e.g. soap, shampoo, sanitary products, cleaning supplies • The study reported that the prison facilities were unclean, e.g. plumbing that did not work, slugs or worms coming from showers, and dirty, smelling sink water'. Prisons also suggested that bed linen and towels should be washed more frequently • The study noted that prisoners felt that their health problems were not private within the prison system
Limitations	<p>Research methods not rigorous - self-selected, non-random sample</p>
Applicability of evidence	<p>Limited applicability – USA setting</p>

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Study (ref id)	Lawn 2014²³¹
Aim	To investigate views on smoking ban in forensic psychiatry in-patient facility
Population	n=45 Psychiatric in-patients with stable mental state Male (93.3%) and female Adult (age <30, 11.1%; 30-39, 40%; 40-49%, 37.8%; >50, 11.1%) 80% smoked prior to admission 4.4% ex-smokers Inclusion criteria: stable mental state; ability to speak English
Setting	Forensic psychiatry in-patient facility, Australia
Study design and methodology	Survey, closed-questions All current patients in facility who fulfilled the inclusion criteria were approached to participate.
Analysis methods	Data were entered into and analysed using SPSS v19.
Themes with findings	<ul style="list-style-type: none"> 85% indicated that it was easier to quit when no one else smoked
Limitations	Role of researcher and research methods not clearly described Research methods not rigorous - convenience sampling
Applicability of evidence	Limited applicability – Australian setting

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Study (ref id)	Leob 2007²⁵¹
Aim	To explore health beliefs and concerns of older male inmates
Population	n=51

Study (ref id)	Leob 2007²⁵¹
	<p>Prisoners Male Older adults (aged 50 -80; mean 57±6.7 years)</p> <p>White 56.9% Incarcerated mean 7.6±7.64 years</p> <p>Inclusion criteria: aged 50 or older; ability to speak and understand English Exclusion criteria: life or death sentences</p>
Setting	1 minimum security state correctional facility, Pennsylvania, USA
Study design and methodology	<p>Survey, open-ended questions</p> <p>Convenience sample. Person at Department of Corrections provided a computer-generated listing of eligible prisoners, from which a corrections officer in the prison visiting room contacted cell block officers to determine whether selected inmates were available and if so were they willing to meet with the researcher in the no-contact visiting room to discuss the study.</p> <p>Survey was read aloud to each participant by the principle investigator or their trained assistant 1:1 in a no contact visiting room. Their responses were immediately logged onto the questionnaire booklet by the researcher or assistant. Responses to the open ended questions were verified with the participants during the process of data collection. Questions that were asked included: asking inmates to explain the health changes they had experience since incarceration; what new health programmes they would like to see offered; asked why they felt either confident or non-confident of their ability to manage their health both now and upon release; asked about what fears they have with regard to health when they are released from prison. No participant refused to answer any items (no missing data).</p> <p>Content validity for the survey was established by an expert panel of 4 university faculty members with either criminal justice or geriatric nursing experience.</p>
Analysis methods	Content analysis. Co-authors met regularly to analyse responses to open-ended questions. Each team member began analysis independently, then during team meetings individual codes were compared and contrasted to develop a coherent coding scheme. Number of categories/themes were collapsed and refined by the team in order to reflect the responses. Throughout the process, team members were responsive and considered carefully if the categorisation scheme held, or conversely, if it was insufficiently supported and needed to be relinquished. After categorisation was fully developed, transcripts were again analysed by team members for goodness of fit between data and the derived categorisations.

Study (ref id)	Leob 2007²⁵¹
Themes with findings	<p>Inmates' self-efficacy for managing their health during incarceration</p> <ul style="list-style-type: none"> Prisoners reported a lack of responsiveness from prison administration: "I would like to eat healthier, but I can't even get a salad more than twice a week" <p>Inmate recommendations for prison health programmes</p> <ul style="list-style-type: none"> "I would like to see a better selection of food groups for inmates and alternative food groups served, and not have to be medically prescribed to receive it" "more teaching on cholesterol and healthy food groups [would be helpful]" "[I would like] exercise programme in the gym that is supervised [and they] weigh you, give advice, and guidance"
Limitations	Research methods not rigorous - convenience sampling
Applicability of evidence	Limited applicability – USA setting

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Study (ref id)	Loeb 2011²⁴⁹
Aim	To identify perceived barriers to the health of older inmates
Population	<p>n=42</p> <p>Prisoners Male Older adults (aged 50-68; mean age 55.8 years)</p> <p>37.5% Black 45% White 17% mixed race or American Indian</p> <p>Mean incarceration 12.5±7.39 years</p> <p>Inclusion criteria: indicated during participation in prior research that they were interested in taking part in focus group discussion about managing their health in prison; reported 2 or more chronic health conditions; incarcerated for at least the last 5 years; spoke and understood English; had</p>

Study (ref id)	Loeb 2011²⁴⁹
	adequate hearing. Exclusion criteria: prisoners with life or death sentence; had behaviours or security infractions that resulted in them being in restrictive housing or having other limitations on privileges
Setting	2 prisons in Pennsylvania, USA
Study design and methodology	<p>7 focus groups</p> <p>Focus group size ranged 6-8 participants in 6 of 7 sessions. One focus group had only one participant despite having two inmates consent to participate. Focus groups were held in education rooms. Written notes taken by a trained research assistant, audio recording was prohibited. The discussion questions were as follows:</p> <ol style="list-style-type: none"> 1. Types of health conditions that you are experiencing and how long you've had them 2. How has your health changed during your incarceration? Why do you think your health has changed that way? 3. Can you describe any ways that being in prisoner (or having access to prison resources) has helped you to improve your health? 4. Can you describe any challenges you have faced when trying to improve your health or maintain your health whilst you've been in prison? 5. please explain any things you currently do to try to improve your health 6. how is information important in managing your health? 7. where do you typically get your health information from? 8. are your current sources of health information accurate/up-to-date? Why/why not 9. can you describe any types of health instruction or programs that you have found to be helpful? 10. can you tell us how programs were helpful and/or how they were not helpful? 11. if new health instruction or programs were to be offered, what types of programs do you think would be most helpful to you in managing and improving your health? 12. of all the things that we have talked about today, what is it that has been most helpful to you in managing your health in prison? <p>Focus group sessions lasted for approximately 90 minutes each and continued to be scheduled until saturation. Debriefing meetings among research team were audiotaped immediately after each session to provide insights. All field notes were transcribed verbatim by the research assistant and their accuracy was verified by a second research assistant.</p>
Analysis methods	Transcripts were analysed through content analysis to develop a categorical scheme of the challenges to inmate health management. Each team member independently completed first-level coding of the transcripts. Individual coded were compared and contrasted in order to develop a coherent coding scheme. Through team analysis the number of categories was collapsed and category names refined to best reflect what was reported. After the categorisation was fully developed, the transcripts were again analysed by the team for goodness of fit between the data and categorisations. All three categories were mutually exclusive with each unit of content assigned to only one category. No negative units of content

Study (ref id)	Loeb 2011 ²⁴⁹
	were discarded in the process
Themes with findings	<ul style="list-style-type: none"> • “everyone just lays around. How can I go to the yard and compete with all those younger guys? Stress levels are high” • “in this prison, older prisoners take more of a burden from younger prisoners, they look up to older prisoners which puts an extra stress burden on the older prisoner, there is no support system for the younger prisoners” • The study reported that prisoners often felt that they lacked the motivation to engage in exercise or to assume responsibility their health • The study reported that prisoners were often supported by their peers, family and/or friends through the providing of health-related information • The study reported that participants described some prison health care professionals as being impatient, unresponsive to inmates’ needs, and “err[ing] on the side of someone seeking attention as opposed to genuine care and concern”: “I have complaints but they don’t hear all my complaints”; “there is impatience, humanity is lacking” • It was reported that prisoners came across difficulties in obtaining information from health care professionals (e.g., did not have time to share information, would not write down information, and lack of literature or hand outs). • It was noted that information resources were largely in written form and so were difficult to access for those prisoners who could not read: “if you can’t educate yourself you are in trouble” • It was also noted that prisons were distrusting about available sources of health information, as “information was not up to date” • The study reported that the prisoners were unsatisfied with the quality of the food: “70% of the foods from the commissary have sodium... the food there always drives your blood pressure up”; “the food itself coming in is not bad but they cook out the goodness”; “they get fresh fruit and let it sit so it is no good” • The study reported that prisoners were concerned about the hygiene of the food preparation and distribution. A representative quote was “they are pitting and spraying over it [the food] while they are serving it” • “smoking should stop, they had non-smoking blocks, having us in with smokers violates our contracts” • The study reported that prisoners were concerned about the lack of privacy • “sometimes I’m uncomfortable talking to the doctor ‘causes there are two corrections officers sitting there”
Limitations	<p>Research methods not rigorous - self-selected, non-random sample</p> <p>Data collection not rigorous – handwritten notes only</p>
Applicability of evidence	Limited applicability – USA setting

Study (ref id)	MacDonald 2013 ²⁶⁰
Aim	To investigate availability of existing health promotion practises
Population	n=223 Male and female prisoners and young offenders
Setting	Bulgaria, 3 prisons (5 focus groups n=47) Czech Republic, 3 prisons (3 focus groups n=34) England and Wales, 13 YOIs (4 focus groups n=29) Estonia, 3 prisons (3 focus groups n=28) Germany, 4 prisons (2 focus groups n=25) Latvia, 6 prisons (4 focus groups n=33) Romania, 6 prisons (3 focus groups n=27)
Study design and methodology	Focus groups Different sampling procedures were used in different countries – some chose random sampling and others convenient sampling Young prisoner's concepts of health and wellbeing was explored, data were gathered concerning health promotion needs of young offenders, issues that have impact on their health whilst in custody, availability of different types/range of health promotion activities and suggestions for improving health while in prison, opportunities for collaboration with other agencies in promoting health. Focus groups lasted 30-60 minutes.
Analysis methods	Thematic analysis

Study (ref id)	MacDonald 2013 ²⁶⁰
Themes with findings	<p>Impact of prison health</p> <p>The study reported that the majority of prisoners from all seven EU countries perceived their health status as deteriorating due to the following:</p> <ul style="list-style-type: none"> • stressful environment • feelings of boredom • lack of access to frequent showers/baths • difficulty keeping their cells and themselves clean, as a consequence of different skin diseases which are hard to eradicate and they contaminate the living space: “if I come in healthy and they put me in rooms with mattresses filled with scabies? Well, how can I protect myself from scabies?”. Young female prisoners also raised concerns that the quality of hygiene facilities provided by prisons is poor and insufficient • lack of fresh air in their room and access to the outdoors: “not enough chance to exercise outside” • no contact or limited contacts with family and friends • lack of access to regular sport activities: “not enough chance to exercise outside” • “greasy food” • Sharing a room with a smoker -young prisoners also spoke about being unable to get used to other inmates’ habits, such as smoking habits: “I am not a smoker until now I stay in a smokers’ room”
Limitations	<p>Role of researcher and research design not clearly described</p> <p>Research methods not rigorous - some countries used convenience sampling</p> <p>Data collection and analysis methods not clearly described</p>
Applicability of evidence	<p>Limited applicability – variety of European settings</p>

Study (ref id)	Makris 2012²⁶⁸
Aim	To investigate what helps prisoners quit smoking
Population	<p>n=204</p> <p>Prisoners Male Adult (mean age 33.6±12.5)</p> <p>Greek 51.5% Albanian 21.5% Bulgarian 8.4%</p> <p>Mean sentence 27.4±36.7 months 77.% convicted 75% first imprisonment</p> <p>75.5% smokers 7.35% ex-smokers</p>
Setting	1 detention centre, Greece
Study design and methodology	<p>Survey, closed questions</p> <p>Interview where information was collected using questionnaire, including: whether they want to quit smoking or not; reasons for wanting to quit or not; previous attempts to quit (inside or outside prison); methods/number of attempts.</p> <p>Pharmaceutical treatment using varenline (free of charge) and counselling, or counselling alone were offered to prisoners.</p>
Analysis methods	SPSS v15 was employed, descriptive statistics were used, X2 independence test and t-test were performed.
Themes with findings	<p>Reasons for no intention to quit smoking:</p> <ul style="list-style-type: none"> • Lack of freedom and absence of family 90% • Use of nicotine to reduce stress 55% • Smoking dependence 35%

Study (ref id)	Makris 2012²⁶⁸
	Reasons for failing to quit smoking: <ul style="list-style-type: none"> • Lack of freedom and absence of family 49.4% • Enforced cohabitation in same cell with other smokers 26.5% • Smoking dependence 7.2% • Use of nicotine to reduce stress 16.9%
Limitations	Research methodology and data collection methods not clearly described
Applicability of evidence	Limited applicability –Greek setting

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Study (ref id)	Pulford 2011³⁷⁴; Pulford 2013³⁷⁵
Aim	To explore prisoners' views on their own health, perceptions of healthcare and health promotion in prison
Population	n= 79 Prisoners Male Young adults and adults (mean age 33; range 16-68 years) Aged under 25 years 30% Aged 25-34 years 32% Aged 35-44 years 20% Aged 45 or over 18% On remand 19% Short-term sentence 39% Long-term sentence 42% Served less than 1 month 12% Served 1-6 months 41%

Study (ref id)	Pulford 2011³⁷⁴; Pulford 2013³⁷⁵
	<p>Served 12 months 32%</p> <p>Previously sentenced 73.4%</p> <p>76% smokers 11% ex-smokers 13% never smokers</p>
Setting	1 closed high security prison, Scotland, UK
Study design and methodology	<p>Structured interview, open and closed questions</p> <p>Participants were prisoners attending educational classes, general population prisoners brought from the wings by a custody officer, and protection prisoners on their weekly visit to the education department. Interviews carried out in education centre by a team of 4 interviewers. Interviewers worked in pairs with one interviewing and one scribing the prisoner's responses. The interviews were conducted with prisoners attending educational classes or activities; general population prisoners brought from wings by a custody officer; and single and double protection prisoners during their allotted weekly education and library time. 79/100 planned prisoner interviews were conducted due to the custody and order requirements of the prisoner regime. Prisoners were offered the opportunity to enter a prize draw to win one of 3 Argos vouchers. All prisoners were given a toothbrush and toothbrush for participating in the survey.</p> <p>Answers to open-ended questions were exported to Microsoft Word and are presented thematically or as numbers</p>
Analysis methods	Analysis of closed questions was undertaken using SPSS. Answers to open-ended questions were exported to Microsoft Word and presented thematically.
Themes with findings	<p>Views on health and health behaviours</p> <ul style="list-style-type: none"> The study reports that prisons though that opportunities for physical exercise were improved: "couldn't afford to go to the gym outside but free access here";

Study (ref id)	Pulford 2011 ³⁷⁴ ; Pulford 2013 ³⁷⁵
	<p>Views on health promotion and harm reduction initiatives</p> <ul style="list-style-type: none"> • Smoking in cells was a problem for some prisoners : “trying to cut down on smoking, and can’t smoke in my work place, so that helps. However, cell mate is a smoker”; “I had three people in my cell last night and they were all smoking. I didn’t stop them because I wanted company” • It was also reported that restrictions on smoking were not enforced enough, and one prisoner commented that “prisoners can really just smoker anywhere” • Prisoners expressed concerns about the confidentiality of sexual health services: “people could be bullied for accessing this [sexual health/condom] service” • The study reported that prisoners found that prison environment stressful, “stressful- always got mirrors on your head” • “food’s healthy, lost a bit of weight”; “food wise yes – healthy choices” • “got head lice and scabies in here” <ul style="list-style-type: none"> • 80.8% ‘there are healthy choices that I can make in relation to exercise’ • 51.9% ‘there are healthy choices that I can make in relation to prison meals’ • 57.7% ‘there are healthy choices that I can make in relation to what I buy from the canteen’ • 71.8% ‘there are healthy choices that I can make in relation to non-smoking areas’ <ul style="list-style-type: none"> • 82% shared cell with smoker • 29% reported problems with weight • 8% reported problems with nutrition • 71% prisoners thought that advice on sexual health should be made available to prisoners
Limitations	<p>Research methods not clearly described Data collection and analysis not clearly described Data are not rich</p>
Applicability of evidence	Very applicable

51

Study (ref id)	Richmond 2009 ³⁸⁶
Aim	To explore role of tobacco use in prison and influence of prison environment on smoking in context of developing smoking cessation programmes
Population	n=40

Study (ref id)	Richmond 2009 ³⁸⁶
	<p>Prisoners n=9 Ex-prisoners n=31</p> <p>Male n=28 Female n=12</p> <p>Age ranged from mid 20s to late 40s</p> <p>Prisoners all current smokers</p> <p>Aboriginal n=4</p>
Setting	<p>Maximum security prison Community justice restorative centre and accommodation centre for ex-prisoners</p> <p>Sydney, Australia</p>
Study design and methodology	<p>7 focus groups, 2 in prison and 5 in community centre</p> <p>Focus groups were advertised using posters placed on notice boards calling for volunteers. Duration 2 hours. Participants received \$AU30.</p> <p>Custodial staff did not attend prison-based focus groups. Detailed notes were recorded by hand due to security concerns. 3 team members were present – facilitator, prison nurse and observer. Semi-structured focus group schedule was developed, key questions included: reasons for commencing smoking; role of tobacco in participant’s lives, role of smoking in prison culture; smoking cessation inside and outside prison; and methods used to quit smoking.</p>
Analysis methods	<p>Content analysis was done on the earlier focus groups, where focus groups were part of another study which focused on ways in which participants spoke. Thematic analysis was completed for each group including a return to earlier transcripts. Secondary analysis was conducted across all groups.</p>
Themes with findings	<p>The function of tobacco use in prison</p> <ul style="list-style-type: none"> • The study reported that prisoners found prison system stressful and used tobacco to manage this stress. Being in such a stressful environment was noted as a barrier to quitting smoking and a facilitator of relapse: “it’s too stressful in jail to give up cigarettes”

Study (ref id)	Richmond 2009 ³⁸⁶
	<ul style="list-style-type: none"> • It was reported that prisoners were bored and used smoking to “manage the boredom”: “being locked up 15 hours a day-the only thing to do is smoke”. It was also noted that alternatives to smoking to alleviate boredom may help prisoners to quit • The study reported that smoking was a marker of prison routine. It was reported that the “smoko break” was even used by some prison officers when communicating with prisoners that it was time to break for meal’; <p>Tobacco as currency in prison</p> <ul style="list-style-type: none"> • The study also reported that tobacco served as a de facto currency in the prison economy: “tobacco carries status like paper money”; “if you didn’t have cash you use tobacco. It gets you the things you need, as long as the seal isn’t broken you’re right”; “tobacco is like cash to use in trade as long as the pouch of tobacco is unopened”; “tobacco is used for protection in prison in the sense that if you pay your debts then trouble won’t come your way” <p>Strategies use for smoking cessation whilst in prison</p> <ul style="list-style-type: none"> • Prisoners reported that encouragement from family members helped their attempts to quit smoking in prison • It was reported that prisoners wanted help with quitting smoking, e.g. help to prepare a cessation plan with defined goals, and felt that the current services, ‘quitline’ current telephone counselling service for smokers, was limited • It was reported that prisoners wanted more information on quitting services available • Prisoners also felt that prison staff though that smoking cessation was not considered a priority, with most attention directed at other drug and alcohol problems • The study reported that smokers found it harder to quit due to the prevalence of smokers in their environment and that prison “lock-down[s]” were noted as a trigger point to the resumption of smoking behaviour
Limitations	<p>Research methods not rigorous - self-selected, non-random sample</p> <p>Data collection not rigorous – handwritten notes only</p> <p>Data analysis not rigorous</p>
Applicability of evidence	Limited applicability – Australian setting

52

Study (ref id)	Russell 2006 ³⁹⁴
Aim	To explore young offenders’ perception and expectations of dental health services
Population	<p>Number of participants not reported</p> <p>Young offenders</p>

Study (ref id)	Russell 2006³⁹⁴
	Male
Setting	1 YOI England, UK
Study design and methodology	Focus groups Focus groups began with initial ice-breaker exercises involving association with the words 'doctor', 'nurse' and 'dentist'. Discussion then explored the young offenders' perceptions and experiences of dentists within the penal system. Focus groups lasted 45-60 minutes. Recordings of the focus groups were transcribed.
Analysis methods	Content analysis and thematic coding cross-checked by each researcher independently.
Themes with findings	Assess to oral hygiene aids in the YOI <ul style="list-style-type: none"> It was reported that none of the inmates liked the standard issue toothbrushes or toothpaste given to them at induction Diet <ul style="list-style-type: none"> The study reported that there were some young offenders who felt that they might find dietary advice given by dentist difficult to follow due to the selection of snacks available in the canteen: "everything's got sugar in that's on the canteen list"; "you can buy no savoury stuff or 'owt like that, just sweets"
Limitations	Research methods not clearly described, unclear sampling method Role of researcher not clearly described. Data analysis not rigorous
Applicability of evidence	Indirect – young offenders

53

Study (ref id)	Sifunda 2006⁴²²
Aim	To explore inmates perception of the state of healthcare services
Population	Number of participants not reported Prisoners Male

Study (ref id)	Sifunda 2006⁴²²
	Adult (aged 18-35)
	Inclusion criteria: approved for parole or full release within 3-6 months
Setting	4 medium security prisons in the KwaZulu-Natal and Mpumalanga provinces, South Africa
Study design and methodology	8 focus groups Focus group size ranged from 6-8 inmates. Focus groups were conducted using pre-determined semi-structured pre-prepared discussion guide, focusing on access to health care in correctional facilities. Focus groups were tape recorded and transcribed verbatim. All discussions were conducted in isiZulu by a team of trained speaking facilitators. Discussions were translated into English, and then back into isiZulu by another team to ensure accuracy.
Analysis methods	Kwakutan version 5 was utilised for coding the collected data. Based on the pre-determined tree of themes from the focus group discussion guides, data was coded into major themes with new emerging themes and patterns continuously added during coding.
Themes with findings	Management of sexually transmitted infections including HIV and AIDS <ul style="list-style-type: none"> • The study reported that participants explained that a positive HIV test posed potential stigmatisation as inmates would immediately have to start receiving a special diet of extra fruits Health education programmes for inmates <ul style="list-style-type: none"> • The study noted that some participants reported that health education sessions happened infrequently, more on commemorative occasions as opposed to routine programming: “it happens one a year, maybe during the celebration of the AIDS day” • The study reported that security concerns and movement restrictions were the main barriers hindering effective implementation of health education programmes. Prisoners explained that inmates who were considered high risk did not qualify to access certain sections where education programmes were conducted and this sometimes led to selective access to information and preventative skills • Some inmates reported on the uses of available condoms: “what I can say is they don’t take them [condoms] if there is somebody looking, but they check if there is nobody watching and take them”
Limitations	Research methods not clearly described, unclear sampling method Data are not rich
Applicability of evidence	Limited applicability – African setting

Study (ref id)	Sieminska 2006⁴²⁰
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Study (ref id)	Sieminska 2006⁴²⁰
Aim	To investigate prisoner's attitudes to smoking and smoking cessation
Population	n=907 Prisoners Male Young adult and adult (mean age 32.2 years; range 17-62 years) Provisionally detained 35% First sentence 25% Recidivists 39% 81% smokers 12% ex-smokers
Setting	Prisons and jails in Poland
Study design and methodology	Survey Used data collected in the survey of Central Headquarters of Penitentiary service. Study sample was randomly selected among men incarcerated in prisons and jails of the Gdansk, Lubin and Lodz Penitentiary Districts in Poland. Questions included: changes in smoking habits in prison; factors enhancing smoking; awareness of smoking consequences on health; previous attempts to quit smoking; reasons for quitting; causes of relapses.
Analysis methods	Chi square test used with continuity correction when appropriate. All reported values were two-sided. Statistical analysis was performed using Statistica 6.0

Study (ref id)	Sieminska 2006 ⁴²⁰
Themes with findings	<p>Factors promoting smoking in prison:</p> <ul style="list-style-type: none"> • Missing family and friends 66% • Lack of freedom 57% • Boredom 44% • Anxiety about affairs to deal with at liberty 35% • Lack of sex 31% • Anxiety about case and sentence 23% • Qualms about crime committed 17% • Bad relations with prison staff 17% • Bad relations with other prisoners 13% <p>Causes of failure in cigarette cessation:</p> <ul style="list-style-type: none"> • stress 67% • boredom 10% • depressed mood 8% • joy 5% • yielding to one's persuasion 4% • Lack of alcohol 10% • Lack of narcotics 6% <p>Factors promoting smoking cessation:</p> <ul style="list-style-type: none"> • Anxiety about health 46% • Fight with own weakness 28% • Will to save money 24% • Limited access to cigarettes 21% • Somebody's instigation 7% • Will to gain an authority 2%
Limitations	Research methods not clearly described
Applicability of	Indirect – included participants aged 17

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Study (ref id)	Sieminska 2006⁴²⁰
evidence	Limited applicability –Polish setting

Study (ref id)	Smoyer 2014B⁴²⁹
Aim	To explore women prisoners’ food practises and perception of health
Population	n=30 Ex-prisoners Female Adult (mean age 37.7±10.5 years) Black n=13 White n=12 Latina n=5 Average length of most recent incarceration 9 months, range 1 month – 10 years
Setting	1 prison, New England, USA
Study design and methodology	Semi-structured interview Convenience sampling, recruited from community-based programme that provides post-incarceration housing and re-entry services. 14-item semi-structured interview was used that asked about: food and eating experiences in different parts of the prison; favourite and least favourite foods; cooking practises. Interviews lasted 90 minutes. Participants were compensated \$30. Interviews were digitally recorded and transcribed.
Analysis methods	Thematic analysis, NVivo was used to code and organise the data. Steps of thematic analysis: familiarisation with data; generating initial codes; applying, editing and consolidating codes; and organising and reviewing themes.
Themes with findings	Intentions <ul style="list-style-type: none"> • P10 described actively seeking out “nutritious” deserts and juices that she understood to be “pretty good for the health”, like blueberry pie and rice pudding

Study (ref id)	Smoyer 2014B⁴²⁹
	<ul style="list-style-type: none"> • P1 went to extraordinary efforts to avoid cafeteria food altogether after she learned that the protein substitute used in many of the slop dishes contained MSG: “I had to make sure I didn’t pick the protein pellet. I had to pick the chicken” <p>Gaining weight</p> <ul style="list-style-type: none"> • ‘lack of nutritional food on the commissary list made it difficult for women to find healthy snacks: “I seriously can’t think of any one thing right now, not one thing, that is not fattening... or healthy on that, on that list of food” <p>Losing weight</p> <ul style="list-style-type: none"> • ‘she constructed her weight loss as a demonstration of her will and determination: she wanted to lose weight, “and I did” • “I tried to stay healthy while I was in there. That was like something that kept me motivated, was, going to the gym , trying to eat healthy”
Limitations	Research methods not rigorous - convenience sampling
Applicability of evidence	Limited applicability – USA setting

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Study (ref id)	Thibodeau 2012⁴⁵³
Aim	To explore the views of prisoners on the smoking ban
Population	<p>n=49</p> <p>Prisoners Male Adult (aged 19-60 years)</p> <p>African-American 47% White 41%</p> <p>Sentence length, mean 2.3 years, range 9 months – 19 years</p> <p>Inclusion criteria: aged 18 or older; self-reported daily smokers in three months prior to incarceration; release within 7-30 days; ability to provide written consent and communicate in English.</p>

Study (ref id)	Thibodeau 2012⁴⁵³
Setting	Minimum security prison undertaking a smoking ban. Wisconsin, USA
Study design and methodology	<p>1:1, semi-structured interview</p> <p>Flyers were sent to men within one month of their release dates soliciting participation in a study of cigarette smoking. The first 49 respondent who fulfilled the inclusion criteria were included in the study.</p> <p>Interviews lasted 45 minutes and assessed a range of topics including: attitudes, beliefs and past experiences related to smoking and cessation; expectations about smoking behaviour after release from prison; perceived barriers and facilitators of sustained abstinence, including – individual, interpersonal, situational and structural factors. Participants were allowed to skip any question they preferred not to answer. Each received a small stipend, which was deposited into their personal prison accounts.</p>
Analysis methods	Qualitative data management and analysis was performed using QSR NVivo software 2006. Data analysis began when interview and field notes were transcribed. These data were used to identify primary coding categories and themes and to subsequently develop a hierarchical coding framework. When suggested by associations, overlap, or diversions in the data, thematic categories were refined, merged or subdivided. Relations and associations among categories were interpreted and decisions documented. Process continued iteratively until thematic saturation was reached and organisation of the conceptual coding framework was stabilised. A formal codebook was then developed to include themes, illustrative texts and node addresses. Transcripts were formally coded by 2 members of analytic team. Inter-rater discrepancies were discussed and resolved. New categories and themes that did not appear to fit into the conceptual framework were discussed by the investigative team and modifications were made when deemed appropriate.
Themes with findings	<p>Choosing to smoke contraband cigarettes</p> <ul style="list-style-type: none"> The study reported that reasons for illicit smoking was to manage stress and boredom: “in here I smoke just because it’s something to do... but on the street, I didn’t smoke at all”
Limitations	<p>Research methods not rigorous - self-selected, consecutive sample</p> <p>Data are not rich</p>
Applicability of evidence	Limited applicability – USA setting

Study (ref id)	Valera 2014 ⁴⁶⁶
Aim	To investigate smoking behaviours in prison
Population	<p>n=30</p> <p>Under parole or probation, under community supervision</p> <p>Male</p> <p>Adults (mean age 47; range 35-60)</p> <p>Black 45%</p> <p>Puerto Rican 55%</p> <p>Inclusion criteria: aged 35-67 years; self-identify as Black or Latino; reside in the Bronx; currently under parole or probation; never been diagnosed with cancer; informed consent.</p>
Setting	Recently released from prison undergoing smoking ban, New York, USA
Study design and methodology	<p>Semi-structured interview</p> <p>Cohort of men from larger parent study aimed at examining cancer and health disparities among 259 Black and Latino men under community supervision.</p> <p>Each interview was conducted in a private meeting space and digitally recorded. Interviews lasted 90 minutes. Participants were compensated \$25 for their time.</p>
Analysis methods	Interviews were transcribed by a professional transcriptionist and entered in to NVivo qualitative data analysis software. 1 st and 3 rd author coded the transcripts and met biweekly throughout the process to deliberate upon coding differences and to develop the final codebook. Qualitative data was analysed using the constant comparative method; categories and themes were developed from open, axial and selective coding. Coders reached 80% intercoder reliability across 30 interviews.
Themes with findings	<p>Smoking as anxiety management</p> <ul style="list-style-type: none"> • 24 of the 30 participants interviewed said they smoked cigarettes to reduce anxiety <p>Smoking cigarettes as part of a daily routine</p> <ul style="list-style-type: none"> • The study reported that prisoner seemed to regard smoking cigarettes as part of their daily routine, particularly in the morning as it provided them with immediate pleasure and it provided them with companionship, since they were surrounded by many people, including friends and

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Study (ref id)	Valera 2014⁴⁶⁶
	family who smoke: "I smoke when I wake up. When I wake up I want a cigarette"
	Barrier to quitting <ul style="list-style-type: none"> The study reported that prisoners who wanted to quit smoking but did not often stated that they believed that they did not have the willpower: "I do not have the will power to quit cigarettes right. I think it's got me. It's very addictive"
Limitations	Research methods not clearly described, sampling method unclear Data were not rich
Applicability of evidence	Limited applicability – USA setting

Study (ref id)	Woodall 2010⁵⁰³
Aim	To explore concepts of health and wellbeing with male prisoners
Population	n=36 (1:1 interviews n=19, FGs n=17) Prisoners Male Adult (aged 22-70) Convicted serving medium to long-term sentences
Setting	3 Category-C prisons. England, UK
Study design and methodology	1:1 interviews Focus groups Participants were recruited using posters that provided preliminary information as to overall aims and general purpose of the study. Poster invited potential participants to inform a member of staff of their interest in the study. 1:1 in-depth interviews lasted between 1-2 hours. FGs lasted 90 minutes on average. In many cases research was conducted in prison classrooms behind a closed door. In a few cases 1:1 interviews were conducted within an individual's prison cell. Where audio recording was prohibited for interviews, elements raised by participants were jotted down in the form of key words and phrases written up in more detail immediately after the

Study (ref id)	Woodall 2010 ⁵⁰³
	interview had finished.
Analysis methods	<p>Thematic network analysis. NVivo 7 software was used. Codes to transcripts and field notes were applied. Codes were predominately based on recurring concepts or salient issues which were discussed during data collection or through perceived areas of theoretical interest. From the list of tentative notes, basic themes which were identified were reviewed and, in some cases after a period of reflection, an original theme was not considered robust enough to constitute a theme in itself. Once satisfied with the basic list of themes, these founded the basis of the thematic network and were applied back to the original transcripts and notes to reclassify and organise the data. These basic themes were then grouped and clustered based on shared or common issues and a broader organising theme was derived based on key issues which underpinned these basic level themes.</p> <p>Respondent validation, where participants are given the opportunity to comment on transcripts or field notes prior to analysis, was used where possible (n=5). This was not possible in cases where prisoner released early or moved to another facility. As central themes began to develop they were informally fed back to prisoners, prison staff and gatekeepers. Their appraisal of themes elicited over the fieldwork offered a prime opportunity to clarify interpretations and understandings of the prison setting.</p>
Themes with findings	<p>Freedom</p> <ul style="list-style-type: none"> • The study reported that prisoners emphasised the need for sufficient time out of their cell and adequate access to the outdoors in order to feel in good health <p>Social relationships</p> <ul style="list-style-type: none"> • It was reported that many prisoners felt their health was dependent upon the maintenance of family connections <p>Self-discipline</p> <ul style="list-style-type: none"> • The study reported that prisoners felt that self-discipline and self-motivation were important factors in enabling the undertaking of activities • “I’m well disciplined on the outside but even more so in here... I do discipline myself”
Limitations	<p>Research methods not rigorous - self-selected, non-random sample</p> <p>Data collection not rigorous – handwritten notes only</p>
Applicability of evidence	Very applicable

H4 Medication management

H.4.31 Methods to access medicines

Study	Saiz de la hoya 2014 ³⁹⁷
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=252)
Countries and setting	Conducted in Spain; Setting: 25 prisons in Spain
Line of therapy	1st line
Duration of study	Intervention time: Mean 33.9 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Overall
Subgroup analysis within study	Not applicable
Inclusion criteria	Prison inmates; aged over 18 years; previously untreated chronic hepatitis C; Child-Pugh score of 5
Exclusion criteria	Undergone any systemic antiviral, antineoplastic or immunomodulator therapy in last 6 months prior to first dose of study treatment; investigation therapy in 6 weeks prior to first dose of study treatment; patients with hepatic disease of an aetiology other than HCV; positive IgM anti-HAV test; decompensated hepatic disease (Child-Pugh >6); prior transplantation with a current functional graft; high risk of anaemia, coronary disease or cerebrovascular disease that, according to investigator criteria, were unlikely to tolerate an acute haemoglobin reduction (down to 4g/dL); history of severe cardiac disease, thyroid disorder or abnormalities in thyroid function tests, unless they could be controlled with conventional treatment; other severe comorbid conditions, such as chronic respiratory disease, immunological disease, severe retinopathy, severe psychiatric disorder or convulsive disorder; pregnant or lactating women; man whose partner was pregnant; neutropenia (neutrophil count <1500 cells/mm ³), anaemia (haemoglobin concentration <12g/dL) or serum creatinine level over 1.5 times the upper limit of normal; history of drug use (including alcohol) in the previous year, except those on methadone maintenance programmes
Age, gender and ethnicity	Age - Mean (SD): DOT 36.07 (6.66); SAT 35.72 (6.46). Gender (M:F): DOT 95:5; SAT 93:7. Ethnicity: Not reported
Further population details	1. Age: DOT mean 36.07 (SD 6.66); SAT 35.72 (6.46). 2. Disability: Not stated 3. Gender: M/F - DOT 95:5; SAT 93:7). 4. Length of sentence: Not stated 5. Setting: Prison 6. Substance misuse: No substance misuse (Excluded people with history of drug use (including alcohol) in the previous year, except those on methadone maintenance programmes). 7. Women and children: Excluded pregnant or lactating women
Extra comments	Randomisation was stratified based on: HCV genotype (1-4/2-3), viral load (high/low), ALT level (normal/abnormally

	high), HIV co-infection (yes/no)
Indirectness of population	No indirectness
Interventions	<p>(n=122) Intervention 1: Medicine administration - Supervised administration. Directly observed therapy (DOT) of standard treatment for hepatitis C. Ribavirin was orally given once a day by study nurse - at a dose of 100mg for those weighting 75kg or less or 1.200mg for those weighting more than 75kg, for 24 weeks (patients with genotype 2 or 3) or 48 weeks (patients with genotype 1 or 40). Pegylated interferon alpha-2a was injected once a week by the study nurse. Patients were followed-up for 24 weeks after treatment cessation. Duration 24 or 48 weeks. Concurrent medication/care: Patients without HIV co-infection and with genotype 2 or 3 received a fixed dose of ribavirin (800mg/day) for 24 weeks. A reduction in dosage of ribavirin to 600mg/day was allowed to manage occurrence of anaemia. Dose modifications of pegylated interferon alpha-2a, as low as 90ug, were allowed if patient experienced clinically significant adverse events or laboratory abnormalities.</p> <p>(n=130) Intervention 2: Medicine administration - Self-administration. Self-administered therapy (SAT) or ribavirin for hepatitis C. Ribavirin orally self-administered daily - at a dose of 100mg for those weighting 75kg or less or 1200mg for those weighting more than 75kg, for 24 weeks (patients with genotype 2 or 3) or 48 weeks (patients with genotype 1 or 40). Pegylated interferon alpha-2a was injected once a week by the study nurse. Patients were followed-up for 24 weeks after treatment cessation. Duration 24 or 48 weeks. Concurrent medication/care: Patients without HIV co-infection and with genotype 2 or 3 received a fixed dose of ribavirin (800mg/day) for 24 weeks. A reduction in dosage of ribavirin to 600mg/day was allowed to manage occurrence of anaemia. Dose modifications of pegylated interferon alpha-2a, as low as 90ug, were allowed if patient experienced clinically significant adverse events or laboratory abnormalities.</p>
Funding	Study funded by industry (Roche Farma S.A.)
<p>RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SUPERVISED ADMINISTRATION versus SELF-ADMINISTRATION</p> <p>Protocol outcome 1: Drug adherence - Actual outcome: Sustained virological response at 24 weeks; RR 0.918 (0.756-1.125); Risk of bias: High; Indirectness of outcome: No indirectness</p> <p>Protocol outcome 2: Morbidity - Actual outcome: Mild adverse events (anaemia, thrombocytopenia, neutropenia, leucopenia) at 24-48 weeks; Group 1: 120/122, Group 2: 116/130; Risk of bias: High; Indirectness of outcome: No indirectness - Actual outcome: Serious adverse events at 24-48 weeks; Group 1: 10/122, Group 2: 10/130; Risk of bias: High; Indirectness of outcome: No indirectness</p>	
Protocol outcomes not reported by the study	Drug adherence; Mortality; Overdose; Drug diversion; Quality of life

Study	White 2015 ⁴⁸⁹
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=43)
Countries and setting	Conducted in USA; Setting: 11 facilities in North Carolina State prison system
Line of therapy	Unclear
Duration of study	Intervention time: 24 weeks
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Overall
Subgroup analysis within study	Not applicable
Inclusion criteria	Documented to have HIV infection; currently receiving or initiating ART; housed at one of the 11 participating facilities with no planned inter-prison transfers; Karnofsky score ≥ 70 indicating capacity for self-care; 18 years or older; expected to be incarcerated ≥ 6 months; had a CD4+ T-lymphocyte count and plasma HIV RNA level within 60 days of study entry
Exclusion criteria	Active mental illnesses or conditions that would preclude informed consent or completion of study requirements
Recruitment/selection of patients	Consecutively recruited from 3 prison-based HIV clinics
Age, gender and ethnicity	Age - Median (IQR): DOT: 38 (34, 38). SAT: 39 (36, 39). Gender (M:F): DOT 85:15; SAT 87:13. Ethnicity: African-American: DOT 65%; SAT 78%. White: DOT 10%; SAT 4%. Native American: DOT 15%; SAT 0. Hispanic: DOT 0; SAT 4%
Further population details	1. Age: Aged 18 or older; DOT: mean 38 (IQR 34, 38). SAT: mean 39 (IQR 36, 39). 2. Disability: Not stated 3. Gender: M/F - DOT 85:15; SAT 87:13. 4. Length of sentence: Unclear (Included if expected to be incarcerated ≥ 6 months). 5. Setting: Prison 6. Substance misuse: Substance misuse (Substance misuse history, DOT: 80%; SAT 87%). 7. Women & children: Not stated
Indirectness of population	No indirectness
Interventions	(n=23) Intervention 1: Medicine administration - Self-administration. Self-administered therapy (SAT) of ART (non-nucleoside and nucleoside reverse-transcriptase inhibitors; protease inhibitors). Participants received monthly allotments of all their antiretroviral medications from prison staff and were required to sign for each antiretroviral medication bottle. Duration 24 weeks. Concurrent medication/care: None stated (n=20) Intervention 2: Medicine administration - Supervised administration. Directly observed therapy (DOT) of ART (non-nucleoside and nucleoside reverse-transcriptase inhibitors; protease inhibitors). Prison staff observed each person ingest all of their antiretroviral medications per prison DOT protocol. Duration 24 weeks. Concurrent

	medication/care: None stated
Funding	Academic or government funding (National Institute of Drug Abuse; University of North Carolina Centre for AIDS Research; National Institute of Mental Health)
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: SUPERVISED ADMINISTRATION versus SELF-ADMINISTRATION	
<p>Protocol outcome 1: Drug adherence</p> <p>- Actual outcome: Medication Event Monitoring System pill caps (MEMS) at 24 weeks; DOT: median 99 (IQR 93.9, 100); n=16; SAT: median 98.9 (IQR 96, 100);n=21; Risk of bias: High; Indirectness of outcome: No indirectness</p> <p>- Actual outcome: Medication Event Monitoring System pill caps (MEMS) at 48 weeks; DOT: median 99.8 (IQR 96.3, 100); n=11; SAT: median 99.9 (IQR 85.2, 100);n=11; Risk of bias: Very high; Indirectness of outcome: No indirectness</p> <p>- Actual outcome: Pill count at 24 weeks; DOT: median 97.1 (IQR 95.1, 99.3); n=16; SAT: median 98.5 (IQR 95.8, 100); n=21; Risk of bias: High; Indirectness of outcome: No indirectness</p> <p>- Actual outcome: Pill count at 48 weeks; DOT: median 100 (IQR 94.8, 100); n=11; SAT: median 99.5 (IQR 97, 100); n=11; Risk of bias: Very high; Indirectness of outcome: No indirectness</p>	
Protocol outcomes not reported by the study	Morbidity; Mortality; Overdose; Drug diversion; Quality of life

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H.462 Methods for continuity of care

Study	Reznick 2013³⁸⁵
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=151)
Countries and setting	Conducted in USA; Setting: 2 prisons and 1 jail in California, USA
Line of therapy	Unclear
Duration of study	Follow up (post intervention): 12 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Overall
Subgroup analysis within study	Not applicable
Inclusion criteria	Aged over 18 years old; being released to one of nine San Francisco Bay countries; able to speak English or Spanish; able to name at least one adult in the local area who would be able to participate in the intervention with them;

	willingness to sign a release for the recruiter to contact that person
Exclusion criteria	None stated
Recruitment/selection of patients	Recruiters met with potential participants who were about to be released into the community in 21-90 days. The recruited asked if they wished to hear about the study and, if interested, they reviewed eligibility and conducted consent process.
Age, gender and ethnicity	Age - Mean (SD): Intervention 42 (7.9), control 41.4 (7.8). Gender (M:F): 90:10. Ethnicity: Black: intervention 48.7%, control 56%; Latino: intervention 13.2%, control 16%; white: intervention 25%, control 20%
Further population details	1. Age: Unclear (Intervention 42 (7.9), control 41.4 (7.8)). 2. Disability: Not stated 3. Gender: Mixed (M/F: 90:10). 4. Length of sentence: Not stated 5. Setting: Prison (2 prisons and 1 jail). 6. Substance misuse: Not stated 7. Women & children: Not stated
Indirectness of population	No indirectness
Interventions	<p>(n=81) Intervention 1: Other. Ecosystem-based intervention. Aim: to restructure interactions within participant's ecosystem to support HIV transmission risk reduction and HIV medication adherence. The counsellor achieved this through 3 core activities: (1) assessing the membership, functional patterns and roles in the participant's ecosystems, including their family, friends, sexual and drug use partners, and service providers; (2) connecting with the participant's ecosystems through joint meetings and other communication; (3) restructuring interactions and roles through direct interventions. The intervention proceeded in 3 phases: (1) initiation - the counsellor built the therapeutic alliance and mapped the participant's ecosystem; (2) treatment - restructuring interventions were conducted through both individual and group counselling sessions (N.B. group sessions included their ecosystem members e.g. family) and newly acquired interaction patterns within ecosystems were reinforced; (3) termination - treatments were taped off and ended. Two individual intervention sessions were conducted prior to release and up to 16 intervention sessions were conducted in the 4 months post-release. Duration 6 months. Concurrent medication/care: 53.4% taking ART for HIV pre-release</p> <p>(n=81) Intervention 2: Other. Individual counselling. Based on Project Start intervention. Aim: to provide information and support regarding through counselling sessions: (1) reduction of sexual and drug-related HIV transmission risk; (2) promotion of HIV related medication adherence. The counselling sessions were individual, 1:1 with a counsellor, focusing on the participant's own goals and objectives. Intervention techniques involved motivational interviewing, facilitated referral and goal setting. Two individual intervention sessions were conducted prior to release and up to 16 individual intervention sessions were conducted in the 4 months post-release. Duration 6 months. Concurrent medication/care: 64.4% taking ART for HIV pre-release</p>
Funding	Academic or government funding (National Institute of Mental Health)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: ECOSYSTEMIC versus INDIVIDUAL COUNSELLING

Protocol outcome 1: Drug adherence
 - Actual outcome: Medication adherence (self-reported) at 12 months; OR 0.35 (0.13-0.95); Risk of bias: High; Indirectness of outcome: No indirectness
 Protocol outcomes not reported by the study Morbidity; Mortality; Overdose; Drug diversion; Unplanned admissions; Quality of life

Study	White 1998 ⁴⁹⁴
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=61)
Countries and setting	Conducted in USA; Setting: San Francisco City and County Jails
Line of therapy	1st line
Duration of study	Follow up (post intervention): 9 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Overall
Subgroup analysis within study	Not applicable
Inclusion criteria	People in jails; screened for TB; agreed to take isoniazid prophylaxis as recommended by physicians for TB infection
Exclusion criteria	Did not speak English or Spanish; sequestered from jail population due to mental illness or violence
Recruitment/selection of patients	Inmates who met the inclusion criteria were consecutively sampled
Age, gender and ethnicity	Age - Mean (SD): 32. Gender (M:F): 98.4: 1.6. Ethnicity: Hispanic 50.8%, Black 21.3%, White 14.7%, Asian 3.3%
Further population details	1. Age: Unclear (Mean age 32). 2. Disability: Not stated. 3. Gender: Male (98.4%). 4. Length of sentence: Not applicable 5. Setting: Indirect setting (Jail). 6. Substance misuse: Not stated. 7. Women & children: Not stated
Indirectness of population	No indirectness
Interventions	(n=30) Intervention 1: Other. Incentive - \$5 cash on first visit to TB clinic. TB education - research assistants met with each inmate individually and provided standard education about TB and the importance of continuing isoniazid prophylaxis treatment to prevent disease at a later date, and answered any questions about TB or the medication. Duration 12 months. Concurrent medication/care: Isoniazid prophylaxis for TB. (n=31) Intervention 2: Usual care. Education. TB education - research assistants met with each inmate individually and provided standard education about TB and the importance of continuing isoniazid prophylaxis treatment to prevent

	disease at a later date, and answered any questions about TB or the medication. Duration 12 months. Concurrent medication/care: Isoniazid prophylaxis for TB.
Funding	Academic or government funding (Academic Senate of the University of California)
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: INCENTIVE PLUS EDUCATION versus EDUCATION	
Protocol outcome 1: Drug adherence - Actual outcome: Completed first visit to TB clinic at 12 months; Group 1: 8/30, Group 2: 7/31; Risk of bias: Low; Indirectness of outcome: No indirectness	
Protocol outcomes not reported by the study	Morbidity; Mortality; Overdose; Drug diversion; Unplanned admissions; Quality of life

Study	White 2002 ⁴⁹¹
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=558)
Countries and setting	Conducted in USA; Setting: San Francisco City and County Jail, and San Francisco County TB Clinic
Line of therapy	1st line
Duration of study	Intervention time: 6 months
Method of assessment of guideline condition	Adequate method of assessment/diagnosis
Stratum	Overall
Subgroup analysis within study	Not applicable
Inclusion criteria	Jail inmates with latent TB infection
Exclusion criteria	Moved to prison; remained in custody for the duration of therapy; did not speak English or Spanish; determined by sheriff's personnel to be violent; determined by Jail Health Services' mental health staff to have serious psychiatric illness
Recruitment/selection of patients	Jail inmates were screened by jail medical personnel, inmates who were determined to have a latent TB infection were consecutively approached to enrol in the study
Age, gender and ethnicity	Age - Median (range): education: 29.5, incentive 28.5, control 29.7. Gender (M:F): 89:11. Ethnicity: Latino: education 53%, incentive 52%, control 61%; black: education 20%, incentive 26%, control 19%; white: education 6%, incentive 4%, control 6%; Asian: education 3%, incentive 4%, control 5%
Further population details	1. Age: Unclear (Median age - education: 29.5, incentive 28.5, control 29.7). 2. Disability: Not stated 3. Gender: Mixed (M/F: 89:11). 4. Length of sentence: Not applicable. 5. Setting: Indirect setting (Jail). 6. Substance misuse: Not stated 7.

	Women & children: Not stated
Indirectness of population	No indirectness
Interventions	(n=185) Intervention 1: Other. Education - education provided every 2 weeks whilst in jail. Duration 6 months. Concurrent medication/care: Isoniazid therapy for latent TB infection (n=185) Intervention 2: Other. Incentive - \$25 of food or transportation vouchers provided at first visit to TB clinic. Duration 6 months. Concurrent medication/care: Isoniazid therapy for latent TB infection (n=188) Intervention 3: Usual care. Usual care. Duration 6 months. Concurrent medication/care: Isoniazid therapy for latent TB infection
Funding	Academic or government funding (National Institute of Nursing Research)
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: EDUCATION versus USUAL CARE	
Protocol outcome 1: Drug adherence - Actual outcome: Completed first visit to TB clinic at 6 months; Group 1: 40/107, Group 2: 25/104; Risk of bias: Low; Indirectness of outcome: No indirectness - Actual outcome: Completed isoniazid therapy at 6 months; adjusted OR 2.2 (1.04-4.72); Risk of bias: Low; Indirectness of outcome: No indirectness	
RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: INCENTIVE versus USUAL CARE	
Protocol outcome 1: Drug adherence - Actual outcome: Completed first visit to TB clinic at 6 months; Group 1: 42/114, Group 2: 25/104; Risk of bias: Low; Indirectness of outcome: No indirectness - Actual outcome: Completed isoniazid therapy at 6 months; adjusted OR 1.07 (0.47-2.4); Risk of bias: Low; Indirectness of outcome: No indirectness	
Protocol outcomes not reported by the study	Morbidity; Mortality; Overdose; Drug diversion; Unplanned admissions; Quality of life

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Study	Wohl 2011⁴⁹⁹
Study type	RCT (Patient randomised; Parallel)
Number of studies (number of participants)	1 (n=89)
Countries and setting	Conducted in USA; Setting: Multiple prisons, North Carolina
Line of therapy	Unclear
Duration of study	12 months

Method of assessment of guideline condition	Adequate method of assessment/diagnosis: adults in prisons
Stratum	Overall
Subgroup analysis within study	Not applicable
Inclusion criteria	Aged 18 years or older; HIV infection; in North Carolina prison system; had 4 weeks - 3 months left of their sentence; returning to 1 of 12 study counties in North Carolina; housed at a prison facility that was within 2 hour drive from the release county; ; English speaking
Exclusion criteria	None stated
Recruitment/selection of patients	Recruited from Infectious Diseases Clinics in North Carolina prison system. At the clinic healthcare staff provided brief information regarding the trial to potential participants and referred interested patients to study personnel. Interested participants met with a research associate who explained the study and answered questions regarding participation
Age, gender and ethnicity	Age - Other: aged 18 years or older. Gender (M:F): 73:27. Ethnicity: Black: intervention 76.7%, control 80.4%; white: intervention 14%, control 8.7%; American Indian or Alaskan native: intervention 4.7%, control 0%
Further population details	1. Age: Unclear (aged 18 years or older). 2. Disability: Not stated. 3. Gender: Mixed (M/F: 73:27). 4. Length of sentence: Not stated. 5. Setting: Prison 6. Substance misuse: Unclear (Use of cocaine in 30 days prior to incarceration: intervention 60.5%, control 67.4%). 7. Women & children: Not stated
Indirectness of population	No indirectness
Interventions	<p>(n=52) Intervention 1: Other. Bridging case management. Bridging case management is largely directed by the person rather than the case manager. Focuses on the identification of talents, resources and goals of the person in an open, non-judgemental environment. Case managers met with the study participants prior to and after release to identify medical and non-medical needs, and to develop plans to meet those needs including: housing, employment, medical care, substance abuse counselling and family reconciliation. Case managers attempted to meet with participants a minimum of every 2 weeks prior to release, weekly for the first 2 weeks post-release and then at approximately 2 week intervals up to 6 months after release. Duration 9 months. Concurrent medication/care: ART for HIV</p> <p>(n=52) Intervention 2: Usual care. Discharge planning. Usual care group received discharge planning from a dedicated HIV outreach nurse. Each nurse worked with participants approximately 3-6 months prior to their release to make referrals to community clinics and social services, identify sources for coverage of medication expenses, and attempt to locate housing. Nurses met with participants approximately 3 times prior to release. No support or follow-up was given post-release. Duration 3-6 months. Concurrent medication/care: ART for HIV</p>
Funding	Academic or government funding (National Institute of Mental Health; National Institutes of Health; University of North Carolina Center for AIDS Research)

RESULTS (NUMBERS ANALYSED) AND RISK OF BIAS FOR COMPARISON: CASE MANAGEMENT versus USUAL CARE

Protocol outcome 1: Unplanned admissions

- Actual outcome: Hospitalisation at 12 months; Group 1: 14/43, Group 2: 7/46; Risk of bias: High; Indirectness of outcome: No indirectness

- Actual outcome: ED presentation at 12 months; Group 1: 17/43, Group 2: 18/46; Risk of bias: Low; Indirectness of outcome: No indirectness

Protocol outcomes not reported by the study

Drug adherence; Morbidity; Mortality; Overdose; Drug diversion; Quality of life

H.4.13 Barriers and facilitators to ensuring access to medicines

Study	Adams 2011 ¹
Aim	This study was designed to understand how former inmates perceived their risk of HIV and HCV after release from prison, the behaviours and environmental factors that put patients at risk for new infection and the barriers to accessing health care.
Population	<p>n = 29</p> <p>Prisoners Male:female 20:9</p> <p>Age in years, mean (range) 39 (22–57)</p> <p>Ethnicity African American 11 (38%) White 5 (17%) Latino 10 (34%) American Indian 3 (10%)</p> <p>Length of time since release, mean (range) 42 days (5–82)</p>
Setting	<p>Country Colorado, USA</p> <p>Prison category - not reported</p>
Study design and methodology	<p>Details of recruitment Semi-structured interviews face-to-face with former inmates aged 18 and older recruited within two months of release. Study participants were</p>

Study	Adams 2011 ¹
	<p>recruited from a community health centre, an urgent care centre and addiction treatment centres in Denver, Colorado, with subsequent snowball sampling. Eligibility criteria included ability to speak English and ability to consent to the study procedures. Former inmates whose release was from jail were excluded.</p> <p>Details of interview/focus group and questions asked</p> <p>The interview guide was developed to address a broad set of aims related to the health of former inmates. Interview questions were refined with input from qualitative and health services researchers, interviewers, and former inmates enrolled in initial interviews. Interview questions addressed behaviours placing participants at risk for acquiring or transmitting HIV or HCV as well as access to medical care. Team members from medicine, public health, social work, and psychology met regularly to debrief the interviewers. Participants were provided \$25 for initial interviews and \$25 for member checking. Interviews were digitally recorded in private, uploaded to a secure drive and professionally transcribed.</p> <p>Questions included:</p> <p>Thinking back to those first two weeks after you were released, what do you think was the biggest threat to your safety?</p> <p>Thinking back to the first two weeks after release, what do you think was the biggest threat to your health?</p> <p>What kinds of things do you think people who are released from prison do to improve their health and well-being in the first two weeks after release?</p> <p>How might you have made your health worse after your release?</p> <p>Since your release, how important has it been to get health care?</p> <p>Did you have any trouble getting health care after release?</p>
Analysis methods	<p>Transcript files were entered into Atlas-tiR qualitative data analysis software. An inductive, team-based approach was used to explore HIV and HCV-related patterns and themes within the interview data. Two team members coded transcripts and met regularly to resolve coding differences and to create the final codebook. Other team members reviewed a subset of transcripts and met with the primary coders to discuss emerging themes and discrepancies. For this analysis, the investigators reviewed the transcripts, paying particular attention to segments of text related to HIV/HCV.</p>
Themes with findings	<ul style="list-style-type: none"> • Accessing health care and medications after release <ul style="list-style-type: none"> ○ Participants commonly described long wait times to be screened for indigent care services. A 48 year old male with HCV described this process: ○ “I’ve spent quite a bit of time down there learning the ropes on what you have to do to get this free health care because you know how it’s free health care, but by golly you’re going to wait quite a long time and you gotta kind of know, you know, the ins and outs.” • Difficulty obtaining needed medications after being released without them or with only a short-term supply. A 40 year old African American man with HIV revealed stopping his anti-retrovirals because he was concerned the side effects would prevent him from complying with parole requirements: <ul style="list-style-type: none"> ○ “They gave me a [30 day] supply of medication, but I’m not able to take the medication because the medication knock me out and I might not

Study	Adams 2011¹
	<p>hear the page...If I don't make these calls, that can be taken for escape for me not calling back...so I just don't take my medication."</p> <ul style="list-style-type: none"> ○ At the same time, he readily acknowledged the risks associated with medication non-adherence: ○ "I: In the period of time after your release, what was the biggest threat to your health? R: Not taking my [HIV] meds."
Limitations	Note focus on first 2 weeks since release. Other focus of study is on risky behaviour - not extracted.
Applicability of evidence	Note setting is USA

Study (ref id)	Binswanger 2011⁴²
Aim	To understand the health-seeking experiences, perceptions of risk, and medical and mental health needs of former prisoners in the first 2 months after release from prison
Population	<p>n=29</p> <p>Former prisoners, 2 months after release Adults (mean age 39, range 22-57) Male: female ratio: 69:31</p> <p>African American 38% White 34% Latino 17% Native American 10%</p> <p>Inclusion criteria: ability to speak English, comprehend and consent to the study procedures, and age of 18 years or greater Exclusion criteria: current inmates, people released from jail</p>
Setting	USA
Study design	1:1, semi-structured interview
Methods and analysis	Recruited from community health centre, an urgent care centre and addiction treatment centres that treat criminal justice populations in an urban, using snowball sampling.

Study (ref id)	Binswanger 2011 ⁴²
	<p>The interview guide was developed by the authors. Interview questions were refined with input from experienced qualitative and health services researchers, interviewers, and former inmates enrolled in initial interviews. Interview questions addressed: 1) access to medical and mental health care, 2) medical and mental health needs, and 3) perceptions of risk to one's health and safety during the transition from prison to the community. Initial interviews were conducted from March through June 2009; follow-up member checks were conducted through September 2010. Two experienced interviewers (male and female) were trained to interview criminal justice populations, taught qualitative interview methods, and coached on individual behaviours likely to increase rapport and participant comfort level. Team members from medicine, public health, social work, and psychology met regularly to debrief the interviewers. Follow-up interviews (member checking) were conducted by the investigators with three previously interviewed participants. In the follow-up sessions, participants were provided with results from the study and asked questions about the validity of the interpretations, as well as questions to clarify areas of ongoing uncertainty among the investigators. Participants were provided \$25 in the form of a check or grocery gift card. Participants who agreed to be re-contacted to verify data interpretation were compensated an additional \$25 at the follow-up interview. Interviews were digitally recorded in a private setting, uploaded to a secure drive and transcribed by a professional transcriptionist.</p> <p>Transcript files were entered into Atlas-ti qualitative data analysis software. Data was analysed using an inductive, team-based approach to explore patterns and potential themes in the data. Two members of the team coded transcripts, meeting weekly to resolve coding differences and to create the final codebook, which was used to code the remainder of the interviews. Other team members reviewed a subset of transcripts and met with the primary coders to discuss emerging themes as well as discrepancies, disconfirming and confirming cases. Subsequent analytic steps included creating a figure to visually represent the key emerging themes and an iterative process of data collection, debriefing, and analysis. The results were presented to external groups, including correctional health providers and physician researchers, to further refine analysis. The research team assisted with data interpretation, prioritising salient elements, and discussing discrepancies and implications. Researchers met with 3 of the original participants to clarify key points and assess validity of our interpretations (member checking)</p>
Themes with findings	<p>Transitional challenges</p> <ul style="list-style-type: none"> • Long waits to get medication post-release: “It was very difficult like when I tried to go get my medicine... they were telling me there was like a 90-day wait. The sad part about it was that you had to wait two hours for them to tell you there's a 90-day wait... So, it's discouraging, very discouraging if you need your medications”. • Participants felt that short-term course (10 to 30 days) of chronic medications at release was not sufficient as it did not enable sufficient time to establish care in the community: “[Upon release] they gave me about 10 days’ worth of Risperdal. That was it... They just give you a bag and say ‘Get out’.”
Limitations and applicability of evidence	<ul style="list-style-type: none"> • No serious limitations; does not report whether data reached saturation • Applicable

Study	Bowen 2009 ⁵⁰
Aim	Drawing on the narrative accounts of prisoners and the staff they must negotiate with, this paper considers the prescribing and taking of medication related to the management of mental health problems in a prison context.
Population	<p>n= 71 members of staff and n = 39 prisoners across in 4 local prisons</p> <p>Prisoners Male:female 27:12</p> <p>Age <25 years = 13 <35 years = 17 <45 years = 7 <55 years = 2</p> <p>Ethnicity - Not reported</p> <p>Prison staff Male:female 43:28</p> <p>Role Chaplain = 3, Detoxification staff = 6, Doctor = 3, Nurses/HCOs = 16, In-reach staff = 8, Social work/out-reach = 2, Prison officer = 19, Probation = 1, Psychiatry = 4, Psychology = 1, Suicide prevention coordinator = 7, Occupational therapist = 1.</p> <p>Ethnicity - Not reported</p>
Setting	<p>Country England and Wales</p> <p>Prison category 1 x female prison accepting all categories of prisoner (both sentenced and on remand) with facilities for juveniles and young offenders (YOs),</p>

Study	Bowen 2009 ⁵⁰
	<p>1 x male YO and juvenile facility 1 x male Category B prison 1 x prison from the High Security Estate accommodating both remand and sentenced adults and YOs.</p> <p>At the time, all were undergoing an evaluated programme of structural and organisational changes intended to improve the management of prisoners believed to be at risk of suicide or self-harm.</p>
Study design and methodology	<p>Details of recruitment Members of staff were selected whose daily responsibilities brought them in contact with high-risk categories of prisoner. These 'key informants' included officers working in reception areas and on induction units, and health care professionals accustomed to managing high-risk patients. A purposive sample of prisoners was selected to provide 'information-rich cases for in-depth study', and to enhance 'situational generalizability'; these included prisoners who:-</p> <ol style="list-style-type: none"> 1. were known to be suffering with or who had a recent history of mental disorder; 2. were currently withdrawing from drug or alcohol misuse; 3. had experience of either the F2052SH4 or ACCT5 processes (or both); 4. had been in prison for at least 2 weeks and less than approximately 8 months. <p>Details of interview/focus group and questions asked The interviews lasted approximately 45 minutes to 1 hour, and were recorded on a portable hand-held audio device using micro-cassettes. Interviews with staff focused on participants' attitudes, and knowledge and training in relation to the identification and management of mental health problems. Staff were asked about their current practices, the division of labour and the impact that the environment had on mental health related work, and were asked about their professional relationships with other members of staff, and with the prisoners that they manage. Interviews with prisoners explored participants' state of mental health on arrival in prison, their concerns at that time, and how these concerns were met. Prisoners were asked about the environment, regime and practices that they had experienced since entering prison, and the effect that these had had on their mental health. Prisoners were also asked to comment on their relationships with members of staff from various disciplines and their ability to access support networks.</p>
Analysis methods	<p>Mixed qualitative methods approach incorporating semi-structured interviews that were supported and informed by participant observation. A manual, iterative and reflexive approach to the thematic analysis of the interview data collected during this study involved the repeated review of both the audio recorded interviews and transcribed text to draw out key themes. Tables were then produced to highlight these issues; the tables permitting inter-group (i.e. between establishment/staff grouping e.g. nurses, officers, medical staff) and intra-group (i.e. between individuals within a particular establishment) comparisons to be made, assumptions derived that could be retested in the data collection process,</p>

Study	Bowen 2009 ⁵⁰
	and finally, conclusions drawn.
Themes with findings	<ul style="list-style-type: none"> • Disruption to medication management: a barrier to coping with mental health and managing in prison <ul style="list-style-type: none"> ○ On arriving in prison (prisoners) <ul style="list-style-type: none"> - "I was on tablets for depression running back over the past 10 years, and when I came here, they refused to give me any..... so for just short of a month of being here, I didn't get any... And when I first came in and I explained it, I explained what medication I was on the outside, and the doctor says 'well we don't give that out in here'. When he said " we don't give that out in here', I thought 'Whohh! That's what I've always had....'. They were listening but they weren't understanding..... That's how they are in here..... They've got their opinion in their head and nothing's gonna change that."(male prisoner, ID 39) - "I felt I was coping alright with these tablets and then when I knew I wasn't getting any, I just panicked really. The first night I was crying and... I was beside myself really... because when I was in the hospital, I was on Trazodone (anti-depressant), and they [i.e. specifically the prison doctor] changed it to Venlafaxine. ...and that one I've forgot the name of, for the bi-polar, they just stopped them... It's quite a puzzle to me, 'cos I did get better in there [when previously in hospital], and I can't imagine how I'm going to be alright without it" (female prisoner, ID9) - (Participant who had been started on a course of pain relief to help with his detox from heroin when he first arrived in prison.) "... but when they shipped me from here to PPPP [a prison nearer to court], my detox medication, I never got that for three days." ○ On arriving in prison (staff) <ul style="list-style-type: none"> - "The only way really around it is that you need to revamp the system of people being reviewed [on arrival in prison]. If you can imagine, the courts sit 'til 5 o'clock. If someone is remanded, they mightn't get to the prison 'til 8 o'clock, 9 o'clock that night. They're [the nursing staff on duty] not going to start ringing GPs at that time of night. In which case, they're then referred to healthcare. If they're lucky, they'll see them the next day. If there's a huge number of people to be seen, they might not be seen for 2 or 3 days. These are where the delays occur." - "Where you get the problems is where someone comes in who is clearly going to need a detox also, who immediately starts to tell you that he's been taking Valium and Temazepam, and they've all been prescribed by his GP. You know... of course they are [sarcasm inferred]. And the number of people that they [i.e. staff] do checks on, and they're not. They've [the prisoner] been buying drugs or whatever. So people tend to be less enthusiastic, shall we say, about making the phone calls and whatever, and just say to people 'I'm sorry, these drugs are just not available in this prison', which is not always correct... Valium is the obvious one. We can use Valium in the prison but it is extremely rare that we use it and it is a 'no-no'. Technically, in here, [it's] a non-formulary item, so you have to fill out another form. You have to get another doctor to agree with you so as to prescribe it, which is time consuming. So 99.9% of the time, they'll just tell you 'it's not available'..." (member of in-reach team, ID 60) - "...If they come in with drugs that are in their name, have pharmacy labels on them, then they get prescribed you see. But because they don't turn up with any evidence of what they've been taking, it is the problem of checking out with the GP surgeries, who are extremely reluctant I have to say, to give us information of what these guys are taking, so that we can continue that. Unless it was wildly outside the formulary which we adhere to, which is the SSSS formulary [the formulary drawn up by the local Primary Care Trust], we wouldn't be changing it, so there is some protection..." (member of nursing staff, ID 49)

Study	Bowen 2009 ⁵⁰
	<ul style="list-style-type: none"> - Continuity of medication - detox, pain medication <p>"I only started getting them 3 days after I came in. I had to wait for my medical records from GGGG [name of prison from where the prisoner had just been transferred] and until that came they couldn't give us any medication. Thing is, I'd been on Methadone there...Yeah, it's different in different gaols.... Like in GGGG, if you're on a script on the 'out', they give you what they call a 'maintenance script' inside, of a smaller dose. Whereas I was on 50 ml on the outside, so in GGGG I was getting 30 ml of methadone and a sleeping tablet. And that was it. That was doing it. But when I came here, they told me they don't do Methadone ..., they don't give you sleeping pills. It's a total no-no. So I was ill, very ill." (female prisoner, ID 15)</p> o Delays/disruption to medication <ul style="list-style-type: none"> - "I expected to [i.e. to receive medication], but I didn't take any for.....until the end of the weekend..... [for] 4 days...' cos they didn't have any in the pharmacy..... I started going a bit mad, bit loopy... [I] self-harmed....And I asked them to put me on 2052, cos I didn't feel well." (male prisoner, ID6) - "The doctor told me he wasn't going to give me anti-depressantSo I said, all I said was ' it's no wonder people hang their selves'. It was taken the wrong way and I was taken to hospital and put in a 'strip cell' because they thought I'd said that I was going to hang meself.... I tried to explain that I'd only said it out of frustration because I mean, it is a worry. The medication does help. I've tried just about every anti-depressant. I've been on this one for than 3 years now." (male prisoner, ID4) - Chaotic state of paper-based prisoners' medical records - "I would say that General Practice in here [in prison] is at about 1980 in terms of comparison with the outside world. The biggest deficit now is the lack of an IT system, an integrated IT system, which means we work entirely off paper notes, and have all the problems of paper notes which are that they are a mess, they are difficult to get information from them quickly... We can't trace back what drugs they've been on without having to trawl through the whole lot. ... Like, all the repeat prescribing has to be hand-written, hand-checked. ... We are really back to where I came into General Practice in 1980. However, we are supposed to have a reasonable computer system up and running by Easter, so hopefully when that all gets on then things like Clinical Governance, chasing through repeat prescriptions, monitoring, will all become a lot easier". (doctor, ID 66) o Perceived lack of flexibility in prison regime and limited availability of in-possession medication <ul style="list-style-type: none"> - "I only had been taking the Trazodone of a night time [i.e. prior to coming into prison]. I had problems for quite a few weeks [i.e. after entering prison]. I used to get the tablet at 4 o'clock before tea at 5 o'clock, and if I took the tablet at 4 [o'clock], by the time I come to 5 [o'clock] I couldn't even get myself off the bed because I was that drugged up on it.... But I've manage to get that moved to 7 o'clock now after a lot of negotiation." (male prisoner, ID 18) - "... Healthcare keep messing it up...Well they keep... not bringing it to me. Not giving it to me...Well we'll see, 'cos I got my medication at 12 o'clock last night...I've been in about 3 weeks and it's happened about 5 times. So we'll have to wait and see what time it comes this afternoon." (male prisoner, ID20) - "...If I write up a drug [i.e. a prescription for a prisoner] for three times a day, this is one of the issues that we are trying to deal with at the moment, they are going to get 3 doses, some of them, within as little as 8 hours. Whereas again, if you were at home you'd take them

Study	Bowen 2009 ⁵⁰
	<p>breakfast time, lunchtime and evening time, but because of the needs of the discipline staff to be monitoring the queues and things, then our medication regimes have to fit in with them, and it does lead to some friction. We are trying to work on that at the moment". (doctor, ID 66)</p> <ul style="list-style-type: none"> ○ Alienation and mutual distrust: anti-therapeutic relationships between staff and inmates over medication prescribing <ul style="list-style-type: none"> - "Yeah... with prison and the 'out' [outside community], it's different. Like, on the out, your doctor knows who you are, what you are, what medication you're on and what your problem is. In here, it doesn't matter what medication you're on out there, you don't get it in here. Do you know what I mean?" (male prisoner, ID 20) - "The standard of care [medical care] is good, and I would think that some of the inmates would think it was good, but a lot of them would think it was bad because they're not getting what they get on the 'out'... If a doctor is in his surgery on a little estate somewhere and someone comes in screaming and shouting for something, and he feels intimidated and wants his surgery to be nice and quiet, he'll give them a script, a prescription, and he's got them out the door.... But if you're in a place like a prison, where they can't go anywhere, they can't be disruptive or if they are disruptive, they can be removed, then you can say 'no, I'm not going to give you that drug'. And so I think that the general consensus might be that we've got rubbish doctors because 'the doctor on the 'out' would give me it'. But it doesn't necessarily mean that the doctor on the 'out' is good, it's not his fault but a lot of people get pacified on the 'out'. People get kept on Valium for years and it shouldn't happen". (nurse, ID 8) - "Like there's one guy at the moment who is convinced that he's on certain doses of certain things and I've got the GP to read me his psychiatrist's letter that came in January, so I know that the doses we've prescribed are correct. Do you know what I mean? 'Cos I've seen him three times with the same issue... So there's a bit of that, and a bit of manipulation..." (member of nursing staff, ID 49) - "I think the big difference between civilian psychiatric practice and working here is that in civilian psychiatric practice people rarely actually lie to you. I mean, they highlight things they want you to be aware of and minimise things they don't want you to be aware of. I suppose it's lying really, but usually there's a kernel of truth in 95% of cases; whereas in here, 95% of the people that you're speaking to are telling you things that aren't true. That's a politically incorrect explanation but ... The aim usually is to obtain either pain killers or opiates such as Cocodamol, just to get some kind of sedative so that they can basically blot out reality really... It's quite crucially important really [to understand what is going on] 'cos what happens is that if the doctors who are involved just give in when they [the prisoners] come in and start ranting and raving about opiates and so on, and the doctor kind of goes 'okay' and gives in to them then it makes it harder for the prison staff 'cos he goes back and tells the wing that Dr X is a walkover and then they are all coming over, and if they get codeine out of the doctor, they sell it for 'gear' [i.e. drugs] to other prisoners and it makes a breakdown of the system more likely." (psychiatrist, ID 26)
Limitations	Includes young offenders
Applicability of evidence	Applicable - mental health medication

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Study	Hassan 2012 ¹⁷⁰
Aim	To explore staff and patient views on in-possession medication.
Population	<p>n= 92 (24 people in prison and 68 staff) across 12 prisons</p> <p>People in prison Male:female 21:3</p> <p>Staff role Governor/deputy = 6 Healthcare management = 14 Primary care (including GPs) = 11 Mental Health nursing = 7 First reception nursing = 10 Pharmacy = 7 Substance misuse = 4 Prison officer = 9</p> <p>Age = not reported</p> <p>Ethnicity - Not reported</p>
Setting	<p>Country UK (including Northern, Midlands and London and Southern regions)</p> <p>Prison category Adult male local (A - E) n = 5 Adult male sentenced (F) n = 1 Male youth Offender Institution (G - I) = 3 Female (J - L) = 3</p>
Study design and methodology	Details of recruitment

Study	Hassan 2012 ¹⁷⁰
	<p>A mixed methods design. Questionnaires were sent to all prisons throughout England and Wales in 2008, and follow-up interviews were completed with 68 staff and 24 patients at 12 prisons</p> <p>Details of questionnaire and questions asked Questionnaire was developed, comprising open and closed questions covering: in-possession medication policies, limited prescribing lists, risk assessment tools and medication storage facilities. The questionnaire was piloted and then sent to healthcare managers in all healthcare managers in prison throughout England and Wales during June 2008. Written and telephone reminders were sent to non-responders. (90% response rate was achieved, n = 127/141.</p> <p>Details of interview/focus group and questions asked Prisons purposively selected according to geographical spread and range of prisoner population. As a minimum, they attempted to interview ‘key informants’ at each prison: the governor/deputy, the healthcare manager and/or primary care manager, a member of the pharmacy team, a member of the nursing staff, a prison officer and at least two prisoners, including a least one who was holding their own medication. At 6 prisons, researchers conducted interviews in person in private rooms in healthcare or residential wings. Researchers worked in pairs and used semi-structured interview schedule covering experiences of in-possession medication, its perceived challenges and benefits. Interviews were audio recorded where permitted. Audio-recorded telephone interviews were conducted with staff only at the other 6 prisons.</p>
Analysis methods	Qualitative data were analysed using a thematic approach. A 3 stage approach method was used for analysis: data reduction, data display and conclusion drawing/verification. Interview summaries were read compared by 2 researchers, allowing for verification of patterns and anomalies, and thematic coding.
Themes with findings	<ul style="list-style-type: none"> • Survey data: <ul style="list-style-type: none"> ○ Do you allow in-possession medication with your establishment? Yes n = 115, 100% ○ Does your establishment have a list of medication that cannot be given in-possession? Yes n = 78, 68% ○ Do you provide specific storage facilities for patients with in-possession medication within your establishment? Yes n = 52, 45% ○ Do you have a structured method for assessing prisoners’ suitability to receive medication in-possession? Yes n - 108, 94% • Empowerment (primary benefit of increasing availability of in-possession medication) <ul style="list-style-type: none"> ○ “Prisoners should have their own medication in-possession... that’s coming from my core beliefs that we’ve got to enhance their autonomy and independence and get them to take charge of their care treatment. (Mental health manager, Prison A)” ○ Also empowering for staff: “Nurses spend far too much time giving out medication rather than being nurses. (Pharmacist, Prison L) ○ Empowerment - sub theme - equivalence of care/preparation for release ○ “It actually gives the prisoner a certain amount of control over their illness or their treatment... they are taking the responsibility on for

Study	Hassan 2012 ¹⁷⁰
	<p>themselves. Healthcare is supposed to reflect inside the prison what happens outside the prison. (Mental health nurse, Prison H)</p> <ul style="list-style-type: none"> ○ Prisoner needs - separating healthcare needs from offending. “It makes you feel normal. I’m not a monster, so I should get my inhaler. (Patient, Prison L). ○ Convenience. “Having it is better than coming down for it every day, it would be a pain coming then. (Patient, Prison F).” ● Risk (security and health risk) <ul style="list-style-type: none"> ○ Staff concerned about potential for misuse, trading and diversion (particularly drugs with psychotropic, sedative or analgesic properties). ○ Staff suspicious of prisoner motives - “[In possession medication] can only be a good thing if they can be trusted to have it, but a lot of these would sell their granny for a few extra cigarettes. (Prison officer, Prison A).” ○ Concerns over storage “I don’t think there is any benefit of anyone having their own medication... unless there was a safe place to keep them in your pad [cell]. (Patient, Prison A)” ○ Risk management, staff views “A good, robust system should minimise risks. (Healthcare manager, Prison F)” and “You’ll never get rid of risk totally. (Reception nurse, Prison G)” ○ Noted ‘calibration’. Some establishments had a more flexible approach to in-possession medication and ruled out fewer drugs and were more likely to adapt or ‘calibrate’ approaches individually. Inflexibility invoked frustration among some patients “It’s the drug, not me! They’d be better off assessing individual cases rather than having a blanket ban. (Patient, Prison F)” ○ General comments were positive and in favour of in-possession medication: “We haven’t had any major incidents or real problems there so I think... is effective. (Healthcare manager, Prison D). ○ Noted it was common to hear staff frustration over in-possession, and may have an overly cautious approach: “Some people do get rather upset and agitated about it but the incident of death by overdose is very low. Plus, if they were in the community they would have a cupboard full of tablets anyway. (Healthcare manager, Prison A). “Sometimes we’re too cautious, more cautious than other prisons. (Mental health nurse, Prison E).
Limitations	Includes young offenders
Applicability of evidence	Applicable

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Study	Mills 2011 ³⁰⁰
Aim	To investigate prisoners' subjective experiences of antipsychotic medication, and how such experiences and aspects of the prison environment and regime might affect medication adherence and satisfaction.
Population	<p>n = 44 participants in 3 local prisons</p> <p>Male:female 36:8</p> <p>Age = 19 - 61 years. Mean age = 37 years</p> <p>Ethnicity</p> <p>White = 27</p> <p>Black African = 2</p> <p>Black Caribbean = 6</p> <p>Asian = 6</p> <p>Other = 3</p> <p>n = 38 prescribed antipsychotic medication for treatment of a psychotic disorder.</p> <p>n = 6- prescribed antipsychotic medication for treatment of a personality disorder.</p> <p>32 had been a psychiatric inpatient.</p> <p>28 were prescribed atypical antipsychotics.</p>
Setting	<p>Country</p> <p>UK</p> <p>Prison category</p> <p>2 male category B prisons and 1 female prison</p>
Study design and methodology	<p>Details of recruitment</p> <p>Included prisoners both on remand and sentenced. Respondents had to have been in prison for at least a month, have been prescribed antipsychotic medication to treat an ICD-10 psychiatric disorder for at least 4 weeks and be aged over 18 years. Exclusions included those with severe learning disabilities or organic brain disease and prisoners without the capacity to give written consent. Written informed consent was sought. Of the 56 prisoners approached, 44 agreed to take part, a response rate of 79%.</p>

Study	Mills 2011 ³⁰⁰
	<p>Details of interview/focus group and questions asked</p> <p>Short 30 minute one to one semi-structured qualitative interview. Broad questions were asked to initiate discussion with interviewers seeking clarification and elaboration of answers given. The interview schedule covered personal knowledge and awareness of illness and medication; past experiences of medication and adherence history; experiences and views of current medication and treatment; methods of medication avoidance and views of future treatment likelihood of adherence after leaving prison.</p>
Analysis methods	<p>Interviews digitally audio-recorded and transcribed verbatim. Data analysed using a content analysis method which entailed the elicitation of key themes emerging inductively from the data. Data coded according to themes related to questions, then coded segments of the data were organised using Tesch’s method of de-contextualising and re-contextualising which helps to condense and expand data through new organising principles.</p>
Themes with findings	<ul style="list-style-type: none"> • Intention to continue taking medication after prison <ul style="list-style-type: none"> - I believe I’m going to need to take this medication for a lot of years because it suits me. It seems to be helping me and I’ve more self-esteem about myself when I take it. - Hopefully, it’ll help me...I’d like to not have to take it, but it’s not safe for me to. - I have to take it. When the doctor says you have to take it, you have to take it, or you’ll end up back in hospital. • Past non-adherence in the prison and community <ul style="list-style-type: none"> ○ Preoccupation with substance misuse. <ul style="list-style-type: none"> - The drink had usually been my number one priority...Yes, I forgot [when drinking]. I don’t like the symptoms I suffer when I’m not on the medication so it wouldn’t make sense for me not to take it on purpose. - I forget. Maybe it’s because of the drugs I used to take. ○ Forgot to take it/did not wish to attend appointments at depot clinics <ul style="list-style-type: none"> - It’s just remembering to take it. That’s the difficult part. - To begin with my CPN used to come and...give me an injection at my house. But then they changed it and said I had to go to the Bridge Centre...And it made it hard for me to get there because I didn’t like going out. ○ Did not feel the benefit <ul style="list-style-type: none"> - When I feel it’s not working and I’m in a bad mood about it...I think ‘well, it’s not working, there’s no point in taking it’, so that’s stopped me from taking it. - I sometimes get to that stage where I feel I think I feel better so I don’t need it. - I just didn’t want to spend the rest of my life on medication. So I guess I thought I was better so I decided to try and come off it. ○ Mental health condition not seen as an illness (compliant because of threat to be detained under Mental Health Act) - only one respondent <ul style="list-style-type: none"> - I will take it to keep them happy at the end of the day. To keep them off my back. I’ve never been satisfied with it. I never will be.

Study	Mills 2011 ³⁰⁰
	<ul style="list-style-type: none"> • Prison related factors - staff persuading prisoners <ul style="list-style-type: none"> ○ Use of incentives to take medication <ul style="list-style-type: none"> - I think they'd offer me incentives like 'we'll lend you a kettle if you take your medicine' or 'come on, you'll never get back to your own prison if you don't take your medicine', so I think they'd use social underhand measures to try and coax me. - Some of the staff bribe me...[saying for example] 'I'll give you proper cigarettes if you take your medication'. • Strong coercion to take medication <ul style="list-style-type: none"> - They told me if I didn't take it, I'd go to healthcare which is like punishment because,...[you are] banged up [for ages] down there. They were like 'we can make you take it'. And I was just like 'oh stuff that then, I'll take it over here'. • Prison related factors - prison routine helps adherence (acts as 'stabiliser') <ul style="list-style-type: none"> - The fact that I'm in prison and it gets issued to me. And I'm told when it's there. It makes it easier. - Since I've been to the prison I start staying with the routine all the time. Now everyday when they give me my medication in my room, I take it on...time. I take it with food...I don't forget. • Prison related factors - inflexible prison regime <ul style="list-style-type: none"> - I've had appointments elsewhere, because I was on the detox wing, they only give it out at certain times so I actually missed it. - First time I was on the house block and I got my dinner and then had to have medication so I went to get medication, but then I wanted to have my dinner. So I missed the medication and went back for my dinner. • Administration of medication and relationships with healthcare professionals. <ul style="list-style-type: none"> ○ Directly observed vs. in-possession <ul style="list-style-type: none"> - They call you for your medication, I will make (sic) my best to go and get it, but if there's ... people queuing up, I might miss... a dose. Just because of the aggro of it. It's only a tablet for God's sake... - (not having meds in-possession, meant no choice in when to take meds) Morning and afternoon, even though I wanted it at night time... I just know I will get a better night's sleep if I take it at night time. • Relationships with healthcare professionals. <ul style="list-style-type: none"> ○ Information about prescribed medication <ul style="list-style-type: none"> - I don't understand it. He don't explain anything. He just sits down and talks about the past which is nothing to do with this medication. - Obviously they have decreased my symptoms, but I'd like to know what sort of neurological parts it stops, what nerve endings it goes to, literally...[the] ins and outs of the medication. Because I suffer with paranoia I do feel like a guinea pig sometimes with medication.
Limitations	None
Applicability of evidence	Applicable - mental health medication

Study	Prison reform trust ³⁶⁹
Aim	To investigate views of older people in prison. To develop more effective ways of working with older prisoners.
Population	<p>n= unclear</p> <p>These findings are based on interviews with 78 men in prison, 18 ex-prisoners, two focus groups with women prisoners and letters received by the researchers and PRT's advice and information service.</p> <p>Male:Female - not stated</p> <p>Age - not stated</p> <p>Ethnicity - not stated</p>
Setting	<p>Country UK</p> <p>Prison category 2 male category B prisons and 1 female prison</p>
Study design and methodology	<p>Details of recruitment None stated</p> <p>Details of interview/focus group and questions asked None stated</p>
Analysis methods	None stated
Themes with findings	<ul style="list-style-type: none"> • Older people entering prison had the medication they were receiving in the community stopped. More than one woman explained that hormone replacement treatment had been withdrawn. <ul style="list-style-type: none"> - I came in and they took the HRT off me – I was suicidal anyway – it was terrible. • Three men also confirmed that on-going treatment had been terminated without referral to a consultant on arrival in prison. In one case prostate treatment was stopped until a new referral was made to the local hospital – after a delay of six months. <ul style="list-style-type: none"> - [When I came in] I was given no health check during the induction programme. I told them that I was being treated for high blood pressure

Study	Prison reform trust ³⁶⁹
	<p>by my GP and I had also been referred to a consultant for my prostate check-up, although that had to be cancelled because of my sentence. But because I did not have my medication with me and the prison had no records about my health I was told I would have to wait until I could see the prison doctor. Someone did make a note on a form but I was given no health check or blood pressure was taken – even though I could tell it was high because of what I was going through... It took a few weeks before I was transferred from that prison to this one that something was done...the nurse was great and gave me a good examination. I saw the doc' within a couple of days... he was furious that I had not been checked earlier. He then gave me a prescription and I'm coping much better now and he is also looking at getting me an appointment for my prostate.</p>
Limitations	No description of methods
Applicability of evidence	Applicable

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Study	Sowell 2001 ⁴³⁵
Aim	To identify social service needs of HIV-infected persons at the time of release from prison/jail and to describe their case management experiences after release from jail
Population	<p>n=16</p> <p>Former prisoners/in jail diagnosed with HIV Adults (mean 38.7±7.9; range 23-51) Male/female ratio 11:5</p> <p>African American 81% Caucasian 19%</p> <p>Released from prison/jail 2 weeks to 6 years prior to participation</p> <p>Inclusion criteria: had a history of incarceration in prison/jail; were diagnosed with HIV infection prior to the time of their release in prison/jail; at least 18 years old; were able to communicate in English</p>
Setting	USA
Study design	3 focus groups
Methods and analysis	<p>Convenience sampling; potential participants were recruited from the AIDS Service Organization (ASO) in South Carolina providing HIV-specific social services and case management. Potential participants were made aware of the study through caseworkers at the cooperating agency. Persons expressing interest in the study were provided contact information for one of the research team members. A member of each research team was available daily on site to assist in recruitment during the study period. Once initial contact was made, a research team member explained the purpose of the study and conducted a brief screening to determine if they met the study criteria.</p> <p>All focus groups were conducted in a conference room located in the cooperating ASO and recorded on audio tape. Before each session commenced the leader explained the purpose of the study and obtained informal consent. A second member of the research team attended each of the focus groups to assist with the audio taping and to take observational notes. Focus group sessions were conducted using a semi-structured interview guide consisting of open ended questions. The interview was divided into 2 sections. The first group of questions asked participants to identify and discuss their social service needs when returning to the community after release from prison or jail, including: what did you need most when you left prison/jail?; what were the barrier to getting your needs meet? The second group of questions asked participants about their experiences in accessing or obtaining social and medical services after release from prison or jail, about their experiences with case management</p>

Study	Sowell 2001⁴³⁵
	<p>and their satisfaction with case managers' ability to help them receive needed services; including: when you were first released from prison or jail, how easy was it for you to see a case manager?; was your case manager able to help you get your needs met? If so tell me about how the case manager helped; what was the most important thing the case manager did for you?. Focus groups lasted approximately 3 hours and participants were paid \$10 for their participation.</p> <p>Content analysis was used to analyse and interpret the qualitative data. Transcripts of the focus groups were independently reviewed by two members of the research team. Initially, researchers noted every incidence where participants mentioned a specific social service need or need for specific resources. These identified needs were then categorised and coded. Secondly the researchers identified each mention of case management or an incident in which they had interacted with a case manager or had tried to access case management or social services. When all descriptions of participants' experiences with or views of case management/social services were identified, these descriptions were categorised and coded. Following the individual coding of the data, the two researchers worked together and developed a final coding scheme and assigned specific data to the categories of the coding scheme.</p>
Themes with findings	<p>Continuity of medication post release</p> <ul style="list-style-type: none"> • Participants being released from the state prison system frequently reported receiving enough medication to last until they could see a doctor "Well, when I was released, the Department of Corrections gave me a month's supply of medication to take with me." • Others did note that they had gone without medicines for long periods.
Limitations and applicability of evidence	<ul style="list-style-type: none"> • Serious limitations: role of researcher not clearly described • Applicable

Study	Tompkins 2009 ⁴⁵⁸
Aim	To explore prison buprenorphine (Subutex) misuse, including diversion of prescriptions.
Population	<p>n = 30 Male prisoners</p> <p>Age = 20 - 50 years. Mean age = 34 years (SD 6.99)</p> <p>Ethnicity White British = 24 Black British = 1 Black Caribbean = 1 British Asian = 2 White other = 2</p> <p>27 had received prison prescribed detoxification and/or maintenance for drug dependence during their last sentence, including methadone, Subutex, dihydrocodeine, and lofexidine. 18 participants had intra-nasally used Subutex when in prison, but none had ever injected it. The number of custodial sentences ranged from 1 to 60 with a mean of 10 times (SD 12.66).</p>
Setting	<p>Country UK (Leeds)</p> <p>Prison category Served in over 35 different adult and young offender establishments throughout England.</p>
Study design and methodology	<p>Details of recruitment Inclusion criteria were men with injecting drug use histories who had been released from prison since 2002. Recruitment started in August 2006 and ended in January 2008. Recruitment was via community services such as needle exchanges, drug intervention programme and approved premises (Probation Service supervised controlled accommodation for offenders)</p> <p>Details of interview/focus group and questions asked 30 men were interviewed in depth about how imprisonment affected their drug use behaviour. A topic guide covering the main themes of drug using practices before and during imprisonment was used in the interviews. Topic guide revised to explore obtaining Subutex and about their motivations and experiences. All interviews were digitally audio-recorded and participants received a £15 payment on completion. Interviews</p>

Study	Tompkins 2009⁴⁵⁸
	ranged from 36 -- 88 minutes. Interviews were transcribed by an independent researcher.
Analysis methods	Framework approach was used for analysis. This provided a structure to allow emerging themes. Transcripts were read, themes were identified, and a coding strategy subsequently developed and applied to each transcript line and paragraph.
Themes with findings	<ul style="list-style-type: none"> • Availability and supply <ul style="list-style-type: none"> ○ Diversion of prison prescriptions “The doctors were prescribing it (Subutex) in (prison 2) at one point to the adults. And a lot of people, a lot of people wasn’t taking it; they were bringing it back onto the wing to sell to other drug users, and that’s how it was getting brought back and everybody was buying it and I brought it myself and just use it. If you’d not used it before or you are just starting to use it, it would behave the same effect as if I was doing heroin” ○ Techniques used to obtain (included crushed or whole tablets when nurses or officers not looking, concealed under upper body clothing or put into a receptacle: “If you haven’t been caught trying to get it out, they (prison) keep giving it to you in the full tablet. And if you have been caught trying to get it out they will crush it... People who get it crushed still get it out... they take a little empty medicine pot with them that they get the Subutex in that they have anyway and just go to the hatch, put it in their mouth and then when they have stood up, because they have to stand against a wall being supervised, but all it takes is a split second for the officer to turn around and then it’s like they spit it straight in a pot... put it straight in their pocket and then they can just walk off.” ○ Generally believed that whole tablets were easier to retrieve “When it is in tablet form, you can just take it out your mouth with your hand. But a lot of people spit in their tops, you know tuck their t-shirt in and spit it down.” ○ Swapping prescribed Subutex for other prescribed medication, such as paracetamol: “They (prisoners) have all sorts of ways (of obtaining Subutex). They have different kinds of tablets in their hands and swap it round or whatever. I don’t know, everybody does it a different way and everybody is always secretive about it. In case, they don’t want somebody else to start doing the same thing and get noticed and mess it up for them.” • Prison responses <ul style="list-style-type: none"> ○ Participants suggested prison knew about the diversion, which led to changes in dispensing practices: “They’re crushing it (Subutex) up and giving it to you like that now. And all the lads (male prisoners) are getting round it.” ○ Prescribing other drugs “It has changed now in (prison 1) because they’ve got to go on methadone because too much people grafting (stealing from) healthcare right and spitting them out and just snorting them or just selling them. ○ Considering introducing Suboxone in favour of Subutex, to limit diversion and misuse: “it’s a new one they’re fetching in a Subutex thing. It’s orange and it you snort it, it burns your nose.” “They’re even bringing in a subbie out now you can’t snort aren’t they? They’re testing it in (Prison 1)” • Charging and cost <ul style="list-style-type: none"> ○ Subutex was identified as a major currency in prison. “In (Prison 1) you can get one for half an ounce of baccy (tobacco) because loads of people get prescribed them from the doctor. In (Prison 3) there is no prescription drugs whatsoever. So one in there would cost you £45.” ○ Currency differs across prisons (transfer) “I used to buy them in (Prison 1) for half an ounce, knowing that I’d eventually get moved to an

Study	Tompkins 2009⁴⁵⁸
	ordinary jail. So when I got moved to (Prison 3) I had them all with me so I knew how much they were worth in (Prison 1) and how much they were worth in (Prison 4)...
Limitations	Former prisoners? Substance misuse?
Applicability of evidence	Applicable

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H.5 Deteriorating health and emergency management

H.5.1 Deteriorating health

Study	Condon 2006⁸¹
Aim	To explore prisoners' views of health care within the prison setting.
Population	<p>n= 111 in 12 prisons</p> <p>Participating prisons were selected purposefully to cover 4 diverse geographical areas in England. Includes all types of prisoner (remand and sentences, men, women, young offenders and juveniles (16-18)).</p> <p>Male:female 101:10</p> <p>Age = 16 - 78 years. Median age = 34 years</p> <p>Ethnicity</p> <p>White British = 82</p> <p>White European = 12</p> <p>Black British = 6</p> <p>Black African = 4</p> <p>Black Caribbean = 3</p> <p>British Asian = 3</p> <p>White African = 1</p>

Study	Condon 2006 ⁸¹
Setting	<p>Country UK Prison category All categories. (Cat A = 1, cat B = 5, cat C = 2, cat D = ,1 YOI = 2, women = 1)</p>
Study design and methodology	<p>Details of recruitment Prisoners were recruited by means of a poster, which described the project and invited potential volunteers to complete a reply slip or inform prison staff of their interest. Prison health care staff vetted the list of volunteers to exclude those for whom participation might present a risk to the physical or mental health of either the individual or the researchers. Researchers made a random selection of 10 participants from the names provided by each prison.</p> <p>Details of interview/focus group and questions asked Interviews carried out by two members of the multidisciplinary team. All interviews were conducted in privacy, to the extent that health and or prison staff were not within listening distance of the interview, and took place in a variety of venues ranging from consulting rooms to prisoner’s cells. Interviews were audiotaped and transcribed verbatim, with the transcriptions creating the text for analysis. In depth, semi structured interviews were conducted using main questions and prompts. Interviews lasted between 20 and 60 minutes. Relevant Q = What is your experience of healthcare in this prison? Do you know what healthcare is available in this prison? What are the good/bad things about healthcare in prison? How does it compare with healthcare outside of prison? How do you look after your own health when you are in prison? What do you think helps prisoners to look after their health better in prison?</p>
Analysis methods	<p>Thematic analysis assisted by Atlas.ti software. Data analysis included stages: identifying initial concepts, coding the data, sorting the data by theme and developing a conceptual framework.</p>
Themes with findings	<ul style="list-style-type: none"> • Accessing health services - Opportunity to improve health/use services: Majority of prisoners stated that being in prison was an opportunity to catch up on healthcare and to make use of the services offered: “It’s time to get healthy... get back to normal, it’s just a thing with prisoners - come to jail and get yourself sorted. I had better things to do when I was out, but in here you’ve got all the time in the world, so you might as well get everything done. HP1 (19 years of age, young offender). • Accessing health services – Application process: Many gave their views on the application system, by which they give written request for specific services. Varying success, some said it worked well “if you’ve got bad teeth, or of you want to see the GU matey, you just put an application in and then you go down the list and then they come and get you. But if you say it’s an emergency - ‘I think my tooth’s broke on me’ - then you’ll probably go the next day.” EP6 (17 years of age, young offender). Others said the system worked poorly and was characterised by inefficiency, long waiting times and poor communication: “You put your application in the box, and it comes over to health care and they just add you on to a list, which is massive anyway, you know... it’s taking 3 weeks to see a doctor. You just have to wait, basically - you can’t ask, like the nurse on the wing - she just tells you to put another app in. IP3 (33 years of age, category B prison). Quality and accessibility of services were reported to vary according to category of prison. In local prison with a high turnover of prisoners, services could be fragmented, whereas in a training prison

Study	Condon 2006 ⁸¹
	<p>“health care is a lot more accessible and they’ve got more time to deal with you as an individual” BP4 (25 years of age, category B prion). However, in practise open prisons could still have difficulties e.g. one prison had appointments only available during a set 1 hour period in the morning “to make an appointment, you can’t do it until dead on 8 o’clock, when you should be on a bus going to work. So you miss a whole day’s pay to make an appointment” DP3 (57 years of age, category D prison)</p> <ul style="list-style-type: none"> • Accessing health services – Gatekeeping (triage): Some prisoners noted they had to see a nurse before they could see a doctor: “if you want to see a doctor, you have to ask sister first” LP6 (45 years of age, category C prison), and that the nurse would make the decision as to whether the condition justified seeing a doctor “ if a nurse recommends you to see a doctor, that is the only time you see the doctor” LP6 (45 years of age, category C prison). Some stated the triage system was good as they saw the nurse quickly; others described it as a possibly delaying or obstructive stage. • Medication access – Equivalence: Many described their dissatisfaction at the range of analgesics medication available, considering paracetamol as overused for conditions that required stronger medication. Prisoners were aware of strict rules about types of medication that can be prescribed and perceived that the ruling was for the prison service rather than health care “ Number 1 governor’s made a ruling, no matter what is wrong with you, you will only receive diflofenac or paracetamol” DP3 (57 years of age, category D prison). Other prisoners commented on healthcare in prison and that “it shouldn’t be that ‘cos you’re in prison you’re not allowed to have certain medication. It should be (that) if you’re ill, then you should be treated” CP3 (32 years of age, category C prison). • Attitude of prisoners – Manipulative behaviour: Prisoners in all the study prisons described a clear distinction between the ‘legitimate’ and ‘non-legitimate’ patients. Non-legitimate patients or ‘blaggers’ were those who feigned illness to get additional medication or to miss work. Many felt that the large number of ‘blaggers’ led to staff becoming hardened to the health needs of the prisoners: “They’re so used to girls blagging them, trying to get any sort of drugs... they think that everybody’s the same - we’re all trying to blag them. But that’s not the case for everybody” AP1 (43 years of age, female prisoner). Where a prisoner had established good rapport with health care staff and was certain of being seen as a legitimate patient, this was a source of confidence that health and nursing needs would be met: “ I don’t go up there unless I need to and they know that and that’s important.” DP4 (age 70 years of age, category D prison) • Accessing health services – Overnight access to prisoners: In many prisons participants described a near ban on pressing buzzers at night to call for help, even in the case of illness. In some prisons, a cell door would not be opened after night locking except in the most serious circumstances. Young offenders generally described better access to health-care services at night.
Limitations	Note indirectness of population
Applicability of evidence	UK

Study	Gately 2006 ¹⁴⁸
Aim	To explore the barriers and opportunities for managing long term conditions in a prison setting. To uncover individuals’ experiences of the Expert

Study	Gately 2006 ¹⁴⁸
	Patients Programme (EPP), a policy aimed at mainstreaming patient experience in the NHS operationalised through the introduction of a lay-led self-management course for people suffering from long-term conditions.
Population	<p>n= Prison X - 11 pre-course and 8 post-course interviewees Prison Y - 2 post course interviews Prisoners with chronic conditions including diabetes, high blood pressure, arthritis, and back problems.</p> <p>Male Age - NR Ethnicity - NR</p>
Setting	<p>Country UK Prison category - Two category C training prisons</p>
Study design and methodology	<p>Details of recruitment. Prisoners were selected by the prison officer in charge of health care in one prison and in the second were recruited to the course by responding to posters put up around the prison. No prison officers were present during the interviews. All prisoners gave informed consent.</p> <p>Details of interview/focus group and questions asked. Semi-structured interviews were conducted before and after the prisoners completed the Expert Patients Programme course. All prisoners were interviewed in the health wing of the prison, using a semi-structured interview guide. Four authors carried out the interviews. All interviews were taped and transcribed.</p>
Analysis methods	Analysis was carried out using the Framework Approach, developed specifically for policy relevant qualitative research. A thematic framework was constructed, mapped and interpreted.
Themes with findings	<ul style="list-style-type: none"> • Medication access – Equivalence: Prisoners felt that they should receive the equivalent level of care as they would in the community. Considered that they were treated as prisoners first and foremost and only secondly as patients “More of a caring emphasis. At the end of the day, whether you’re a prisoner or not, you’re still a human being and if you are genuine with an illness, you should be seen, you should have your health care... I know it’s slow outside there, but at least you should be on the same level as out there, as in here, but we’re not. We’re behind.” (PXID 10: obesity). • Accessing health services – Opportunity to improve health/use services: Others believed their health had improved since coming into prison. In the community, elements of chaotic lifestyles i.e. excessive consumption of alcohol, eating sporadically or violent activity was detrimental to their health. The structured nature of the regime in prison had helped some to regain control over their lifestyles and the time spent in prison was seen as an opportunity to get health issues previously ignored addressed: “Well I was a lot heavier before I come to prison. I’ve lost about

Study	Gately 2006¹⁴⁸
	<p>three stones since I come to prison. Prison's done a lot for me. People might find that strange, but it has. I see the healthcare staff when I need to see them... I've had all the checks and obviously I get an MOT, you know do a check-up every so often... (PXID 10: obesity)</p> <ul style="list-style-type: none"> • Attitude of prisoners – Manipulative behaviour: Many felt that those with chronic conditions should have priority, they were unhappy that they were treated the same as others they believed to be malingerers, attending healthcare just to get out of work "But I do find there's a, if you want to call it, a culture or an attitude, an undercurrent within staff on the medical side really because they have so many lads that go along feigning illness to get out of work, they're all tarred with the same brush, like I say brought down to the lowest common level and not treated as an individual" (PX1D1: cerebral palsy). Those with diabetes were different from the rest of the sample as they described being treated as patients and were positive about the care they received from the specialist nurse "I could always get the help should I need to... I can just have a talk with the health care... it's quite easy... with the diabetes, I don't think they mess about with it, cos of the seriousness of it, so... I can just come up and have a talk with anyone up here" (PXID 2: diabetes and asthma) • Accessing health services – Gatekeeping (triage): This was considered limited in prison X, current triage system was seen to delay contact with a doctor "I mean, I once ended up with nearly having pneumonia. Because, you know, the triage nurse kept fobbing me off with, telling me it were just a cold and I had a, bit of a, you know, a chest infection and it'll wear off, you know what I mean. And then when eventually I did get to see the doctor, the doctor told me off for not, you know, seeing him earlier, you know what I mean..." (PXID4: back injury). Prison Y were full of praise for healthcare staff. They felt they could drop in to health care and discuss health problems in an informal way, for example requesting to be seen by the female doctor as they were unhappy with the treatment they had received from the male doctor during their last appointment.
Limitations	Indirectness - low level security prisons? Some concerns over methodology, inconsistent sampling method across study sites. Age and ethnicity not reported.
Applicability of evidence	UK

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Study	Marks 2006²⁷²
Aim	Identify views on the training needs of doctors and health care managers working in prisons.
Population	<p>n= 10 doctors, 5 health care manager</p> <p>Male:female: NR</p> <p>Age: NR</p>

Study	Marks 2006 ²⁷²
	Ethnicity: NR
Setting	Country: UK Prison category: Five prisons from the north east of England. Closed male young offenders (YOI), Category B mixed local prison and high security female prison, high security male prison, category B male local prison, closed female prison and young offender institution
Study design and methodology	Details of recruitment: No details on selection methodology for prisons or interviewees Details of interview/focus group and questions asked: No details on questions asked. Interviews were conducted by either second author (for doctors) or third author (for healthcare managers). Interviews were recorded, no further details provided.
Analysis methods	Thematic analysis conducted by first author. A project steering group and expert panel is mentioned in the acknowledgements but no details are given on their input into the study. No other details provided.
Themes with findings	<ul style="list-style-type: none"> • Attitude of prisoners – Manipulative behaviour: described having to adjust to manipulative and demanding behaviour. Some prisoners were described as “consummate actors”, “skilled manipulators” some interviewees described confrontational and sometimes aggressive prisoners. Some continually “cried wolf” and some were litigious and a “culture of suing” could potentially lead to more defensive medicine. (D5) • Healthcare resources – Equipment: lack of computers in this sample of prisons created difficulties for managing long-term conditions or avoiding fragmented care following prison transfers • Accessing health services – Referral: interviewees often experienced difficulties in getting specialists to visit prisons, even though this was cheaper than escorting prisoners and posed less of a security risk. “Certain consultants... are either frightened to come into prison or don’t want to have to deal with prisoners” (D8). Majority of interviews described pressures not to refer patients unless absolutely necessary because of security issues and cost (D2, 4, 5, 7, 8). • Accessing health services – Overnight access to prisoners: one interviewee complained of the lack of access to prisoners after 7pm • Healthcare resources – Time: A number complained of surgery times having to fit into the prison regime; this could mean rushed surgeries. • Attitude of primary care staff – communication with team-members: Team working and peer support were poorly developed, in contrast with general practice “We don’t all meet together and discuss common problems, like we do in the practice” (D8). • Medication access- Equivalence: interviewees described a number of differences between prescribing in prisons and in the community. First were prescribing restrictions, such as for codeine and other opiate-based drugs, topical treatments for acne, and drugs which are dangerous in overdose. Needles (such as for insulin injections) were forbidden and bed boards and crutches would be considered a security risk.

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Study	Marks 2006 ²⁷²
Limitations	No details on questions, one area of England, small study size
Applicability of evidence	UK

Study	Plugge 2008 ³⁵⁷
Aim	To explore women prisoners' experiences of primary healthcare provision in prison.
Population	n= 37 (focus groups), and 12 (interviews) Prisoners Females (focus groups: young offenders (aged 18 - 21 years) n=11, black British n = 5, Jamaican n = 3, Sentenced prisoners n = 6, African n = 7, Drug misusers n = 5 Age - interviewees aged 19 - 46 years Ethnicity, as specified in focus groups. Interviews = 11 British born and 1 was Irish. 4 identified as black (African or African, Caribbean), the remainder as white.
Setting	Country UK, 2 prisons in southern England Prison category Closed, local prisons that received women prisoners from the community who were on remand or had been sentenced.
Study design and methodology	Details of recruitment Purposive sampling was used to recruit women to six specific focus groups to ensure that the perspectives of women were from a range of different prison groupings were included. Researchers identified women who were eligible for the study using the local inmate directory; only women who had been in prison for at least 1 month were eligible. Groups were very different from each other, but members within groups were fairly homogenous in terms of background. Convenience sampling was used to recruit for individual interviews. These women participated in a longitudinal questionnaire survey over a 3 month period and so were familiar with the researchers. Details of interview/focus group and questions asked

Study	Plugge 2008 ³⁵⁷
	<p>Focus groups and interviews took place in a private room in the health centre of the prisons or on the wings. No prison or healthcare staff were present in the room and it was made clear to the women that what was said in the groups and interviews was confidential. There was a facilitator and co-facilitator for each group, and the conversation was guided by a schedule and tape-recorded.</p> <p>Semi-structured interviews were conducted when women had been in prison for between 1 and 3 months. None of the interview participants had participated in the focus groups. The researchers approached women on the wings at least 1 day before the group to give them a written information sheet and ensure they were able to attend. The interviews were tape recorded and consisted of questions reflecting the key themes that emerged from the focus groups. Questions included: can you tell me about any experiences you have had with prison healthcare services since you came to prison? Overall, how would you rate the healthcare services you have received in prison compared with health care you have received outside? If you could make three suggestions on how to improve prison healthcare what would they be?</p>
Analysis methods	<p>The recordings of the focus groups and interviews were transcribed using a private company. Two of the authors independently analysed the data. The researchers carried out thematic analysis to identify and categorise major themes and subthemes. Themes were reviewed and refined to ensure they formed a coherent pattern and recoded if necessary.</p>
Themes with findings	<ul style="list-style-type: none"> • Accessing health services - Application process: Women had to fill in a form (an app), stating why they needed to see a particular professional. Women were not kept informed about the status of their application, and were not told whether an appointment would be arranged or how long they would have to wait: “This app business - do you know how long it takes to see a doctor here? I would have damned killed myself if I wanted to do that.” (Focus group 1). “When you need to see a doctor, you have to put in an application, you have to wait too long and mainly because I’m quiet and because I don’t fuss” (Focus group 3). “When you are in pain... you can’t just book - like you can’t just go to your GP or go to - walk in to a surgery and say I’m ill blah, blah, blah.. They’ll tell you to put an app in and it can take you a whole week and you’re still waiting for that app.” (Focus group 5). “Yeah everything’s a [expletive] app. I can’t be bothered... because of the pain I’m in, do you know what I mean? Everything’s so long - I’ve been waiting for [expletive] 6 weeks.” (Focus group 6). • Accessing health services - Gatekeeping (triage): Nurses seen as gatekeepers who had the power to deny prisoners access to the doctor or other healthcare professional. “You can’t just say ‘I want to see the doctor’ you’ve got to explain to the nurse why you want to see the doctor and if the nurse - if she thinks it’s valid then you can. If she thinks it’s not worth it because you were there last week... then you ain’t gonna see him” (Focus group 6). “The nursing staff decide whether you’re eligible to go to the doctor or not” (focus group 4) “ the nurses to me seem only there to filter out the applications for the doctor and to interrupt you when you’re at the doctor and tell the doctor what’s wrong with you, as if you cannot speak for yourself” (Focus group 4). “Listen, if you want to see a doctor here you have to wait until the nurse slips out the room and quickly say all you’ve got to say to the doctor and they can write down your med because the nurse will stop you getting anything you know and that’s wrong “ (Focus group 2) • Attitude of primary care staff – Communication with patients: Critical of disrespectful and uncaring attitude of the healthcare staff and that they were not treated as they would be in the community “They make you feel - oh... I can only speak for myself, but I - they make you feel like that you - you’re [sighs]. They look beneath you. Erm, down at you, if you know what I mean? Because you’re a prisoner.” (Interview 8). “ I think the nursing here is very...I don’t think they understand. I don’t think they want to understand. They have a very bad attitude” (Interview 1). “You

Study	Plugge 2008 ³⁵⁷
	<p>shouldn't be judged just because you're in prison" (Focus group 1) "Not stereotyping - stop being stereotypical and thinking that we just want drugs" (Focus group 2).</p> <ul style="list-style-type: none"> • Attitude of prisoners - Staff competence: They considered healthcare staff to not be competent "They are, they're NHS rejects" (Focus group 2) "First of all these nurses are unprofessional. I don't know where they got them from. I'd like to see some of them's qualification. Trust me, because - and first of all, they don't even notice, interact with you on a professional basis" (Focus group 3). "I don't rate them that they're qualified doctors. I reckon they just [expletive] got them off the street yeah." (Focus group 1) • Attitude of prisoners – entitlement: Some women highlighted the poor provision and vulnerable patient group. "Like there's one nurse, yeah, for however many people they have to see coming through reception here. Like 40% of them might be alcoholics or drug addicts, they've got to take on board everything everyone is saying. Most of the people that come in 'clucking' or withdrawing, they want their drugs and they want whatever is going to make them feel better now....then someone else comes along being genuine, then that person might have it taken out on them. But that's how the doctor feels - they've got to understand." (focus group 10)
Limitations	Indirectness - includes reception. Different sampling methods for focus groups versus interviews but analysis reported together.
Applicability of evidence	UK

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Study	Powell 2010 ³⁶⁴
Aim	Study the views and experiences of nurses and other prison healthcare staff about their roles and the nursing care they provide to prisoners
Population	<p>n=68 (12 focus groups) and nurses and other healthcare staff</p> <p>n=12 (individual interviews) Nurse managers</p> <p>Male:female: 21:59</p> <p>Age – mean (range) : 44.59 (24-58)</p> <p>Ethnicity: NR</p>
Setting	Country: UK

Study	Powell 2010 ³⁶⁴
	<p>Prison category: Various (purposive sampling in order to “capture all categories of prison”); breakdown NR</p>
Study design and methodology	<p>Details of recruitment: Twelve prisons were purposively selected to cover four diverse regions in England. Nurses and other healthcare staff working on the day of the visit were included in the focus group. Not reported whether participation in focus group was compulsory for nurses, other healthcare professionals were included if they wished to be.</p> <p>Details of interview/focus group and questions asked Interviews were conducted following the first focus group, as nurses deferred to their managers. Following this the managers were not included in the groups. The majority of interviews lasted just over one hour and were semi-structured. Focus groups lasted between one hour and an hour and half. Both the focus groups and interviews were facilitated by a pair of researchers and were audiotaped and transcribed verbatim.</p> <p>Relevant interview questions asked:</p> <ul style="list-style-type: none"> • How do you and the rest of the primary care team try to meet the health needs of the prisoners? • How do you identify the need and what services do you provide? [e.g.] Reception, Primary/Secondary health needs assessment, Triage system, Request slip system, Prison officers, Treatment room, Anything offered on the wing? Drop in clinics for prisoners, Referral to health services outside prison? • What effect do you think prison has on prisoners?... e.g. access to health services • What are the frustrations of working as a nurse in prison? • What are the barriers to providing a good service? • What improvements could be made? • What works well? • What do you do well in this prison?
Analysis methods	<p>Thematic analysis assisted by Atlas.ti software. Data analysis included stages: identifying initial concepts, coding the data, sorting the data by theme and developing a conceptual framework. A steering group gave guidance throughout the process (no further details given) and the four researchers worked as a group, not independently, with individual interpretations modified by a consensus process.</p>
Themes with findings	<ul style="list-style-type: none"> • Healthcare resources – Time: Many participants expressed their frustration with the time-consuming task of ‘dishing out the meds’ and seeing to minor ailments and injuries. Some nurses thought that these responsibilities took them away from delivering a more preventive healthcare service. • Accessing health services – Referral: Taking a prisoner to an outside specialist healthcare appointment was described as a lengthy, frustrating process that could easily be sabotaged. Participants described many incidents of unsuccessful referrals. Attempts to take prisoners out to

Study	Powell 2010 ³⁶⁴
	<p>secondary healthcare services highlighted the complex issues that healthcare staff and prison officers face when trying to balance healthcare needs and security requirements. The impact of having to cancel a planned secondary care referral (usually as a result of lack of prison officers to escort the prisoner to the appointment) was described as hugely distressing. One nurse described her irritation at receiving letters from prisoners' lawyers complaining that their clients had suffered medical neglect as a result of missed hospital appointments "It really annoys me... I see why they're doing it, but we get hundreds of letters a year...And it's not neglect – if the officers aren't there to do it, we can't do it." (Healthcare Manager, category B prison)</p> <ul style="list-style-type: none"> • Accessing health services - Application process: An 'application system' to enable prisoners to access healthcare services was used across the prisons. Prisoners filled in a form requesting one or more healthcare services, including the general practitioner (GP), nurse, dentist, podiatrist and optician. Most participants suggested that the system worked well because it similar in every prison and so was familiar to prisoners. Not all participants expressed satisfaction with the application system; one primary care manager alluded to an inefficient paper-chase, where applications 'half the time, go missing...' • Accessing health services – Gatekeeping (triage): The triage process represented a significant change for many of the nurses: "Until recently, they all had to see a doctor within 24 hours of being here. That stopped. That was deemed completely unnecessary, and now we refer them on as we feel necessary." (Healthcare Manager, category C prison). Participants' perceptions about triage differed between prisons, and within the focus groups. The topic provoked debate and revealed uncertainty and confusion about this emerging nurse role within several of the focus groups. A large number of participants saw their triage role as one of gate-keeping to protect general practitioner (GP) time: "Sometimes they request to see the doctor for colds, but if everybody went to see their GP, the doctor wouldn't be able to go home, would he?" (Healthcare staff, focus group participant, category A prison) Triage was described as a paper-sorting task where decisions were based on interpreting prisoners' healthcare applications or as a face-to-face meeting between prisoner and nurse in their prison cells or in the health centre. Few of the participants had received any formal training in triage. Some nurses approached the concept of triage as a common-sense decision-making process that did not require any particular training, whilst others voiced their worries about acting beyond their levels of competence.
Limitations	Sampling method not described. Possibility that participation was compulsory, as large n numbers compared to other studies and was part of a larger department of health funded study.
Applicability of evidence	UK

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Study	Walsh 2014 ⁴⁷⁷
Aim	To explore the attitudes and perceptions of prison staff towards pain management in prison.
Population	<p>n=23 questionnaires, n=5 in focus group prison staff (out of 200 total) Questionnaire: 10 health care staff, nine prison officers, one probation officer, one charity worker, deputy governor and one manager</p>

Study	Walsh 2014 ⁴⁷⁷
	<p>Focus group: probation officer, prison officer, physiotherapist, general practitioner and the clinical director (only member not to have filled in questionnaire)</p> <p>Male:female - NR</p> <p>Age: NR</p> <p>Ethnicity: NR</p>
Setting	<p>Country UK</p> <p>Prison category 1 large, category B, adult male prison</p>
Study design and methodology	<p>Details of recruitment: Questionnaires: self-selected convenience sampling – questionnaires were distributed across the prison for all staff with direct prisoner contact to complete and return if they chose to do so. 450 questionnaires were distributed for a staff base of 200, 23 were returned. Focus groups: self-selected convenience sampling – focus groups were recruited as part of the questionnaire (although the clinical director requested verbally to take part and did not fill in a questionnaire). 10 questionnaires indicated interest in the focus group and four staff members subsequently attended.</p> <p>Details of interview/focus group and questions asked: Questionnaire, mixture of qualitative, quantitative and demographic:</p> <ul style="list-style-type: none"> • What is your role within the prison? • How long have you worked at HM Prison? • What sort of pain for you see prisoners suffering with? • How many time would you estimate per week that you prisoners complaining to you that they are in pain? • Do you think the prison environment can cause pain? • How do you think pain is treated in prison? • How do you think pain should be treated in prison? • Have you ever heard about or witnessed prisoners trading pain medication? • Do you think prisoners ever access health care services to obtain pain medication that they do not need?

Study	Walsh 2014 ⁴⁷⁷
	<ul style="list-style-type: none"> • Do you think you use your intuition when deciding if a prisoner complaining of pain is genuine? • Have you ever had any training in how to deal with prisoners who are in pain? • If no: would you like any training in how to deal with prisoners who are in pain? • Do you think prisoners should be able to buy paracetamol and ibuprofen through the canteen? <p>Focus group direction was informed by results of the questionnaire (further details not given). Length of focus groups and method of data collection not reported. Multiple project team members were present in focus groups: one facilitator and “researchers”; numbers and their roles within the focus group and study were not reported. No example questions given.</p>
Analysis methods	<p>Questionnaire – analysed using qualitative thematic analysis, undertaken by one researcher and then presented and discussed amongst the other members of the project team</p> <p>Focus group – analysed using qualitative conventional content analysis approach and undertaken by one researcher. Data analysis included open coding to identify meaning and then grouping of codes into categories and themes. Analysis presented to other project members present in the focus group for validation</p>
Themes with findings	<p style="text-align: center;">Questionnaire</p> <ul style="list-style-type: none"> • Healthcare resources – Time: some staff stated that managing pain took a significant amount of their workload, one GP estimated around a third of their workload. Almost all tend to be approached by prisoners complaining of pain almost daily. • Attitude of prisoners – Entitlement: Prisoners expectations of pain management are different to those outside prison, leading to particular demands for treatment, usually medication. “Part of the problem is lots of men in here have never had to manage pain without illegal meds. They have no idea what ‘normal’ pain is and so find it hard to cope. You don’t want to say ‘man up’ but many of them need to know that what they are feeling is a normal amount of pain and they have to get on with it like people in the community do quite happily.” (R10) • Attitude of prisoners – Manipulative behaviour: one respondent felt that prisoner patients might not trust staff to understand and believe their complaint of pain, thus leading to prisoners exaggerating their symptoms. • Medication access – medication diversion: majority of respondents had witnessed or heard about trading, and all believed that prisoners accessed health care services to obtain pain medication that they do not need, with opiate drugs being the most popular for trading. “It’s very easy for prisoners to ‘blag’ pain relief. They even crush up pain killers and sell them as illicit drugs” (R13). Other reasons to attempt to access pain medication include habitual drug seeking behaviour, the need to pay off debt (trading), wanting to hoard in order to overdose and commit suicide or to gain access to an outside hospital to make good an escape from custody” <p style="text-align: center;">Focus groups</p> <ul style="list-style-type: none"> • Attitude of prisoners – Power: Using complaint of pain as way of exerting power over the health care professional “There are lots of consultations where you can predict completely how it’s going to go e.g. “I’ve tried that, that doesn’t work “ so you come up with another drug, “

Study	Walsh 2014 ⁴⁷⁷
	<p>I had that years ago and that didn't work". You are quite sceptical about whether that's the reality or not... It feels combative really quite often" (P3) "if they feel that they won't get what they want they will be quite happy to keep you there all day, and that's powerful." (P6)</p> <ul style="list-style-type: none"> • Attitude of prisoners – Entitlement: perspective of being a victim " there is a strong sense of victim, a strong sense of entitlement, you know, if you come in and say "look, the police have beaten me up, look at my arm, dog bite, therefore I should have" (P6) • Attitude of prisoners – Manipulative behaviour: "there is patently a lot of manipulative behaviour that they come limping in and when they extracted out of you what they want they go hopping, you know, running down the corridor out of the room and they've clearly scored a goal (P3). The presentation of pain for secondary gain was felt to be a challenge for prison staff in terms of ascertaining genuine suffering and therefore appropriate treatment. "There are a lot of those trauma type injuries that people get that they'll live with that pain all the time there is a potential of compensation." (P7). Other secondary gains identified were applications for disability living allowance once release from prison, sympathy from a parole board and improved access to prison facilities and resources such as the gym.
Limitations	Individual from management took part in the focus group. Low response rate to both questionnaire and focus group
Applicability of evidence	UK

H.532 Emergency situations

Study	Condon 2006 ⁸¹
Aim	To explore prisoners' views of health care within the prison setting.
Population	<p>n= 111 in 12 prisons</p> <p>Participating prisons were selected purposefully to cover 4 diverse geographical areas in England. Includes all types of prisoner (remand and sentences, men, women, young offenders and juveniles (16-18).</p> <p>Male:female 101:10</p> <p>Age = 16 - 78 years. Median age = 34 years</p> <p>Ethnicity</p> <p>White British = 82</p> <p>White European = 12</p> <p>Black British = 6</p> <p>Black African = 4</p>

Study	Condon 2006⁸¹
	Black Caribbean = 3 British Asian = 3 White African = 1
Setting	Country UK Prison category All categories. (Cat A = 1, cat B = 5, cat C = 2, cat D = ,1 YOI = 2, women = 1)
Study design and methodology	<p>Details of recruitment Prisoners were recruited by means of a poster, which described the project and invited potential volunteers to complete a reply slip or inform prison staff of their interest. Prison health care staff vetted the list of volunteers to exclude those for whom participation might present a risk to the physical or mental health of either the individual or the researchers. Researchers made a random selection of 10 participants from the names provided by each prison.</p> <p>Details of interview/focus group and questions asked Interviews carried out by two members of the multidisciplinary team. All interviews were conducted in privacy, to the extent that health and or prison staff were not within listening distance of the interview, and took place in a variety of venues ranging from consulting rooms to prisoner’s cells. Interviews were audiotaped and transcribed verbatim, with the transcriptions creating the text for analysis. In depth, semi structured interviews were conducted using main questions and prompts. Interviews lasted between 20 and 60 minutes. Relevant Questions = What is your experience of healthcare in this prison? Do you know what healthcare is available in this prison? What are the good/bad things about healthcare in prison? How does it compare with healthcare outside of prison? How do you look after your own health when you are in prison? What do you think helps prisoners to look after their health better in prison?</p>
Analysis methods	Thematic analysis assisted by Atlas.ti software. Data analysis included stages: identifying initial concepts, coding the data, sorting the data by theme and developing a conceptual framework.
Themes with findings	<ul style="list-style-type: none"> • Access to prisoners – Across all prisons many participants expressed anxiety about becoming a patient in an emergency. While virtually all felt confident that an accident which happened at work or in the gym in the daytime would be dealt with promptly, there was much more doubt about an emergency that happened at night when prisoners were locked in their cells. Prisoners were uncertain whether the prison procedures would mean that prompt treatment would be given. “How about if anybody gets a heart attack, you know, in their cell – what do you do? You just leave him until the next morning or something” 1P1 (age 46 years of age, category B prison). One prisoner described a wait of over one hour before the door was opened when his cellmate hanged himself in 2000. The participant thought that changed prison procedures meant that the waiting period would now be shorter, but remained very critical of the difficulties in seeking help during the night.
Limitations	Note indirectness of population

Study	Condon 2006⁸¹
Applicability of evidence	UK

Study	Powell 2010³⁶⁴
Aim	Study the views and experiences of nurses and other prison healthcare staff about their roles and the nursing care they provide to prisoners
Population	n=68 (12 focus groups) Nurses and other healthcare staff n=12 (individual interviews) Nurse managers Male:female: 21:59 Age – mean (range) : 44.59 (24-58) Ethnicity: NR
Setting	Country: UK Prison category: Various (purposive sampling in order to “capture all categories of prison”); breakdown NR
Study design and methodology	Details of recruitment: Twelve prisons were purposively selected to cover four diverse regions in England. Nurses and other healthcare staff working on the day of the visit were included in the focus group. Not reported whether participation in focus group was compulsory for nurses, other healthcare professionals were included if they wished to be. Details of interview/focus group and questions asked Interviews were conducted following the first focus group, as nurses deferred to their managers. Following this the managers were not included in the groups. The majority of interviews lasted just over one hour and were semi-structured. Focus groups lasted between one hour and an hour and

Study	Powell 2010 ³⁶⁴
	<p>half. Both the focus groups and interviews were facilitated by a pair of researchers and were audiotaped and transcribed verbatim. Relevant interview questions asked:</p> <ul style="list-style-type: none"> • How do you and the rest of the primary care team try to meet the health needs of the prisoners? • How do you identify the need and what services do you provide? [e.g.] Reception, Primary/Secondary health needs assessment, Triage system, Request slip system, Prison officers, Treatment room, Anything offered on the wing? Drop in clinics for prisoners, Referral to health services outside prison? • What effect do you think prison has on prisoners?... e.g. access to health services • What are the frustrations of working as a nurse in prison? • What are the barriers to providing a good service? • What improvements could be made? • What works well? • What do you do well in this prison?
Analysis methods	Thematic analysis assisted by Atlas.ti software. Data analysis included stages: identifying initial concepts, coding the data, sorting the data by theme and developing a conceptual framework. A steering group gave guidance throughout the process (no further details given) and the four researchers worked as a group, not independently, with individual interpretations modified by a consensus process.
Themes with findings	<ul style="list-style-type: none"> • Emergency referrals – Referrals of prisoners to hospital appeared to be not as adversely affected [as compared to routine appointments]. One healthcare manager suggested that “emergency care is probably the easiest, because the prison has to find staff – there’s no option.”
Limitations	Sampling method not described. Possibility that participation was compulsory, as large n numbers compared to other studies and was part of a larger department of health funded study.
Applicability of evidence	UK

H.6 Continuity of healthcare

H.621 Barriers and facilitators to continuity of healthcare

Study (ref id)	Binswanger 2011 ⁴²
Aim	To understand the health-seeking experiences, perceptions of risk, and medical and mental health needs of former prisoners in the first 2 months after release from prison
Population	<p>n=29</p> <p>Former prisoners, 2 months after release Adults (mean age 39, range 22-57) Male: female ratio: 69:31</p> <p>African American 38% White 34% Latino 17% Native American 10%</p> <p>Inclusion criteria: ability to speak English, comprehend and consent to the study procedures, aged 18 years or over Exclusion criteria: current inmates, people released from jail</p>
Setting	USA
Study design	1:1, semi-structured interview
Methods and analysis	<p>Recruited from community health centre, an urgent care centre and addiction treatment centres that treat criminal justice populations in an urban, using snowball sampling.</p> <p>The interview guide was developed by the authors. Interview questions were refined with input from experienced qualitative and health services researchers, interviewers, and former inmates enrolled in initial interviews. Interview questions addressed: 1) access to medical and mental health care, 2) medical and mental health needs, and 3) perceptions of risk to one's health and safety during the transition from prison to the community. Initial interviews were conducted from March through June 2009; follow-up member checks were conducted through September 2010. Two experienced interviewers (male and female) were trained to interview criminal justice populations, taught qualitative interview methods, and coached on individual behaviours likely to increase rapport and participant comfort level. Team members from medicine, public health, social</p>

Study (ref id)	Binswanger 2011 ⁴²
	<p>work, and psychology met regularly to debrief the interviewers. Follow-up interviews (member checking) were conducted by the investigators with three previously interviewed participants. In the follow-up sessions, participants were provided with results from the study and asked questions about the validity of the interpretations, as well as questions to clarify areas of ongoing uncertainty among the investigators. Participants were provided \$25 in the form of a check or grocery gift card. Participants who agreed to be re-contacted to verify data interpretation were compensated an additional \$25 at the follow-up interview. Interviews were digitally recorded in a private setting, uploaded to a secure drive and transcribed by a professional transcriptionist.</p> <p>Transcript files were entered into Atlas-ti qualitative data analysis software. Data was analysed using an inductive, team-based approach to explore patterns and potential themes in the data. Two members of the team coded transcripts, meeting weekly to resolve coding differences and to create the final codebook, which was used to code the remainder of the interviews. Other team members reviewed a subset of transcripts and met with the primary coders to discuss emerging themes as well as discrepancies, disconfirming and confirming cases. Subsequent analytic steps included creating a figure to visually represent the key emerging themes and an iterative process of data collection, debriefing, and analysis. The results were presented to external groups, including correctional health providers and physician researchers, to further refine analysis. The research team assisted with data interpretation, prioritising salient elements, and discussing discrepancies and implications. Researchers met with 3 of the original participants to clarify key points and assess validity of the interpretations (member checking).</p>
Themes with findings	<p>Transitional challenges</p> <ul style="list-style-type: none"> • Lack of knowledge of how to engage with physical and mental health services • Difficulty making appointments: “I think with guys that have extensive medical problems coming out, that it should be an extension from the prison system to the hospitals, doctors that they could refer them to before getting out. Making appointments...instead of having to get out and try to get all this started themselves. If it was started for them at release it is ... probably easier for them to go ahead on and accomplish those things.” • Conditions of parole were also viewed as barriers to maintaining health and establishing mental and medical care in the community: “... if you are a parolee... they have... mandatory things that they have to do to survive, it’s just a daunting task for somebody who doesn’t have any resources or any family or friends to support and help them. And it’s just... like for myself the success rate for me succeeding out here this time and not going back to the DOC [Department of Corrections] is like 1%” <p>Cognitive responses during the transitional period</p> <ul style="list-style-type: none"> • Most participants attributed importance to continuing to get their medications and remain physically and emotionally functional, largely because reasonable health was necessary to gain and keep employment or to be available for their children: “Your health is everything. If you don't have your health you don't have anything. If you don't have your health you can't do nothing.” • However some participants did not view healthcare as a priority, employment/stable housing often took priority: “maybe if I find a good job, any kind of job that offers some benefits, we can go from there, but if not, we'll figure out something.” • Participants noted that lack of knowledge of medical and psychiatric care as a barrier to accessing care.

3

Study (ref id)	Binswanger 2011⁴²
Limitations and applicability of evidence	<ul style="list-style-type: none"> • No serious limitations; does not report whether data reached saturation • Applicable
Study (ref id)	Bracken 2015¹³¹
Aim	To increase understanding of what contributes to HIV medical care engagement in former prisoners
Population	<p>n=27</p> <p>Adults (aged 18 years or over; 72% aged over 40 years) with HIV Recently released from prison (in last 24 months) Male 96%, female 0%, transgender 4%</p> <p>Age: <30, 4%; 30-39, 11%; 40-49, 55%; 50+, 30%</p> <p>Race: black 85%; latino 11%; white 4%</p> <p>Inclusion criteria: aged 18 years or over, diagnosis of HIV, incarceration in Californian state prison in prior 24 months</p>
Setting	USA
Study design	Focus groups
Methods and analysis	<p>A structured guide, covering issues obtaining to prisoner re-entry and engagement in HIV specific medical care, was developed independently by the 4 member research team. The group then formulated these issues into questions and presented them to a community advisory board comprised of service providers and formally incarcerated for their input. The revised discussion guide was implemented in the first discussion group and subsequently revised based on that group experience and transcript review. Example questions: before you were released from prison, were you provided with any information or service that helped you return to your community?; describe what is involved in obtaining medical care for people after release; what is it like for people to get housing upon their release; what worked and didn't work with your housing?; what kind of support do people received from family, friends, agencies?; do you feel that HIV-positive men and women who have been released from prison know enough about HIV/AIDS?</p> <p>Recruitment was carried out between October 2012 – October 2013 by distribution and posting of flyers and through community advisory board member and provider referrals. Outreach sites included HIV clinics, housing facilities targeting the formerly incarcerated, substance abuse</p>

Study (ref id)	Bracken 2015 ¹³¹
	<p>treatment centres, parole officers, and HIV-educational events. Potential participants called the study number and were screened by a series of questions to determine their eligibility. Participants provided documentation of their HIV status and were compensated \$40 for their participation.</p> <p>Focus groups had 2-4 participants. Focus groups were conducted in a confidential room. A licensed clinical psychologist serviced as a facilitator. Two research assistants took posted process notes and notes of nonverbal observations during the focus groups. One of the focus groups with 2 participants lasted 70 minutes. The remaining 6 groups lasted between 100-130 minutes. Due to a technical difficulty with a recording device only half (55 minutes) of the recording from one group discussion was analysable. Focus groups were conducted until saturation was reached.</p> <p>Consensual qualitative analysis approach. Opened coding was used to develop codes, axial coding was used to relate these codes to one another and to identify major themes. To begin all 4 members of the research team individually developed codes based on their readings of the 2 groups transcripts and using the 5 broad discussion guide categories (barriers, protective/facilitating factors, individual background characteristics, internal motivators, and external motivators to HIV retention and care). The research team met to discuss each other's chosen codes and to develop a first draft codebook. 2 sets of 2 member teams then each separately coded 5 transcripts using Atlas.ti and the preliminary codebook. After each transcript was coded, the research team met to discuss and reach consensus with regards to each coded quotation and any new codes proposed. The final 2 transcripts were coded by 1 team member and reviewed by another, with all points of disagreement discussed with the full team.</p>
Themes with findings	<p>Interpersonal relationships</p> <ul style="list-style-type: none"> • Friends: emotional support, appropriate guidance and a willingness to talk to others positively about them, providing shelter on release • Family: HIV-positive family members provided them with support for coping with the disease, emotional support and encouragement, instrumental support (including housing, transportation, clothing, meals, money). • Significant others: providing support and acceptance of participant's HIV diagnoses, were knowledgeable about HIV <p>Professional relationships</p> <ul style="list-style-type: none"> • HIV medical providers: participants who were currently engaged in care tended to have a personal rapport with their medical providers and could voice to them their concerns and opinions about their emotional wellbeing. Participants who did not report this kind of connections often reported losing focus and withdrawing from regular HIV care. Participants also favoured physicians who were truthful and matter of fact: "I don't want to deal with anybody who's going to tell me what I want to hear and send me out their face"

Study (ref id)	Bracken 2015 ¹³¹
	<p>Coping strategies and resources</p> <ul style="list-style-type: none"> Participant resource knowledge: participants differed widely in their awareness of and in their ability or access community resources: “I’m very comfortable with [HIV] now because now I know more about this and I know that I’m not the only one. There are individuals like these people here that I could probably fo ask a question and they’d listen. Would you have the resources for it or an answer? If not, maybe they could direct me to something?... to me it means a lot”. Most knowledgeable people tended to be those who first received HIV services prior to coming to prison: “because I’m already plugged in, so as soon as I come home, I call, okay, I go my medication. When’s my next appointment? And they had it right up”. In contrast, those whose first interactions with the HIV system occurred I custody and who has received little-ton-no transitional linkage serviced described being lost and not being able to take advantage of community resources. Transitional linkage support: several participants reported the need for more of this, few reported in-depth linkage support that began in custody. Comprehensiveness of support depended on providers. “at my institution... they have just about every resource opportunity to set you up to get out. But there’s no follow through on it. They signed me up to get MediCal when I got out, four months before I got out. I still [don’t] have MediCal”. Obtaining prisoners medical record were aspects of linkage support that worked smoothly.
Limitations and applicability of evidence	<ul style="list-style-type: none"> No serious limitations: role of researcher not clearly described Applicable: USA

4

5

Study (ref id)	Dyer 2013 ¹¹⁶
Aim	To explore prison health discharge planning in four North East prisons in the UK
Population	<p>n=17 staff members including GPs, nurses, nursing assistants and healthcare support workers, members of the Mental Health In-Reach Teams, pharmacy and CARATs (Counselling, Assessment, Referral, Advice and Throughcare) staff.</p> <p>Age: not stated Gender: not stated Ethnicity: not stated Inclusion/exclusion criteria: not stated</p>
Setting	<p>UK</p> <p>Four prisons: a male high security dispersal prison, a male category B local prison, a category C male training prison and a category C and D male</p>

Study (ref id)	Dyer 2013¹¹⁶
	resettlement prison
Study design	Interviews and focus groups
Methods and analysis	Interviews were conducted face to face or by telephone. Interviews explored existing institutional discharge and transfer policy and practice; their effectiveness at ensuring equivalence of care; the strengths and weaknesses of current pathways arrangements; and possible improvements and priority areas where improvements are most needed. Where possible, interviews were recorded. When security requirements prevented recording, notes were made and written up immediately afterwards.
Themes with findings	<p>Strengths</p> <ul style="list-style-type: none"> • Participants highlighted the importance of collaborative working across professions and organisations in supporting the delivery of clinical pathways. For example, participants noted the importance of collaborative working to achieve effective discharge planning and clinical pathways, particularly for patients with more serious, on-going and/or chronic conditions. <p>Challenges at the institutional level</p> <ul style="list-style-type: none"> • Prisons with a rapid turnover of inmates, many of whom were held for very short periods, gave staff little time to plan for discharge or transfer, and making it difficult to ensure that all prisoners were discharged in line with all PSO 3050 requirements. Additionally security-related transfers, which occur very quickly and without warning, often meant that healthcare staff had little or no time to organise a transfer package • Prison regimes and resources often made the creation of effective clinical pathways difficult. Participants reported that balancing access to healthcare with a range of other institutional priorities (including work, mealtimes, recreation and the separation of vulnerable and 'normal location' prisoners) limited the time that was available to healthcare staff to spend with prisoners to develop clinical pathways. • lack of institutional level management and coordination left some staff feeling unsupported. Individual staff appeared to have a clear understanding of the need to develop appropriate clinical pathways; however, several felt that more institutional-level guidance and strategic management would help to ensure standardised institutional approaches to the management of these pathways. • Prisons were understaffed, which made proactive discharge planning more difficult by increasing caseloads and decreasing resources. Limited resources meant that staff tended to focus on reacting to emergency or unplanned situations. • staffing levels, the number of functional departments within prisons, and time constraints, mean that integration and information-sharing between healthcare and other prison departments could sometimes be informal and fragmented. Consequently, at times inmates were transferred or left prison without some of the staff involved in their treatment being made aware or contributing to their on-going care. • despite the introduction of SystemOne, patient records were still occasionally incomplete, with important details not entered onto the database and therefore not accompanying transferring prisoners • partnership working with community-based agencies is not always straightforward. It can require several phone calls to successfully contact community-based staff with whom to discuss transfer of care, although in many cases healthcare staff do know who to contact and community services respond positively to requests from prisons to engage with prisoners as they are released. • The main challenge for healthcare/mental health staff is the time it takes to contact the right individuals/teams within the community organisations and develop working relationships. This problem is further complicated for two of the prisons involved in this research because

Study (ref id)	Dyer 2013 ¹¹⁶
	they release their inmates nationwide which requires staff to develop links across Britain
	<p>Challenges at the individual-level</p> <ul style="list-style-type: none"> healthcare staff reported that some inmates lack an interest in their health or the motivation to engage with healthcare in prison or in the community to address their health issues. This can often be linked to a perception that they have no alternative to a life characterised by re-offending and imprisonment. Lack of engagement from inmates results in it being extremely difficult to identify their healthcare needs and thus establish appropriate clinical pathways for these inmates. substantial proportion of inmates have no fixed address upon release, making it extremely difficult for these inmates to register with a GP. it is very difficult for healthcare staff to create a pathway for these inmates, as they cannot provide them with details of local GPs and services as they do not know where these inmates will live upon release
Limitations and applicability of evidence	<ul style="list-style-type: none"> Very serious limitations: role of researcher not clearly described; data collection not rigorous - where recording not possible, notes were made and written up afterwards; data analysis methods not reported; data not rich Very applicable

6

Study	Gately 2006 ¹⁴⁸
Aim	To explore the barriers and opportunities for managing long term conditions in a prison setting. To uncover individuals' experiences of the Expert Patients Programme (EPP), a policy aimed at mainstreaming patient experience in the NHS operationalised through the introduction of a lay-led self-management course for people suffering from long-term conditions.
Population	<p>n= 21</p> <p>Prison X - 11 pre-course and 8 post-course interviewees Prison Y - 2 post course interviews</p> <p>Prisoners with chronic conditions including diabetes, high blood pressure, arthritis, and back problems.</p> <p>Male</p> <p>Age: not stated Ethnicity: not stated</p>
Setting	2 category C training prisons, UK

Study	Gately 2006 ¹⁴⁸
Study design	Semi-structured interviews and focus groups
Methods and analysis	<p>Prisoners were selected by the prison officer in charge of health care in one prison and in the second were recruited to the course by responding to posters put up around the prison. No prison officers were present during the interviews. All prisoners gave informed consent.</p> <p>Semi-structured interviews were conducted before and after the prisoners completed the Expert Patients Programme course. All prisoners were interviewed in the health wing of the prison, using a semi-structured interview guide. Four authors carried out the interviews. All interviews were taped and transcribed.</p> <p>Analysis was carried out using the Framework Approach, developed specifically for policy relevant qualitative research. A thematic framework was constructed, mapped and interpreted.</p>
Themes with findings	<ul style="list-style-type: none"> • Loss of contact with healthcare professionals in the community on entry to prison – prisoners described the impact that a lack of continuity between prison and community primary care had in terms of medical care and treatment. • There was little opportunity for prisoners to take part in the negotiation of their prescription, as past experiences or perceived need for particular medicines tended to be dismissed: “well it took them four months to give me the ointment to keep my psoriasis under control, and they were giving me stuff they were using when I was, a kid ten years old. Well, and after so long your body gets used to it and it just takes no effect. And this is what I were trying to explain to the doctor and he... what got me is, and when I told him the name of it, cos I couldn’t remember the name of it, so I’ve had that many treatments, so I couldn’t, but I rang the missus, ‘can you tell me what the cream is like?’ and she told me, and I went and seen him and he looked it up in their, the book, and the first words out of his mouth were, ‘Well it’s £60, you can’t have that’”
Limitations and applicability of evidence	<ul style="list-style-type: none"> • Serious limitations: research design/methods not rigorous; data not rich • Very applicable

7

Study (ref id)	Hammett 2015 ¹⁶⁴
Aim	To investigate facilitators and challenges of in-prison care, transitional interventions, and access to and continuity of care in the community in Rhode Island and North Carolina
Population	<p>n=65</p> <p>correctional staff (n = 27), community HIV providers (n = 13), and other community providers and state agencies (n = 25)</p>
Setting	USA

Study (ref id)	Hammett 2015¹⁶⁴
Study design	Semi-structured interviews and focus groups
Methods and analysis	<p>The data were gathered for the Link Into Care Study (LINCS), a mixed-methods project funded by the National Institute on Drug Abuse to assess transitional services for prisoners and releasees with HIV.</p> <p>Interviews were conducted with purposive samples of individuals working in the correctional systems, state departments of public health and other social services (Medicaid, mental health and substance use, vocational rehabilitation, employment), and agencies providing HIV care, mental health, and substance use services and addressing basic needs (housing, employment). Key informants and snowball techniques were used to recruit the respondents. All interviews were recorded and transcribed. Qualitative interviews employed an interview guide incorporating the key question: “What makes a good linkage to care for an HIV-positive individual upon release from prison?”</p> <p>Thematic codes were developed guided by the five essential components of transitional care for prison releasees with HIV identified. Additional codes were identified inductively based on the data collected. The research team tested and refined the codebook by applying the initial codes to a common transcript and then agreeing upon consistent code names, categories, and definitions. Inter-rater reliability correlations were also examined and coding definitions were refined and coders retrained until acceptable inter-rater reliability was achieved. All transcripts were coded by four analysts using NVivo 10 software. Text was further coded as a facilitator or barrier to six main themes: facilitators of in-prison care, facilitators of discharge planning, facilitators of post-release care, barriers to in-prison care, barriers to discharge planning, and barriers to post-release care. Text segments could be coded as both facilitators and barriers.</p>
Themes with findings	<p>A patient-centred personal connection between providers and clients</p> <ul style="list-style-type: none"> • “[Project Bridge staff] ... work inside [the prison] which is good because we find that inmates are more likely to follow through with you if they know you and they feel comfortable... They’re [inmates] a much different population [from] other people. They’re typically not very trusting, paranoid, pretty closed. So if you’ve met with them inside, there’s more of a connection where they’re much more likely to follow through with you” (RI ASO administrator) • “The most innovative part is the personal approach. They know there is a provider there that wants to see them... [The] case manager has taken a personal interest in them. Incarceration is a process of being rejected. [It’s] part of the punishment. If you can demonstrate that you are not rejecting the individual, you can go a long ways in retaining them in care” (RI correctional provider) <p>Mutual respect and learning among prison and community providers and correctional departments</p> <ul style="list-style-type: none"> • “the security side of the house gets to know the community providers and vice versa.” (correctional staff member) <p>Information sharing and communication</p> <ul style="list-style-type: none"> • Automated and linked information systems can facilitate the transfer of information between staff and organisations but strong inter-agency collaborations and quality data are pre-requisites for effective information sharing. Ideally, community providers are notified of clients’ release dates, receive patients’ prison medical records, and reach out to releasees to make appointments or ensure that pre-arranged appointments are kept • “Communication.... Here is the contact name of the person you are going to go see and we are going to send your records to that doc so you can

Study (ref id)	Hammett 2015 ¹⁶⁴
	<p>hit the ground running, letting the clinic know so and so is coming..." (NC community HIV provider)</p> <ul style="list-style-type: none"> • "getting information communicated well in advance of the release, not 48 hours [before]. Getting releases of information signed, having everything set up when a person gets out because we know that [those] first few days and weeks are critical." (NC TASC administrator) • Participants reported that a common problem in both states is lack of accurate advance information on release dates and times: "...a lot of times, information is supposed to be faxed to the [community] providers [but] that doesn't always happen... [Community] providers [sometimes say] 'Hey, I know this guy was released 2 or 3 weeks ago. I didn't get anything.'" (NC correctional provider)
	<p>Services/activities in prison</p> <ul style="list-style-type: none"> • "[care in prison is] better than they would get outside. ... [T]here are a couple of things that happen very well at the prison. Number one, you write an order for HIV anti-retrovirals and they get them...faster ...—sometimes the same day. And all of them are available. No insurance hassles..." (NC correctional provider)
	<p>Specific post-release appointments and other linkages to services</p> <ul style="list-style-type: none"> • specific post-release appointments and other linkages to services while individuals are incarcerated is critical to the effectiveness of the transitional system • "[I]f someone is being released from prison and the discharge planner thinks they... need outpatient substance abuse counselling, they'll contact me within 90 days of the inmate's release and I will go in, see them, set up an appointment so that when they leave, they've already got the appointment. They don't have to go on a waiting list...and it's a smooth transition" (RI community mental health/substance abuse agency staff member) • "We know that... from the minute they walk out the door ... all of the challenges begin and it's a pretty complex world out there and sometimes it's hard to know where to go, what to do. So I think the more that they can be set up with while they're here with very clear instructions on this is where you go, this is who you talk to, and actually have an appointment made for them would be the most helpful." (RI correctional administrator)

Study (ref id)	Hammett 2015 ¹⁶⁴
	<p>Case management and care coordination</p> <ul style="list-style-type: none"> • “...the most important thing is early and complete communication between the [prison] discharge staff and the [community] social worker ...that is going to be taking the case after release” (NC counsellor) • “[i]nmates being released within the next 30 days [and] all the providers sit around the table and we decide what services this person needs and who is going to provide them...” (RI community mental health/substance use agency staff member) • “It has to be a cooperative plan in that all of the agencies that you are accessing are on board and invested. It’s not enough to be on board. They have to be invested in success. It has to be a cooperative plan in that everybody understands their role in the whole plan. For instance, it does me no good to get a medical appointment for an inmate if Medicaid is not on board to pay the bill, and none of that’s any good if I don’t see that there’s transportation to get them to the places that they need to be” (NC correctional administrator) • “All substance abuse folks are seen by the [agency] staff here [in prison], and it’s the same staff that sees them when they get out... So we have a direct pipeline.” (RI correctional administrator) • “[W]e’re trying to have discharge planners...work with probation and parole and be able to follow up with people for 60 days while they’re out... I think we know those initial months if they’re successful give them a better chance. And we’re... making those ... initial appointments for them here as part of their discharge plan and not putting that burden on the probation-parole officer” (RI correctional administrator) <p>Releasees’ commitment</p> <ul style="list-style-type: none"> • client must own and commit to carrying out the plan • “The person that you’re writing the plan for has to be invested in it. They have to take ownership. It’s their plan. I routinely tell inmates, “I’m not going home with you. I’m not driving you to an appointment. I’m going to do the best I can do give you the best plan that I can when you leave, but it’s your plan” (NC correctional administrator)
Limitations and applicability of evidence	<ul style="list-style-type: none"> • Very serious limitations: role of researcher not clearly described; interviews and data collection methods not described; findings less relevant to the review as primarily focused on what is good about a private healthcare system • Applicable: conducted in USA

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Study (ref id)	HM Inspectorate of Prisons 2012 ¹⁹⁰
Aim	<p>To explore:</p> <ul style="list-style-type: none"> • the extent to which information contained in person escort records (PERs) is helpful to staff in prisons and young offender institutions (YOIs) when assessing risk of self-harm and devising care plans • identifying common gaps in information contained in PERs • how PERs and their associated processes can be made more effective and enable the protection of vulnerable detainees to be improved.
Population	n= 69 (19 prisoners, 18 prison officers or managers, 32 prison healthcare staff)

Study (ref id)	HM Inspectorate of Prisons 2012 ¹⁹⁰
	<p>Prisoners: Mainly adults, 15% young offenders aged 17 or younger Male/female ratio 14:5 74% White British 10% White Irish</p> <p>Inclusion/exclusion criteria: not stated</p>
Setting	<p>England</p> <p>Interviews in HMYOI Feltham and HMPs Styal, Doncaster, Brixton and Holme House Focus groups in Holme House and Pentonville</p>
Study design	Semi-structured interviews and 2 focus groups
Methods and analysis	Unclear, 'thematic review'
Themes with findings	<p>How helpful is PER information in assessing risk of self-harm and devising care plans?</p> <ul style="list-style-type: none"> • It was reported that establishments received self-harm warning forms (most of which were completed by court custody staff), but these were not always attached to the PER • Staff regarded self-harm warning forms as important because they 'flagged' an immediate concern, but these forms were not always received for every prisoner or young person for whom an immediate risk of self-harm was indicated, and the depth of the information they contained about history of self harm, patterns and triggers was described as 'hit-and-miss' • Prison staff said they never received them from court enforcement officers (CEOs), who raise a PER for each detainee they arrest for non-payment of fines etc., some of whom might be vulnerable • some escort staff lacked information or detailed knowledge of vulnerable detainees, e.g. those who self-harm • it was reported that there was not always time to go through each PER thoroughly, so self-harm information might be missed, particularly if a self harm warning form had not been completed • A team manager emphasised the importance of enabling staff who had concerns about a prisoner's self-harm to form, record and communicate a view (a basic assessment) about the likely level of risk, and that view must be informed by information about triggers (an event that might cause a person to self-harm) obtained from the prisoner and any existing documentation. The role of the PER in these structures was secondary to that of SystmOne. This was because information in the PER tended to lack the detail required, and because the PER did not encourage the person completing it to record their view about the immediacy of any risk

Study (ref id)	HM Inspectorate of Prisons 2012¹⁹⁰
	<ul style="list-style-type: none"> Identifying common gaps in information contained in PERs Prison staff believed the telephone numbers of court escort contractor control centres included on the PER were of little use, as control centre staff would not have any first-hand knowledge of the prisoner or young person. There were many complaints about inadequate information in PERs, for example, 'tried to kill himself in 2011'. Some staff said that parts of the PER were often unreadable due to poor carbon copies, including the yellow (second) copy that reception health care staff used at some establishments. The difficulty or reluctance that staff described in chasing missing information exacerbated the limitations of PERs that were not completed fully or clearly, or where the accompanying documentation was missing <p>How PERs and associated processes can be made more effective and help improve the protection of vulnerable detainees</p> <ul style="list-style-type: none"> Prison staff said they would like to have information about the context in which the self-harm took place, what the prisoner said about it or the prisoner's mood. Few prisoners said that the police asked them about self-harm and how they were feeling, except during booking in at the police custody suite. Staff felt P-Nomis might have potential for greater use in transferring information about self-harm but it needed a self-harm search tool that would quickly bring up any details about a detainee's self-harm. Pre-sentence reports were also described as useful, but not all prisoners have a PSR, and it is unsatisfactory that probation staff fax reports to the prison on the next working day when the information is needed immediately.
Limitations and applicability of evidence	<ul style="list-style-type: none"> Very serious limitations: role of researcher not clearly described; research methods/design not described; data analysis methods not clear reported – 'thematic review'; data not rich; data not clearly reported Applicable: conducted in UK but focused on mental health issues

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Study (ref id)	Joanna 2008²¹³
Aim	To explore the continuity of care experienced by prisoners before and after release
Population	<p>n= 70 (45 former prisoners; 25 professionals in prisons and community services)</p> <p>Former prisoners: Mainly adults (aged 17 years or older) Male/female ratio 18:27</p> <p>Age: 17 n=1; 18-21 n=1; 22-30 n=16; 31-40 n=12; 41-50 13; 51 or older n=2</p>

Study (ref id)	Joanna 2008 ²¹³
	<p>White British n=32 White Irish n=3 Other White n=1 White / Black Caribbean n=2 White / Black African n=2 White / Asian n=1 Asian n=1 Black African n=1 Spanish n=1</p> <p>Professionals: 4 based in prison, 21 worked predominately in the community From statutory agencies – including: psychiatric nurses, GPs, substance misuse workers Non-statutory agencies – provided services including: generic resettlement assistance, employment advice, assistance with housing needs</p>
Setting	1 male and 1 female prison, England
Study design	Interviews with prisoners, interviews and focus groups with professionals in prisons and community services
Methods and analysis	<p>The local inmate database system was used to identify prisoners who were due for release within a month. These prisoners were then approached to take part in a semi-structured interview. The interview consisted of questions regarding:</p> <ul style="list-style-type: none"> • Mental health problems prior to or during their sentence; • Mental health care they had received in prison; • Plans for release, for example employment and accommodation; • Agencies or professionals they had worked with; • Opinions about the help they had received. <p>To facilitate tracking on release, prisoners were asked to provide contact details for themselves, family and agencies they might engage with in the community. Approximately two weeks after release the researchers attempted to contact prisoners to interview them for a second time to explore their experiences of resettlement, and find out about their mental health concerns and what agencies they had engaged with since release. Initially the researchers planned to interview people a third time, but due to problems in contacting prisoners on release, interviews were conducted when possible regardless of the time since release.</p>

Study (ref id)	Joanna 2008 ²¹³
	<p>Interviews and focus groups were conducted with professionals. Professionals in prisons and community services were also invited to take part in an interview or focus group. These explored the roles they fulfil in the resettlement of prisoners, their views on continuity of care and what barriers exist to engaging with released prisoners.</p> <p>Researchers also explored the role of informal support provided by family and friends of prisoners through two focus groups. These were arranged through an organisation that runs a regular support group for friends and families of prisoners.</p> <p>Each interview (when tape recorded) was transcribed in full by the researchers, and where interviews could not be tape-recorded detailed notes were made. These were analysed by the research team and four sets of themes were developed which represented the experiences of males, females, professionals and families of continuity of care and resettlement. These were incorporated to produce broader themes, which highlighted the key areas of continuity and resettlement for prisoners and professionals.</p>
Themes with findings	<p>Women prisoners</p> <ul style="list-style-type: none"> • Prisoners did not know how to get healthcare when released • Emotional support from prison officers is disrupted by prison movement within and out of prison • Prisoner noted that they lost contact with keyworker in community when they entered prison <p>Prison healthcare</p> <ul style="list-style-type: none"> • Professionals reported poor transfer of information from prison to the community: “I’ve found at the health care unit at [name of prison] that if a person’s going to be released they don’t pass on the medical information to the GP; they’re not allowed to pass it on to their GP or any other local mental health team.” (Resettlement agency) • “They were coming out of prison with no support in place, very last minute. We had to meet them, take them to the homeless persons unit. They were given something like one day’s medication at reception as they were leaving. They were diagnosed with schizophrenia and were coming out with absolutely nothing.” (Resettlement agency) <p>GP registration</p> <ul style="list-style-type: none"> • Prisoners reported not having a GP in community, and not being helped to register with GP by the prison. This should have been done as part of the Prison Service Order on continuity of health care (HM Prison Service, 2006). • One female prisoner reported that she was unable to register with a GP because she was homeless. Although a GP said that prisoners could register using the address of temporary accommodation they might be staying but if they were sleeping rough and had no form of identification this would make it difficult to register. <p>Substance misuse</p> <ul style="list-style-type: none"> • Professionals reported that information sometimes was not transferred between prison and community services: “We’ve seen it with those who’ve got drug issues, suddenly now their ‘script information hasn’t followed them out to the community and the next worker who’s less likely to provide them with the right sort of drugs.” (Resettlement agency)

Study (ref id)	Joanna 2008 ²¹³
	<ul style="list-style-type: none"> • A prisoner reported that they had seen a drug counsellor once a week in the community but did not think that his counsellor knew he was in prison. • One prisoner who had wanted to work with the same CARAT worker when she returned to prison after breaching her licence. “She was my last CARAT worker when I was in here, so she knows a lot about me and as soon as I got in here I asked for [her] straightaway. I don’t want no other CARAT worker ... It helps when I’m in prison to see people I already know”
	<p>Early release</p> <ul style="list-style-type: none"> • Lack of information about prisoners’ release dates was also having an impact on continuity of care between prisons and the community. • “That’s crazy because if you get 18-day early release, you see the doctor two weeks before you go ... so if you get your 18-day early, you’re out before you’ve seen the flipping [doctor].” • “They only get told the 18-day release at the very last second, so even if we had something working in the prison they can’t get that information to us. We have guys go out to some prisons, stand outside in the freezing cold all day and then [get told] ‘oh they were released two weeks ago.’” (Resettlement agency) • “The person who obviously thought of this [End of Custody Licence] policy had never worked in a prison. What we do as a team is anyone sentenced who fits the criteria ... we take off the 18 days and just work to that date anyway. The DIPs now know the situation within the prison, so will make a kind of impromptu appointment for a lady if she’s just come out.” (CARAT worker)
	<p>Referral routes</p> <ul style="list-style-type: none"> • According to one professional, the probation service does not refer prisoners to organisations unless they have a formal relationship with them. No other professionals made similar comments, so it is unclear how widespread this practice may be.
	<p>Difficulties in getting access to services</p> <ul style="list-style-type: none"> • Although professionals thought referral processes were adequate, prisoners could still have difficulties in gaining access to a service. This seemed partly to be due to a shortage of services. One non-statutory substance misuse agency’s specialised service was not provided in all prisons and a transfer to a prison where it was available was often difficult. • The transfer of prisoners between prison has an impact on prisoners who may have used a service in one prison but be unable to do so in a different prison and may have an impact on any resettlement plans they have tried to arrange. • One barrier for former prisoners trying to gain access to services was caused by their difficulty in keeping appointments: “There’s housing appointments, there’s going to the doctor, there’s having to attend your probation officer ... there’s having to pick up your methadone script ... Just any small crisis, like your taps aren’t working, it all becomes a lot more difficult for someone who’s living a chaotic lifestyle and who is vulnerable. It’s a lot more difficult for them to sort out.” (Employment agency) • Difficulty in keeping multiple appointments is often made worse by services being ‘fragmented’: “They’re on probation orders or court orders and they would turn up at a probation place and they will turn up at the employment centre and they won’t go to their housing office or they won’t go to their behavioural specialist because they’re all too fragmented.” (Resettlement agency)

Study (ref id)	Joanna 2008 ²¹³
	<ul style="list-style-type: none"> • Professionals also implied that services do not communicate efficiently with each other. Released prisoners may have appointments to see service providers in several different locations at times which are perhaps not well coordinated. This will force people to choose which appointments to attend and therefore which needs are met. • Released prisoners with no fixed abode were also said to experience particular difficulties in getting access to services: “Prisoners that are of no fixed address, NFA, homeless, find it the most difficult to access services because there is no local authority that will take responsibility for them.” (Substance misuse worker) • As prisoners can be often located in prisons a long way from their homes, prison resettlement teams do not necessarily know about services outside their own locality. “If you are in a prison away from your home, when you’re released you’re not going to be linked in with the services you need in your home area.” (Employment agency) <p>information sharing between agencies</p> <ul style="list-style-type: none"> • Inter-agency communication would help to increase the amount of client information available to each organisation. “It would be really good if there was some way that I could talk to the other people involved in that person’s care ... if they could tell us more about what’s happening with a client ... so that, when somebody hasn’t been coming to class, I can find out if they’ve started using [substances] again.” (Employment agency) • Another agency suggested that the National Offender Management Service (NOMS) should take the lead in improving information sharing between agencies. “80% of prisoners’ information isn’t transferred and the information that is transferred about probation clients is very, very cursory ... so there’s huge scope for improvement but it needs to be picked up, by NOMS essentially, and it needs to be commissioned, and it’s starting to go that way.” (Resettlement agency) <p>working relationships between agencies</p> <ul style="list-style-type: none"> • The quality of relationships and information sharing was reported to depend on individual good practice. “When it’s a legal formal record, like prison, like probation, then sharing that information is restricted for security reasons. You might be able to access that but it’s driven by individual good practice ... rather than a system’s basis.” (Resettlement agency)
Limitations and applicability of evidence	<ul style="list-style-type: none"> • Serious limitations: role of researcher not clearly described; data analysis methods not clearly described • Very applicable
Study (ref id)	Lloyd 2015 ²⁴⁸
Aim	To explore how primary health care can better meet the health care and social support needs of Aboriginal Australians transitioning from prison to the community
Population	n=30 (12 former prisoners, 12 family members, 8 community service providers)

Study (ref id)	Lloyd 2015 ²⁴⁸
	<p>Former prisoners: Adults (aged 18 years or over) Male/female ratio 7:5 Aboriginal</p> <p>Family members: Family member of someone who has been in prison, including mother, sister, aunt, child, partner Male/female ratio 1:4</p> <p>Community service providers: working for health or social service community organisation; from 4 governmental agencies and 4 NGOs, such as charities and community controlled services 50% Aboriginal</p> <p>Inclusion/exclusion criteria: not stated</p>
Setting	2 urban Aboriginal communities, Australia
Study design	Interviews with thematic analysis
Methods and analysis	<p>Purposive sampling was used to identify interviewees who were Aboriginal and had either been in contact with the criminal justice system or had a family member who had been in prison. The researchers brainstormed a list of local community service providers who were actively involved in the care of former inmates. Both health care providers and social service providers working for government and non-government organisations were invited to participate.</p> <p>Interviews were conducted by a team of health professionals between September 2012 and February 2013. Three separate interview guides were developed by a team of health professionals - one each for Aboriginal former inmates, family members and service provider. Interview questions focused on former prisoners' access to services during the transition from prison to community. Family members were asked what life was like for the family with a relative in prison. They were also asked about their relative's access to health on release, and the kinds of health services and support that would be most helpful to Aboriginal former inmates and their families at that time. Community service providers were asked about how they work with Aboriginal people leaving custody, factors that assist them in providing effective services and factors that impede them from performing the work that they would like to do.</p> <p>Interviews were digitally recorded and transcribed verbatim. All transcripts were read by one researcher to check for accuracy and to remove any</p>

Study (ref id)	Lloyd 2015 ²⁴⁸
	<p>identifying information. The transcripts were then reread and notes were handwritten on the right hand side of the transcript. Saturation was reached with no new themes emerging from the final transcripts. Initial codes were drafted and patterns and differences were discussed by two researchers. The initial codes were then collated into tentative themes and the interviews were then reread in order to gather all the relevant data that applied to the tentative themes. A summary description of each of these themes was then drafted and discussed by two researchers with advice and input from another researcher. Cross cutting themes over the three groups (former inmates, family members and community service providers) were then identified. This involved developing connections between concepts and categories and to consider these concepts in relation to the existing literature. These common themes were discussed with the team at who conducted the interviews to verify accuracy.</p>
Themes with findings	<p>Pre-release</p> <ul style="list-style-type: none"> • Participant responses indicated that discharge planning and communication was variable and hampered by uncertainty regarding release dates and lack of access to Medicare • Communication between prison and community services appeared to depend on whether a person is released to freedom or on parole, or is sentenced or on remand, and also on the duration of imprisonment. • Service providers and former inmates indicated that uncertainty regarding release dates meant that discharge summaries were not always written and a week’s supply of medication not always provided to inmates on release. • The majority of service providers indicated that there is a strong need for pre-release planning for all inmates, regardless of the nature of their incarceration (remand or sentenced). The need was identified for connection of inmates with community services prior to their release so that they are better able to access available services and support. • “...near the end of that term [of imprisonment], that’s when there should be some real serious work done with that client with regards to setting up the supports ready to go out. So places like Housing should be contacted. The medical centre should be contacted. If they need furniture and stuff, all those things should be ready so that when people get out of jail, they’re not just left and then they’ve got to struggle to re-establish everything again.” (Service provider—Housing New South Wales) • Participants also noted the need for coordinated and holistic pre-release planning across all services: “I think what needs to happen, everyone needs to sit down and say, alright, well, this is what’s going to go on [before release]. This is the plan ... By a strong team, I’m talking about you have someone from Probation and Parole. You have somebody from the HASI1 program ... You have somebody from mental health. You have somebody from drug and alcohol. They don’t have to be from the same service, but they have to know what role they’re actually planning.” (Service Provider - Aboriginal mental health worker) <p>Post-release</p> <ul style="list-style-type: none"> • Support from family or from case workers was described as a facilitator to accessing healthcare in the community: “oh, they’re good, Probation and Parole. Like she’s been really good to me. She helped me when I went to a refuge and she helped me ring around a few places.... And I’m actually doing an employment pathway plan through Parole, so we do that every Friday and they supply lunch.” (Aboriginal women, former inmate) • Family members felt unsupported while trying to help former inmates adjust to community life and deal with drug use, aggression or mental health issues.

Study (ref id)	Lloyd 2015 ²⁴⁸
	<ul style="list-style-type: none"> • One service provider emphasised that in order to be effective, post-release support must be immediate and easily accessible upon release as the immediate post release period is such a chaotic and vulnerable time: “When they first get released make sure you’re in their face. Don’t say come and see me in a week’s time. Actually get there, see the patient, and say, ‘Hey look this is what you need to do.’ Keep them busy for that week...” (Service provider - Aboriginal mental health worker). • The majority of participants reported that there were inadequate links to community services from prison, for example lack of letters/discharge summary on release, not being put in contact with GP or medical service • Some service providers reported that former inmates were not aware of services available
Limitations and applicability of evidence	<ul style="list-style-type: none"> • No serious limitations • Applicable

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Study (ref id)	Plugge 2014 ³⁵⁶
Aim	To explore issues around health and access to health services for those on probation
Population	<p>n=41 (22 people on probation, 10 probation officers, 9 professionals who work for partner organisations)</p> <p>People on probation: Adults (aged 19-60) Male/female ratio 15:7</p> <p>Probation officers: Aged 28-54 years Mixed male and female</p> <p>Partner organisations: aged 33-58 years Mixed male and female</p> <p>Ethnicity: not stated Inclusion/exclusion criteria: not stated</p>

Study (ref id)	Plugge 2014³⁵⁶
Setting	England
Study design	6 focus groups with thematic analysis
Methods and analysis	<p>4 focus groups were with people on probation; 3 with men and 1 with women. One of the groups with men and the group with women took part in their residential hostel. The two other male groups took place on their community service work placement. 2 focus groups were with staff; one with probation officers and one with professionals who work for a range of partner organisations.</p> <p>Two researchers used a semi-structured guide which aimed to explore the probationer’s perceptions of the health problems of their probation and their experiences of healthcare services and recommendations for service development. The following questions were asked:</p> <ul style="list-style-type: none"> - what would you say are the sorts of health problems people on probation might have? - Who has used health services since being on probation this time? Which ones? - From your experience, we want you to identify good things about the services you have used recently and the bad things - Please could each person say one way in which they would improve health services? <p>Each group comprised 3-10 people and lasted between 30-75 minutes. The two researchers facilitated each group. Discussions were recorded electronically and then transcribed.</p> <p>NVivo 7 was used to facilitate analysis. A thematic analytical framework was adopted and an inductive approach to identify themes related to the overall broad study objectives was used. The analysis was driven by a detailed semantic description of gathered data, not by pre-conceived theories. Two researchers independently coded and analysed the data. After the researchers familiarised themselves with the data, they categorised and collated major themes and subthemes to form patterns within the data. Data for deviant cases were examined and reviewed, their interpretations were discussed and differences in coding were resolved.</p>
Themes with findings	<p>Health as a low priority</p> <ul style="list-style-type: none"> • People on probation and professionals identified that health was not a priority issues for probations. More pressing concerns included finding employment appropriate housing, dealing with alcohol/drug problems • “bottom of the pile. It’s the last thing they want to do... get yourself a balanced diet and a goodnight’s sleep!” (partner organisation) <p>Stress of being on probation</p> <ul style="list-style-type: none"> • People on probation felt they were not provided with support. They wanted support from their probation officer to help them move forward and address needs such as housing and employment. • “they don’t try to help you. They don’t put you in touch with people who are going to help you. Or sign you to them... they don’t do that” (person on probation) <p>Prison or probation?</p> <ul style="list-style-type: none"> • People on probation noted that it was easier to access a range of health services in prison than in the community

Study (ref id)	Plugge 2014³⁵⁶
	Mental health and substance use <ul style="list-style-type: none"> • Professionals also noted the lack of services for people with learning disabilities, in terms of identification and on-going support
Limitations and applicability of evidence	<ul style="list-style-type: none"> • No serious limitations; does not report whether data reached saturation • Very applicable

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Study (ref id)	Powell 2010³⁶⁴
Aim	To explore views and experiences of nurses and other prison healthcare staff about their roles and the nursing care they provide to prisoners
Population	<p>n=80 (67 nurses working in prison healthcare centres including nurse managers, community psychiatric nurses/mental health nurses, substance misuse nurses and in-patient nurses; 13 healthcare assistants/healthcare workers/nursing auxiliaries)</p> <p>Adults (aged 24-58 years) Male/female ratio: 21:59</p> <p>Ethnicity: not stated Inclusion/exclusion criteria: not stated</p>
Setting	England
Study design	12 interviews, 12 focus groups
Methods and analysis	<p>Recruitment of nurses for interview was aimed at those working in primary care; however, where there were small teams, or teams where nursing tasks were shared or where nurses were keen to be involved in the interviews, then this was accommodated by the research team. Recruitment for the focus groups was aimed at nurses as key informants working in primary healthcare, but other healthcare staff were included if they wished to be.</p> <p>Healthcare leads and managers were interviewed separately following the first focus group discussion, in which a primary care lead was included. The focus group facilitators observed that participants in this group tended to defer to their manager. It was anticipated that participants in the remaining focus groups would feel more able to express their true feelings without a manager's presence. Interviewing the healthcare leads separately gave a manager's perspective, often generating information about strategic issues related to nursing care in prisons.</p> <p>Focus group discussions with healthcare staff and individual interviews with primary care and healthcare managers were conducted using the following semi-structured interview schedule:</p>

Study (ref id)	Powell 2010 ³⁶⁴
	<ol style="list-style-type: none"> 1. Background: Gender, Age, Ethnic group, Confirm qualifications, Job title 2. Are you already taking part in a research project? (If participant already taking part in a research project, consider whether to proceed) 3. Tell me about your role as a nurse working in this prison. What would you do in a typical day? 4. What are the main health problems that you come across in this prison? (Check frequency and extent of need for the following- e.g. does that come up a lot/is that common? Is that a big problem for people in this prison?) Asthma, Diabetes, Coronary Heart Disease, Cancer, Epilepsy, Communicable disease, e.g. STI, hepatitis, HIV, TB. Minor ailments, Trauma and minor injury, Primary care mental health problems, e.g. anxiety, depression, bereavement. Self-harm, substance misuse (alcohol, smoking, drugs) 5. Which prisoners do you think have the highest health needs? Why is that? Older, Younger, Black and Asian, other minority ethnic group, Prisoners with disabilities, Substance misusers, any others? 6. How do you and the rest of the primary care team try to meet the health needs of prisoners? 7. How do you identify the need and what services do you provide? Reception, Primary/Secondary health needs assessment, Triage system, Request slip system, Prison officers, Treatment room, Anything offered on wing?, Drop in clinics for prisoners, Referral to health services outside prison 8. What effect do you think prison has on prisoners' health? Better/worse in prison? Physical health Mental health Better health care inside or outside? e.g. access to health services (including treatment, immunizations, detoxification/maintenance, health promotion, referral) Look after health differently Inside and outside? Health eating/diet Exercise Family relationships 9. What are the frustrations of working as a nurse in prison? 10. What are the barriers to providing a good service? 11. What improvements could be made? 12. What is satisfying about working as a nurse in prison? 13. What works well? 14. What do you do well in this prison? <p>Focus group interviews lasted between one and one and a half hours, and most individual interviews with healthcare managers lasted just over an hour. These were audiotaped and transcribed verbatim. The four-person multidisciplinary research team worked in pairs to facilitate the focus groups and interview the nurse leads. The data were collected in the prison healthcare centres.</p> <p>Thematic analysis was undertaken using the analytical framework developed by Ritchie and Spencer (1994). Atlas.ti software was used to assist with coding and sorting of the data. Data analysis was conducted in four key stages: identifying initial concepts, coding the data, sorting the data by theme and developing a theoretical framework. The four researchers worked as a group rather than as four individuals to develop and test the codes and identify the emerging themes. This group researcher process enhanced the credibility of the themes generated, as individual interpretations were modified by a consensus process. The dependability of the resulting group interpretation was supported through discussion in</p>

Study (ref id)	Powell 2010³⁶⁴
	steering group meetings. Data from the focus groups and interviews were analysed the same way.
Themes with findings	Identifying health needs <ul style="list-style-type: none"> • One primary care manager noted difficulties with using a paper-based system to apply for healthcare on reception, where applications “half the time, go missing...”
Limitations and applicability of evidence	<ul style="list-style-type: none"> • Serious limitations: data not rich • Very applicable

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Study (ref id)	Sidibe 2015⁴¹⁹
Aim	To assess health care workers' experiences with and perceptions of the health care needs of HIV-infected, formerly incarcerated individuals
Population	<p>n=38</p> <p>community-based health care and service professionals, including nurses, physicians, case managers, and counsellors/therapists</p> <p>Mental health professional n=12 Health care provider n=6 Case manager/outreach worker/social worker n=20</p> <p>Male to female ratio 21:79</p> <p>White 45% African American 42% Multiracial 5% Hispanic 6%</p> <p>Inclusion criteria: at least 1 year of experience working with recently released HIV-infected individuals; employed at their agencies for at least 1 year; aged 18 years or over</p>
Setting	Community, USA
Study design	Semi-structured interviews

Study (ref id)	Sidibe 2015 ⁴¹⁹
Methods and analysis	<p>Conducted as part of the formative phase of the Individuals Motivated to Participate in Adherence Care and Treatment (imPACT) Study; a National Institute on Drug Abuse-funded trial of a multidimensional intervention to maintain suppression of HIV following prison release in North Carolina and Texas.</p> <p>Participants were recruited using purposive sampling from health care agencies and community-based organisations over a 4-month period in North Carolina and Texas. Agencies and organisations were identified through referral from health care workers in the community and agencies that had a mission of serving people who were HIV-infected. The agencies were members of the imPACT Study team; each of the organisations were contacted to introduce the study and obtain permission to approach the agency's staff. Team members from each participating university then continued the recruitment process at participating sites. The research team actively recruited participants for the interviews through distribution of promotional materials, phone calls, and in-person conversations. In addition, the research team passively recruited participants by providing study flyers and business cards to agencies to place in mailrooms, on bulletin boards, in lunchrooms, and in staff break areas.</p> <p>The interviewees participated in either a telephone interview or a face-to-face interview that lasted approximately 75 minutes. All five interviewers gave an overview of the study before participants volunteered and provided their consent. All interviews were audio-recorded and de-identified. At the completion of the interview, respondents received a \$25 gift card.</p> <p>The interview guide was developed based on the Socio-Ecological Framework (SEF) and a literature review of what was known about barriers to and facilitators of accessing care post-release for incarcerated individuals living with HIV.</p> <p>Interview Guide:</p> <p>Section 1. Description of agency and interviewee's role at agency.</p> <ul style="list-style-type: none"> • Question 1 Describe the type of place where you work.1. What is the goal of this agency? What kind of services does your agency offer? • Question 2 Please describe the work that you do at your agency. <p>Section 2: Explanation of how organization/agency serves HIV-infected patients who are newly released from prison.</p> <ul style="list-style-type: none"> • Question 1 What barriers are you aware of that your newly released HIV-infected patients face in managing their HIV? (prompts asked if interviewee does not address) 1. Barriers that get in the way of linking to HIV care after prison? 2. Barriers that get in the way of continuing in HIV care once they have gotten linked after prison? 3. Barriers to adhering to ARV medications? 4. Barriers to adhering to medical appointments? 5. Barriers due to stigma associated with HIV status? • Question 2 What facilitators are you aware of that help your newly released HIV-infected patients manage HIV after release from prison? (prompts asked if interviewee does not address) 1. Facilitators that help them link to care after release from prison? 2. Facilitators that help them continue in HIV care after prison? 3. Facilitators that help them take HIV medications after release? 4. Facilitators that help them adhere to their medical appointments after release?

Study (ref id)	Sidibe 2015 ⁴¹⁹
	<p>Section 3: Transition of newly released HIV-infected prisoners into services at the agency.</p> <ul style="list-style-type: none">• Question 1 How are first appointments scheduled for HIV-infected patients post release?• Question 2 What information do you get from the DOC about newly released HIV-infected patients before or after release? 1. What information, if any, do you wish you got from the DOC but haven't? 2. Describe the extent of your interaction with DOC medical staff about these patients. 3. Do you get any type of a needs assessment report from the prison staff? a. If Yes: i. What information is most useful in the assessment? ii. What information is least useful? iii. What additional information would be useful? b. If No: What information would you find useful to obtain through such a needs assessment?• Question 3 How long after prison release do people attend their first appointment with you?• Question 4 What are the most common needs of patients at these first appointments with you post release? 1. Which needs are you NOT able to address? 2. Which needs ARE you able to address? 3. What referrals do you commonly make? a. What types of referrals are easiest to make? Why? b. What types of referrals are most difficult to make? Why? 4. What services do you wish existed, but don't?• Question 5 What has to be done regarding HIV or ART prescriptions on the first appointment post release? (renew prescription, refer to pharmacy, completing ADAP, labs, etc.) 1. Do you assist patients with Ryan White funding? If so, what is the process?• Question 6 How often do patients/consumers no-show for their first medical/agency appointment after release? 1. What do you do when someone no-shows for a first post-release appointment? 2. What has happened to this person, generally, since prison release?• Question 7 How do patients/consumers get to their medical/agency appointments?• Question 8 What does your agency do well to provide services and care to recently released individuals? Where does your agency need to improve? <p>Each audio-recorded interview was transcribed verbatim for data analysis. Using NVivo 9, the transcripts were systematically analysed according to the principles of structural thematic analysis, applying interview guide questions consistent with the SEF to define the initial topical structural codes. Each transcript was reviewed by at least two members of the research team to ensure that it matched the audio file and to remove all identifying information from the transcripts. Next, four researchers read and reviewed all of the transcripts and created memos of identified themes. Creating memos allowed the researchers to reflect on the accumulation of ideas and record concepts and relationships that emerged while reading the transcripts. After reviewing all of the transcripts, a codebook was created based on the memos, and two of the researchers used the codebook to ensure coding consistency. Disagreements in coding were resolved collaboratively and adjustments to the codebook were made iteratively until the coding team came to consensus on all codes. Finally, the entire research team reviewed the codebook to identify overarching themes. The final codebook included topical structural codes that were based on the SEF and emergent codes that were based on additional unanticipated themes that coders identified during the analysis.</p>

Study (ref id)	Sidibe 2015 ⁴¹⁹
Themes with findings	<p>Reintegration activities represent competing demands to accessing care</p> <ul style="list-style-type: none"> • The participants also suggested that adjusting to life outside of prison, especially for individuals imprisoned for an extensive time, impeded former prisoners' abilities to access HIV care. They explained that the longer patients had been in prison, the more activities they needed to carry out to reintegrate into their communities. Reintegration activities competed with efforts to get health care. For example, if former inmates had to work to reconnect with friends and family, this would make it harder for them to maintain HIV care compared to someone who still had connections with friends and family • “If they have been incarcerated for such a long duration of time that they don't know how to function in non-incarcerated life, all of those things could overwhelm their health care as a priority” (Social Worker with 5 years of experience working for agency). • Participants explained that many clients experiencing the freedom of being released after a long sentence prioritised spending time with friends and family before going to a physician. “Simply doing anything about their health care may become a very low priority in that person's life once they are just released” (Case Manager, 8 years working for agency).
	<p>Meeting basic needs</p> <ul style="list-style-type: none"> • The health professionals described often being called upon to help newly released individuals address basic needs, such as accessing food, housing, and transportation, as a step to enable the client to focus on medical needs. • “There is a need hierarchy. If they don't have housing, if they don't have a place to stay or a roof over their head, food to eat, and/or income, then medical needs are the furthest thing that they are concerned about” (Case Manager, 7 years working for agency) • Providers discussed the notion that to successfully engage in care, individuals first needed to meet their basic needs, such as housing and food. • “A lot of them that get out, from my experience, are homeless, then you have to find shelter for them, and sometimes the shelters are full. You also have to make sure they have food as well; this can take time to meet their needs” (Case Manager, 9 years working for agency) • “They need housing. Even though they might have an income, they might be restricted because they have a record, and especially felons” (HCP, 11 years working for agency).

Study (ref id)	Sidibe 2015 ⁴¹⁹
	<p>Disclosure</p> <ul style="list-style-type: none"> • Participants stated that many former prisoners living with HIV were fearful about disclosing their HIV status to friends and family members, which prevented them from accessing key forms of social support. When accessing case management services, for example, prisoners were often reluctant to provide the contact information necessary for follow-up. As one participant stated, • “A lot of times, they don't want to put a phone number on the ADAP (AIDS Drug Assistance Program) application. They won't give adequate or correct addresses on the application because family members and friends are not aware of their diagnosis. And they are fearful of being treated differently or put out of the house and not having a place to stay because of their diagnosis” (Outreach Worker, 2 years working at agency) • Because many individuals were afraid to disclose their status, they were afraid to ask for assistance with transportation to and from medical care, especially to organizations that were associated with HIV-related disease. A case manager said, “I know a lot of [clients] don't wanna tell anybody. They usually have to figure out a way to get transportation, and if they're coming to a place that is specifically related to HIV, they may not go” (Case Manager, 3 years working for agency). • Participants also mentioned that individuals who had not disclosed their status were concerned about taking medications for fear of being identified as HIV-infected: “People—if they are able to access their medications, they don't wanna take 'em, especially if they're in a setting like a shelter” (Outreach Worker, 8 years working at agency).
	<p>Exposure to pre-release environment and social networks</p> <ul style="list-style-type: none"> • Participants explained that many individuals returned to environments where they re-connected with social circles that promoted risk behaviours, such as substance abuse, rather than supporting health-inducing activities, such as clinic visits. As one participant explained, once individuals were released, “I think the biggest barrier that they are faced with is going back into that same environment in which they caught their case [of HIV] in or where they used drugs” (Mental HCP, 5 years working at agency). • There was often a lack of community resources needed to address behavioural health problems, such as substance abuse. “The most common reason to go to prison is drug offenses. So they struggle with their substance use and going back to the same world you came from doesn't help you” (HCP, 5 years working at agency).
	<p>Lack of transportation</p> <ul style="list-style-type: none"> • Participants expressed the view that transportation was a primary barrier for HIV-infected, recently released individuals accessing medical treatment, and that lack of transportation prevented many individuals from accessing HIV outreach agencies, keeping medical appointments, and receiving other services, such as housing assistance programs. “In managing their HIV, it's getting to treatment, getting to their medical provider, making their appointments” (HCP, 11 years working at agency). “When we get them in case management we talk to the doctors and we make some agreement, and we get them there a little bit quicker. Barriers would be money, insurance, transportation” (Mental HCP, 3 years working at agency). • Participants described a number of factors that influenced an individual's ability to access transportation. For example, participants indicated that social support systems affected an individual's access to transportation. Some individuals who are recently released do not have the friends and family they may need at first to help with rides.

Study (ref id)	Sidibe 2015 ⁴¹⁹
	<ul style="list-style-type: none"> Because many individuals face barriers to obtaining rides from family and friends, access to public transit becomes an important resource for recently released individuals seeking medical treatment. Many participants, however, reported that accessible and convenient public transportation was lacking in communities where the clients resided. "Waiting outside for public transportation, particularly if one is ill with HIV, becomes very difficult, and many of the public bus-line shelters are not shelters" (Case Manager, 8 years working for agency). "... some bus routes from some parts of the city might take several hours to get here" (Case Manager, 8 years working for agency). "If you're 15 minutes late, you get your appointment cancelled and you get rescheduled. So there's some of those things that go on where a client knows, 'If I'm running late, I'm not going to be seen anyways, so why do I show up?'" (Case Manager, 12 years working for agency) Infrequent and inaccessible transportation can prevent clients from engaging in HIV care. One agency representative reported that funding declines and budget cuts were affecting the agency's ability to provide transportation services. "And with funding, all of the social service agencies are having significant funding cuts, and transportation is one that's being cut" (HCP, 5 years working for agency). <p>Poor coordination between care systems</p> <ul style="list-style-type: none"> Participants discussed the lack of coordination between systems of care and its effect to greatly reduce access to care and impede care quality, particularly for individuals with co-occurring behavioural health conditions. For example, health care and medication access were often disrupted at release because linkage to community care before release was inadequate. During the interviews, participants also described how poor care coordination across behavioural and health care systems led to sub-optimal care for HIV-infected former prisoners with co-occurring behavioural health conditions. As one individual said, "They're dealing with some mental health issues. She's gonna need someone meeting with her on the inside and then helping in transition to more services than just medical" (Social Worker, 3 years working for agency). According to participants, care coordination challenges were common because of differences in policies, procedures, and terminology across different systems of care. "They don't talk the same language. When people get released, they have to follow this because there's just so—each agency has so many rules within itself" (HCP, 3 years working at agency).
Limitations and applicability of evidence	<ul style="list-style-type: none"> No limitations Applicable: conducted in USA

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Study (ref id)	Sowell 2001 ⁴³⁵
Aim	To identify social service needs of HIV-infected persons at the time of release from prison/jail and to describe their case management experiences after release from jail
Population	<p>n=16</p> <p>Former prisoners/in jail diagnosed with HIV</p>

Study (ref id)	Sowell 2001⁴³⁵
	<p>Adults (mean 38.7±7.9; range 23-51) Male/female ratio 11:5</p> <p>African American 81% Caucasian 19%</p> <p>Released from prison/jail 2 weeks to 6 years prior to participation</p> <p>Inclusion criteria: had a history of incarceration in prison/jail; were diagnosed with HIV infection prior to the time of their release in prison/jail; at least 18 years old; were able to communicate in English</p>
Setting	USA
Study design	3 focus groups
Methods and analysis	<p>Convenience sampling; potential participants were recruited from the AIDS Service Organization (ASO) in South Carolina providing HIV-specific social services and case management. Potential participants were made aware of the study through caseworkers at the cooperating agency. Persons expressing interest in the study were provided contact information for one of the research team members. A member of each research team was available daily on site to assist in recruitment during the study period. Once initial contact was made, a research team member explained the purpose of the study and conducted a brief screening to determine if they met the study criteria.</p> <p>All focus groups were conducted in a conference room located in the cooperating ASO and recorded on audio tape. Before each session commenced the leader explained the purpose of the study and obtained informal consent. A second member of the research team attended each of the focus groups to assist with the audio taping and to take observational notes. Focus group sessions were conducted using a semi-structured interview guide consisting of open ended questions. The interview was divided into 2 sections. The first group of questions asked participants to identify and discuss their social service needs when returning to the community after release from prison or jail, including: what did you need most when you left prison/jail?; what were the barrier to getting your needs meet? The second group of questions asked participants about their experiences in accessing or obtaining social and medical services after release from prison or jail, about their experiences with case management and their satisfaction with case managers' ability to help them receive needed services; including: when you were first released from prison or jail, how easy was it for you to see a case manager?; was your case manager able to help you get your needs met? If so tell me about how the case manager helped; what was the most important thing the case manager did for you? Focus groups lasted approximately 3 hours and participants were paid \$10 for their participation.</p> <p>Content analysis was used to analyse and interpret the qualitative data. Transcripts of the focus groups were independently reviewed by two members of the research team. Initially, researchers noted every incidence where participants mentioned a specific social service need or need for</p>

Study (ref id)	Sowell 2001⁴³⁵
	<p>specific resources. These identified needs were then categorised and coded. Secondly the researchers identified each mention of case management or an incident in which they had interacted with a case manager or had tried to access case management or social services. When all descriptions of participants' experiences with or views of case management/social services were identified, these descriptions were categorised and coded. Following the individual coding of the data, the two researchers worked together and developed a final coding scheme and assigned specific data to the categories of the coding scheme.</p>
Themes with findings	<p>Emotional support</p> <ul style="list-style-type: none"> • Participants indicated a need for professional support from case managers and persons who provide social services: "sometimes you just need them [to be there]" • Participants also indicated persons who were HIV-infected and has been in prison or jail were viewed as important sources of information and support: "it was like an emotional kind of thing because I had gotten sick at the time, and I was scared. I really didn't know what to expect... and he was there to let me know that things will get better... and there was a way that... a sense it can be done"; another participant reported that a peer could tell you what you needed to hear such as "'you need to get hold of yourself'". Participants noted that peers were also useful in knowing where and how to obtain services: "[having peer support would] shorten a lot of the time that it would take [to obtain services]"; "I wouldn't have known where to turn to, what to do, and how to get in the system or anything" <p>Discharge planning</p> <ul style="list-style-type: none"> • Participants identified a need to start preparing persons for discharge from prison/jail before they were released. Specific components of such discharge planning needed to include information about services, as well as links to actual service providers: "actually, the discharge planning might be the most important [need] because you can make sure that everything else is kind of like [available]... Medicaid, housing"; "you know medicines and doctors... that way – when a person comes home at least they know what to look for"
Limitations and applicability of evidence	<ul style="list-style-type: none"> • Serious limitations: role of researcher not clearly described • Applicable

H.612 Systems to manage patient records

2 None.

3 Appendix I: Health economic evidence tables

I.1 Health assessment

I.151 Reception assessment

6 None.

I.172 Subsequent assessment

8 None.

I.193 When should subsequent assessments be done

10 None.

I.114 Assessment tools

12 None.

I.2 Coordination and communication

14 None.

I.3 Promoting health and wellbeing

I.3.1 Interventions

17 None.

I.3.2 Methods of delivery

19 None.

I.3.3 Who should deliver

21

Study	South 2014 ⁴³³			
Study details	Population & interventions	Costs	Health outcomes	Cost-effectiveness
<p>Economic analysis: CUA (health outcome: QALY loss averted)</p> <p>Study design: Static probabilistic Bernoulli (infectious disease) model</p> <p>Approach to analysis: The effectiveness of the interventions was estimated through the Bernoulli model. This figure was combined with costs and QALYs in a cost-effectiveness framework.</p> <p>Perspective: Service provider (health sector plus educational provision of the intervention costs)</p> <p>Time horizon Lifetime</p>	<p>Population: Offenders in prison settings and their partners when they are released from prison</p> <p>Cohort settings: Start age: 32.1 years Male: 100%</p> <p>Intervention 1: No intervention group; representing baseline knowledge and behavioural intentions</p> <p>Intervention 2: Professionally led; 60 minutes group class on HIV prevention at entry into prison. Educator had a degree and 4 years' experience in HIV education</p> <p>Intervention 3:</p>	<p>Total costs (mean per patient): Intervention 1: £484,645 Intervention 2: £412,694 Intervention 3: £292,782 Incremental (2-1): -£71,961 (95% CI: NR; p=NR) Incremental (3-1): -£191,873 (95% CI: NR; p=NR) Incremental (3-2): -£119,912 (95% CI: NR; p=NR)</p> <p>Currency & cost year: 2011 UK pounds</p>	<p>QALY loss averted: Intervention 1: 0.00 Intervention 2: 1.26 Intervention 3: 3.34 Incremental (3-2): 2.08 (95% CI: NR; p=NR)</p>	<ul style="list-style-type: none"> Intervention 1 is dominated by both Interventions 2 & 3 (more expensive and less effective) Intervention 2 is dominated by intervention 3 (more expensive and less effective) <p>Analysis of uncertainty: Authors highlight considerable uncertainty in the results. One way and probabilistic sensitivity analyses were conducted. The peer-led intervention always dominates the professionally led for all parameters of the Bernoulli model and the follow up cost and QALY inputs in the one way sensitivity analysis. In the probabilistic sensitivity analysis</p>

Treatment effect duration^(a): 1 Year Discounting: Costs: 3.5%; Outcomes: 3.5%	Peer-led; 60 minutes group class on HIV prevention at entry into prison. Educators were HIV-positive inmates who trained for 30 hours over 5 days	Cost components incorporated: Intervention costs, HIV infection lifetime costs	the 'do nothing' intervention is clearly dominated. Point estimates for the other two interventions are partly overlapping; however the mean estimates are clearly distinct.
Data sources			
Health outcomes: Estimated with the use of a Bernoulli infectious disease model sourced by a systematic literature review Quality-of-life weights: Figures taken from multiple studies, some values are pooled estimates. Cost sources: Resource use was extracted from a US RCT ¹⁶⁰ , intervention unit costs were attached by the study authors and were relevant to the UK, lifetime costs sourced from a UK 2010 HTA ⁴¹⁶			
Comments			
Source of funding: UK National Institute for Health Research Limitations: Quality of life values are derived from studies conducted on a non-prisons population. Health outcomes sourced from a non-prison setting. Resource use was extracted from a US prison setting.			
Overall applicability^(b): partially applicable Overall quality^(c): potentially serious limitations			

Abbreviations: 95% CI: 95% confidence interval; CUA: cost-utility analysis; NR: not reported; QALYs: quality-adjusted life years

(a) For studies where the time horizon is longer than the treatment duration, an assumption needs to be made about the continuation of the study effect. For example, does a difference in utility between groups during treatment continue beyond the end of treatment and if so for how long.

(b) Directly applicable / Partially applicable / Not applicable

(c) Minor limitations / Potentially serious limitations / Very serious limitations

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I.384 Barriers and facilitators to health promotion

29 None.

b4 Medication management

I.411 Methods to access medicines

32 None.

I.432 Methods for continuity of care

34 None.

I.453 Barriers and facilitators to ensuring access to medicines

36 None.

b5 Monitoring chronic conditions

38 None.

b6 Deteriorating health and emergency management

I.601 Deteriorating health

41 None.

I.622 Emergency situations

43 None.

44

47 Continuity of healthcare

I.761 Barriers and facilitators to continuity of healthcare

47 None.

I.782 Systems to manage patient records

49 None.

50

51 **Appendix J: GRADE tables**

J.1 Health assessment

J.1.1 Reception assessment

54 None.

J.1.2 Subsequent assessment

56 None.

J.1.3 When should subsequent assessments be done

58 None.

J.1.4 Assessment tools

60 None.

J.2 Coordination and communication

62 None.

J.3 Promoting health and wellbeing

J.3.1 Interventions

J.3.1.1 Hygiene

66 Table 3: Clinical evidence profile: hygiene health promotion versus no care

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Hygiene health promotion	No care	Relative (95% CI)	Absolute		
Oral Hygiene Index (follow-up 2 months; measured with: Russell's Oral Hygiene Index⁴; range of scores: 0-6; Better indicated by lower values)												
1	observational studies	very serious ¹	no serious inconsistency	no serious indirectness	Uncertain ²	none	35	52	-	MD 0.1 lower ³	⊕000 VERY LOW	
Periodontal Index (follow-up 2 months; measured with: Vermillion's Periodontal Index⁴; range of scores: 0-8; Better indicated by lower values)												
1	observational studies	very serious ¹	no serious inconsistency	no serious indirectness	Uncertain ²	none	35	52	-	MD 0.33 higher ³	⊕000 VERY LOW	

67 ¹ Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias

68 ² Imprecision was undetectable as standard deviations were unreported

69 ³ Confidence limits were undetectable as study did not report standard deviations

70 ⁴ Literature search indicates that the names of the two indexes used in this study were transposed.

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73.1.2 Nutrition

74 Table 20: Clinical evidence profile: Reduced calorie diet versus usual care

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Nutrition	Control	Relative (95% CI)	Absolute		
BMI (follow-up mean 1 years; Better indicated by lower values)												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	serious ¹	none	24	39	-	MD 3.2 lower (6.17 to 0.23 lower)	⊕○○○ VERY LOW	

75 ¹ Downgraded by 1 increment if the confidence interval crossed 1 MID or by 2 increments if the confidence interval crossed both MIDs

76.1.3 Physical activity

77 Table 4: Clinical evidence profile: Cardiovascular plus resistance training (CRT) versus usual care

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Physical activity	Control	Relative (95% CI)	Absolute		
Body mass index (follow-up mean 9 months; measured with: kg/m²; Better indicated by lower values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	21	18	-	MD 0.7 lower (2.65 lower to 1.25 higher)	⊕⊕⊕○ MODERATE	
Systolic blood pressure (follow-up mean 9 months; measured with: mmHg; Better indicated by lower values)												
1	randomised trials	serious ²	no serious inconsistency	no serious indirectness	serious ²	none	21	18	-	MD 7.8 lower (17 lower to 1.4 higher)	⊕⊕○○ LOW	
Diastolic blood pressure (follow-up mean 9 months; measured with: mmHg; Better indicated by lower values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	21	18	-	MD 4.6 lower (9.18 to 0.02 lower)	⊕⊕⊕○ MODERATE	
Coronary heart disease risk (follow-up mean 9 months; measured with: ratio = total cholesterol/high density lipoprotein; Better indicated by lower values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	21	18	-	MD 0.6 lower (1.56 lower to 0.36 higher)	⊕⊕⊕○ MODERATE	

78 ¹ Downgraded by 1 increment for risk of bias. Differences in baseline values across study arms.79 ² Downgraded by 1 increment if the confidence interval crossed 1 MID or by 2 increments if the confidence interval crossed both MIDs.

80

81 **Table 5: Clinical evidence profile: high intensity strength training (HIST) versus usual care**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Physical activity	Control	Relative (95% CI)	Absolute		
Body mass index (follow-up mean 9 months; measured with: kg/m²; Better indicated by lower values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	19	18	-	MD 1.2 lower (2.91 lower to 0.51 higher)	⊕⊕⊕O MODERATE	
Systolic blood pressure (follow-up mean 9 months; measured with: mmHg; Better indicated by lower values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	19	18	-	MD 1.5 lower (10.63 lower to 7.63 higher)	⊕⊕OO LOW	
Diastolic blood pressure (follow-up mean 9 months; measured with: mmHg; Better indicated by lower values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	19	18	-	MD 1.9 lower (5.82 lower to 2.02 higher)	⊕⊕⊕O MODERATE	
Coronary heart disease risk (follow-up mean 9 months; measured with: ratio = total cholesterol/high density lipoprotein; Better indicated by lower values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	19	18	-	MD 0.6 higher (0.83 lower to 2.03 higher)	⊕⊕⊕O MODERATE	

¹ Downgraded by 1 increment for risk of bias. Differences in baseline values across study arms.

² Downgraded by 1 increment if the confidence interval crossed 1 MID or by 2 increments if the confidence interval crossed both MIDs.

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85 **Table 6: Clinical evidence profile: structured exercise versus usual care**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Physical activity	Control	Relative (95% CI)	Absolute		
Resting heart rate (follow-up mean 12 weeks; Better indicated by lower values)												
1	randomised trials	serious ³	no serious inconsistency	no serious indirectness ⁴	serious ²	none	5	8	-	MD 19.84 lower (32.06 to 7.62 lower)	⊕⊕OO LOW	
Systolic blood pressure (follow-up mean 12 weeks; measured with: mmHg; Better indicated by lower values)												
1	randomised trials	serious ³	no serious inconsistency	no serious indirectness ⁴	very serious ²	none	5	8	-	MD 2.56 lower (14.72 lower to 9.61 higher)	⊕OOO VERY LOW	
Diastolic blood pressure (follow-up mean 12 weeks; measured with: mmHg; Better indicated by lower values)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	5	8	-	MD 9.29 lower (16.89 to 7.30 lower)	⊕⊕OO	

	trials		inconsistency	indirectness ⁴						1.69 lower)	LOW	
Body mass index (follow-up mean 12 weeks; Better indicated by lower values)												
1	randomised trials	serious ³	no serious inconsistency	no serious indirectness ⁴	no serious imprecision	none	5	8	-	MD 1.66 lower (6.43 lower to 3.1 higher)	⊕⊕⊕O MODERATE	

86 ² Downgraded by 1 increment if the confidence interval crossed 1 MID or by 2 increments if the confidence interval crossed both MIDs.

87 ³ Downgraded by 1 increment for risk of bias. Selection bias, low sample size of 10 per arm further limited by participant dropout.

88 ⁴ Male inmates with chronic illness, two risk factors for chronic illness or aged over 40 years.

89

90 **Table 7: Clinical evidence profile: exercise and nutrition programme versus usual care**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Physical activity	Control	Relative (95% CI)	Absolute		
Body mass index (follow-up mean 6 weeks; Better indicated by lower values)												
1	observational studies	no serious risk of bias	no serious inconsistency	serious ⁵	no serious imprecision	none	16	16	-	MD 0.73 lower (3.79 lower to 2.33 higher)	⊕○○○ VERY LOW	

91 ⁵ Downgraded by 1 increment for indirectness. Noted that this intervention also includes a nutrition component

92.1.4 Sexual health

93 **Table 8: Clinical evidence profile: sexual health promotion versus usual or no care**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Sexual health promotion	Usual or no care	Relative (95% CI)	Absolute		
Knowledge (follow-up 6 weeks; measured with: 12 True/False Knowledge Questions; range of scores: 0-12; Better indicated by higher values)												
1	observational studies	very serious ¹	no serious inconsistency	serious ²	serious ³	none	196	196	-	MD 1.23 higher (0.86 to 1.6 higher)	⊕○○○ VERY LOW	
Knowledge (follow-up 60-90 minutes; measured with: 10 Knowledge Questions; range of scores: 0-10; Better indicated by higher values)												
1	randomised trials	very serious ¹	no serious inconsistency	serious ²	Uncertain ⁴	none	1169	478	-	MD 0.3 higher ⁵	⊕○○○ VERY	

												LOW	
Knowledge (follow-up 60-90 minutes; measured with: 10 Knowledge Questions; range of scores: 0-10; Better indicated by higher values)													
1	randomised trials	very serious ¹	no serious inconsistency	serious ²	Uncertain ⁴	none	648	478	-	MD 0.5 higher ⁵	⊕○○○ VERY LOW		
Knowledge (follow-up 6 weeks; measured with: 27 Knowledge Assessment Questions; range of scores: 0-27; Better indicated by higher values)													
1	observational studies	very serious ¹	no serious inconsistency	serious ²	serious ³	none	90	90	-	MD 0.99 higher (0.09 lower to 2.08 higher)	⊕○○○ VERY LOW		
Knowledge (follow-up 6 months; assessed with: 23 Closed-Ended Knowledge Questions)													
1	observational studies	very serious ¹	no serious inconsistency	very serious ^{2,7}	no serious imprecision	none	258/300 (86%)	56.1%	RR 1.77 (1.56 to 2)	432 more per 1000 (from 314 more to 561 more)	⊕○○○ VERY LOW		
Intention (follow-up 6 weeks; measured with: 5 point Likert Scale; range of scores: 1-5; Better indicated by higher values)													
1	observational studies	very serious ¹	no serious inconsistency	serious ²	serious ³	none	90	90	-	MD 0.34 higher (0.04 to 0.63 higher)	⊕○○○ VERY LOW		
Intention (follow-up 60-90 minutes; measured with: 5 Point Likert Scale⁶; range of scores: 1-3; Better indicated by higher values)													
1	randomised trials	very serious ¹	no serious inconsistency	serious ²	no serious imprecision	none	1817	478	-	MD 0.23 higher (0.14 to 0.31 higher)	⊕○○○ VERY LOW		

94 ¹ Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias

95 ² Downgraded by 1 or 2 increments because: The majority of the evidence had indirect outcomes

96 ³ Downgraded by 1 increment if the confidence interval crossed one MID or by 2 increments if the confidence interval crossed both MIDs.

97 ⁴ Imprecision was undetectable as study did not report standard deviations

98 ⁵ Confidence limits were undetectable as study did not report standard deviations

99 ⁶ A 3 Point Likert Scale was reported in the results

100 ⁷ Downgraded by 1 because the majority of the evidence included an indirect population

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Table 9: Clinical evidence profile: access to condom dispensers versus no readily available access

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Access to condom dispenser	No readily available access	Relative (95% CI)	Absolute		
Practise Safe Anal Sex - Of prisoners who have sex (follow-up 10 years; assessed with: Self-reporting)												
1	observational studies	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	21/37 (56.8%)	3.1%	Peto OR 11.4 (4.16 to 31.24)	322 more per 1000 (from 98 more to 937 more)	⊕000 VERY LOW	
Practise Safe Anal Sex - Of prisoners who have sex (follow-up 4 months; assessed with: Self-reporting)												
1	observational studies	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	5/6 (83.3%)	33.3%	RR 2.5 (0.49 to 12.89)	500 more per 1000 (from 170 fewer to 1000 more)	⊕000 VERY LOW	
Practise Safe Anal Sex - Total prisoner sample (follow-up 10 years; assessed with: Self-reporting)												
1	observational studies	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	21/1118 (1.9%)	0.1%	Peto OR 5.15 (2.21 to 11.98)	4 more per 1000 (from 1 more to 11 more)	⊕000 VERY LOW	
Practise Safe Anal Sex - Total prisoner sample (follow-up 4 months; assessed with: Self-reporting)												
1	observational studies	very serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	5/69 (7.2%)	1.3%	RR 5.58 (0.67 to 46.59)	60 more per 1000 (from 4 fewer to 593 more)	⊕000 VERY LOW	
Obtaining Condoms (follow-up 4 months; assessed with: Self-Reporting)												
1	observational studies	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	17/77 (22.1%)	5.8%	RR 3.81 (1.35 to 10.77)	163 more per 1000 (from 20 more to 567 more)	⊕000 VERY LOW	

¹ Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias

² Downgraded by 1 increment if the confidence interval crossed one MID or by 2 increments if the confidence interval crossed both MIDs

105.1.5 Smoking cessation

106 Table 26: Clinical evidence profile: behavioural intervention with or without NRT versus usual care in men

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Smoking status	Control	Relative (95% CI)	Absolute		
Mean change in CO-oximetry - MI - Pre-test and post-test (follow-up mean 90 days; Better indicated by higher values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 7.44 higher (6.29 to 8.59 higher)	⊕⊕⊕⊕ LOW	
Mean change in CO-oximetry - MI - Pre-test and follow-up (follow-up mean 90 days; Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 7.44 higher (6.25 to 8.63 higher)	⊕⊕⊕⊕ LOW	
Mean change in CO-oximetry - MI - Post-test and follow-up (follow-up mean 90 days; Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 0 higher (0.87 lower to 0.87 higher)	⊕⊕⊕⊕ LOW	
Mean change in CO-oximetry - MI + NRT - Pre-test and post-test (follow-up mean 90 days; Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 10.51 higher (9.32 to 11.7 higher)	⊕⊕⊕⊕ LOW	
Mean change in CO-oximetry - MI + NRT - Pre-test and follow-up (follow-up mean 90 days; Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 10.87 higher (9.89 to 11.85 higher)	⊕⊕⊕⊕ LOW	
Mean change in CO-oximetry - MI + NRT - Post-test and follow-up (follow-up mean 90 days; Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 0.36 higher (0.39 lower to 1.11 higher)	⊕⊕⊕⊕ LOW	
Mean change in cigarettes per day - MI - Pre-test and post-test (follow-up mean 90 days; Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 8.98 higher (6.78 to 11.18 higher)	⊕⊕⊕⊕ LOW	
Mean change in cigarettes per day - MI - Pre-test and follow-up (follow-up mean 90 days; Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 5.81 higher (3.45 to 8.17 higher)	⊕⊕⊕⊕ LOW	
Mean change in cigarettes per day - MI - Post-test and follow-up (follow-up mean 90 days; Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 3.78 higher (2.56 to 5 higher)	⊕⊕⊕⊕ LOW	
Mean change in cigarettes per day - MI + NRT - Pre-test and post-test (follow-up mean 90 days; Better indicated by lower values)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 9.41 higher (7.78 to 11.04 higher)	⊕⊕⊕⊕ LOW	
Mean change in cigarettes per day - MI + NRT - Pre-test and follow-up (follow-up mean 90 days; Better indicated by lower values)												
1	randomised	very	no serious	no serious	no serious	none	71	71	-	MD 10.06 higher (8.97 to	⊕⊕⊕⊕	

	trials	serious ¹	inconsistency	indirectness	imprecision					11.15 higher)	LOW
Mean change in cigarettes per day - MI + NRT - Post-test and follow-up (follow-up mean 90 days; Better indicated by lower values)											
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 0.64 higher (0.99 lower to 2.27 higher)	⊕⊕⊕⊕ LOW
Mean change in Fagerström test score - MI - Pre-test and post-test (follow-up mean 90 days; Better indicated by lower values)											
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 2.67 higher (1.92 to 3.42 higher)	⊕⊕⊕⊕ LOW
Mean change in Fagerström test score - MI - Pre-test and follow-up (follow-up mean 90 days; Better indicated by lower values)											
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 4.32 higher (3.53 to 5.11 higher)	⊕⊕⊕⊕ LOW
Mean change in Fagerström test score - MI - Post-test and follow-up (follow-up mean 90 days; Better indicated by lower values)											
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 1.64 higher (0.96 to 2.32 higher)	⊕⊕⊕⊕ LOW
Mean change in Fagerström test score - MI + NRT - Pre-test and post-test (follow-up mean 90 days; Better indicated by lower values)											
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 6.29 higher (5.55 to 7.03 higher)	⊕⊕⊕⊕ LOW
Mean change in Fagerström test score - MI + NRT - Pre-test and follow-up (follow-up mean 90 days; Better indicated by lower values)											
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 8.51 higher (7.8 to 9.22 higher)	⊕⊕⊕⊕ LOW
Mean change in Fagerström test score - MI + NRT - Post-test and follow-up (follow-up mean 90 days; Better indicated by lower values)											
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	71	-	MD 2.22 higher (1.57 to 2.87 higher)	⊕⊕⊕⊕ LOW

107 ¹ Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias.

108 **Table 10: Clinical evidence profile: behavioural intervention plus nicotine patch versus usual care in women**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Smoking status	Control	Relative (95% CI)	Absolute		
Smoking abstinence - 10 weeks												
1	randomised trials	very serious ^{1,2}	no serious inconsistency	no serious indirectness	no serious imprecision	none	46/250 (18.4%)	1%	RR 0 (5.58 to 56.29)	10 fewer per 1000 (from 46 more to 553 more)	⊕⊕⊕⊕ LOW	
Smoking abstinence - 3 months												
1	randomised trials	very serious ^{1,2}	no serious inconsistency	no serious indirectness	no serious imprecision	none	42/250 (16.8%)	2.4%	RR 6.94 (3.17 to 15.16)	143 more per 1000 (from 52 more to 340 more)	⊕⊕⊕⊕ LOW	
Smoking abstinence - 6 months												
1	randomised trials	very serious ^{1,2}	no serious inconsistency	no serious indirectness	no serious imprecision	none	35/250 (14%)	2.8%	RR 5.06 (2.39 to 10.7)	114 more per 1000 (from 39 more to 272 more)	⊕⊕⊕⊕ LOW	

Sessions attended - End of treatment (Better indicated by higher values)												
1	randomised trials	very serious ^{1,2}	no serious inconsistency	no serious indirectness	no serious imprecision	none	250	250	-	MD 2.7 higher (2.27 to 3.13 higher)	⊕⊕OO LOW	
Sessions attended - 6 months (Better indicated by higher values)												
1	randomised trials	very serious ^{1,2}	no serious inconsistency	no serious indirectness	no serious imprecision	none	250	250	-	MD 1.4 higher (0.9 to 1.9 higher)	⊕⊕OO LOW	
Medication compliance - End of treatment (Better indicated by higher values)												
1	randomised trials	very serious ^{1,2}	no serious inconsistency	no serious indirectness	no serious imprecision	none	46	204	-	MD 21.6 higher (12.04 to 31.16 higher)	⊕⊕OO LOW	
Medication compliance - 6 months (Better indicated by higher values)												
1	randomised trials	very serious ^{1,2}	no serious inconsistency	no serious indirectness	very serious ³	none	35	215	-	MD 5.8 higher (5.26 lower to 16.86 higher)	⊕OOO VERY LOW	

¹ Downgraded by 1 increment for risk of bias. Randomised controlled crossover with 6 month waitlist control group who crossed over to the active intervention after 6 months.

² Downgraded by 1 increment for risk of bias. High rate of attrition, 134 people did not complete intervention (115 not interested, 19 transferred/segreated).

³ Downgraded by 1 increment if the confidence interval crossed 1 MID or by 2 increments if the confidence interval crossed both MIDs.

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113 **Table 11: Clinical evidence profile: behavioural intervention plus nicotine patch plus nortriptyline versus behavioural intervention plus nicotine patch**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Smoking status	Control	Relative (95% CI)	Absolute		
Continuous smoking abstinence - 3 months												
1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	serious ³	none	49/206 (23.8%)	16.4%	RR 1.45 (0.98 to 2.13)	74 more per 1000 (from 3 fewer to 185 more)	⊕⊕OO LOW	
Continuous smoking abstinence - 6 months												
1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	serious ³	none	36/206 (17.5%)	12.3%	RR 1.42 (0.89 to 2.25)	52 more per 1000 (from 14 fewer to 154 more)	⊕⊕OO LOW	
Continuous smoking abstinence - 12 months												
1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	very serious ³	none	24/206 (11.7%)	11.9%	RR 0.98 (0.58 to 1.65)	2 fewer per 1000 (from 50 fewer to 77 more)	⊕OOO VERY LOW	
Point prevalence abstinence - 3 months												
1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	serious ⁴	none	57/206 (27.7%)	19.6%	RR 1.41 (1 to 1.99)	80 more per 1000 (from 0 more to 194 more)	⊕⊕OO LOW	
Point prevalence abstinence - 6 months												
1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	serious ⁴	none	40/206 (19.4%)	14.2%	RR 1.37 (0.89 to 2.11)	53 more per 1000 (from 16 fewer to 158 more)	⊕⊕OO LOW	
Point prevalence abstinence - 12 months												

1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	very serious ³	none	25/206 (12.1%)	14.6%	RR 0.83 (0.51 to 1.35)	25 fewer per 1000 (from 72 fewer to 51 more)	⊕○○○ VERY LOW
Smoking reduction 50% - 6 months											
1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	no serious imprecision	none	168/206 (81.6%)	77.6%	RR 1.05 (0.95 to 1.16)	39 more per 1000 (from 39 fewer to 124 more)	⊕⊕⊕○ MODERATE
Smoking reduction 50% - 3 months											
1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	no serious imprecision	none	185/206 (89.8%)	88.6%	RR 1.01 (0.95 to 1.08)	9 more per 1000 (from 44 fewer to 71 more)	⊕⊕⊕○ MODERATE
Smoking reduction 50% - 12 months											
1	randomised trials	serious ⁴	no serious inconsistency	no serious indirectness	no serious imprecision	none	148/206 (71.8%)	77.6%	RR 0.93 (0.83 to 1.03)	54 fewer per 1000 (from 132 fewer to 23 more)	⊕⊕⊕○ MODERATE

³ Downgraded by 1 increment if the confidence interval crossed 1 MID or by 2 increments if the confidence interval crossed both MIDs.

⁴ Downgraded by 1 increment for attrition bias. 40% of intervention arm and 45% of control arm had less than 75% medication adherence.

⁵ Downgraded by 1 increment for risk of bias. Unclear method of randomisation and poor description of motivational intervention used. Unclear rate of attrition, assume intention to treat analysis has been performed.

⁶ Downgraded by 1 increment for indirectness. Participants used both chewable and smoking tobacco. 5.3% chewing tobacco and 2.1% chewable and smoking tobacco.

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120 **Table 12: Clinical evidence profile: behavioural intervention versus usual care**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Smoking status	Control	Relative (95% CI)	Absolute		
Smoking abstinence at 6 months												
1	randomised trials	very serious ⁵	no serious inconsistency	serious ⁶	no serious imprecision	none	48/300 (16%)	2%	RR 8 (3.48 to 18.41)	140 more per 1000 (from 50 more to 348 more)	⊕○○○ VERY LOW	
Attempt to quit at 6 months												
1	randomised trials	very serious ⁵	no serious inconsistency	serious ⁶	no serious imprecision	none	235/300 (78.3%)	30.7%	RR 2.55 (2.13 to 3.06)	476 more per 1000 (from 347 more to 632 more)	⊕○○○ VERY LOW	
Willing to quit at 6 months												
1	randomised trials	very serious ⁵	no serious inconsistency	serious ⁶	no serious imprecision	none	206/300 (68.7%)	61.3%	RR 1.12 (0.99 to 1.26)	74 more per 1000 (from 6 fewer to 159 more)	⊕○○○ VERY LOW	

⁵ Downgraded by 1 increment for risk of bias. Unclear method of randomisation and poor description of motivational intervention used. Unclear rate of attrition, assume intention to treat analysis has been performed.

⁶ Downgraded by 1 increment for indirectness. Participants used both chewable and smoking tobacco. 5.3% chewing tobacco and 2.1% chewable and smoking tobacco.

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128**132 Methods of delivery**

130 None.

133 Who should deliver132 **Table 13: Clinical evidence profile: professional educator versus peer educator**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Professional educator	Peer educator	Relative (95% CI)	Absolute		
Knowledge (follow-up 60-90 minutes; measured with: 10 Knowledge Questions; range of scores: 0-10; Better indicated by higher values)												
1	randomised trials	very serious ¹	no serious inconsistency	serious ²	no serious imprecision ³	none	648	1169	-	MD 0.2 higher ³	⊕○○○ VERY LOW	IMPORTANT
Intention (follow-up 60-90 minutes; measured with: 5 Point Likert Scale⁴; range of scores: 1-5; Better indicated by higher values)												
1	randomised trials	very serious ¹	no serious inconsistency	serious ²	no serious imprecision	none	648	1169	-	MD 0.05 lower (0.15 lower to 0.05 higher)	⊕○○○ VERY LOW	IMPORTANT
HIV Testing (follow-up 60-90 minutes; assessed with: Percentage volunteered for HIV test)												
1	randomised trials	very serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	292/648 (45.1%)	42.5%	RR 1.06 (0.95 to 1.18)	25 more per 1000 (from 21 fewer to 76 more)	⊕⊕○○ LOW	IMPORTANT

133 ¹ Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias134 ² Downgraded by 1 or 2 increments because: The majority of the evidence had indirect outcomes135 ³ Imprecision and confidence intervals were undeterminable as standard deviations were not reported136 ⁴ A 3 Point Likert Scale was reported in the results

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14 Medication management**141 Methods to access medicines****Table 14: Clinical evidence profile: DOT versus SAT**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	DOT	SAT	Relative (95% CI)	Absolute		
Sustained virological response (follow-up 24 weeks)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	74/122 (60.7%)	86/130 (66.2%)	RR 0.918 (0.746 to 1.125)	53 fewer per 1000 (from 165 fewer to 86 more)	⊕⊕⊕O MODERATE	CRITICAL
Mild adverse events (follow-up 48 weeks; assessed with: anaemia, thrombocytopenia, neutropenia, leucopenia)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	no serious imprecision	none	120/122 (98.4%)	116/130 (89.2%)	RR 1.1 (1.03 to 1.18)	89 more per 1000 (from 27 more to 161 more)	⊕⊕⊕O MODERATE	CRITICAL
Serious adverse events (follow-up 48 weeks; assessed with: not defined)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	very serious ²	none	10/122 (8.2%)	10/130 (7.7%)	RR 1.07 (0.46 to 2.47)	5 more per 1000 (from 42 fewer to 113 more)	⊕OOO VERY LOW	CRITICAL

141 ¹ Downgraded by one increment if the majority of the evidence was at a high risk of bias and downgraded by two increments if the majority of the evidence was at a very high risk of bias

142 ² Downgraded by one increment if the confidence interval crossed one MID or by two increments if the confidence interval crossed both MIDs

142 Methods for continuity of care**Table 15: Clinical evidence profile: education versus usual care**

Quality assessment							No of patients		Effect		Quality	Importance

No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Education	Usual care	Relative (95% CI)	Absolute		
Drug adherence (follow-up 6 months; assessed with: Completed first visit to TB clinic)												
1	randomised trials	no serious risk of bias	no serious inconsistency	none	serious ¹	none	40/107 (37.4%)	25/104 (24%)	RR 1.56 (1.02 to 2.37)	135 more per 1000 (from 5 more to 329 more)	⊕⊕⊕⊖ MODERATE	CRITICAL
Drug adherence (follow-up 6 months; assessed with: Completed isoniazid therapy)												
1	randomised trials	no serious risk of bias	no serious inconsistency	none	serious ¹	none	24/107 (22.4%)	12/114 (10.5%)	OR 2.21 (1.03 to 4.72)	101 more per 1000 (from 3 more to 252 more)	⊕⊕⊕⊖ MODERATE	CRITICAL
Morbidity (critical outcome) - no data												

145 ¹ Downgraded by 1 increment if the confidence interval crossed one MID or by 2 increments if the confidence interval crossed both MIDs

146 **Table 16: Clinical evidence profile: incentive versus usual care**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Incentive	Usual care	Relative (95% CI)	Absolute		
Drug adherence (follow-up 6 months; assessed with: Completed first visit to TB clinic)												
1	randomised trials	no serious risk of bias	no serious inconsistency	none	serious ¹	none	42/114 (36.8%)	25/104 (24%)	RR 1.53 (1.01 to 2.33)	127 more per 1000 (from 2 more to 320 more)	⊕⊕⊕⊖ MODERATE	CRITICAL
Drug adherence (follow-up 6 months; assessed with: Completed isoniazid therapy)												
1	randomised trials	no serious risk of bias	no serious inconsistency	none	very serious ¹	none	14/114 (12.3%)	12/104 (11.5%)	OR 1.07 (0.47 to 2.41)	7 more per 1000 (from 58 fewer to 124 more)	⊕⊕○○ LOW	CRITICAL
Morbidity (critical outcome) - no data												

147 ¹ Downgraded by 1 increment if the confidence interval crossed one MID or by 2 increments if the confidence interval crossed both MIDs

148 **Table 17: Clinical evidence profile: incentive plus education versus education**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Incentive and education	Education	Relative (95% CI)	Absolute		
Drug adherence (follow-up 12 months; assessed with: Completed first visit to TB clinic)												
1	randomised trials	no serious risk of bias	no serious inconsistency	none	very serious ¹	none	8/30 (26.7%)	7/31 (22.6%)	RR 1.18 (0.49 to 2.85)	41 more per 1000 (from 115 fewer to 418 more)	⊕⊕⊕⊕ LOW	CRITICAL
Morbidity (critical outcome) - no data												

149 ¹ Downgraded by 1 increment if the confidence interval crossed one MID or by 2 increments if the confidence interval crossed both MIDs150 **Table 18: Clinical evidence profile: ecosystemic intervention versus individual counselling**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Ecosystemic intervention	individual counselling	Relative (95% CI)	Absolute		
Drug adherence (follow-up 12 months; assessed with: self-reported)												
1	randomised trials	serious ¹	no serious inconsistency	none	serious ²	none	- ³	- ³	OR 0.35 (0.13 to 0.95)	- ³	⊕⊕⊕⊕ LOW	CRITICAL
Morbidity (critical outcome) - no data												

151 ¹ Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias152 ² Downgraded by 1 increment if the confidence interval crossed one MID or by 2 increments if the confidence interval crossed both MIDs153 ³ Raw data not reported154 **Table 19: Clinical evidence profile: bridging case management versus discharge planning**

Quality assessment							No of patients		Effect		Quality	Importance
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No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Bridging case management	Discharge planning	Relative (95% CI)	Absolute		
Unplanned admission (assessed with: Hospitalisation)												
1	randomised trials	serious ¹	no serious inconsistency	no serious indirectness	serious ²	none	14/43 (32.6%)	7/46 (15.2%)	RR 2.14 (0.96 to 4.79)	173 more per 1000 (from 6 fewer to 577 more)	⊕⊕○○ LOW	IMPORTANT
Unplanned admission (follow-up 12 months; assessed with: Emergency department presentation)												
1	randomised trials	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious ²	none	17/43 (39.5%)	18/46 (39.1%)	RR 1.01 (0.6 to 1.69)	4 more per 1000 (from 157 fewer to 270 more)	⊕⊕○○ LOW	IMPORTANT
Drug adherence (critical outcome) - no data												
Morbidity (critical outcome) - no data												

155 ¹ Downgraded by 1 increment if the majority of the evidence was at high risk of bias, and downgraded by 2 increments if the majority of the evidence was at very high risk of bias

156 ² Downgraded by 1 increment if the confidence interval crossed one MID or by 2 increments if the confidence interval crossed both MIDs

1473 Barriers and facilitators to ensuring access to medicines

158 None.

155 Monitoring chronic condition

160 None.

166 Deteriorating health

1621 Deteriorating health

163 None.

~~164~~ **Emergency situations**

165 None.

~~167~~ **Continuity of healthcare**

~~171~~ **Barriers and facilitators to continuity of healthcare**

168 None.

~~172~~ **Systems to manage patient records**

170 None.

171

1 Appendix K: Forest plots

K.1 Health assessment

K.1.1 Reception assessment

4 None.

K.1.2 Subsequent assessment

6 None.

K.1.3 When should subsequent assessments be done

8 None.

K.1.4 Assessment tools

10 None.

K.2 Coordination and communication

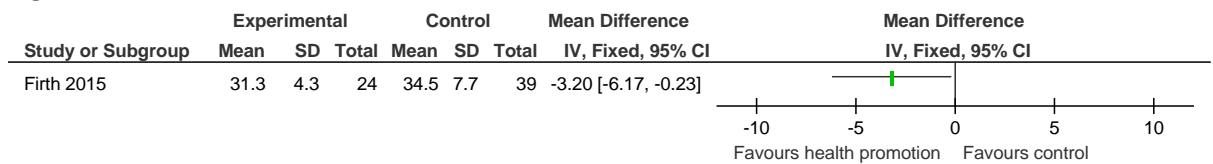
12 None.

K.3 Promoting health and wellbeing

K.3.1 Interventions

K.3.1.1 Nutrition

Figure 22: Reduced calorie diet versus usual care



16.1.2 Physical activity

Figure 23: Cardiovascular plus resistance training (CRT) versus usual care

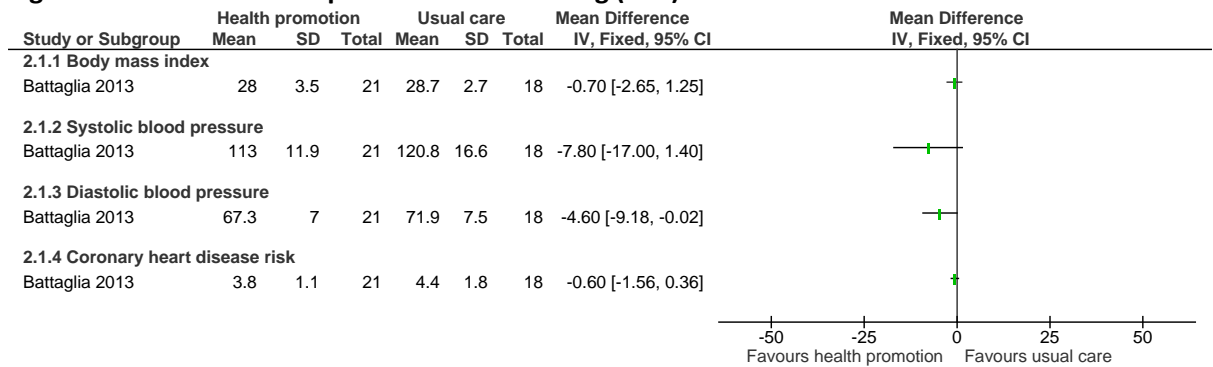


Figure 24: High intensity strength training (HIST) versus usual care

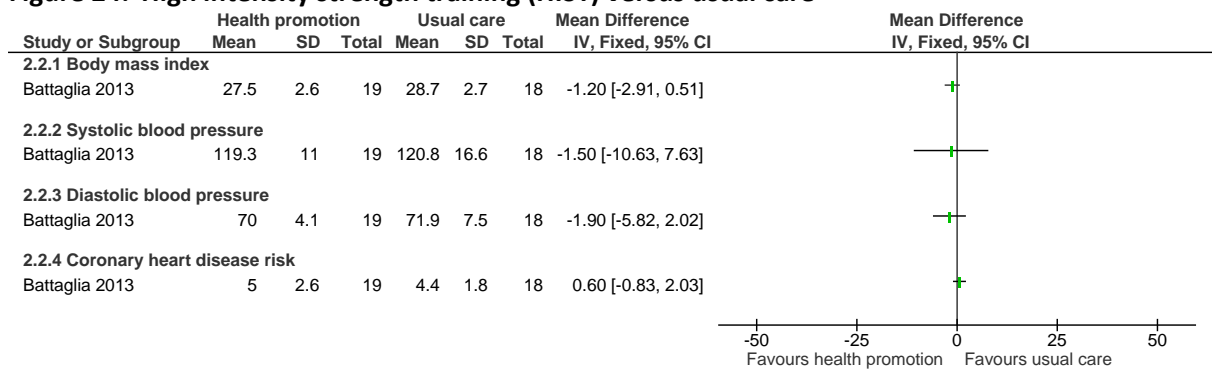


Figure 25: Structured exercise versus usual care

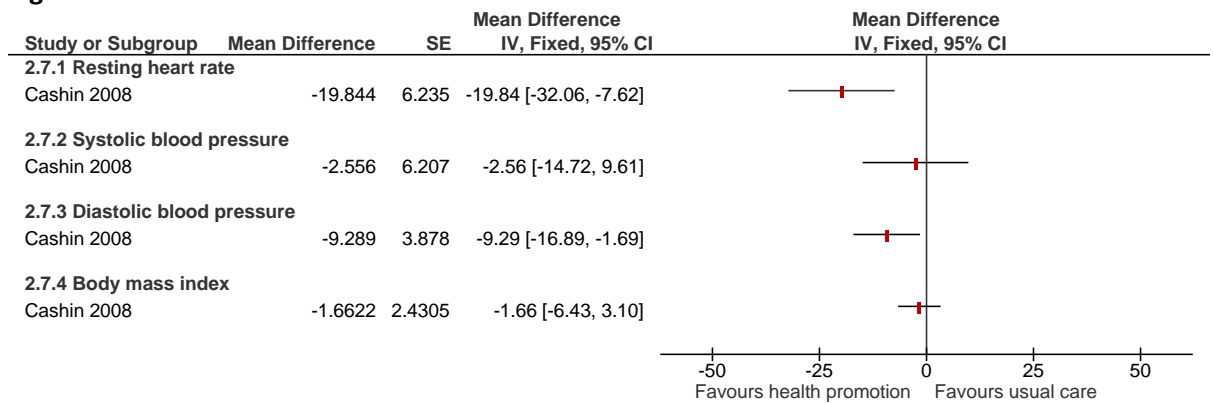
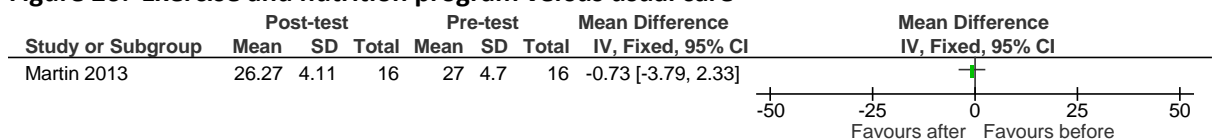


Figure 26: Exercise and nutrition program versus usual care



K3.1.3 Sexual health

K.3.1.3.1 Sexual health promotion versus usual or no care

Figure 27: Sexual health promotion versus no care in prison - HIV knowledge test

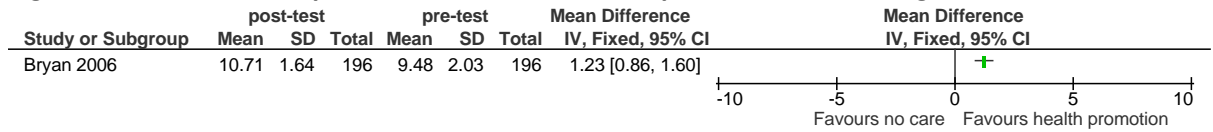


Figure 28: Sexual health promotion versus no care in prison - AIDS knowledge test

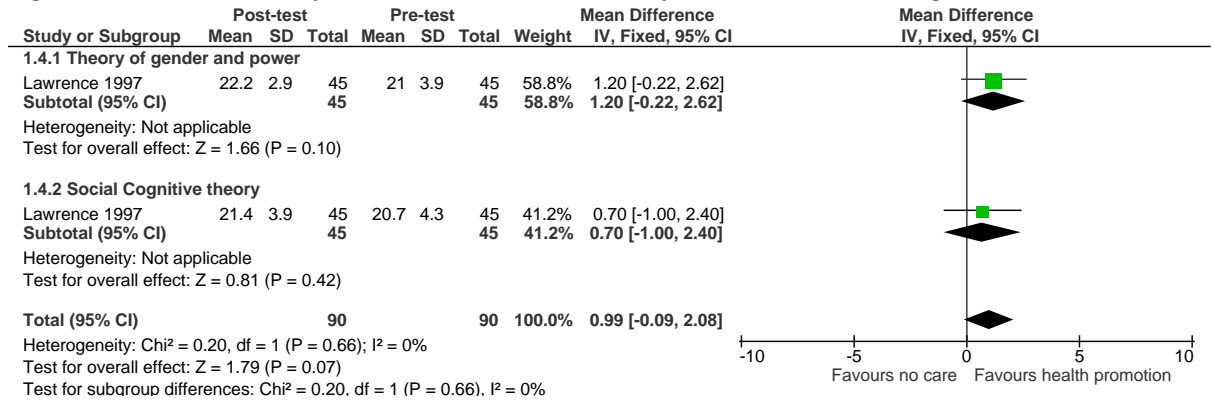


Figure 29: Sexual health promotion versus no care in prison - Sexual behaviour and AIDS knowledge test

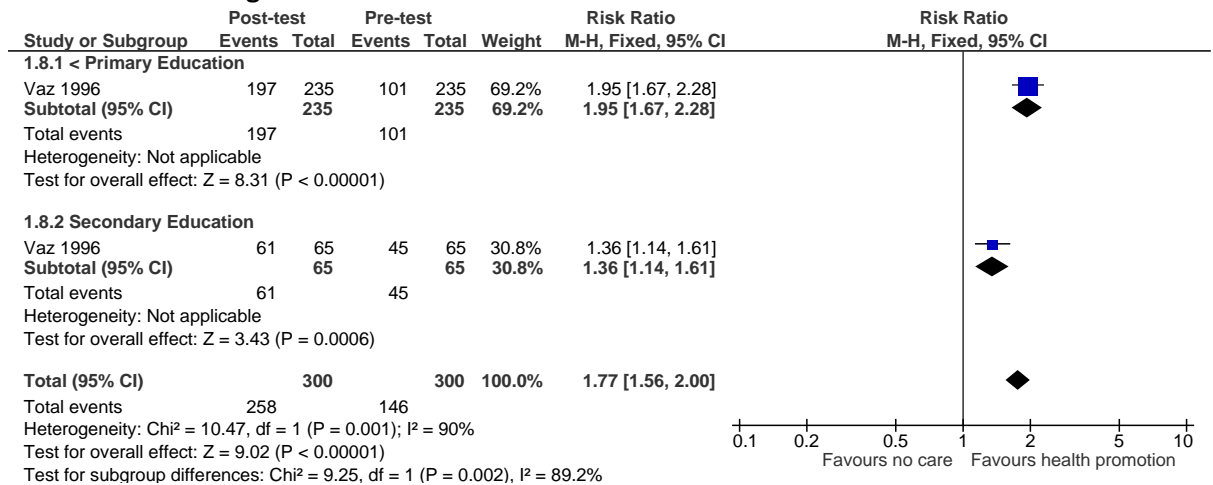


Figure 30: Sexual health promotion versus no care in prison - Condom use intention

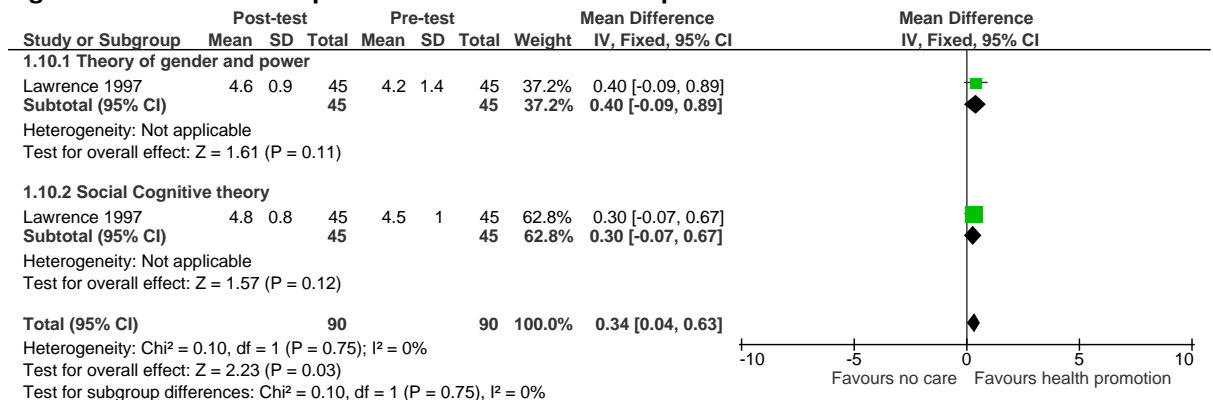
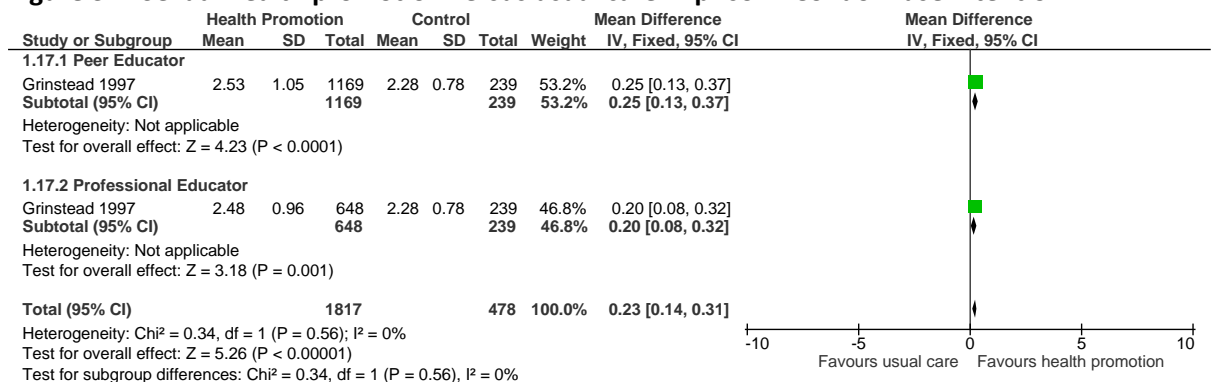


Figure 31: Sexual health promotion versus usual care in prison - Condom use intention



K.3.1.3.2 Access to condom dispensers versus no readily available access

Figure 32: Access to condom dispenser (individually wrapped condoms) versus access via a scheduled meeting with a healthcare provider - Obtaining condoms

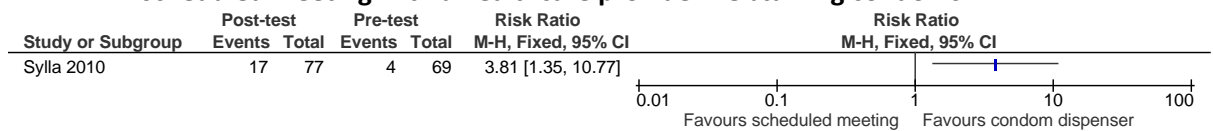


Figure 33: Access to condom dispensers (individually wrapped condoms) versus access via scheduled meeting with a healthcare provider - safe anal sex

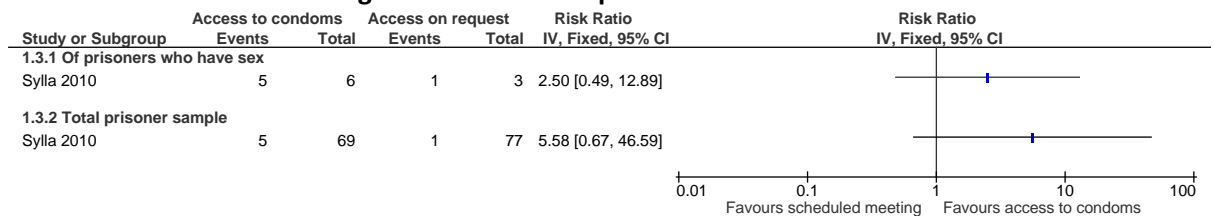
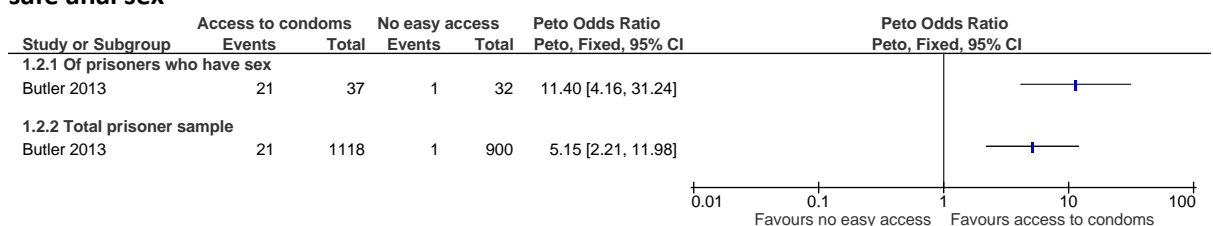


Figure 34: Access to condom dispenser (condom kit) versus "no readily available access" - safe anal sex



K3.1.4 Smoking cessation

K.3.1.4.1 Behavioural intervention versus usual care in male prisoners

Figure 35: Mean change in CO-oximetry

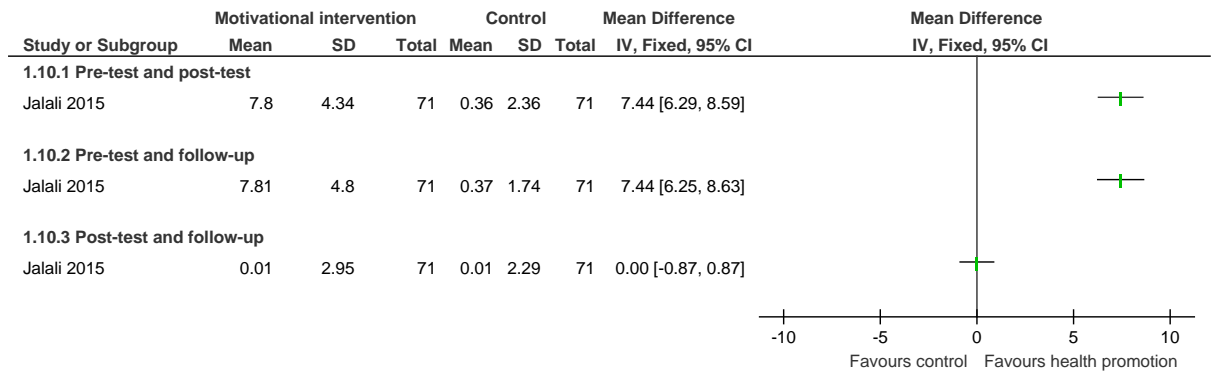


Figure 36: Mean change in cigarettes per day

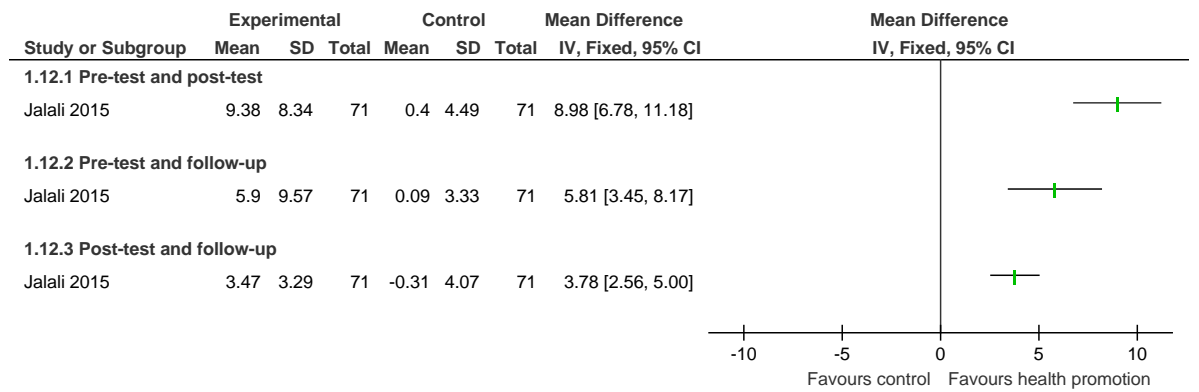
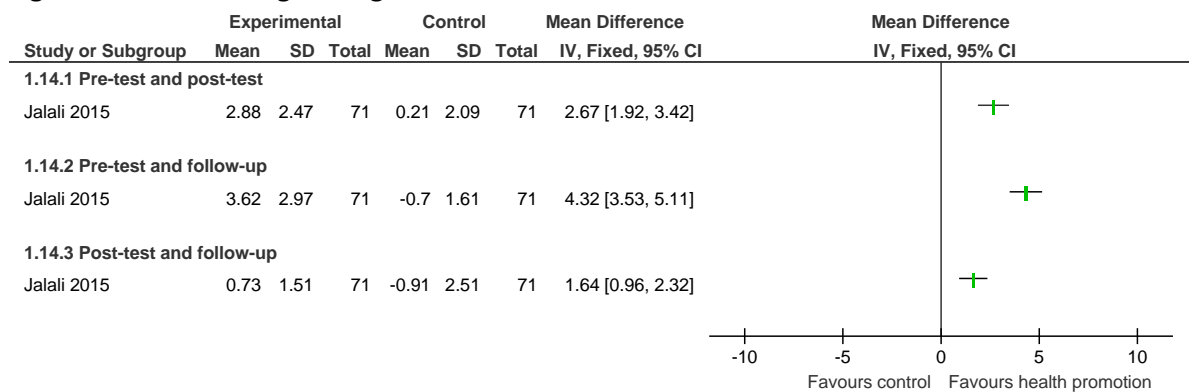


Figure 37: Mean change in Fagerström test



K.3.1.42 Behavioural intervention versus usual care in male prisoners

Figure 38: Mean change in CO-oximetry

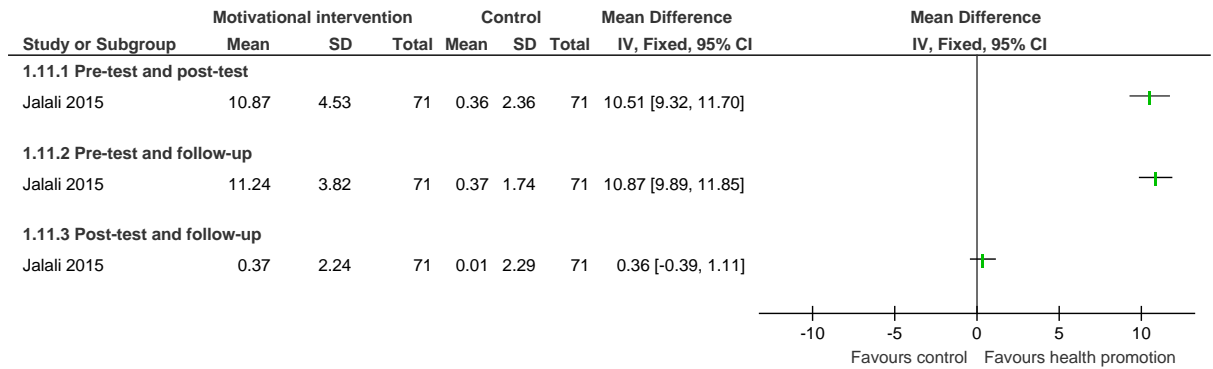


Figure 39: Mean change in cigarettes per day

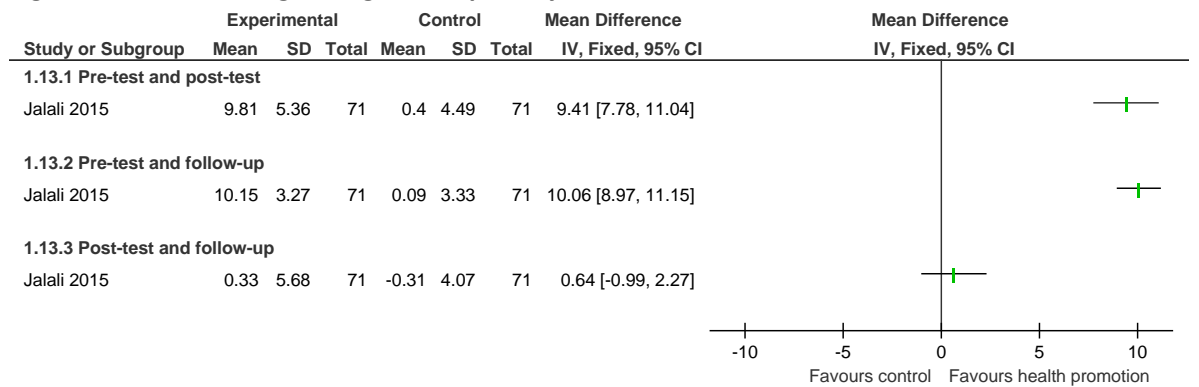
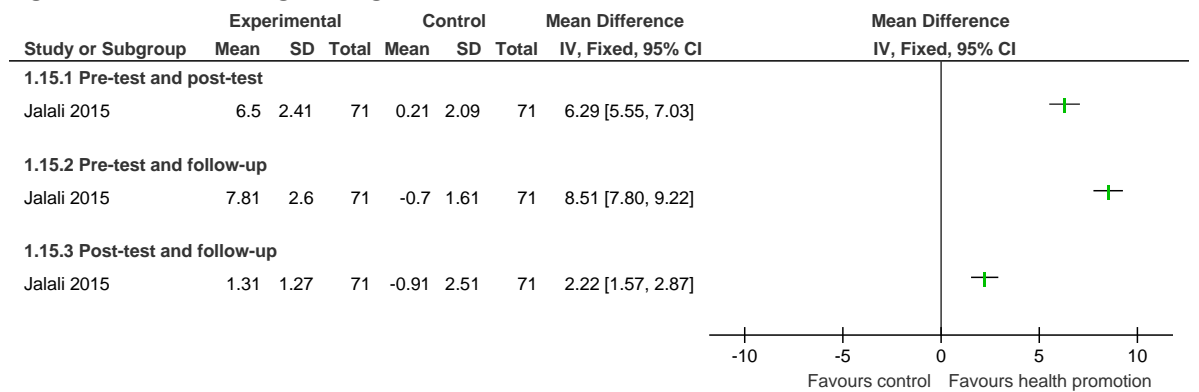


Figure 40: Mean change in Fagerström test



K.3.1.23 Behavioural intervention plus nicotine patch versus usual care in women prisoners

Figure 41: Smoking abstinence

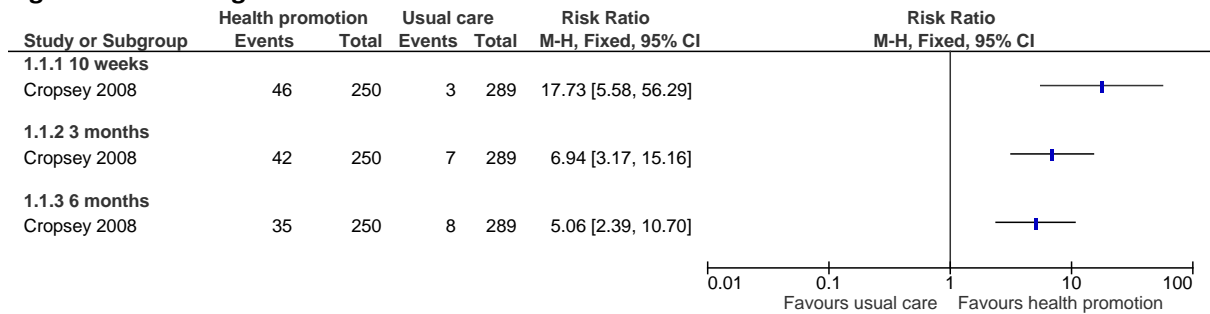


Figure 42: Behavioural intervention sessions attended

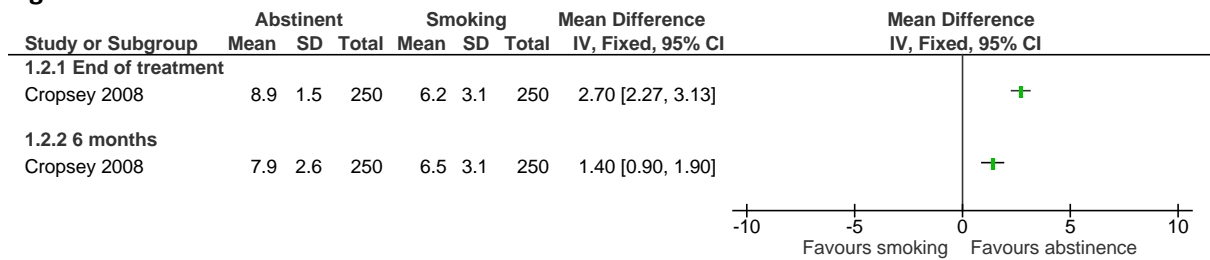
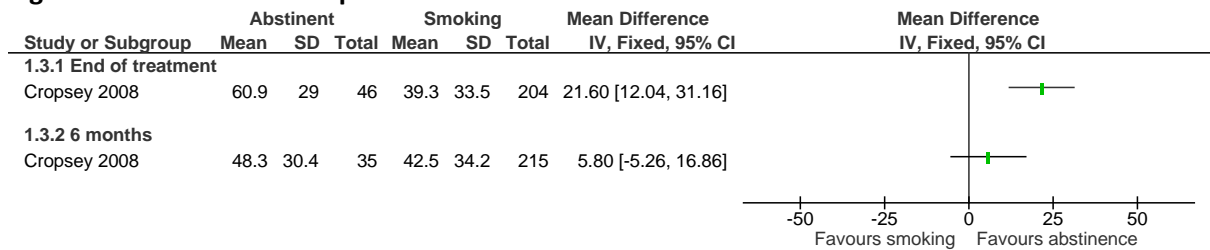


Figure 43: Medication compliance



K.3.1.24 Behavioural intervention plus nicotine patch plus nortriptyline (NOR) versus behavioural intervention plus nicotine patch in male prisoners

Figure 44: Continuous smoking abstinence

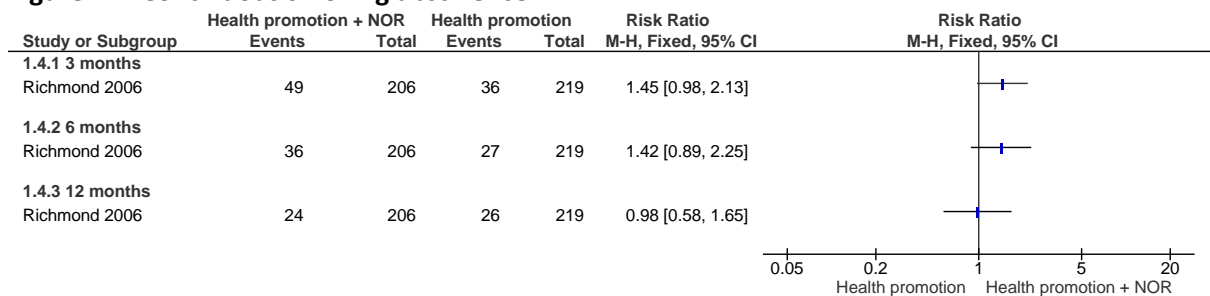


Figure 45: Point prevalence smoking abstinence

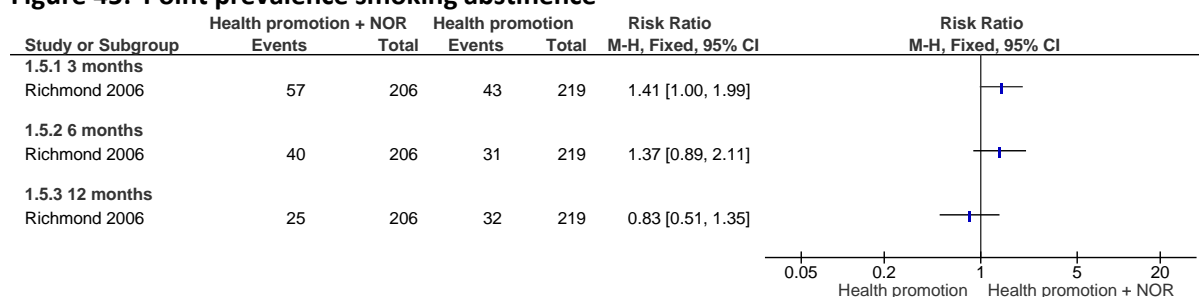
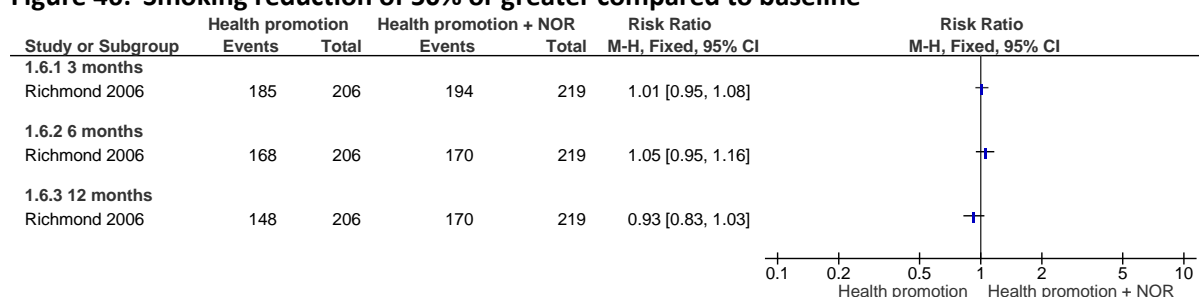


Figure 46: Smoking reduction of 50% or greater compared to baseline



K.3.1.23 Behavioural intervention versus usual care in male prisoners

Figure 47: Smoking abstinence at 6 months

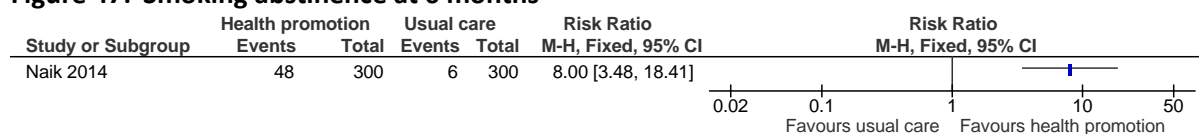


Figure 48: Attempt to quit smoking at 6 months (yes/no)

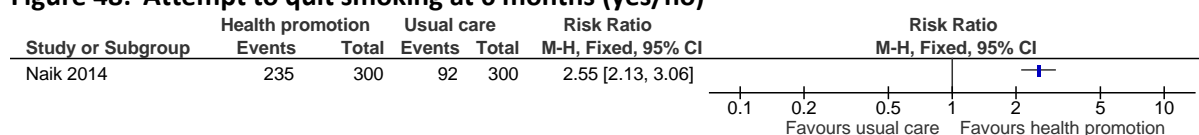
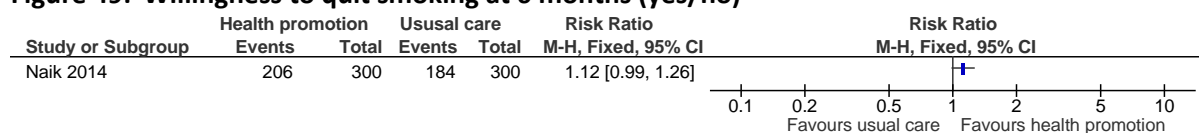


Figure 49: Willingness to quit smoking at 6 months (yes/no)



28

K.3.2 Methods of delivery

30 None.

K.3.13 Who should deliver

Figure 50: Peer educator versus professional educator – condom use intention

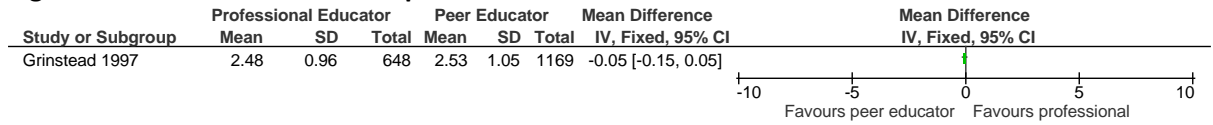
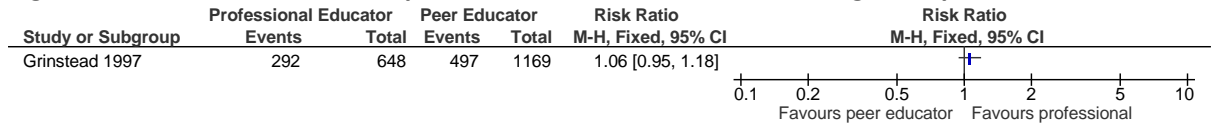


Figure 51: Peer educator versus professional educator – HIV screening test uptake

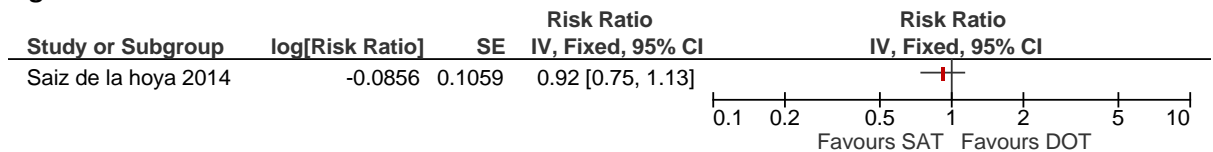


K.4 Medication management

K.4.1 Methods to access medicines

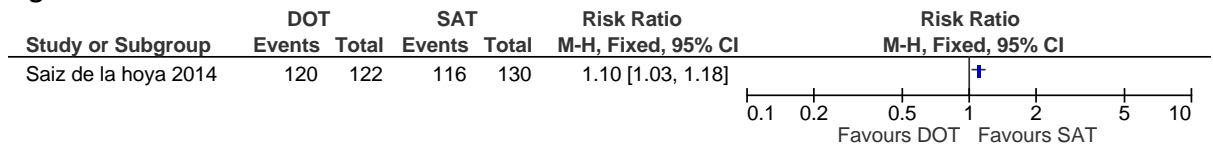
K.4.1.1 Sustained virological response

Figure 52: DOT versus SAT



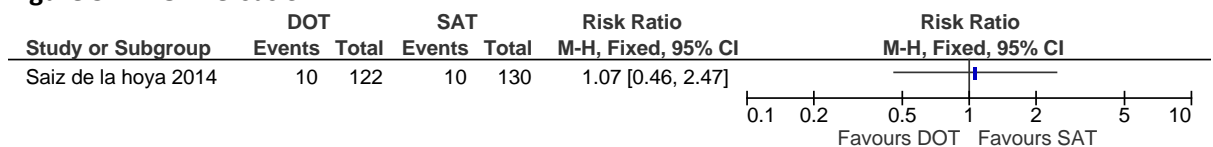
K.4.1.2 Mild adverse events

Figure 53: DOT versus SAT



K.4.1.3 Serious adverse events

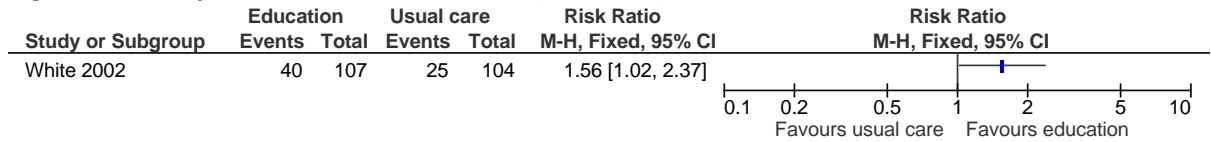
Figure 54: DOT versus SAT



K4.2 Methods for continuity of care

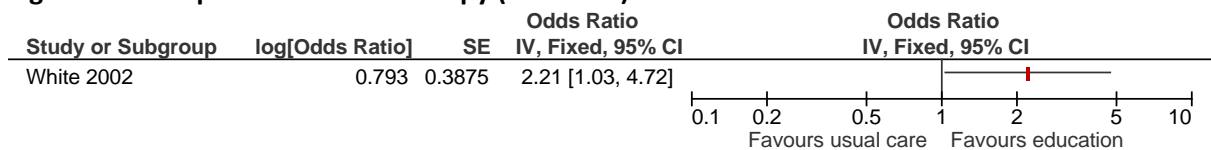
K4.2.1 Education versus usual care

Figure 55: Completed first visit to TB clinic (6 months)



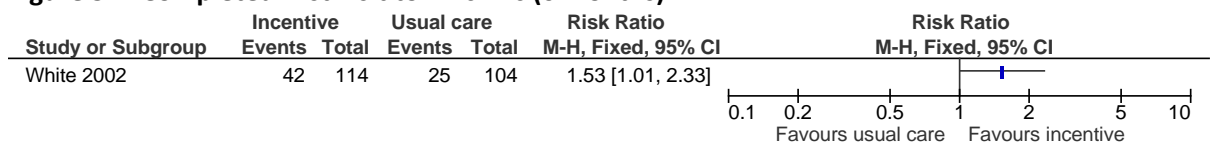
3

Figure 56: Completed isoniazid therapy (6 months)



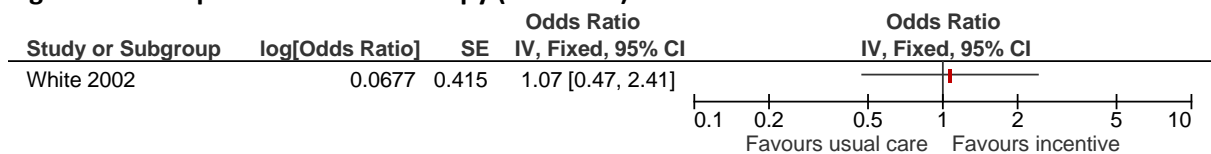
K4.2.2 Incentive versus usual care

Figure 57: Completed first visit to TB clinic (6 months)



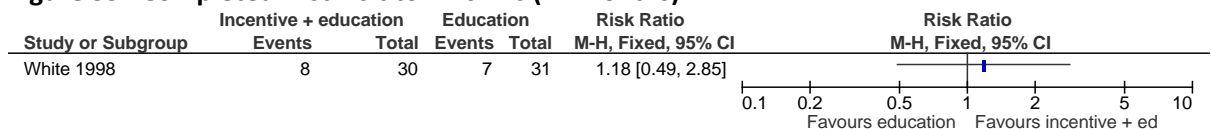
5

Figure 58: Completed isoniazid therapy (6 months)



K4.2.3 Incentive plus education versus education

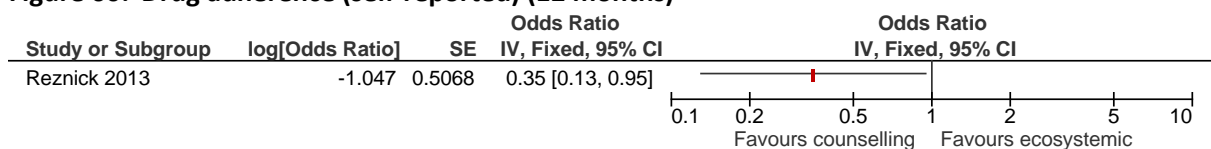
Figure 59: Completed first visit to TB clinic (12 months)



7

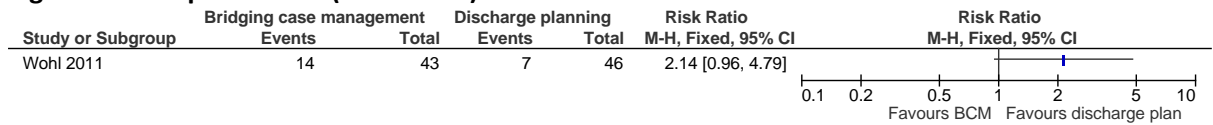
K4.2.4 Ecosystemic education versus individual counselling

Figure 60: Drug adherence (self-reported) (12 months)



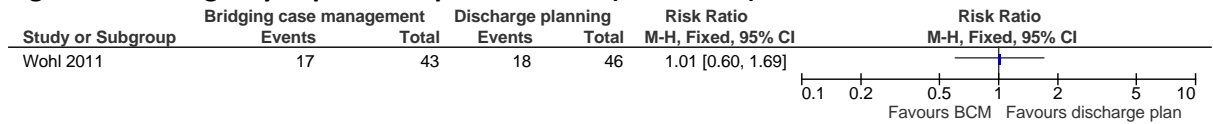
K9.2.5 Bridging case management versus discharge planning

Figure 61: Hospitalisation (12 months)



10

Figure 62: Emergency department presentations (12 months)



K.4.13 Barriers and facilitators to ensuring access to medicines

12 None.

K.5 Monitoring chronic condition

14 None.

K.6 Deteriorating health

K.6.1 Deteriorating health

17 None.

K.6.2 Emergency situations

19 None.

K.7 Continuity of healthcare

K.7.1 Barriers and facilitators to continuity of healthcare

22 None.

K.7.2 Systems to manage patient records

24 None.

25

1 Appendix L: Excluded clinical studies

L.1 Health assessment

L.1.1 Reception assessment

4 **Table 20: Studies excluded from the clinical review**

Reference	Reason for exclusion
Bennett 2008 ³⁷	Single test at admittance (drug screening)
Birmingham 1997 ⁴⁵	Assesses accuracy of the standard medical questionnaire (F2169) in identifying mental health conditions
Conklin 2000 ⁸²	Study design (qualitative)
Duhamel 1999 ¹¹⁵	Not applicable, not reception assessment (health status assessment)
Eckstein 2007 ¹¹⁸	Not applicable, not reception assessment (health needs assessment)
Enders 2005 ¹²⁷	Inappropriate study design (qualitative)
Fickenscher 2001 ¹³³	Not applicable, not reception assessment (health needs assessment)
Freestone 2015 ¹⁴¹	Mental health assessment
Gore 1996 ¹⁵⁵	Single test at admittance (drug screening)
Gray 2014 ¹⁵⁷	Not applicable, not reception assessment (dental triage)
Jones 2014 ²⁰⁵	Single test at admittance (drug screening)
Kaba 2014 ²⁰⁸	Single test at admittance (traumatic brain injury)
Kipping 2011 ²¹⁷	Inappropriate study design (qualitative)
Macaskill 2011 ²⁵⁹	Single test at admittance (alcohol screening)
Macintyre 2004 ²⁶³	Single test at admittance (drug screening)
McCarthy 2015 ²⁸⁴	Single test at admittance (neurodevelopmental disorders)
McKinnon 2002 ²⁸⁷	No relevant (diagnostic) outcomes reported
McKinnon 2015 ²⁸⁶	Single test at admittance (intellectual disability)
Miles 2007 ²⁹⁸	Single test at admittance (drug screening)
Morrison 2001 ³¹⁰	Not applicable, not reception assessment (retrospective health needs assessment)
Murphy 2015 ³¹⁷	Single test at admittance (intellectual disability)
Raba 1983 ³⁷⁶	No comparison
Ringgenberg 2011 ³⁹⁰	Not applicable, not reception assessment (dental triage)
Scheyett 2009 ⁴⁰¹	Inappropriate study design (qualitative)
Shaw 2008 ⁴⁵²	Inappropriate study design (qualitative)
Stewart 2008 ⁴⁴¹	Not applicable, not reception assessment (health needs assessment)
Stewart 2009 ⁴⁴²	Single test at admittance (drug screening)
Sweet 2003 ⁴⁴⁵	Single test at admittance (drug screening)
Swett 1984 ⁴⁴⁷	Single test at admittance (alcohol screening)
Young 2001 ⁵¹⁸	Not applicable, not reception assessment (health needs assessment)
Young 2015 ⁵¹⁷	Single test at admittance (intellectual disability)

L.1.2 Subsequent assessment

6 **Table 21: Studies excluded from the clinical review**

Reference	Reason for exclusion
Andersen 2002 ¹⁰	Incorrect intervention (mental health assessment)
Anon 1995 ⁴⁰⁶	No intervention
Anon 2002 ¹⁷⁷	No intervention
Anon 2004a ¹⁷⁵	No intervention
Anon 2004b ¹⁷⁴	No comparison
Anon 2004c ³⁸⁰	No intervention
Anon 2014 ¹⁹⁷	Incorrect intervention (mental health assessment)
Asch 2011 ¹⁸	Incorrect intervention (assessment of health service performance)
Azbel 2013 ²⁰	No comparison
Bloche 2005 ⁴⁶	Editorial
Buchanan 2008 ⁵⁶	Incorrect intervention (single assessment – dentistry)
Caulfield 2010 ⁷²	Incorrect intervention (assessment of risk/need)
Chariot 2013 ⁷⁵	No comparison
Chitsabesan 2014 ⁷⁷	Incorrect intervention (single assessment - neurodisability)
de Viggiani 2012 ⁹⁹	No intervention
Dembo 1997 ¹⁰⁰	Incorrect intervention (mental health assessment)
Derro 1978 ¹⁰²	No comparison
Farabee 2011 ¹³²	Incorrect intervention (assessment of risk)
Freestone 2015 ¹⁴¹	Incorrect intervention (mental health assessment)
Galappathie 2007 ¹⁴⁵	No comparison
Golzari 2014 ¹⁵⁴	No diagnostic accuracy data reported
Gray 2014 ¹⁵⁷	Incorrect intervention (assessment at reception)
Holstein 2014 ¹⁹²	Incorrect intervention (health literacy assessment)
Jacobson 1956 ¹⁹⁹	Incorrect intervention (single assessment – TB)
Jacques 2010 ²⁰¹	Incorrect intervention (mental health assessment)
Jamil 2006 ²⁰³	No comparison
Kreffft 1983 ²²⁵	Incorrect intervention (mental health assessment)
Lyle 1968 ²⁵⁶	Incorrect intervention (mental health assessment)
Marshall 2001 ²⁷³	No intervention
McCarthy 2015 ²⁸⁴	Incorrect intervention (single assessment - neurodevelopmental disorders)
McKinnon 2013 ²⁸⁷	Incorrect intervention (assessment at reception)
Murphy 2015 ³¹⁷	Incorrect intervention (single assessment - intellectual disability)
Ross 2012 ³⁹³	No comparison
Shapiro 1987 ⁴¹⁰	Inappropriate comparison (accessed health care)
Sirdfield 2012 ⁴²⁴	Incorrect study design
Young 2015 ⁵¹⁷	Incorrect intervention (single assessment - intellectual disability)

L.1.7 When should subsequent assessments be done

8 **Table 22: Studies excluded from the clinical review**

Reference	Reason for exclusion
Andersen 2002 ¹⁰	Incorrect intervention (mental health assessment)
Anon 1995 ⁴⁰⁶	No intervention
Anon 2002 ¹⁷⁷	No intervention
Anon 2004a ¹⁷⁵	No intervention
Anon 2004b ¹⁷⁴	No comparison
Anon 2004c ³⁸⁰	No intervention
Anon 2014 ¹⁹⁷	Incorrect intervention (mental health assessment)
Asch 2011 ¹⁸	Incorrect intervention (assessment of health service performance)
Azbel 2013 ²⁰	No comparison
Bai 2014 ²⁶	Time point that health assessment undertaken not stated
Bloche 2005 ⁴⁶	Editorial
Buchanan 2008 ⁵⁶	Incorrect intervention (single assessment – dentistry)
Caulfield 2010 ⁷²	Incorrect intervention (assessment of risk/need)
Chariot 2013 ⁷⁵	No comparison
Chitsabesan 2014 ⁷⁷	Incorrect intervention (single assessment - neurodisability)
de Viggiani 2012 ⁹⁹	No intervention
Dembo 1997 ¹⁰⁰	Incorrect intervention (mental health assessment)
Derro 1978 ¹⁰²	No comparison
Farabee 2011 ¹³²	Incorrect intervention (assessment of risk)
Freestone 2015 ¹⁴¹	Mental health assessment
Galappathie 2007 ¹⁴⁵	No comparison
Golzari 2014 ¹⁵⁴	No diagnostic accuracy data reported
Gray 2014 ¹⁵⁷	Incorrect intervention (assessment at reception)
Holstein 2014 ¹⁹²	Incorrect intervention (health literacy assessment)
Jacobson 1956 ¹⁹⁹	Incorrect intervention (single assessment – TB)
Jacques 2010 ²⁰¹	Incorrect intervention (mental health assessment)
Jamil 2007 ²⁰³	No comparison
Kreffft 1983 ²²⁵	Incorrect intervention (mental health assessment)
Lyle 1968 ²⁵⁶	Incorrect intervention (mental health assessment)
Marshall 2001 ²⁷³	No intervention
McCarthy 2015 ²⁸⁴	Single test at admittance (neurodevelopmental disorders)
McKinnon 2013 ²⁸⁷	Incorrect intervention (assessment at reception)
Murphy 2015 ³¹⁷	Single test at admittance (intellectual disability)
Ross 2012 ³⁹³	No comparison
Shapiro 1987 ⁴¹⁰	Inappropriate comparison (accessed health care)
Sirdfield 2012 ⁴²⁴	Incorrect study design
Young 2015 ⁵¹⁷	Single test at admittance (intellectual disability)

L.194 Assessment tools

10 **Table 23: Studies excluded from the clinical review**

Reference	Reason for exclusion
Altass 2001 ⁶	No relevant data reported
Anon 2015 ¹²¹	No tool
Anon 2015 ¹²¹	Incorrect population
Bagnall 2015 ²⁵	No tool
Bailey 2015 ²⁷	No tool
Bailey 2015 ²⁷	Incorrect study design
Battaglia 2014 ³⁴	No tool
Battaglia 2014 ³⁴	Incorrect study design
Buchanan 2008 ⁵⁶	Incorrect intervention (dentistry)
Connell 2015 ⁸³	Incorrect study design
Cunningham 2002 ⁹²	Not relevant outcomes reported
Djachenko 2015 ¹⁰⁷	Literature review
Fogel 2015 ¹³⁶	Incorrect population
Gallagher 1987 ¹⁴⁶	Narrative review
Grubin 2002 ¹⁶²	No relevant data reported
Henderson-Nichol 2003 ¹⁸⁴	Review
HM Chief Inspector of Prisons 2004 ¹⁸⁹	Incorrect study design
Irene 2008 ⁸⁶	Incorrect study design
Kipping 2011 ²¹⁷	Incorrect study design (cross-sectional and qualitative)
Knudsen 2014 ²²¹	Incorrect population
Kouyoumdjian 2015 ²²⁴	Systematic review – checked for references
Lester 2003 ²³⁹	Incorrect study design (survey)
MacDonald 2013 ²⁶⁰	No tool
Moloughney 2004 ¹⁷⁴	No tool
Murphy 2015 ³¹⁸	Incorrect study design
Osorio 2012 ³⁴¹	Review
Ramsden 2015 ³⁷⁸	No tool
Shelton 2015 ⁴¹³	Commentary
Shelton 2015 ⁴¹³	Commentary
Swenty 2014 ⁴⁴⁶	Incorrect study design
Twyman 2014 ⁴⁶³	No tool
Underhill 2014 ⁴⁶⁴	Systematic review – checked for references
Visher 2014 ⁴⁷⁴	Incorrect population
Wagoner 2015 ⁴⁷⁶	Incorrect population

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L2 Coordination and communication

13 **Table 24: Studies excluded from the clinical review**

Reference	Reason for exclusion
Adams 2011 ¹	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Addaction 2004 ²	Incorrect study design
Adshead 2005 ³	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Altus 2006 ⁷	Incorrect study design
Anaraki 2003 ⁹	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Angell 2014 ¹¹	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Anon 1998 ³⁷⁰	Advertisement
Anon 2000 ¹⁷⁶	Incorrect study design
Appelbaum 2001 ¹⁴	Incorrect study design
Appleby 1995 ¹⁵	Advertisement
Arriola 2002 ¹⁶	Incorrect study design
Arriola 2003 ¹⁷	Incorrect study design
Badger 1999 ²³	Incorrect study design
Badowski 2012 ²⁴	Incorrect study design
Baldwin 2009 ²⁸	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Barbera 2008 ²⁹	Incorrect study design
Barnao 2015 ³⁰	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Barsky 2007 ³²	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Berzin 2002 ⁴⁰	Incorrect study design
Binswanger 2011 ⁴²	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Binswanger 2012 ⁴³	Incorrect study design
Binswanger 2015 ⁴⁴	Incorrect study design
Bond 2007 ⁴⁷	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Bowen 2009 ⁵⁰	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Bracken 2015 ¹³¹	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Byng 2012 ⁶³	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Cashin 2010 ⁶⁹	Incorrect study design
Chafin 2013 ⁷³	Incorrect study design
Chaisson 1981 ⁷⁴	Incorrect study design
Condon 2007 ⁸¹	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals

Reference	Reason for exclusion
Coon 2008 ⁸⁴	Incorrect study design
Deslich 2013 ¹⁰³	Incorrect study design
Dieleman 2014 ¹⁰⁶	Incorrect study design
Dooris 2013 ¹¹²	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Ellem 2012 ¹²⁶	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Engle 1999 ¹²⁸	Incorrect study design
Eroy 2009 ¹²⁹	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Fischer 2007 ¹³⁴	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Gately 2006 ¹⁴⁸	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Hall 2001 ¹⁶³	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Hammett 2015 ¹⁶⁴	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Hiller 1999 ¹⁸⁶	Incorrect study design
HM Inspectorate Of 2012 ¹⁹⁰	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Kasmi 2015 ²¹⁰	Incorrect study design
Kinner 2006 ²¹⁶	Incorrect study design
Konkle-Parker 2011 ²²²	Incorrect study design
Kumar 2001 ²²⁷	Incorrect study design
Larsen 2004 ²²⁹	Incorrect study design
Leonard 2004 ²³⁷	Protocol only
Lincoln 2006 ²⁴⁴	Incorrect study design
Lloyd 2013 ²⁴⁷	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Lloyd 2015 ²⁴⁸	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Loeb 2007 ²⁵¹	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Luther 2011 ²⁵⁵	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
MacDonald 2012 ²⁶¹	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Martin 1991 ²⁷⁷	Incorrect study design
Martin 1993 ²⁸⁰	Incorrect study design
Mead 2004 ²⁸⁹	Incorrect study design
Mellow 2007 ²⁹⁴	Incorrect study design
Mellow 2008 ²⁹³	Incorrect study design
Min 2012 ³⁰¹	Incorrect study design
Morgan 2008 ³⁰⁹	Incorrect study design
Mullen 2009 ³¹³	Incorrect study design

Reference	Reason for exclusion
Needels 2005 ³²⁶	Incorrect study design
Norman 2000 ³³⁰	Incorrect study design
Okamoto 2001 ³³⁷	incorrect population
Olson 2009 ³³⁸	Incorrect study design
Patel 2014 ³⁴⁴	Incorrect study design
Plugge 2014 ³⁵⁶	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Pomerantz 2003 ³⁶⁰	Incorrect study design
Pope 2013 ³⁶¹	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Prandoni 1985 ³⁶⁵	Incorrect study design
Pulford 2011 ³⁷⁴	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Reingle Gonzalez 2014 ³⁸³	Incorrect study design
Richard 2012 ⁶³	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Saltmarsh 2012 ³⁹⁸	Incorrect study design
Schwalbe 2012 ⁴⁰⁴	incorrect population
Semien 2009 ⁴⁰⁸	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Sidbe 2015 ⁴¹⁹	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Small 2009 ⁴²⁷	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Souza 2015 ⁴³⁴	Incorrect study design
Sowell 2001 ⁴³⁵	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Tetley 2011 ⁴⁵⁰	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Van Der Velde 2012 ⁴⁶⁷	Incorrect study design
Vandavelde 2006 ⁴⁶⁹	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Vilke 2015 ⁴⁷³	Incorrect intervention
Walsh 1990 ⁴⁷⁹	Bibliography
Walsh 2013 ⁴⁷⁸	Incorrect study design
Weiskopf 2005 ⁴⁸⁷	Focus not on barriers and facilitators to coordination, case management and communication between prison staff and healthcare professionals
Wetzler 2006 ⁴⁸⁸	Incorrect study design
Williams 2009 ⁴⁹⁷	Incorrect study design
Williams 2013 ⁴⁹⁶	Incorrect study design
Wolff 2002 ⁵⁰¹	Incorrect study design
Woods 2013 ⁵⁰⁶	Incorrect study design
Wootton 2001 ⁵⁰⁷	Incorrect study design
Young 2004 ⁵¹⁵	Incorrect population

L3 Promoting health and wellbeing

L.3.1 Interventions

13.1.1 Nutrition

17 **Table 25: Studies excluded from the clinical review for the intervention: nutrition health**
18 **promotion**

Study	Reason for exclusion
Akbar 2012 ⁵	No relevant outcomes
Anon 2010 ³⁷²	Study design (news article)
Antonis 1961 ¹²	Not health-promotion. No relevant outcomes
Antonis 1963 ¹³	Not health-promotion. No relevant outcomes
Clouse 2012 ⁷⁸	No relevant outcomes
Cormac 2013 ⁸⁷	Preceding methodological paper withdrawn from publication
Curd 2013 ⁹³	No relevant outcomes
D'Asaro 1975 ⁹⁵	No relevant comparisons/outcomes
Flanagan 2011 ¹³⁵	No relevant outcomes pre-release
Forsyth 2012 ¹³⁹	Wrong population (staff survey)
Heidari 2014 ¹⁸²	Study design (cross-sectional/descriptive)
Kloppers 1971 ²¹⁹	Not health-promotion. No relevant outcomes
Martin 2013 ²⁷⁸	Primarily a physical activity intervention
Olubodun 1996 ³³⁹	Study design (descriptive)
Pease 1986 ³⁴⁷	Study design (descriptive)
Schoenthaler 1991 ⁴⁰³	Age of population
Worthington 1974 ⁵⁰⁹	Not health-promotion, 2 compulsory diets
Wright 2011 ⁵¹⁰	No relevant outcomes

13.1.2 Hygiene

20 **Table 26: Studies excluded from the clinical review for the intervention: Hygiene health**
21 **promotion**

Study	Reason for exclusion
Akbar 2012 ⁵	No relevant outcomes
Buchanan 2008 ⁵⁶	Assessment only
Clouse 2012 ⁷⁸	Not relevant outcomes
Conklin 2000 ⁸²	No relevant outcomes
Costa 2014 ⁸⁹	Study design (descriptive)
Elger 2011 ¹²⁵	Study design (descriptive)
Goldstein 2006 ¹⁵³	Wrong population (staff training)
Gray 2014 ¹⁵⁷	Assessment only
Harvey 2005 ¹⁶⁷	Study design (descriptive)
Heidari 2007 ¹⁸¹	Study design (cross-sectional)
Heidari 2014 ¹⁸²	Study design (cross-sectional/descriptive)
Heidari 2014 ¹⁸⁰	Study design (cross-sectional)

Study	Reason for exclusion
Heidari 2014 ¹⁷⁹	Study design (descriptive)
Loeb 2011 ²⁵⁰	Study design (cross-sectional)
Mack 2013 ²⁶⁴	Study design (longitudinal)
Maree 2010 ²⁷¹	Study design (case-control)
Marshman 2014 ²⁷⁵	Study design (cross-sectional)
Martin 1984 ²⁷⁶	Study design (cross-sectional)
Mekhjian 1996 ²⁹²	Low sample size, no comparator
Meyer 1981 ²⁹⁷	Study design (descriptive)
Moss 2005 ³¹¹	Study design (descriptive)
Oninla 2012 ³⁴⁰	Study design (cross-sectional)
Porter 1995 ³⁶²	Study design (descriptive)
Rawlins 1981 ³⁸²	Study design (descriptive)
Shapiro 1971 ⁴⁰⁹	Study design (cross-sectional)
Skoler 1975 ⁴²⁵	Study design (descriptive)
Smith 1989 ⁴²⁸	Study design (descriptive)
Stewart 2011 ⁴⁴³	Looking at promoting social care (e.g. Elderly patients)
Webb 2009 ⁴⁸⁵	Study design (cross-sectional)
Wootton 2004 ⁵⁰⁸	Study design (case-control)

123.1.3 Physical activity

23 **Table 27: Studies excluded from the clinical review for the intervention: physical activity**

Study	Reason for exclusion
Agozino 2009 ⁴	Study design (review)
Bacon 2012 ²²	No comparison
Booth 1989 ⁴⁸	Study design (discussion paper)
Cashin 2008 ⁶⁸	Pilot study for Cashin 2008 (included)
Clouse 2012 ⁷⁸	No relevant intervention
Condon 2008 ⁸⁰	Study design (qualitative)
Cormac 2013 ⁸⁸	No relevant outcomes
Cormac 2008 ⁸⁷	Withdrawn from publication
Cunningham 2002 ⁹²	No relevant outcomes
Dooris 2013 ¹¹²	No relevant outcome
Harner 2013 ¹⁶⁵	Study design (qualitative)
Haysom 2013 ¹⁷³	No relevant outcomes
Hilgenbrinck 2003 ¹⁸⁵	No relevant intervention
Lester 2003 ²³⁹	Study design (survey)
Loeb 2011 ²⁵⁰	Study design (qualitative)
Marshall 2001 ²⁷³	Study design (qualitative)
Meek 2012 ²⁹¹	No relevant outcomes
Messina 2013 ²⁹⁵	No relevant outcomes
Moore 2005 ³⁰⁸	Study design (abstract)
Munson 1988 ³¹⁶	No relevant outcomes
Oakley 2013 ³³⁴	Study design (qualitative)

Study	Reason for exclusion
Paterson 2007 ³⁴⁵	Study design (discussion paper)
Perez-Moreno 2007 ³⁴⁸	No relevant outcomes
Peterson 1995 ³⁵¹	No relevant outcomes
Pollock 1977 ³⁵⁸	No relevant outcome (focus on injury)
Tetlie 2008 ⁴⁵¹	Unable to extract results (narrative with missing data)
Woodall 2014 ⁵⁰⁵	Study design (qualitative)
Zucker 2010 ⁵¹⁹	Study design (abstract)
Zucker 2012 ⁵²⁰	No relevant intervention

18.1.4 Sexual health

25 **Table 28: Studies excluded from the clinical review for the intervention: sexual health promotion**

Study	Reason for exclusion
Anon 1991 ¹⁸⁸	Study design (policy statement)
Anon 2003 ²⁴⁰	Post-prison
Anon 2008 ⁴⁴⁴	Study design (news article)
Anonymous 2003 ³⁶⁶	Study design (report)
Anonymous 2009 ³³²	Study design (report)
Asl 2013 ¹⁹	Primarily a drug-behaviour health promotion
Baxter 1991 ³⁶	Poor outcome reporting
Brown 2014 ⁵²	Assessment only
Bryan 2003 ⁵⁴	Study design (cross-sectional)
De Groot 2006 ⁹⁸	Study design (descriptive)
Dolan 2004 ¹¹⁰	Poor outcome reporting
Dolan 2004 ¹⁰⁹	Study design (cross-sectional)
Dolan 2009 ¹⁰⁸	Study design (descriptive)
Dubik-Unruh 1999 ¹¹⁴	Study design (descriptive)
el-Bassel 1995 ¹²⁴	No relevant outcomes
Elger 2011 ¹²⁵	Study design (descriptive)
Hebb 2007 ¹⁷⁸	Study design (descriptive)
Hogben 2000 ¹⁹¹	Study design (cross-sectional)
Jurgens 2011 ²⁰⁷	Study design (descriptive)
Lehma 2001 ²³⁵	Poor outcome reporting
Leibowitz 2013 ²³⁶	Study design (econ model)
Leukefeld 2012 ²⁴¹	Community re-entry
Lyons 2014 ²⁵⁷	Study design (survey)
Magura 1995 ²⁶⁶	Follow-up post release
Mahto 2008 ²⁶⁷	Study design (cross-sectional)
Mallory 2013 ²⁶⁹	Jail pop not separate; 83% attrition rate
May 2002 ²⁸³	Study design (cross-sectional)
Minc 2007 ³⁰²	Study design (descriptive)
Shen 2011 ⁴¹⁵	Indirect setting (drug rehabilitation centre)
Sifunda 2008 ⁴²¹	Poor outcome reporting
Tang 2010 ⁴⁴⁹	Study design (cross-sectional)

Study	Reason for exclusion
Tripodi 2011 ⁴⁶¹	No relevant outcomes
Velasquez 2013 ⁴⁷¹	Conference abstract - does not list jail results
Weir 2009 ⁴⁸⁶	Wrong population (women on parole)
Winarso 2006 ⁴⁹⁸	Study design (descriptive)
Wootton 2001 ⁵⁰⁷	Study design (descriptive)

18.1.5 Smoking cessation

27 **Table 29: Studies excluded from the clinical review for the intervention: smoking cessation**

Study	Reason for exclusion
Berg 2013 ³⁸	Study design (prognostic)
Bryant 2011 ⁵⁵	Study design (review)
Chester 2011 ⁷⁶	Study design (audit)
Condon 2008 ⁸⁰	Study design (qualitative)
Corcoran 2010 ⁸⁵	Study design (qualitative)
Cropsey 2003 ⁹¹	No relevant intervention
Dickens 2005 ¹⁰⁵	Study design (survey)
Dooris 2013 ¹¹²	No relevant intervention
Eadie 2012 ¹¹⁷	Study design (qualitative)
Foley 2010 ¹³⁷	Study design (qualitative)
Garg 2009 ¹⁴⁷	No relevant intervention
Gautam 2011 ¹⁵⁰	Study design (discussion)
Helstrom 2004 ¹⁸³	Study design (abstract only)
Lasnier 2011 ²³⁰	No relevant intervention
Lawn 2014 ²³¹	Study design (qualitative)
Lawrence 2008 ²³³	No relevant outcomes
Linhorst 2001 ²⁴⁵	Study design (qualitative)
MacAskill 2008 ²⁵⁸	Study design (qualitative)
Makris 2012 ²⁶⁸	Study design (qualitative)
Richmond 2006 ³⁸⁸	Pilot study for Richmond 2013 (included)
Shetty 2010 ⁴¹⁷	Study design (abstract only)
Sieminska 2006 ⁴²⁰	Study design (qualitative)
Thibodeau 2012 ⁴⁵³	Study design (qualitative)
Twyman 2014 ⁴⁶³	Study design (qualitative)
Valera 2014 ⁴⁶⁶	Study design (qualitative)
Wongwiwatthanakit 2010 ⁵⁰²	Study design (abstract)

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L.302 Methods of delivery

31 **Table 30: Studies excluded from the clinical review^a**

Study	Reason for exclusion
Agozino 2009 ⁴	Study design (review)
Akbar 2012 ⁵	No relevant outcomes
Akbar 2012 ⁵	No relevant outcomes
Anon 1991 ¹⁸⁸	Study design (policy statement)
Anon 2003 ²⁴⁰	Post-prison
Anon 2008 ⁴⁴⁴	Study design (news article)
Anon 2010 ³⁷²	Study design (news article)
Anonymous 2003 ³⁶⁶	Study design (report)
Anonymous 2009 ³³²	Study design (report)
Antonis 1961 ¹²	Not health-promotion. No relevant outcomes
Antonis 1963 ¹³	Not health-promotion. No relevant outcomes
Asl 2013 ¹⁹	Primarily a drug-behaviour health promotion
Bacon 2012 ²²	No comparison
Baxter 1991 ³⁶	Poor outcome reporting
Berg 2013 ³⁸	Study design (prognostic)
Booth 1989 ⁴⁸	Study design (discussion paper)
Brown 2014 ⁵²	Assessment only
Bryan 2003 ⁵⁴	Study design (cross-sectional)
Bryant 2011 ⁵⁵	Study design (review)
Buchanan 2008 ⁵⁶	Assessment only
Cashin 2008 ⁶⁸	Pilot study for Cashin 2008 (included)
Chester 2011 ⁷⁶	Study design (audit)
Clouse 2012 ⁷⁸	No relevant outcomes
Clouse 2012 ⁷⁸	Not relevant outcomes
Clouse 2012 ⁷⁸	No relevant outcomes
Condon 2008 ⁸⁰	Study design (qualitative)
Condon 2008 ⁸⁰	Study design (qualitative)
Conklin 2000 ⁸²	No relevant outcomes
Corcoran 2010 ⁸⁵	Study design (qualitative)
Cormac 2008 ⁸⁷	Withdrawn from publication
Cormac 2013 ⁸⁷	Preceding methodological paper withdrawn from publication
Cormac 2013 ⁸⁸	No relevant outcomes
Costa 2014 ⁸⁹	Study design (descriptive)
Cropsey 2003 ⁹¹	No relevant intervention
Cunningham 2002 ⁹²	No relevant outcomes
Curd 2013 ⁹³	No relevant outcomes
D'Asaro 1975 ⁹⁵	No relevant comparisons/outcomes
De Groot 2006 ⁹⁸	Study design (descriptive)

^a Search strategy was split by intervention areas. Duplications in the excluded study list are present as studies may be selected from multiple searches

Study	Reason for exclusion
Dickens 2005 ¹⁰⁵	Study design (survey)
Dolan 2004 ¹⁰⁹	Study design (cross-sectional)
Dolan 2004 ¹¹⁰	Poor outcome reporting
Dolan 2009 ¹⁰⁸	Study design (descriptive)
Dooris 2013 ¹¹²	No relevant outcome
Dooris 2013 ¹¹²	No relevant outcome
Dubik-Unruh 1999 ¹¹⁴	Study design (descriptive)
Eadie 2012 ¹¹⁷	Study design (qualitative)
el-Bassel 1995 ¹²⁴	No relevant outcomes
Elger 2011 ¹²⁵	Study design (descriptive)
Elger 2011 ¹²⁵	Study design (descriptive)
Flanagan 2011 ¹³⁵	No relevant outcomes pre-release
Foley 2010 ¹³⁷	Study design (qualitative)
Forsyth 2012 ¹³⁹	Wrong population (staff survey)
Garg 2009 ¹⁴⁷	No relevant intervention
Gautam 2011 ¹⁵⁰	Study design (discussion)
Goldstein 2006 ¹⁵³	Wrong population (staff training)
Gray 2014 ¹⁵⁷	Assessment only
Harner 2013 ¹⁶⁵	Study design (qualitative)
Harvey 2005 ¹⁶⁷	Study design (descriptive)
Haysom 2013 ¹⁷³	No relevant outcomes
Hebb 2007 ¹⁷⁸	Study design (descriptive)
Heidari 2007 ¹⁸¹	Study design (cross-sectional)
Heidari 2014 ¹⁷⁹	Study design (descriptive)
Heidari 2014 ¹⁸⁰	Study design (cross-sectional)
Heidari 2014 ¹⁸²	Study design (cross-sectional/descriptive)
Heidari 2014 ¹⁸²	Study design (cross-sectional/descriptive)
Helstrom 2004 ¹⁸³	Study design (abstract only)
Hilgenbrinck 2003 ¹⁸⁵	No relevant intervention
Hogben 2000 ¹⁹¹	Study design (cross-sectional)
Jurgens 2011 ²⁰⁷	Study design (descriptive)
Kloppers 1971 ²¹⁹	Not health-promotion. No relevant outcomes
Lasnier 2011 ²³⁰	No relevant intervention
Lawn 2014 ²³¹	Study design (qualitative)
Lawrence 2008 ²³³	No relevant outcomes
Lehma 2001 ²³⁵	Poor outcome reporting
Leibowitz 2013 ²³⁶	Study design (econ model)
Lester 2003 ²³⁹	Study design (survey)
Leukefeld 2012 ²⁴¹	Community re-entry
Linhorst 2001 ²⁴⁵	Study design (qualitative)
Loeb 2011 ²⁵⁰	Study design (cross-sectional)
Loeb 2011 ²⁵⁰	Study design (cross-sectional)
Lyons 2014 ²⁵⁷	Study design (survey)

Study	Reason for exclusion
MacAskill 2008 ²⁵⁸	Study design (qualitative)
Mack 2013 ²⁶⁴	Study design (longitudinal)
Magura 1995 ²⁶⁶	Follow-up post release
Mahto 2008 ²⁶⁷	Study design (cross-sectional)
Makris 2012 ²⁶⁸	Study design (qualitative)
Mallory 2013 ²⁶⁹	Jail pop not separate; 83% attrition rate
Maree 2010 ²⁷¹	Study design (case-control)
Marshall 2001 ²⁷³	Study design (qualitative)
Marshman 2014 ²⁷⁵	Study design (cross-sectional)
Martin 1984 ²⁷⁶	Study design (cross-sectional)
Martin 2013 ²⁷⁸	Primarily a physical activity intervention
May 2002 ²⁸³	Study design (cross-sectional)
Meek 2012 ²⁹¹	No relevant outcomes
Mekhjian 1996 ²⁹²	Low sample size, no comparator
Messina 2013 ²⁹⁵	No relevant outcomes
Meyer 1981 ²⁹⁷	Study design (descriptive)
Minc 2007 ³⁰²	Study design (descriptive)
Moore 2005 ³⁰⁸	Study design (abstract)
Moss 2005 ³¹¹	Study design (descriptive)
Munson 1988 ³¹⁶	No relevant outcomes
Oakley 2013 ³³⁴	Study design (qualitative)
Olubodun 1996 ³³⁹	Study design (descriptive)
Oninla 2012 ³⁴⁰	Study design (cross-sectional)
Paterson 2007 ³⁴⁵	Study design (discussion paper)
Pease 1986 ³⁴⁷	Study design (descriptive)
Perez-Moreno 2007 ³⁴⁸	No relevant outcomes
Peterson 1995 ³⁵¹	No relevant outcomes
Pollock 1977 ³⁵⁸	No relevant outcome (focus on injury)
Porter 1995 ³⁶²	Study design (descriptive)
Rawlins 1981 ³⁸²	Study design (descriptive)
Richmond 2006 ³⁸⁸	Pilot study for Richmond 2013 (included)
Schoenthaler 1991 ⁴⁰³	Age of population
Shapiro 1971 ⁴⁰⁹	Study design (cross-sectional)
Shen 2011 ⁴¹⁵	Indirect setting (drug rehabilitation centre)
Shetty 2010 ⁴¹⁷	Study design (abstract only)
Sieminska 2006 ⁴²⁰	Study design (qualitative)
Sifunda 2008 ⁴²¹	Poor outcome reporting
Skoler 1975 ⁴²⁵	Study design (descriptive)
Smith 1989 ⁴²⁸	Study design (descriptive)
Stewart 2011 ⁴⁴³	Looking at promoting social care (e.g. Elderly patients)
Tang 2010 ⁴⁴⁹	Study design (cross-sectional)
Tetlie 2008 ⁴⁵¹	Unable to extract results (narrative with missing data)
Thibodeau 2012 ⁴⁵³	Study design (qualitative)

Study	Reason for exclusion
Tripodi 2011 ⁴⁶¹	No relevant outcomes
Twyman 2014 ⁴⁶³	Study design (qualitative)
Valera 2014 ⁴⁶⁶	Study design (qualitative)
Velasquez 2013 ⁴⁷¹	Conference abstract - does not list jail results
Webb 2009 ⁴⁸⁵	Study design (cross-sectional)
Weir 2009 ⁴⁸⁶	Wrong population (women on parole)
Winarso 2006 ⁴⁹⁸	Study design (descriptive)
Wongwiwatthanakit 2010 ⁵⁰²	Study design (abstract)
Woodall 2014 ⁵⁰⁵	Study design (qualitative)
Wootton 2001 ⁵⁰⁷	Study design (descriptive)
Wootton 2004 ⁵⁰⁸	Study design (case-control)
Worthington 1974 ⁵⁰⁹	Not health-promotion, 2 compulsory diets
Wright 2011 ⁵¹⁰	No relevant outcomes
Zucker 2010 ⁵¹⁹	Study design (abstract)
Zucker 2012 ⁵²⁰	No relevant intervention

L.3.3 Who should deliver

33 **Table 31: Studies excluded from the clinical review^b**

Study	Reason for exclusion
Agozino 2009 ⁴	Study design (review)
Akbar 2012 ⁵	No relevant outcomes
Akbar 2012 ⁵	No relevant outcomes
Anon 1991 ¹⁸⁸	Study design (policy statement)
Anon 2003 ²⁴⁰	Post-prison
Anon 2008 ⁴⁴⁴	Study design (news article)
Anon 2010 ³⁷²	Study design (news article)
Anonymous 2003 ³⁶⁶	Study design (report)
Anonymous 2009 ³³²	Study design (report)
Antonis 1961 ¹²	Not health-promotion. No relevant outcomes
Antonis 1963 ¹³	Not health-promotion. No relevant outcomes
Asl 2013 ¹⁹	Primarily a drug-behaviour health promotion
Bacon 2012 ²²	No comparison
Baxter 1991 ³⁶	Poor outcome reporting
Berg 2013 ³⁸	Study design (prognostic)
Booth 1989 ⁴⁸	Study design (discussion paper)
Brown 2014 ⁵²	Assessment only
Bryan 2003 ⁵⁴	Study design (cross-sectional)
Bryant 2011 ⁵⁵	Study design (review)
Buchanan 2008 ⁵⁶	Assessment only
Cashin 2008 ⁶⁸	Pilot study for Cashin 2008 (included)

^b Search strategy was split by intervention areas. Duplications in the excluded study list are present as studies may be selected from multiple searches

Study	Reason for exclusion
Chester 2011 ⁷⁶	Study design (audit)
Clouse 2012 ⁷⁸	No relevant outcomes
Clouse 2012 ⁷⁸	Not relevant outcomes
Clouse 2012 ⁷⁸	No relevant outcomes
Condon 2008 ⁸⁰	Study design (qualitative)
Condon 2008 ⁸⁰	Study design (qualitative)
Conklin 2000 ⁸²	No relevant outcomes
Corcoran 2010 ⁸⁵	Study design (qualitative)
Cormac 2008 ⁸⁷	Withdrawn from publication
Cormac 2013 ⁸⁷	Preceding methodological paper withdrawn from publication
Cormac 2013 ⁸⁸	No relevant outcomes
Costa 2014 ⁸⁹	Study design (descriptive)
Cropsey 2003 ⁹¹	No relevant intervention
Cunningham 2002 ⁹²	No relevant outcomes
Curd 2013 ⁹³	No relevant outcomes
D'Asaro 1975 ⁹⁵	No relevant comparisons/outcomes
De Groot 2006 ⁹⁸	Study design (descriptive)
Dickens 2005 ¹⁰⁵	Study design (survey)
Dolan 2004 ¹⁰⁹	Study design (cross-sectional)
Dolan 2004 ¹¹⁰	Poor outcome reporting
Dolan 2009 ¹⁰⁸	Study design (descriptive)
Dooris 2013 ¹¹²	No relevant outcome
Dooris 2013 ¹¹²	No relevant outcome
Dubik-Unruh 1999 ¹¹⁴	Study design (descriptive)
Eadie 2012 ¹¹⁷	Study design (qualitative)
el-Bassel 1995 ¹²⁴	No relevant outcomes
Elger 2011 ¹²⁵	Study design (descriptive)
Elger 2011 ¹²⁵	Study design (descriptive)
Flanagan 2011 ¹³⁵	No relevant outcomes pre-release
Foley 2010 ¹³⁷	Study design (qualitative)
Forsyth 2012 ¹³⁹	Wrong population (staff survey)
Garg 2009 ¹⁴⁷	No relevant intervention
Gautam 2011 ¹⁵⁰	Study design (discussion)
Goldstein 2006 ¹⁵³	Wrong population (staff training)
Gray 2014 ¹⁵⁷	Assessment only
Harner 2013 ¹⁶⁵	Study design (qualitative)
Harvey 2005 ¹⁶⁷	Study design (descriptive)
Haysom 2013 ¹⁷³	No relevant outcomes
Hebb 2007 ¹⁷⁸	Study design (descriptive)
Heidari 2007 ¹⁸¹	Study design (cross-sectional)
Heidari 2014 ¹⁷⁹	Study design (descriptive)
Heidari 2014 ¹⁸⁰	Study design (cross-sectional)
Heidari 2014 ¹⁸²	Study design (cross-sectional/descriptive)

Study	Reason for exclusion
Heidari 2014 ¹⁸²	Study design (cross-sectional/descriptive)
Helstrom 2004 ¹⁸³	Study design (abstract only)
Hilgenbrinck 2003 ¹⁸⁵	No relevant intervention
Hogben 2000 ¹⁹¹	Study design (cross-sectional)
Jurgens 2011 ²⁰⁷	Study design (descriptive)
Kloppers 1971 ²¹⁹	Not health-promotion. No relevant outcomes
Lasnier 2011 ²³⁰	No relevant intervention
Lawn 2014 ²³¹	Study design (qualitative)
Lawrence 2008 ²³³	No relevant outcomes
Lehma 2001 ²³⁵	Poor outcome reporting
Leibowitz 2013 ²³⁶	Study design (econ model)
Lester 2003 ²³⁹	Study design (survey)
Leukefeld 2012 ²⁴¹	Community re-entry
Linhorst 2001 ²⁴⁵	Study design (qualitative)
Loeb 2011 ²⁵⁰	Study design (cross-sectional)
Loeb 2011 ²⁵⁰	Study design (cross-sectional)
Lyons 2014 ²⁵⁷	Study design (survey)
MacAskill 2008 ²⁵⁸	Study design (qualitative)
Mack 2013 ²⁶⁴	Study design (longitudinal)
Magura 1995 ²⁶⁶	Follow-up post release
Mahto 2008 ²⁶⁷	Study design (cross-sectional)
Makris 2012 ²⁶⁸	Study design (qualitative)
Mallory 2013 ²⁶⁹	Jail pop not separate; 83% attrition rate
Maree 2010 ²⁷¹	Study design (case-control)
Marshall 2001 ²⁷³	Study design (qualitative)
Marshman 2014 ²⁷⁵	Study design (cross-sectional)
Martin 1984 ²⁷⁶	Study design (cross-sectional)
Martin 2013 ²⁷⁸	Primarily a physical activity intervention
May 2002 ²⁸³	Study design (cross-sectional)
Meek 2012 ²⁹¹	No relevant outcomes
Mekhjjan 1996 ²⁹²	Low sample size, no comparator
Messina 2013 ²⁹⁵	No relevant outcomes
Meyer 1981 ²⁹⁷	Study design (descriptive)
Minc 2007 ³⁰²	Study design (descriptive)
Moore 2005 ³⁰⁸	Study design (abstract)
Moss 2005 ³¹¹	Study design (descriptive)
Munson 1988 ³¹⁶	No relevant outcomes
Oakley 2013 ³³⁴	Study design (qualitative)
Olubodun 1996 ³³⁹	Study design (descriptive)
Oninla 2012 ³⁴⁰	Study design (cross-sectional)
Paterson 2007 ³⁴⁵	Study design (discussion paper)
Pease 1986 ³⁴⁷	Study design (descriptive)
Perez-Moreno 2007 ³⁴⁸	No relevant outcomes

Study	Reason for exclusion
Peterson 1995 ³⁵¹	No relevant outcomes
Pollock 1977 ³⁵⁸	No relevant outcome (focus on injury)
Porter 1995 ³⁶²	Study design (descriptive)
Rawlins 1981 ³⁸²	Study design (descriptive)
Richmond 2006 ³⁸⁸	Pilot study for Richmond 2013 (included)
Schoenthaler 1991 ⁴⁰³	Age of population
Shapiro 1971 ⁴⁰⁹	Study design (cross-sectional)
Shen 2011 ⁴¹⁵	Indirect setting (drug rehabilitation centre)
Shetty 2010 ⁴¹⁷	Study design (abstract only)
Sieminska 2006 ⁴²⁰	Study design (qualitative)
Sifunda 2008 ⁴²¹	Poor outcome reporting
Skoler 1975 ⁴²⁵	Study design (descriptive)
Smith 1989 ⁴²⁸	Study design (descriptive)
Stewart 2011 ⁴⁴³	Looking at promoting social care (e.g. Elderly patients)
Tang 2010 ⁴⁴⁹	Study design (cross-sectional)
Tetlie 2008 ⁴⁵¹	Unable to extract results (narrative with missing data)
Thibodeau 2012 ⁴⁵³	Study design (qualitative)
Tripodi 2011 ⁴⁶¹	No relevant outcomes
Twyman 2014 ⁴⁶³	Study design (qualitative)
Valera 2014 ⁴⁶⁶	Study design (qualitative)
Velasquez 2013 ⁴⁷¹	Conference abstract - does not list jail results
Webb 2009 ⁴⁸⁵	Study design (cross-sectional)
Weir 2009 ⁴⁸⁶	Wrong population (women on parole)
Winarso 2006 ⁴⁹⁸	Study design (descriptive)
Wongwiwatthanakit 2010 ⁵⁰²	Study design (abstract)
Woodall 2014 ⁵⁰⁵	Study design (qualitative)
Wootton 2001 ⁵⁰⁷	Study design (descriptive)
Wootton 2004 ⁵⁰⁸	Study design (case-control)
Worthington 1974 ⁵⁰⁹	Not health-promotion, 2 compulsory diets
Wright 2011 ⁵¹⁰	No relevant outcomes
Zucker 2010 ⁵¹⁹	Study design (abstract)
Zucker 2012 ⁵²⁰	No relevant intervention

L.3.4 Barriers and facilitators to health promotion

35 **Table 32: Studies excluded from the clinical review**

Reference	Reason for exclusion
Altab 2001 ⁶	Description of intervention, no outcomes reported
Anon 2015 ¹²¹	Incorrect population
Anon 2015 ¹²¹	Incorrect study design
Bagnall 2015 ²⁵	Focus not on barriers and facilitators to health promotion in prison
Bailey 2015 ²⁷	Incorrect study design
Bailey 2015 ²⁷	Incorrect study design
Battaglia 2014 ³⁴	Incorrect study design

Reference	Reason for exclusion
Battaglia 2014 ³⁴	Incorrect study design
Betts-Symonds 2011 ⁴¹	Incorrect population
Boothby 2011 ⁴⁹	Focus not on barriers and facilitators to health promotion in prison (prisoners reflecting on their own role as peer support 'insiders')
Brooker 2007 ⁵¹	Focus not on barriers and facilitators to health promotion in prison
Buston 2011 ⁵⁹	Conference abstract
Carcedo 2008 ⁶⁴	Focus on mental health
Collica 2010 ⁷⁹	Focus not on barriers and facilitators to health promotion in prison (about adapting to the prison environment/emotional support)
Connell 2015 ⁸³	Incorrect study design
Daniel 2000 ⁹⁶	Review
Djachenko 2015 ¹⁰⁷	Literature review
Donelle 2014 ¹¹¹	Focus not on barriers and facilitators to health promotion in prison
Eadie 2012 ¹¹⁷	Incorrect population (criminal justice/public health staff)
Edgar 2011 ¹²⁰	Focus not on barriers and facilitators to health promotion in prison
Enders 2005 ¹²⁷	Focus not on barriers and facilitators to health promotion in prison
Fogel 2015 ¹³⁶	Incorrect population
Foley 2010 ¹³⁷	n=3
Forsyth 2012 ¹³⁹	Incorrect population (prison staff)
Gallagher 1987 ¹⁴⁶	Narrative review
Gately 2006 ¹⁴⁸	Focus on management of long term conditions
Gatherer 2005 ¹⁴⁹	Review
Ginn 2013 ¹⁵²	Review
Heidari 2007 ¹⁸¹	Focus not on barriers and facilitators to health promotion in prison
Henderson-Nichol 2003 ¹⁸⁴	Review
HM Chief Inspector of Prisons 2004 ¹⁸⁹	Focus not on barriers and facilitators to health promotion in prison
HM Prison Hull 2002 ¹⁷⁷	Focus not on barriers and facilitators to health promotion in prison
Hoover 2009 ¹⁹³	Focus on needle exchange programme
Irene 2008 ⁸⁶	Incorrect study design
Jacobson 2008 ²⁰⁰	Focus not on barriers and facilitators to health promotion in prison (describes issues relating to reception/first few days in prison)
Kauffman 2007 ²¹¹	Incorrect population (correctional facilities)
Knudsen 2014 ²²¹	Incorrect population
Kouame 2014 ²²³	Narrative review
Kouyoumdjian 2015 ²²⁴	Systematic review – checked for references
LaRochelle 2012	Focus not on barriers and facilitators to health promotion in prison
Lehma 2001 ²³⁵	Quantitative study
Levenson 2002 ²⁴²	Incorrect population (ambiguous whether themes derived from prisoner or staff population)
Linhorst 2001 ²⁴⁵	Survey, no relevant outcomes reported
Macaskill 2008 ²⁵⁸	Focus not on barriers and facilitators to health promotion in prison
MacGowan 2006 ²⁶²	Quantitative study
Martin 2009 ²⁷⁹	Feasibility of prisoners participating in designing a public health intervention

Reference	Reason for exclusion
Meek 2012 ²⁹¹	Quantitative study
Mekhjan 1996 ²⁹²	Focus not on barriers and facilitators to health promotion in prison
Moller 2008 ³⁰⁷	Focus not on barriers and facilitators to health promotion in prison
Moller 2009 ³⁰⁶	Review
Munoz-Laboy 2012 ³¹⁴	Focus not on barriers and facilitators to health promotion in prison
Munoz-Plaza 2005 ³¹⁵	Focus on drug treatment programme
Murphy 2015 ³¹⁸	Incorrect study design
Nobile 2011 ³²⁸	Focus not on barriers and facilitators to health promotion in prison
O’Gorman 2012 ³³³	Feasibility of prisoners participating in designing a public health intervention
Oakley 2013 ³³⁴	Incorrect population (Medium Secure Units)
Osorio 2012 ³⁴¹	Review
Peterson 1995 ³⁵¹	Quantitative study
Prison Health Service ³⁶⁸	Descriptive study
Ramsden 2015 ³⁷⁸	Focus not on barriers and facilitators to health promotion in prison
Ritter 2013 ³⁹¹	Focus not on barriers and facilitators to health promotion in prison
Santora 2014 ³⁹⁹	Review
Shelton 2015 ⁴¹³	Commentary
Shelton 2015 ⁴¹³	Commentary
Sifunda 2006 ⁴²²	Focus not on barriers and facilitators to health promotion in prison
Sirdifield 2006 ⁴²³	Focus not on barriers and facilitators to health promotion in prison
Smoyer 2014A ⁴³⁰	Focus not on barriers and facilitators to health promotion in prison
South 2014 ⁴³³	Systematic review
Swenty 2014 ⁴⁴⁶	Incorrect study design
Tiwari 2014 ⁴⁵⁵	Focus not on barriers and facilitators to health promotion in prison
Todrys 2011 ⁴⁵⁷	Focus not on barriers and facilitators to health promotion in prison
Twyman 2014 ⁴⁶³	Systematic review
Twyman 2014 ⁴⁶³	No tool
Underhill 2014 ⁴⁶⁴	Systematic review – checked for references
Van Ginneken 2014 ⁴⁶⁸	Book review
Visher 2014 ⁴⁷⁴	Incorrect population
Wachter 2013 ⁴⁷⁵	Focus not on barriers and facilitators to health promotion in prison
Wagoner 2015 ⁴⁷⁶	Incorrect population
Whitehead 2006 ⁴⁹⁵	Review
Woodall 2009 ⁵⁰⁴	Focus not on barriers and facilitators to health promotion in prison
Woodall 2014 ⁵⁰⁵	Focus not on barriers and facilitators to health promotion in prison
Wright 2011 ⁵¹⁰	Systematic review

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37

L34 Medication management

L.4.1 Methods to access medicines

40 **Table 33: Studies excluded from the clinical review**

Study	Exclusion reason
Anon 2008 ³⁰⁴	Incorrect study design
Babudieri 2000 ²¹	Incorrect study design
Burns 2009 ⁵⁸	Incorrect study design
Carmenates 2001 ⁶⁵	No relevant outcomes reported
Casares-lopez 2012 ⁶⁶	Not in English
Castberg 2008 ⁷⁰	Incorrect study design
Catz 2010 ⁷¹	Incorrect study design
De blecourt 2009 ⁹⁷	Conference abstract
Dennis 2015 ¹⁰¹	Incorrect study design
Devereux 2002 ¹⁰⁴	Incorrect study design
Ehret 2011 ¹²²	Conference abstract
Ehret 2013 ¹²³	Incorrect interventions
Ford 2009 ¹³⁸	Systematic review - checked for references
Fujii 2012 ¹⁴³	Conference abstract
Gaynor king 1996 ¹⁵¹	Incorrect study design
Griffiths 2012 ¹⁵⁹	Systematic review - checked for references
Grommon 2013 ¹⁶¹	Not review population
Hammett 2015 ¹⁶⁴	Incorrect study design
Hart 2010 ¹⁶⁶	Systematic review - checked for references
Hughes rhidian 2000 ¹⁹⁴	Incorrect study design
Incorvaia 1997 ¹⁹⁶	Narrative review
Iroh 2015 ¹⁹⁸	Systematic review - checked for references
Kantrowitz kunkel 2005 ²⁰⁹	Conference abstract
Kaufmann 1997 ²¹²	Incorrect study design
Kim 2007 ²¹⁴	Incorrect study design
Klein 2007 ²¹⁸	Incorrect study design
Knisely 2008 ²²⁰	Development of prognostic tool for predicting drug misuse
Kroner 2014 ²²⁶	Incorrect study design
Lanzafame 2000 ²²⁸	No relevant outcomes reported
Lord Patel 2010 ²⁵²	Incorrect study design
Lucas 2002 ²⁵³	Narrative review
Lutge 2012 ²⁵⁴	Systematic review - checked for references
Mackain 2008 ²⁶⁵	Incorrect study design
Marco 1998 ²⁷⁰	Inappropriate comparison
Maru 2008 ²⁸¹	Outcome data not reported separately per group
Mathis 2010 ²⁸²	Incorrect study design
Mc 1998 ²⁸⁵	Incorrect study design
Meyer 2012 ²⁹⁶	Incorrect study design

Study	Exclusion reason
Mills 2011 ³⁰⁰	Incorrect study design
Nateniyom 2004 ³²⁰	Incorrect study design
Nolan 1997 ³²⁹	Incorrect study design
Nurhidayat 2015 ³³¹	Incorrect intervention
Parsons 2009 ³⁴³	Commentary
Petersilia 1992 ³⁵⁰	Illicit drugs
Phillips 2012 ³⁵³	Narrative review
Phillips 2014 ³⁵²	Narrative review
Pilkinton 2014 ³⁵⁴	Narrative review
Powell 2009 ³⁶³	Incorrect study design
Ptak 1975 ³⁷³	Commentary
Radcliffe 2008 ³⁷⁷	Incorrect study design
Renaud 1999 ³⁸⁴	Commentary
Reznick 2013 ³⁸⁵	Incorrect interventions
Roberson 2009 ³⁹²	Incorrect study design
Saberi 2012 ³⁹⁶	Incorrect study design
Saber-tehrani 2012 ³⁹⁵	Not review population
Santos 2006 ⁴⁰⁰	Incorrect study design
Schmidt 2013 ⁴⁰²	Incorrect study design
Schwitters 2014 ⁴⁰⁵	Incorrect study design
Seals 1997 ⁴⁰⁷	Incorrect study design
Shelton 2010 ⁴¹⁴	Narrative review
Sidibe 2015 ⁴¹⁹	Incorrect study design
Slavuckij 2002 ⁴²⁶	Incorrect study design
Solomon 2014 ⁴³¹	Incorrect study design
Springer 2010 ⁴³⁸	No relevant outcomes reported
Springer 2014 ⁴³⁶	Not review population
Thompson 2014 ⁴⁵⁴	Commentary
Tkacz 2010 ⁴⁵⁶	Not review population
Trace 1998 ⁴⁵⁹	Incorrect study design
Trigg 2012 ⁴⁶⁰	Incorrect study design
Veysey 2007 ⁴⁷²	Incorrect study design
Wang 2013 ⁴⁸²	Incorrect study design
White 1998 ⁴⁹⁴	Not review population
White 2002 ⁴⁹¹	Not review population
White 2005 ⁴⁹³	Incorrect study design
White 2006 ⁴⁹⁰	Incorrect study design
White 2012 ⁴⁹²	Incorrect interventions
Wohl 2003 ⁵⁰⁰	Incorrect study design
Wohl 2011 ⁴⁹⁹	Not review population

L.4.12 Methods for continuity of care

42 **Table 34: Studies excluded from the clinical review**

Study	Exclusion reason
Anon 2008 ³⁰⁴	Incorrect study design
Babudieri 2000 ²¹	Incorrect study design
Burns 2009 ⁵⁸	Incorrect study design
Carmenates 2001 ⁶⁵	Not review population
Casares-lopez 2012 ⁶⁶	Not in English
Castberg 2008 ⁷⁰	Incorrect study design
Catz 2010 ⁷¹	Incorrect study design
De blecourt 2009 ⁹⁷	Conference abstract
Dennis 2015 ¹⁰¹	Incorrect study design
Devereux 2002 ¹⁰⁴	Incorrect study design
Ehret 2011 ¹²²	Conference abstract
Ehret 2013 ¹²³	Incorrect interventions
Ford 2009 ¹³⁸	Systematic review - checked for references
Fujii 2012 ¹⁴³	Conference abstract
Gaynor king 1996 ¹⁵¹	Incorrect study design
Griffiths 2012 ¹⁵⁹	Systematic review - checked for references
Grommon 2013 ¹⁶¹	Incorrect interventions
Hammett 2015 ¹⁶⁴	Incorrect study design
Hart 2010 ¹⁶⁶	Systematic review - checked for references
Hughes rhidian 2000 ¹⁹⁴	Incorrect study design
Incorvaia 1997 ¹⁹⁶	Narrative review
Iroh 2015 ¹⁹⁸	Systematic review - checked for references
Kantrowitz kunkel 2005 ²⁰⁹	Conference abstract
Kaufmann 1997 ²¹²	Incorrect study design
Kim 2007 ²¹⁴	Incorrect study design
Klein 2007 ²¹⁸	Incorrect study design
Knisely 2008 ²²⁰	Incorrect study design
Kroner 2014 ²²⁶	Incorrect study design
Lanzafame 2000 ²²⁸	Not review population
Lord patel 2010 ²⁵²	Incorrect study design
Lucas 2002 ²⁵³	Narrative review
Lutge 2012 ²⁵⁴	Systematic review - checked for references
Mackain 2008 ²⁶⁵	Incorrect study design
Marco 1998 ²⁷⁰	Inappropriate comparison
Maru 2008 ²⁸¹	Not review population
Mathis 2010 ²⁸²	Incorrect study design
Mc 1998 ²⁸⁵	Incorrect study design
Meyer 2012 ²⁹⁶	Incorrect study design
Mills 2011 ³⁰⁰	Incorrect study design
Nateniyom 2004 ³²⁰	Incorrect study design
Nolan 1997 ³²⁹	Incorrect study design

Study	Exclusion reason
Nurhidayat 2015 ³³¹	Incorrect intervention
Parsons 2009 ³⁴³	Commentary
Petersilia 1992 ³⁵⁰	Incorrect interventions
Phillips 2012 ³⁵³	Narrative review
Phillips 2014 ³⁵²	Narrative review
Pilkinton 2014 ³⁵⁴	Narrative review
Powell 2009 ³⁶³	Incorrect study design
Ptak 1975 ³⁷³	Commentary
Radcliffe 2008 ³⁷⁷	Incorrect study design
Renaud 1999 ³⁸⁴	Commentary
Roberson 2009 ³⁹²	Incorrect study design
Saberi 2012 ³⁹⁶	Incorrect study design
Saber-tehrani 2012 ³⁹⁵	Protocol
Saiz de la hoya 2014 ³⁹⁷	Not review population
Santos 2006 ⁴⁰⁰	Incorrect study design
Schmidt 2013 ⁴⁰²	Incorrect study design
Schwitters 2014 ⁴⁰⁵	Incorrect study design
Seals 1997 ⁴⁰⁷	Incorrect study design
Shelton 2010 ⁴¹⁴	Narrative review
Sidibe 2015 ⁴¹⁹	Incorrect study design
Slavuckij 2002 ⁴²⁶	Incorrect study design
Solomon 2014 ⁴³¹	Incorrect study design
Springer 2010 ⁴³⁸	No relevant outcomes reported
Springer 2014 ⁴³⁶	Not review population
Thompson 2014 ⁴⁵⁴	Commentary
Tkacz 2010 ⁴⁵⁶	No relevant outcomes reported
Trace 1998 ⁴⁵⁹	Incorrect study design
Trigg 2012 ⁴⁶⁰	Incorrect study design
Veysey 2007 ⁴⁷²	Incorrect study design
Wang 2013 ⁴⁸²	Incorrect study design
White 2005 ⁴⁹³	Incorrect study design
White 2006 ⁴⁹⁰	Incorrect study design
White 2012 ⁴⁹²	Incorrect interventions
White 2015 ⁴⁸⁹	Not review population
Wohl 2003 ⁵⁰⁰	Incorrect study design

L.4.3 Barriers and facilitators to ensuring access to medicines

44 **Table 35: Studies excluded from the clinical review**

Reference	Reason for exclusion
Bartlett 2014 ³³	Incorrect study type
Blanco 2005 ⁴³²	Incorrect study type
Gonzalez 2014 ³⁸³	No relevant themes
Gray 2008 ¹⁵⁶	No barriers or facilitators to medication adherence identified

Reference	Reason for exclusion
Hassan 2010 ¹⁶⁹	Incorrect study type
Hassan 2013 ¹⁶⁸	No barriers or facilitators to medication adherence identified
Havnes 2013 ¹⁷²	Incorrect study type
Hilliard 2013 ¹⁸⁷	Incorrect study type
Home office 1993 ¹⁵⁸	Out of remit - about illegal drug misuse
Keene 1997 ²⁰⁴	Out of remit - about illegal drug misuse
Miller 1999 ²⁹⁹	No barriers or facilitators to medication adherence identified
Mostashari 1998 ³¹²	Incorrect study type
Polonsky 2014 ³⁵⁹	No barriers or facilitators to medication adherence identified
Santos 2006 ⁴⁰⁰	Incorrect study type
Small 2009 ⁴²⁷	Setting not relevant
Springer 2008 ⁴³⁷	Incorrect study type
Stewart 2009 ⁴⁴²	Out of remit - about illegal drug misuse
Way 2007 ⁴⁸⁴	No barriers or facilitators to medication adherence identified
White 2006 ⁴⁹⁰	Incorrect study type
Edens 1997 ¹¹⁹	Incorrect study type
Lee 2005 ²³⁴	No barriers or facilitators to medication adherence identified

L45 Monitoring chronic conditions

46 None.

L46 Deteriorating health and emergency management

L46.1 Deteriorating health

49 **Table 36: Studies excluded from the clinical review**

Reference	Reason for exclusion
Enders 2005 ¹²⁷	Focus on advance care planning
Esposito 2012 ¹³⁰	Focus on general health needs
Freshwater 2002 ¹⁴²	Focus on general training needs
Harner 2013 ¹⁶⁵	Focus of general health promotion
Hatton 2006 ¹⁷¹	Focus of general health promotion
HM Chief Inspector Of Prisons 2004 ¹⁸⁹	Study design (quantitative survey)
Kipping 2011 ²¹⁷	Focus on assessment at reception
Lin 2005 ²⁴³	Study design (survey)
Loeb 2011 ²⁴⁹	Focus of general health promotion
McLoughlin 2006 ²⁸⁸	Study design (descriptive)
Nesset 2011 ³²⁷	Study design (survey)
Perry 2013 ³⁴⁹	Psychological risk tool
Pizzini 2009 ³⁵⁵	Study design (abstract)
Rani 2010 ³⁷⁹	Focus on general training needs
Ratcliff 2004 ³⁸¹	Study design (quantitative)

Reference	Reason for exclusion
Stark 1994 ⁴³⁹	Study design (quantitative survey)
Stark 2005 ⁴⁴⁰	Study design (quantitative survey)
Turner 2010 ⁴⁶²	Study design (abstract)
Wang 2014 ⁴⁸⁰	Focus on evaluation of a health assessment tool
Woodall 2010 ⁵⁰³	Focus of general health promotion
Wright 2008 ⁵¹²	Study design (policy evaluation)
Yorston 2009 ⁵¹⁴	Focus on general health experiences

L.60 Emergency situations

51 **Table 37: Studies excluded from the clinical review**

Reference	Reason for exclusion
Anon 1960 ²⁹⁰	News report
Anon 1975 ³³⁶	Study design (quantitative cross-sectional)
Anon 1979 ⁴⁶⁵	Unable to locate a copy
Barry 2010 ³¹	Mixed-methods study design with focused on quantitative results and general health provision
Berry 2014 ³⁹	Study design (descriptive)
Bull 1975 ⁵⁷	Study design (descriptive)
Gage 1986 ¹⁴⁴	Study design (descriptive)
Hunter 1988 ¹⁹⁵	Focus on mental health (suicidal thoughts and self-harm)
Lessenger 1985 ²³⁸	Study design (descriptive)
Modlin 1979 ³⁰⁵	Study design (descriptive)
Parker Jr 2000 ³⁴²	Study design (jurisprudence review)
Payne-James 2010 ³⁴⁶	Study design (descriptive) and focus on forensic medical assessment
Shilling 2012 ⁴¹⁸	News report
Young 2000 ⁵¹⁶	Focus on recognising deteriorating health

L57 Continuity of healthcare

L.731 Barriers and facilitators to continuity of healthcare

54 **Table 38: Studies excluded from the clinical review**

Reference	Reason for exclusion
Adams 2011 ¹	Focus not on barriers and facilitators to ensuring continuity of healthcare
Addaction 2004 ²	Incorrect study design
Adshead 2005 ³	Focus not on barriers and facilitators to ensuring continuity of healthcare
Altus 2006 ⁷	Incorrect study design
Anaraki 2003 ⁹	Focus not on barriers and facilitators to ensuring continuity of healthcare
Angell 2014 ¹¹	Focus not on barriers and facilitators to ensuring continuity of healthcare
Anon 1998 ³⁷⁰	Advertisement
Anon 2000 ¹⁷⁶	Incorrect study design
Appelbaum 2001 ¹⁴	Incorrect study design
Appleby 1995 ¹⁵	Advertisement

Reference	Reason for exclusion
Arriola 2002 ¹⁶	Incorrect study design
Arriola 2003 ¹⁷	Incorrect study design
Badger 1999 ²³	Incorrect study design
Badowski 2012 ²⁴	Incorrect study design
Baldwin 2009 ²⁸	Focus not on barriers and facilitators to ensuring continuity of healthcare
Barbera 2008 ²⁹	Incorrect study design
Barnao 2015 ³⁰	Focus not on barriers and facilitators to ensuring continuity of healthcare
Barsky 2007 ³²	Focus not on barriers and facilitators to ensuring continuity of healthcare
Berzin 2002 ⁴⁰	Incorrect study design
Binswanger 2012 ⁴³	Incorrect study design
Binswanger 2015 ⁴⁴	Incorrect study design
Bond 2007 ⁴⁷	Focus not on barriers and facilitators to ensuring continuity of healthcare
Bowen 2009 ⁵⁰	Focus not on barriers and facilitators to ensuring continuity of healthcare
Byng 2012 ⁶³	Focus not on barriers and facilitators to ensuring continuity of healthcare
Cashin 2010 ⁶⁹	Incorrect study design
Chafin 2013 ⁷³	Incorrect study design
Chaisson 1981 ⁷⁴	Incorrect study design
Condon 2007 ⁸¹	Focus not on barriers and facilitators to ensuring continuity of healthcare
Coon 2008 ⁸⁴	Incorrect study design
Deslich 2013 ¹⁰³	Incorrect study design
Dieleman 2014 ¹⁰⁶	Incorrect study design
Dooris 2013 ⁹¹	Focus not on barriers and facilitators to ensuring continuity of healthcare
Ellem 2012 ¹²⁶	Focus not on barriers and facilitators to ensuring continuity of healthcare
Engle 1999 ¹²⁸	study design (descriptive)
Eroy 2009 ¹²⁹	Focus not on barriers and facilitators to ensuring continuity of healthcare
Fischer 2007 ¹³⁴	Focus not on barriers and facilitators to ensuring continuity of healthcare
Hall 2001 ¹⁶³	Focus not on barriers and facilitators to ensuring continuity of healthcare
Hiller 1999 ¹⁸⁶	Incorrect study design
Kasmi 2015 ²¹⁰	Incorrect study design
Kinner 2006 ²¹⁶	Incorrect study design
Konkle-Parker 2011 ²²²	Incorrect study design
Kumar 2001 ²²⁷	Incorrect study design
Larsen 2004 ²²⁹	Incorrect study design
Leonard 2004 ²³⁷	Protocol only
Lincoln 2006 ²⁴⁴	Incorrect study design
Lloyd 2013 ²⁴⁷	Focus not on barriers and facilitators to ensuring continuity of healthcare
Loeb 2007 ²⁵¹	Focus not on barriers and facilitators to ensuring continuity of healthcare
Luther 2011 ²⁵⁵	Focus not on barriers and facilitators to ensuring continuity of healthcare
MacDonald 2012 ²⁶¹	Incorrect population
Martin 1991 ²⁷⁷	Incorrect study design
Martin 1993 ²⁸⁰	Incorrect study design
Mead 2004 ²⁸⁹	Incorrect study design
Mellow 2007 ²⁹⁴	Incorrect study design

Reference	Reason for exclusion
Mellow 2008 ²⁹³	Incorrect study design
Min 2012 ³⁰¹	Incorrect study design
Morgan 2008 ³⁰⁹	Incorrect study design
Mullen 2009 ³¹³	Incorrect study design
Needels 2005 ³²⁶	Incorrect study design
Norman 2000 ³³⁰	Incorrect study design
Okamoto 2001 ³³⁷	incorrect population
Olson 2009 ³³⁸	Incorrect study design
Patel 2014 ³⁴⁴	Incorrect study design
Pomerantz 2003 ³⁶⁰	Incorrect study design
Pope 2013 ³⁶¹	Incorrect population
Prandoni 1985 ³⁶⁵	Incorrect study design
Pulford 2011 ³⁷⁴	Focus not on barriers and facilitators to ensuring continuity of healthcare
Reingle Gonzalez 2014 ³⁸³	Incorrect study design
Richard 2012 ⁶³	Focus not on barriers and facilitators to ensuring continuity of healthcare
Ricketts 2007 ⁵¹¹	Incorrect population
Saltmarsh 2012 ³⁹⁸	Incorrect study design
Schwalbe 2012 ⁴⁰⁴	Incorrect population
Semien 2009 ⁴⁰⁸	Focus not on barriers and facilitators to ensuring continuity of healthcare
Small 2009 ⁴²⁷	Focus not on barriers and facilitators to ensuring continuity of healthcare
Souza 2015 ⁴³⁴	Incorrect study design
Sowell 2001 ⁴³⁵	Focus not on barriers and facilitators to ensuring continuity of healthcare
Tetley 2011 ⁴⁵⁰	Focus not on barriers and facilitators to ensuring continuity of healthcare
Van Der Velde 2012 ⁴⁶⁷	Incorrect study design
Vandeveld 2006 ⁴⁶⁹	Focus not on barriers and facilitators to ensuring continuity of healthcare
Vilke 2015 ⁴⁷³	Incorrect intervention
Walsh 1990 ⁴⁷⁹	Bibliography
Walsh 2013 ⁴⁷⁸	Incorrect study design
Weiskopf 2005 ⁴⁸⁷	Focus not on barriers and facilitators to ensuring continuity of healthcare
Wetzler 2006 ⁴⁸⁸	Incorrect study design
Williams 2009 ⁴⁹⁷	Incorrect study design
Williams 2013 ⁴⁹⁶	Incorrect study design
Wolff 2002 ⁵⁰¹	Incorrect study design
Woods 2013 ⁵⁰⁶	Incorrect study design
Wootton 2001 ⁵⁰⁷	Incorrect study design
Wright 2014 ⁵¹¹	Focus not on barriers and facilitators to ensuring continuity of healthcare
Young 2004 ⁵¹⁵	Incorrect population

L.7.2 Systems to manage patient records

56 **Table 39: Studies excluded from the clinical review**

Reference	Reason for exclusion
Arriola 2003 ¹⁷	No relevant intervention
Dooris 2013 ¹¹²	No relevant intervention

Reference	Reason for exclusion
Dyer 2013 ¹¹⁶	Incorrect study design
Frazier 2013 ¹⁴⁰	No relevant outcomes (non-comparative study)
Hassan 2011 ¹⁶⁹	No relevant intervention
Jones 2002 ²⁰⁶	Out of remit – substance misuse
Wang 2012 ⁴⁸¹	No relevant intervention
Wang 2011 ⁴⁸³	Abstract of Wang 2012 ⁴⁸¹
Yates 1998 ⁵¹³	No relevant intervention

57

1 Appendix M: Excluded health economic studies

M.1 Health assessment

M.1.1 Reception assessment

4 None.

M.1.2 Subsequent assessment

6 None.

M.1.3 When should subsequent assessments be done

8 None.

M.1.4 Assessment tools

10 None.

M.2 Coordination and communication

12 None.

M.3 Promoting health and wellbeing

M.3.1 Interventions

15 None.

M.3.2 Methods of delivery

17 None.

M.3.3 Who should deliver

19 None.

M.3.4 Barriers and facilitators to health promotion

21 None.

M.4 Medication management

M.4.1 Methods to access medicines

24 None.

M.4~~2~~ **Methods for continuity of care**

26 None.

M.4~~3~~ **Barriers and facilitators to ensuring access to medicines**

28 None.

M.5 **Monitoring chronic conditions**

30 None.

M.6 **Deteriorating health and emergency management**

M.6~~1~~ **Deteriorating health**

33 None.

M.6~~2~~ **Emergency management**

35 None.

M.7 **Continuity of healthcare**

M.7~~1~~ **Barriers and facilitators to continuity of healthcare**

38 None.

M.7~~2~~ **Systems to manage patient records**

40 None.

41

1 Appendix N: Cost analysis: First-stage health 2 assessment

N.1 Introduction

4 In the absence of existing cost-effectiveness evidence, original analysis was conducted to examine
5 whether it could be cost-effective to recommend that the first stage of the health assessment,
6 immediately following reception, should be conducted by a registered nurse, compared to
7 recommending that the assessment should be conducted by a healthcare assistant (HCA).

8 The analysis focused on conditions with high prevalence in prisons, which it was considered could be
9 missed at a health assessment, and which could give rise to serious health events during the first
10 week in prison if the condition was not identified.

11 The GDG agreed that the physical conditions of most interest were asthma, angina and epilepsy. The
12 GDG also requested that mental health conditions also be considered. Following discussion with
13 representatives of the GDG for the NICE guideline on Mental health in the criminal justice system, it
14 was agreed that suicides within the first week after reception should also be included.

N.2 Approach to analysis

16 This analysis first considered the cost difference between using nurses and healthcare assistants for a
17 single reception appointment. The maximum potential difference in effectiveness between using
18 nurses compared to HCAs was then considered. The analysis examines the adverse consequences of
19 not identifying any of the 4 prespecified conditions until the second stage of the health assessment,
20 which should take place within 7 days, and compares the impact if nurses are successful and HCAs
21 unsuccessful in identifying these conditions. Effectiveness is expressed in quality-adjusted life years
22 (QALYs).

23 The difference in effectiveness that would be required for the, more expensive, nurse appointments
24 to be cost-effective at a cost-effectiveness threshold of £20,000 per QALY gained is then estimated.
25 This figure is compared to the extra QALYs potentially delivered by nurses for each health condition
26 considered.

27 Incremental cost-effectiveness ratios (ICERs) were also calculated taking the overall QALY gain
28 delivered for the 4 health conditions into account.

29 The analysis includes a threshold scenario that defines the tipping points in a series of parameters
30 that make reception appointments with nurses cost-effective at a cost-effectiveness threshold of
31 £20,000 per QALY gained.

32 Finally, a sensitivity analysis related to suicides was conducted to estimate the effect of a lower QALY
33 loss to the overall cost-effectiveness.

N.3 Included parameters

N.3.1 Costs

36 Staff unit costs per hour were set to be similar to those in NHS primary care and were calculated
37 assuming that the average appointment duration was 20 minutes.

38 **Table 40: Staff unit costs**

Healthcare staff	Cost per hour (£) ^(a)	Cost per 20 min appointment (£)
Registered nurse	53	17.67
Healthcare assistant ^(b)	20	6.67

39 (a) Face to face contact – including qualifications

40 (b) Clinical support worker in nursing

41 Source: Personal Social Services Research Unit 2014

42 Emergency hospital admission costs due to an uncontrolled episode were also taken into account.
 43 These were adjusted according to the percentage of hospitalised cases per event. Such costs were
 44 only applied for asthma and epilepsy; for angina the GDG assumed that an episode of angina would
 45 not result in a hospitalisation.

46 **Table 41: Hospitalisation costs**

Condition	Costs (£)	Details
Asthma	241	DZ15J, 1 non-elective day stay
Epilepsy	258	AA26F, 1 non-elective day stay

47 Source: NHS Reference costs 2013-14

48 **Table 42: Percentage of episodes resulting in hospitalisation**

Condition	Percentage
Asthma	2.7%
Epilepsy	0.1%

49 Source: NICE CMG47³²⁵ (epilepsy), Shaw 2007⁴¹¹ (asthma)

N.3.2 Utilities

51 Utility decrements associated with an acute episode of an asthma exacerbation, angina episode and
 52 epilepsy seizure were obtained from existing NICE guidelines and published literature. This
 53 represents how far the person's overall state of health decreases due to a single episode or event, on
 54 a scale where 1.0 is perfect health and 0 is death. So, for example, someone with a previous state of
 55 health of 0.80 would fall to 0.48 following an asthma attack (minus 0.32).

56 **Table 43: Disutility due to acute episode**

Type of episode	Disutility
Asthma exacerbation	0.320
Angina episode	0.167
Epilepsy seizure	0.100

57 Sources: Loyd 2007²⁴⁶ (asthma), NICE CG137³²² (epilepsies), NICE CG126³²¹ (stable angina)

58
 59 The duration of the disutility was sourced from the literature for an asthma episode. For angina
 60 episodes and epilepsy seizures this was assumed to be 7 days due to the lack of available evidence
 61 and indications that when these conditions are uncontrolled the disutility due to acute episodes is
 62 constant until a healthcare management plan is put in place. It is assumed that it will be a full week
 63 before the second stage of the health assessment is undertaken. For suicides, QALY loss was
 64 calculated by taking into account the mean age of people in prisons, the mean life expectancy in
 65 England and Wales and the mean quality of life in the general population.²¹⁵

66 **Table 44: Duration of disutility**

Type of episode	Duration
Asthma exacerbation	3.65 days (0.01 years)

Type of episode	Duration
Angina episode	7 days
Epilepsy seizure	7 days
Suicide (QALY loss due to death)	49.64 years

67 Sources: Lloyd 2007,²⁴⁶ Marshall 2005,²⁷⁴ ONS 2015,³³⁵ assumptions

N.33 Prevalence in prisons

69 Prevalence of the conditions in prisons was sourced from Marshall 2005 who calculated prison-
 70 specific prevalence adjusting UK general population figures to a UK prison population age mix.
 71 Figures used in the present analysis apply to male prisoners. Reported female-specific figures were
 72 identical for 2 of the 3 conditions. For angina figures for ischaemic heart disease were used – these
 73 may overestimate the prevalence of angina. More serious cardiovascular events, such as a heart
 74 attack or stroke, are not included in this analysis, as these could not be predicted or prevented
 75 following the first stage of health assessment regardless of who had conducted that (they are also
 76 very rare in a 1 week period).

77 **Table 45: Prevalence of the conditions**

Condition	Prevalence
Asthma	14%
Angina (ischaemic heart disease)	0.70%
Epilepsy	0.83%

78 Source: Marshall 2005²⁷⁴

N.34 Risk of an event within 7 days

80 The risk of an asthma exacerbation (for someone with asthma) was sourced from published
 81 literature. For angina episodes and epilepsy seizures it was set to 100% due to the lack of available
 82 evidence and indications that when these conditions are uncontrolled it is highly likely that people in
 83 prisons will experience an acute event within a week. For suicides, the number of suicides during the
 84 first week after reception (27.5 annually, Shaw 2003) was compared to the total number of people
 85 admitted into prisons annually (75,000).

86 **Table 46: Probability of experiencing an event within 7 days**

Condition	Probability
Asthma	0.0120
Angina	1.0000
Epilepsy	1.0000
Suicide	0.0004

87 Sources: Price 2014³⁶⁷; Shaw 2003⁴¹²; MoJ 2013³⁰³; assumptions

N.35 Effectiveness

89 No evidence was available on the comparative effectiveness of nurses and HCAs in successfully
 90 identifying pre-existing physical health conditions, or suicide risk, in people during the first
 91 assessment on reception into prison.

92 For physical health conditions this analysis therefore examines the extreme case of the maximum
 93 possible difference by assuming that nurses would correctly identify 100% of people with these
 94 conditions, and HCAs would correctly identify 0% of people with these conditions.

95 It is clear that this is an overestimate of the difference in effectiveness between the 2 groups. These
96 calculations were performed to place a limit on the maximum difference that could exist, to provide
97 a marker against which the likelihood of cost-effectiveness could be assessed.

98 For suicides, successfully identifying the condition at the first stage of the health assessment was
99 taken to mean identifying that a person is at risk of attempting suicide, which would lead to
100 measures being put in place by prison and healthcare staff to give additional support and monitoring
101 to that person. It is not known what proportion of suicides such monitoring could prevent (bearing in
102 mind that some suicides are in those who have shown no previous signs of risk). This analysis
103 therefore includes 3 alternative scenarios assuming that identification by nurses and monitoring
104 would reduce the number of suicides in the first week by 10%, 20% or 30%, whilst assessment by
105 HCAs would lead to no reduction in suicides

N4 Assumptions

107 The economic analysis was significantly limited by assumptions due to the lack of available evidence.

- 108 o The ability of a nurse to pick up each of these conditions in the reception assessment was
109 assumed to be perfect (100%) and that of healthcare assistants to be 0%. This would include
110 when prisoners arrive at prison with their current drugs or prescription and volunteer their
111 condition to the assessor.
- 112 o The conditions were assumed to be uncontrolled for a 7 day period (until the second stage of
113 the health assessment); while in reality a healthcare intervention would most probably take
114 place immediately after the first acute event or symptoms suggestive of the potential for an
115 event, and some prisons will schedule the second assessment after only 1 or 2 days.
- 116 o These are not intended to be realistic assumptions, but to provide an upper bound for the
117 maximum possible difference in effectiveness between a first stage assessment conducted by
118 a nurse compared to an assessment conducted by an HCA. As a result real-life differences in
119 effectiveness could be substantially lower, and ICERs would be correspondingly higher.
- 120 o For risk of suicides 3 scenarios were investigated: a reduction in suicides in the first week by
121 10%, 20% or 30%.
- 122 o Any conditions missed at reception would be identified at the second stage of the health
123 assessment. Therefore only negative effects on health within the first week are relevant. This
124 analysis does not consider the impact of any conditions not identified at the second stage of
125 assessment, as it is assumed that these would also be missed at the shorter first stage of the
126 assessment.
- 127 o Whether nurses or HCAs conduct the first stage of the assessment will not affect the resources
128 needed for subsequent follow-up consultations due to the assessor referring a varying
129 proportion of people to other healthcare staff for additional checks or assessments before the
130 second stage of the health assessment. This may not be a realistic assumption as less
131 experienced staff may refer a greater proportion of people through caution – which could
132 improve health outcomes but lead to additional costs.
- 133 o New cases (incidence) of each condition are not included, on the basis that neither nurses nor
134 HCAs would be expected to be able to identify a newly developed condition at the reception
135 assessment when the prisoner himself or herself is not aware of it.

N5 Results

N571 QALY gain required per reception assessment

138 Given the incremental cost of a nurse above the cost of an HCA, the extra QALY gain that would be
139 required for the nurse reception assessment to be cost-effective at a cost-effectiveness threshold of

140 £20,000 per QALY gained was 0.000,555 per reception assessment when no additional
 141 hospitalisation costs for adverse events were included. When those were included the QALY gain
 142 required was fractionally lower.

143 **Table 47: Incremental cost & QALY gain required**

	Incremental cost (£)	QALYs required
Without hospitalisation costs	11.000	0.000,550,0
Asthma hospitalisation costs	10.989	0.000,549,5
Epilepsy hospitalisation costs	10.998	0.000,549,9
Asthma + epilepsy hospitalisation costs	10.987	0.000,549,3

144 QALY gain delivered per reception assessment

145 **Table 48: Base case scenario for asthma**

Figure	Description
1,000	Prisoners at reception
140	Have asthma
1.686	Prisoners with exacerbations in 7 days
0.005,4	QALY difference for 1.686 prisoners
0.000,009,1	QALY gain per prisoner at reception
1,208,116	£ per QALY gained

146 **Table 49: Base case scenario for angina**

Figure	Description
1,000	Prisoners at reception
7	Have IHD
7	Prisoners with angina in 7 days
0.022,4	QALY difference for 7 prisoners
0.000,156,9	QALY gain per prisoner at reception
70,093	£ per QALY gained

147 **Table 50: Base case scenario for epilepsy**

Figure	Description
1,000	Prisoners at reception
8.3	Have epilepsy
8.3	Prisoners with angina in 7 days
0.015,9	QALY difference for 8.3 prisoners
0.000,132	QALY gain per prisoner at reception
83,243	£ per QALY gained

148 **Table 51: Base case scenario for 30% suicides prevented**

Figure	Description
1,000	Prisoners at reception
0.1	Commit suicide
4.504,0	QALY loss for 0.1 prisoners
0.000,495	QALY gain per prisoner at reception

Figure	Description
22,207	£ per QALY gained

149 **Table 52: Base case scenario for 20% suicides prevented**

Figure	Description
1,000	Prisoners at reception
0.07	Commit suicide
3.002,7	QALY loss for 0.07 prisoners
0.000,220	QALY gain per prisoner at reception
49,965	£ per QALY gained

150 **Table 53: Base case scenario for 10% suicides prevented**

Figure	Description
1,000	Prisoners at reception
0.04	Commit suicide
1.501,3	QALY loss for 0.07 prisoners
0.000,055	QALY gain per prisoner at reception
199,859	£ per QALY gained

151 Therefore the total QALY gain, and ICER associated with a nurse reception appointment for the 4
152 specified conditions **combined**, under each of the suicide scenarios, is depicted in Table 54 below.

153 **Table 54: Total QALY gain and ICER per preventable suicides scenario**

	Total QALY gain	ICER (£)
Scenario 1 – 30% suicides prevented	0.000,793	13,846
Scenario 2 – 20% suicides prevented	0.000,518	21,198
Scenario 3 – 10% suicides prevented	0.000,353	31,108

154 **Threshold scenario analysis**

155 The tables below present different scenarios to test how much greater the benefit would need to be
156 for each of these conditions to make nurse reception assessment cost-effective at the £20,000 per
157 QALY threshold for preventing that condition.

158 **Table 55: High prevalence threshold**

Condition	Prevalence	QALY gain per prisoner at reception
Asthma	100%	0.000,464
Angina	0.70 ×1.9	0.000,566
Epilepsy	0.83 ×2.1	0.000,583

159 This table shows that if 100% of prisoners had asthma (and all were missed by HCAs), then at the
160 expected frequency of asthma exacerbations there would still not be enough benefit to justify the
161 use of nurses.

162 For IHD the prevalence of angina would have to be 1.9 times as high as the figures we used suggest
163 for the use of nurses to be cost-effective, or for epilepsy 2.1 times as high.

164 **Table 56: Longer disutility threshold**

Condition	Disutility duration	QALY gain per prisoner at reception
-----------	---------------------	-------------------------------------

Condition	Disutility duration	QALY gain per prisoner at reception
Asthma	32 weeks instead of 0.52 weeks	0.000,560
Angina	3.6 weeks instead of 1 week	0.000,565
Epilepsy	4.2 weeks instead of 1 week	0.000,555

165 This table shows that (using the expected prevalence and risk) the gap between reception and
 166 second assessments with a prisoner being untreated and his condition not rectified would need to be
 167 32 / 3.6 / 4.2 weeks for each condition compared with 1 week, to make nurse assessment cost-
 168 effective.

169 **Table 57: Lower disutility due to event threshold**

Condition	Disutility	QALY gain per prisoner at reception
Asthma	QoL=1 instead of 0.32	0.000,028
Angina	QoL=0.60 instead of 0.17	0.000,554
Epilepsy	QoL=0.42 instead of 0.10	0.000,555

170 This table shows that if all prisoners experiencing an asthma exacerbation had their quality of life
 171 decreased to 0, then at the expected frequency of asthma exacerbations there would still not be
 172 enough benefit to justify the use of nurses.

173 For angina the decrease in quality of life would need to be 60% and for epilepsy 42% for the whole
 174 week for the use of nurses to be cost-effective.

N154 Sensitivity analysis for suicides

176 An additional sensitivity analysis was conducted on the 30% suicides prevented scenario to estimate
 177 the effect of a lower QALY loss as a result of lower quality of life and life expectancy figures expected
 178 for people who have survived a suicide attempt. The lower utility used was set at 0.6 in line with
 179 utility associated with mild cases of depression (Sobocki 2007). The lower life expectancy was
 180 assumed to be 20% lower than the base-case figure.

181 The total QALY gain delivered in this sensitivity analysis was 0.000,586 and the corresponding ICER
 182 was £18,738 per QALY gained (compared to £13,846 for the base case).

N6 Discussion

N164 Summary of results

185 Reception appointments with nurses were not cost-effective at a £20,000 threshold when only 1
 186 health condition was considered. In these scenarios, ICERs ranged between £22,207 and £1,208,116
 187 per QALY gained, with the 30% suicides prevented scenario delivering the lowest figure.

188 When all 3 physical health conditions and suicide risk are taken together, the ICER was below a cost-
 189 effectiveness threshold of £20,000 per QALY gained only for the 30% suicides prevented scenario.

190 In the threshold scenario analysis, it was only under extreme parameter values that a nurse
 191 appointment was considered cost-effective. Specifically on the prevalence figures, only when these
 192 were doubled for angina or epilepsy were the incremental QALY gains high enough to justify for the
 193 extra cost of a nurse. Asthma did not deliver high enough effectiveness at any prevalence value.
 194 When testing different disutility durations, only when those were extended from 1 week to about 4
 195 weeks for angina or epilepsy was the benefit high enough to make nurse appointments cost-
 196 effective. For asthma the tipping point was 32 weeks (base case was set at 0.52 weeks). In similar
 197 scenarios on the level of disutility associated with every episode, this had to be tripled or quadrupled

198 in angina or epilepsy for the nurse appointments to become cost-effective. For asthma, under no
199 disutility values were nurse appointments cost-effective.

200 In the additional sensitivity analysis for suicides, using a lower quality of life value for the length of
201 life foregone increased the overall ICER (including all 4 conditions) from £13,846 to £18,738 per QALY
202 gained, still below the threshold of £20,000 per QALY gained.

N2632 Conclusion

204 Overall, there was an absence of published evidence relevant to a prisons population that could be
205 used in the present analysis. Therefore, many of the input data used were sourced from a non-prison
206 setting. In addition, due to the lack of data on the effectiveness difference between nurses and
207 healthcare assistants the analysis assumes that nurses are 100% capable of identifying any
208 underlying health conditions while healthcare assistants identify none of these. Therefore the results
209 need to be interpreted cautiously as they reflect an upper bound on the potential benefit of nurses,
210 not a realistic consideration of the incremental impact of nurses above that of HCAs.

211 Even under such underlying assumptions, only 1 of the 3 base case combined scenarios gave an ICER
212 under the £20,000 per QALY gained scenario. This specific scenario assumed that 30% of suicides
213 during the first week after reception are preventable, a parameter that was also very uncertain.

214 Therefore, a stipulation that the first stage of the health assessment must be conducted by nurses
215 cannot be supported on the basis of this analysis alone. The GDG has instead recommended that the
216 staffing of the first stage of health assessment must be determined locally. The GDG has considered
217 that there are a variety of additional factors, not included in this analysis, which providers will need
218 to consider in planning the staffing of first-stage assessments, some of which may make the use of
219 nurses cost-effective and practical in particular local circumstances. These are discussed in Section
220 5.8.1.

221

1 Appendix O: Unit costs

O.1 Second stage and subsequent health assessments

3 Table 58: UK costs of primary care consultations

Consultation type	Unit cost	Comments
GP	£67	Per patient contact (17.2 minutes)
GP practice nurse	£10	Per 15 minutes
Healthcare assistant	£5	Per 15 minutes (clinical support worker – nursing)

4 Source: Personal Social Services Research Unit 2014

O.2 Health promotion interventions

6 Table 59: Unit costs of healthcare professionals that could lead group sessions

Type	Unit cost	Comments
GP practice nurse	£41	Based on cost of a consultation, per hour figure
Healthcare assistant	£20	Per hour figure
Community physiotherapist	£36	Per hour figure
Hospital dietician	£37	Per hour figure

7 Source: Personal Social Services Research Unit 2014

O.3 Medication management

9 Table 60: Unit costs of healthcare professionals

Type	Unit cost	Comments
GP practice nurse	£41	Based on cost of a consultation, per hour figure
Healthcare assistant	£20	Per hour figure
Pharmacist (community pharmacists)	£57	Per hour figure

10 Source: Personal Social Services Research Unit 2014

11

1 Appendix P: Research recommendations

P.1 Subsequent health assessment

3 **Research question: When should subsequent health assessments be undertaken in prison for**
4 **people serving long-term sentences?**

5 **Why this is important:**

6 Within prison there are growing numbers of people who are serving long-term sentences. There is
7 emerging anecdotal evidence that long-term incarceration exacerbates chronic ill health and causes
8 early onset of conditions associated with old age. Currently, once a person has undertaken the
9 reception assessment no further comprehensive health assessments are undertaken. No evidence
10 was identified for this question and evidence in this area would help inform future recommendation
11 on when additional health checks may be required to prevent potential health deterioration and
12 quickly identify any new health-related conditions.

13 **Criteria for selecting high-priority research recommendations**

PICO question	<p>Population: adults (aged 18 years or over) in prisons or Young Offender Institutions (all prison categories) in the UK who have been sentenced to more than 4 years in prison</p> <p>Intervention(s): Yearly validated comprehensive health assessment (this may be a repeat of the second stage reception assessment)</p> <p>Comparison: Health status of those who do not have a subsequent assessment, or have a health assessment at a different time point</p> <p>Outcome(s): Development of a tool and an advised time frame for its use</p>
Importance to patients or the population	The repeating of a health assessment for longer term and older prisoners will mean that health conditions will be identified earlier and will improve life expectancy and improve patients' quality of life. It would also mean that opportunities for lifestyle changes and the development of self-care can be advised.
Relevance to NICE guidance	This intervention may support future NICE guidelines on the management of chronic conditions in that the regular review of this population may support a different approach to existing guidelines if health outcomes are improved.
Relevance to the NHS	There is potential for cost savings on the prison health budget through more effective identification and chronic disease management. The number of emergencies requiring disruptive access to prisoners should decrease.
National priorities	Both the NHS and NOMS are committed to equivalence of care for prisoners.
Current evidence base	There is currently no evidence to support an understanding of either the effects of long-term imprisonment on health or the effectiveness of assessment interventions in long-term prisoners aimed at supporting the management of long-term conditions.
Equality	<ul style="list-style-type: none"> • People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) • Women, especially pregnant women and the mothers of babies in prison • People over 50 • Long-term prisoners (>4 years) • People with a history of substance misuse
Study design	Longitudinal cohort study

	Subgroup analysis: people aged over 50 years
Feasibility	The long timescales involved may be a challenge, but this is important work with large potential benefits.
Other comments	None
Importance	High: the research is essential to inform future updates of key recommendations in the guideline.

14

15 P.2 Physical health conditions of people in UK prisons

16 **Research question: What is the prevalence of disease in the UK prison population?**

17 **Why this is important:**

18 Currently it is estimated that there are around 85,000 people in prison in the UK. To date, we have
19 little clear evidence of the disease burden of this population as a whole and have therefore had to
20 rely upon anecdotal experience. This was highlighted by our reviews on chronic conditions, in which
21 there was an absence of disease prevalence data, and when searching for prevalence data for the
22 health economic model. Systems are now in place that will allow the relevant data to be gathered
23 and inform a longitudinal study revealing this information and provide a useful foundation for better
24 understanding how to shape the healthcare services provided to prisoners, both in terms of meeting
25 the needs of the prison population and providing commissioners with priority areas for health service
26 delivery and development.

27 **Criteria for selecting high-priority research recommendations**

Population and outcome	Population: adults (aged 18 years or over) in prisons or Young Offender Institutions (all prison categories) in the UK Outcome(s): Disease prevalence
Importance to patients or the population	Prisoners represent a unique population who have a significant number of negative predictors of health including factors such as social exclusion, poverty, substance and alcohol misuse, learning difficulties and mental health problems. The evidence provided by this research will: <ul style="list-style-type: none"> • provide an overview of the health needs of the prison population • provide commissioners with priority areas for health service delivery and development • provide a benchmark against which the provision of healthcare in prisons can be measured in order to assess the quality and improvement of the health of the population • provide a basis on which to review the current Guideline and make further recommendations.
Relevance to NICE guidance	At present, there is very little evidence available on the primary healthcare needs of the UK prison population. While the provision of healthcare is based on the 'equivalence' of care between prisons and the wider community, there is currently no practical means of demonstrating whether the care provided in the prison setting is being addressed within the NICE Guidance developed for the wider community.
Relevance to the NHS	Improving the health of prisoners is an important priority for the health of society as a whole. Prisoners are frequently released and it is expected that improving their health will also help reduce health inequalities within our communities. The provision of appropriate healthcare in the prison setting is an important step towards social inclusion of a particularly vulnerable section of

	our society.
National priorities	None identified.
Current evidence base	The current evidence for primary care health delivery is based on community general practice settings and this has not been validated, adjusted or compared with the prison population.
Equality	<ul style="list-style-type: none"> • People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) • Women, especially pregnant women and the mothers of babies in prison • People over 50 • Long-term prisoners (>4 years) • Short-term prisoners (<12 months) • People with a history of substance misuse
Study design	Longitudinal study Cross-sectional study
Feasibility	There already exists a large database held by TPP known as ResearchOne: http://www.tpp-uk.com/latest-news-stories/tpp-launches-researchone
Other comments	None.
Importance	High: the research is essential to inform future updates of key recommendations in the guideline.

28

29 P.3 Health promotion

30 **Research question: What is most effective method for delivering health promotion activities and**
31 **who should lead on them (peer-led or professional-led)?**

32 **Why this is important:**

33 The evidence review on health promotion identified little data on how health promotion
34 interventions should be delivered and who is best to deliver them. This is considered to still be an
35 important question as it is known that prisoners find it difficult at times to gain access to services
36 which require an interaction with those they perceive to be in authority, including prison officers but
37 also health professionals, as acknowledged within the qualitative review in this area.

38 Many examples of how to deliver health promotion exist, ranging from information leaflets, one-to-
39 one sessions or group-based learning. If it can be established which methodology of health
40 promotion delivery is more effective then both the NHS and prisons would be able to better target
41 the resources it has to better inform, educate and develop independence around health offering
42 equivalence of service, a 'real world' experience and more confidence in overall health provision.

43 **Criteria for selecting high-priority research recommendations**

PICO question	<p>Population: adults (aged 18 years or over) in prisons or Young Offender Institutions (all prison categories) in the UK. For qualitative component: Healthcare professionals and prison staff.</p> <p>Intervention(s): How it is delivered: Any method of health promotion including information leaflets, 1:1 sessions or group-based learning. Who delivers: peer-lead health promotion interventions (prisoner to prisoner, including health trainers or listeners), professional-led health promotion interventions (qualified health professional to prisoner), any other relevant</p>
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	<p>person or group.</p> <p>Comparison: How it is delivered: Usual care or control, or any method of health promotion including information leaflets, 1:1 sessions or group based learning. Who delivers: Usual care or control, or any other relevant person or group.</p> <p>Outcome(s): Mortality Morbidity Health-related quality of life Outcomes relevant to uptake of health promoting activities, for example, stopping smoking, healthy BMI, increased accessing of contraception and sexual health services, increased screening, reduction in STIs Patient knowledge Patient-reported views and satisfaction</p>
Importance to patients or the population	<p>If an effective methodology is identified for this type of service, then prisoners may see their own health outcomes improve. This could see an improvement in their quality of life whilst in prison, but may also see an improvement in the way they interact with providers after release.</p> <p>If this provision is properly targeted, it could see reductions in overall health costs for the general population.</p>
Relevance to NICE guidance	<p>Not only would this research strengthen the current core provision for offenders it would also focus other areas of NICE guidelines on the care of ex-offenders and the specific needs they have as a cohort.</p>
Relevance to the NHS	<p>This research would allow health professionals to better target offenders whilst in custody, focus them on their own health improvements or maintenance. It could also focus offenders and provision on release.</p> <p>Overall it may save the NHS significant cost by having a more informed population.</p>
National priorities	<p>https://www.england.nhs.uk/wp-content/uploads/2013/08/imp-exp-care-app.pdfNHS work plan, improving the patient experience by adopting patient leaders. With the right support you could develop an advisory group within the prisons to feedback to commissioners or governors from prisoners attending healthcare, where the gaps, good practice, poor practice, identified discrimination, abuse of human rights.</p> <p>http://www.cqc.org.uk/content/involving-people-who-use-services methods used to get the voice of those using services Rehabilitating prisoners</p>
Current evidence base	<p>One quasi-randomised study was identified which directly compared a peer-led education intervention against an intervention led by a professional HIV educator. There were no clinical differences found between the interventions for all the reported outcomes: HIV screening uptake, condom use intention, or HIV-related knowledge.</p>
Equality	<ul style="list-style-type: none"> • People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) • Women, especially pregnant women and the mothers of babies in prison • People over 50 • Long-term prisoners (>4 years) • Short-term prisoners (<12 months) • People with a history of substance misuse
Study design	<p>Mixed methods study:</p>

	<ul style="list-style-type: none"> • Randomised controlled trial • Qualitative study, with the voice of stakeholders at all levels, identify peers to hold focus groups with a possible external peer or researcher present. <p>Subgroups:</p> <ul style="list-style-type: none"> • People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) • Women, especially pregnant women and the mothers of babies in prison • People over 50 • Long-term prisoners (>4 years) • Short-term prisoners (<12 months) • People with a history of substance misuse
Feasibility	The challenges of this research will be to gain access to a wide range of prisoner types, but it is important to seek buy in from all estates. Whilst it is accepted that not every prison will be accessed, all prison types from High Security right through to Open and from young people, women and men needs to be considered. The research question does not impose a specific timescale.
Other comments	None
Importance	High: the research is essential to inform future updates of key recommendations in the guideline.

44

45 **P.4 Health promotion needs assessment**

46 **Research question: What are the most effective tools to determine the health promotion needs of**
47 **people in prison?**

48 **Why this is important?**

49 Health promotion in prison can vary and may not be the priority for healthcare staff. However,
50 people in prison are entitled to an equivalent standard of healthcare as they would receive in the
51 community. Whilst in prison there is an ideal opportunity to assist people who perhaps have not
52 previously attended health services. The prison population is known to have a high prevalence of
53 smoking, often a poor diet and difficulties in accessing exercise programmes or information on sexual
54 health, all of which may lead to poor health or infection or exacerbate existing health conditions.
55 Health promotion services are delivered in many ways in prison, however an effective, valid
56 assessment tool would ensure care is commensurate with accurately identified need. No evidence
57 was identified for health promotion needs assessment and a study would inform future
58 recommendations in this area. A validated assessment tool may identify specific healthcare needs
59 more quickly, leading to appropriate education to enable self-care whilst in prison and on release
60 from prison into the community.

61 **Criteria for selecting high-priority research recommendations**

PICO question	<p>Population: adults (aged 18 years or over) in prisons or Young Offender Institutions (all prison categories) in the UK</p> <p>Intervention(s): previously validated assessment tools or newly developed assessment tools to determine people's health promotion needs</p> <p>Comparison: routine assessment, usual care, or each other</p>
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	<p>Outcome(s):</p> <p>Mortality</p> <p>Morbidity</p> <p>Health-related quality of life</p> <p>Outcomes relevant to uptake of health promoting activities e.g. stopping smoking, healthy BMI, increased accessing of contraception and sexual health services, increased screening, reduction in STIs</p> <p>Patient knowledge</p> <p>Patient-reported satisfaction</p>
Importance to patients or the population	<p>People in prison would be identified more quickly for specific healthcare need, receive appropriate education to enable self-care and will be better equipped to self-care on release from prison into the community. People in prison are viewed as some of the most marginalised people in society, and when not in prison, accessing health services tends not to be a priority. Promoting effective and responsive healthcare for them whilst in prison is essential.</p>
Relevance to NICE guidance	<p>The identification of effective health assessment tools used to determine the health needs of people in prison will be essential to informing future updates of key prison healthcare guidance.</p>
Relevance to the NHS	<p>Altered guidance that identifies an effective validated tool would lead to financial savings for the NHS as people in prison with health needs would be identified more quickly. Improving the health of people in prison has a significant impact on public health as this marginalised group tend not to access health services regularly in the community to ensure good health.</p>
National priorities	<p>None identified</p>
Current evidence base	<p>No relevant clinical studies were identified that used assessment tools to determine the health promotion needs of prisoners.</p> <p>Local versions tend to be used that are not validated and often adapted.</p>
Equality	<ul style="list-style-type: none"> • People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) • Women, especially pregnant women and the mothers of babies in prison • People over 50 • Long-term prisoners (>4 years) • Short-term prisoners (<12 months) • People with a history of substance misuse
Study design	<p>Randomised controlled trial</p>
Feasibility	<p>A feasibility study would be advised as prison health research has specific challenges due to the vulnerability of the population, the number and types of prison establishment and the practicalities of follow up in the community</p>
Other comments	<p>None</p>
Importance	<p>High: the research is essential to inform future updates of key recommendations in the guideline.</p>

63 P.5 Medicines administration in prisons

64 **Research question:** Does the use of directly observed supply of medicines (that is, not supplying
65 medicines to prisoners to hold 'in possession') reduce the diversion and abuse and non-adherence of
66 named high risk medicines?

67 **Why this is important?** Since 2003, a principle of self- administration (in-possession medicines) by
68 prisoners has been encouraged with directly observed administration reserved for high risk
69 medicines and vulnerable patients. However, this has led to a variable and inconsistent application of
70 this principle as different medicines are categorised as high risk by different prisons. This is
71 influenced by local factors including the capacity for delivering directly observed medicines which is
72 labour intensive and difficult to include within prisoners' daily schedules. There is no evidence base
73 underpinning the choice of medicines that should be administered under observation. This research
74 will provide the evidence to inform the development of a more consistent list of high risk medicines
75 that require direct observation to improve safety. In addition the research will inform commissioners
76 of health and offender management services about the need to provide the workforce and
77 operational capacity to administer high risk medicines safely.

78 Criteria for selecting high-priority research recommendations

PICO question	<p>Population: adults (aged 18 years or over) in prisons or Young Offenders Institutions (all prison categories) in the UK who are prescribed named high risk medicines</p> <p>Intervention(s): Receiving prescribed named high risk medicines (for example, pregabalin, gabapentin, codeine-based medicines, mental health medicines) under direct observation</p> <p>Comparison: Receiving prescribed named high risk medicines in-possession (weekly).</p> <p>Outcome(s): Medicines supply Medicines adherence Patient views and satisfaction Numbers of security and medication safety incidents (for example, from security checks, local security intelligence information and healthcare identified medication safety incidents and compliance checks).</p>
Importance to patients or the population	The outcomes would reduce the current variability in self-administration of high risk medicines and improve the patient experience within and between prisons. Safety should be improved should specific medicines be identified from the outcomes as being less harmful or tradable if provided under direct observation. Patient experience and satisfaction could improve if directly observed care was implemented more consistently.
Relevance to NICE guidance	This would be used to inform the NICE guidelines on medicines optimisation and the physical health of people in prisons. In addition where named medicines demonstrate that direct observation is recommended from this research, this should be included in additional NICE publications where these medicines are included.
Relevance to the NHS	If a clearer steer on the safety impact of directly observed supply of named medicines was available, this would ensure that resources are used for patients to receive them under observation consistently across prisons. The current operational impact of this is high for both healthcare and prison service delivery.

	This will support improved safety and reduce risk in the area of medicine management within prisons.
National priorities	The administration of medicines under supervision forms part of Priority 5 of the National Partnership agreement 2015/16 between NOMS, NHS England and PHE. The research will also inform the review of current medicines standards for prisons used to commission pharmacy and healthcare services.
Current evidence base	2 RCTs were identified which compared directly observed therapy with in-possession medication for hepatitis C treatments and antiretroviral therapy, respectively. However, no evidence was identified comparing directly observed therapy with in-possession medication for high risk medicines (for example, pregabalin, gabapentin, codeine-based medicines, mental health medicines). There is an OHRN report on the impact of introducing more in-possession medicines that could inform this research.
Equality	<p>The research would need to take account of excluding people who need to have their medicines directly observed due to disabilities or other clinical reasons (for example, dementia).</p> <ul style="list-style-type: none"> • People with disabilities (including physical disabilities, learning disabilities and borderline learning disabilities) • Women, especially pregnant women and the mothers of babies in prison • People over 50 • Long-term prisoners (>4 years) • Short-term prisoners (<12 months) • People with a history of substance misuse
Study design	<p>Cluster RCT</p> <p>Subgroups: Category D open prisons due to operational differences</p>
Feasibility	The research is feasible but would need to be completed in partnership with NOMS to ensure their ethical requirements are met and that they agree to participate in relation to the security aspects of the trials.
Other comments	<p>The research could be completed across multiple prisons as it may be possible to identify separate prisons for direct observation and in-possession to simplify the methods within each prison.</p> <p>The key difficulty will be measuring adherence effectively and the bias they may be encountered if people currently having medicines in their possession are aware that the adherence will be checked.</p> <p>Checking this as a new intervention may improve adherence anyway, whether the medicine is in-possession or directly observed. However some sites already have processes to check adherence.</p> <p>The intervention will need to take account of emerging individual patient risks that result in the need for a person receiving a medicine in their possession to have this changed to direct observation for safety reasons. The number of people who have their administration or supply type changed could also be reported as a secondary outcome.</p>
Importance	High: the research is essential to inform future updates of key recommendations in the guideline.

1 **Appendix Q: Full recommendations from**

2 **published NICE guidance on monitoring of**

3 **chronic conditions**

Q.14 Cardiovascular conditions

5 Chronic heart failure

6 Chronic heart failure: Management of chronic heart failure in adults in primary and secondary care.
7 CG108. Published August 2010

8 1.4.1.1 All patients with chronic heart failure require monitoring. This monitoring should include:

- 9 • a clinical assessment of functional capacity, fluid status, cardiac rhythm (minimum of examining
10 the pulse), cognitive status and nutritional status
- 11 • a review of medication, including need for changes and possible side effects
- 12 • serum urea, electrolytes, creatinine and eGFR. [2003, amended 2010]

13 1.4.1.2 More detailed monitoring will be required if the patient has significant comorbidity or if their
14 condition has deteriorated since the previous review. [2003]

15 1.4.1.3 The frequency of monitoring should depend on the clinical status and stability of the patient.
16 The monitoring interval should be short (days to 2 weeks) if the clinical condition or medication has
17 changed, but is required at least 6-monthly for stable patients with proven heart failure. [2003]

18 1.4.1.4 Patients who wish to be involved in monitoring of their condition should be provided with
19 sufficient education and support from their healthcare professional to do this, with clear guidelines
20 as to what to do in the event of deterioration. [2003]

21 1.4.1.5 When a patient is admitted to hospital because of heart failure, seek advice on their
22 management plan from a specialist in heart failure. [new 2010]

23 Hypertension

24 Hypertension: Clinical management of primary hypertension in adults. CG 127 August 2007

25 1.5.4 Use clinic blood pressure measurements to monitor the response to antihypertensive
26 treatment with lifestyle modifications or drugs. [new 2011]

27 1.5.5 Aim for a target clinic blood pressure below 140/90 mmHg in people aged under 80 years with
28 treated hypertension. [new 2011]

29 1.5.6 Aim for a target clinic blood pressure below 150/90 mmHg in people aged 80 years and over,
30 with treated hypertension. [new 2011]

31 1.5.7 For people identified as having a 'white-coat effect', consider ABPM or HBPM as an adjunct to
32 clinic blood pressure measurements to monitor the response to antihypertensive treatment with
33 lifestyle modification or drugs. [new 2011]

34 1.5.8 When using ABPM or HBPM to monitor response to treatment (for example, in people
35 identified as having a 'white coat effect' and people who choose to monitor their blood pressure at
36 home), aim for a target average blood pressure during the person's usual waking hours of:

- 37 • below 135/85 mmHg for people aged under 80 years
- 38 • below 145/85 mmHg for people aged 80 years and over. [new 2011]

39 1.7.3 Provide an annual review of care to monitor blood pressure, provide people with support and
40 discuss their lifestyle, symptoms and medication. [2004]

41 **Secondary prevention of myocardial infarction**

42 1.3.2. Ensure that a clear management plan is available to the person who has had an MI and is also
43 sent to the GP, including:

- 44 • details and timing of any further drug titration
- 45 • monitoring of blood pressure
- 46 • monitoring of renal function. [new 2013]

47 1.3.3 Offer all people who have had an MI an assessment of bleeding risk at their follow-up
48 appointment. [new 2013]

49 1.3.4 Offer an assessment of left ventricular function to all people who have had an MI. [2013]

50 1.3.9. Renal function, serum electrolytes and blood pressure should be measured before starting an
51 ACE inhibitor or ARB and again within 1 or 2 weeks of starting treatment. Patients should be
52 monitored as appropriate as the dose is titrated upwards, until the maximum tolerated or target
53 dose is reached, and then at least annually. More frequent monitoring may be needed in patients who
54 are at increased risk of deterioration in renal function. Patients with chronic heart failure should be
55 monitored in line with 'Chronic heart failure' (NICE clinical guideline 108).[2007]

Q.162 Kidney conditions

57 **Anaemia management in people with chronic kidney disease NG8 June 2015**

58 1.4.1 People with anaemia of CKD should not have iron levels checked earlier than 1 week after
59 receiving intravenous iron. The length of time to monitoring of iron status is dependent on the
60 product used and the amount of iron given. [2006]

61 1.4.2 Routine monitoring of iron stores to prevent iron overload using serum ferritin should be at
62 intervals of 1–3 months. [2006, amended 2015]

63 1.4.3 In people with anaemia of CKD, monitor Hb:

- 64 • every 2–4 weeks in the induction phase of ESA therapy
- 65 • every 1–3 months in the maintenance phase of ESA therapy
- 66 • more actively after an ESA dose adjustment
- 67 • in a clinical setting chosen in discussion with the patient, taking into consideration their
68 convenience and local healthcare systems. [2006]

69 1.4.4 After other causes of anaemia, such as intercurrent illness or chronic blood loss have been
70 excluded, people with anaemia of CKD should be considered resistant to ESAs when:

- 71 • an aspirational Hb range is not achieved despite treatment with 300 IU/kg/week or more of
72 subcutaneous epoetin or 450 IU/kg/week or more of intravenous epoetin or 1.5
73 micrograms/kg/week of darbepoetin or

- 74 • there is a continued need for the administration of high doses of ESAs to maintain the aspirational
75 Hb range. [2006]
- 76 1.4.5 In people with CKD, pure red cell aplasia (PRCA) is indicated by a low reticulocyte count,
77 together with anaemia and the presence of neutralising antibodies. Confirm PRCA by the presence of
78 anti-erythropoietin antibodies together with a lack of pro-erythroid progenitor cells in the bone
79 marrow. [2006]
- 80 1.4.6 In people with anaemia of CKD, aluminium toxicity should be considered as a potential cause of
81 a reduced response to ESAs after other causes, such as intercurrent illness and chronic blood loss,
82 have been excluded. [2006]
- 83 1.4.7 In haemodialysis patients with anaemia of CKD in whom aluminium toxicity is suspected,
84 perform a desferrioxamine test and review the patient's management accordingly. [2006]
- 85 1.4.8 Consider specialist referral for ESA-induced PRCA. [2006, amended 2011]
- 86 1.4.9 Consider referring people with ESA resistance to a haematology service, particularly if an
87 underlying haematological disorder is suspected. [new 2015]
- 88 1.4.10 Evaluate and discuss the risks and benefits of red cell transfusion with the person or, where
89 appropriate, with their family or carers. [new 2015]
- 90 1.4.11 Take into account the person's symptoms, quality of life, underlying conditions and the chance
91 of a future successful kidney transplant, in addition to Hb levels, when thinking about the need for
92 red cell transfusion. [new 2015]
- 93 1.4.12 Review the rate of red cell transfusion and consider a trial period of stopping ESA in people
94 who have ESA resistance (typically on haemodialysis and on high-dose ESA) and are having frequent
95 transfusions when:
- 96 • all reversible causes of ESA resistance have been taken into account and excluded and
97 • the person's condition is otherwise 'stable' (without intercurrent illness such as infection) and
98 • the person is receiving adequate dialysis.
- 99 Review the rate of red cell transfusion between 1 and 3 months after stopping ESA therapy. If the
100 rate of transfusion has increased, consider restarting ESA therapy. [new 2015]

101 **Chronic kidney disease**


102 Chronic kidney disease: early identification and management of chronic kidney disease in adults in
103 primary and secondary care. CG182. Published July 2014.

- 104 1.3.1 Agree the frequency of monitoring (eGFR creatinine and ACR) with the person with, or at risk
105 of, CKD; bear in mind that CKD is not progressive in many people. [new 2014]
- 106 1.3.2 Use figure 1 to guide the frequency of GFR monitoring for people with, or at risk of, CKD, but
107 tailor it to the person according to:
- 108 • the underlying cause of CKD
- 109 • past patterns of eGFR and ACR (but be aware that CKD progression is often non-linear)
- 110 • comorbidities, especially heart failure
- 111 • changes to their treatment (such as renin–angiotensin–aldosterone system [RAAS] antagonists,
112 NSAIDs and diuretics)
- 113 • intercurrent illness


- 114 • whether they have chosen conservative management of CKD. [new 2014]

Figure 63: Frequency of monitoring of GFR (number of times per year, by GFR and ACR category) for people with, or at risk of, CKD

		ACR categories (mg/mmol), description and range		
		A1 <3 Normal to mildly increased	A2 3–30 Moderately increased	A3 >30 Severely increased
GFR categories (ml/min/1.73 m ²), description and range	G1 ≥90 Normal and high	≤1	1	≥1
	G2 60–89 Mild reduction related to normal range for a young adult	≤1	1	≥1
	G3a 45–59 Mild–moderate reduction	1	1	2
	G3b 30–44 Moderate–severe reduction	≤2	2	≥2
	G4 15–29 Severe reduction	2	2	3
	G5 <15 Kidney failure	4	≥4	≥4



Increasing risk



Increasing risk

Abbreviations: GFR, glomerular filtration rate, ACR, albumin creatinine ratio

NB: ACR is an important indicator of cardiovascular risk and progression.

Adapted with permission from Kidney Disease: Improving Global Outcomes (KDIGO) CKD Work Group (2013) KDIGO 2012 clinical practice guideline for the evaluation and management of chronic kidney disease. Kidney International (Suppl. 3): 1–150

- 115 1.3.3 Define accelerated progression of CKD as:

- 116 • a sustained decrease in GFR of 25% or more and a change in GFR category within 12 months or
 117 • a sustained decrease in GFR of 15 ml/min/1.73 m² per year. [new 2014]

- 118 1.3.4 Take the following steps to identify the rate of progression of CKD:

- 119 • Obtain a minimum of 3 GFR estimations over a period of not less than 90 days.

- 120 • In people with a new finding of reduced GFR, repeat the GFR within 2 weeks to exclude causes of
121 acute deterioration of GFR – for example, acute kidney injury or starting renin–angiotensin
122 system antagonist therapy. [2008, amended 2014]
- 123 1.3.5 Be aware that people with CKD are at increased risk of progression to end-stage kidney disease
124 if they have either of the following:
- 125 • a sustained decrease in GFR of 25% or more over 12 months or
126 • a sustained decrease in GFR of 15 ml/min/1.73 m² or more over 12 months. [2008, amended
127 2014]
- 128 1.3.6 When assessing CKD progression, extrapolate the current rate of decline of GFR and take this
129 into account when planning intervention strategies, particularly if it suggests that the person might
130 need renal replacement therapy in their lifetime. [2008, amended 2014]
- 131 1.3.9 Monitor people for the development or progression of CKD for at least 2–3 years after acute
132 kidney injury, even if serum creatinine has returned to baseline. [new 2014]
- 133 1.7.1 Do not routinely measure calcium, phosphate, parathyroid hormone (PTH) and vitamin D levels
134 in people with a GFR of 30 ml/min/1.73 m² or more (GFR category G1, G2 or G3). [2008]
- 135 1.7.2 Measure serum calcium, phosphate and PTH concentrations in people with a GFR of less than
136 30 ml/min/1.73 m² (GFR category G4 or G5). Determine the subsequent frequency of testing by the
137 measured values and the clinical circumstances. Where doubt exists, seek specialist opinion. [2008]
- 138 1.7.7 Monitor serum calcium and phosphate concentrations in people receiving alfacalcidol or
139 calcitriol supplements. [2014]
- 140 1.7.8 If not already measured, check the haemoglobin level in people with a GFR of less than 45
141 ml/min/1.73 m² (GFR category G3b, G4 or G5) to identify anaemia (haemoglobin less than 110 g/litre
142 [11.0 g/dl], see Anaemia management in people with chronic kidney disease [NICE guideline CG114]).
143 Determine the subsequent frequency of testing by the measured value and the clinical
144 circumstances. [2008]
145

Figure 64: Classification of chronic kidney disease using GFR and ACR categories

GFR and ACR categories and risk of adverse outcomes			ACR categories (mg/mmol), description and range		
			<3 Normal to mildly increased	3–30 Moderately increased	>30 Severely increased
			A1	A2	A3
GFR categories (ml/min/1.73m ²), description and range	≥90 Normal and high	G1	No CKD in the absence of markers of kidney damage		
	60–89 Mild reduction related to normal range for a young adult	G2			
	45–59 Mild–moderate reduction	G3a ¹			
	30–44 Moderate–severe reduction	G3b			
	15–29 Severe reduction	G4			
	<15 Kidney failure	G5			

Increasing risk

Increasing risk

¹ Consider using eGFR_{cystatinC} for people with CKD G3aA1 (see recommendations 1.1.14 and 1.1.15)

Abbreviations: ACR, albumin:creatinine ratio; CKD, chronic kidney disease; GFR, glomerular filtration rate

Adapted with permission from Kidney Disease: Improving Global Outcomes (KDIGO) CKD Work Group (2013) KDIGO 2012 clinical practice guideline for the evaluation and management of chronic kidney disease. Kidney International (Suppl. 3): 1–150

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147

148

Q148 Liver conditions

- 150 **Hepatitis B (chronic): Diagnosis and management of chronic hepatitis B in children, young people**
151 **and adults CG 165. Published June 2013**
- 152 1.6.1 Monitor ALT levels every 24 weeks in adults with HBeAg-positive disease who are in the
153 immune-tolerant phase (defined by active viral replication and normal ALT levels [less than 30 IU/L in
154 males and less than 19 IU/L in females]).
- 155 1.6.2 Monitor ALT every 12 weeks on at least 3 consecutive occasions if there is an increase in ALT
156 levels.
- 157 1.6.3 Monitor ALT and HBV DNA levels every 48 weeks in adults with inactive chronic hepatitis B
158 infection (defined as HBeAg negative on 2 consecutive tests with normal ALT [less than 30 IU/L in
159 males and less than 19 IU/L in females] and HBV DNA less than 2000 IU/ml).
- 160 • Consider monitoring more frequently (for example, every 12–24 weeks) in people with cirrhosis who have
161 undetectable HBV DNA.
- 162 1.6.7 In people with HBeAg seroconversion after antiviral treatment, monitor HBeAg, anti-HBe, HBV
163 DNA level and liver function at 4, 12 and 24 weeks after HBeAg seroconversion and then every 6
164 months.
- 165 1.6.8 Monitor HBsAg and anti-HBs annually in people with HBsAg seroconversion after antiviral
166 treatment and discharge people who are anti-HBs positive on 2 consecutive tests.
- 167 1.6.9 Review injection technique and adverse effects weekly during the first month of treatment in
168 people taking peginterferon alfa-2a[10].
- 169 1.6.10 Monitor full blood count, liver function (including bilirubin, albumin and ALT), renal function
170 (including urea and electrolyte levels) and thyroid function (and in children, weight and height)
171 before starting peginterferon alfa-2a and 2, 4, 12, 24, 36 and 48 weeks after starting treatment to
172 detect adverse effects[10].
- 173 1.6.11 Monitor HBV DNA and quantitative HBsAg levels and HBeAg status before starting
174 peginterferon alfa-2a at 12, 24 and 48 weeks after starting treatment to determine treatment
175 response[10].
- 176 1.6.12 Monitor full blood count, liver function (including bilirubin, albumin and ALT) and renal
177 function (including urea and electrolyte levels) in people with compensated liver disease before
178 starting entecavir or lamivudine, 4 weeks after starting treatment and then every 3 months to detect
179 adverse effects[10].
- 180 1.6.13 Monitor HBV DNA and quantitative HBsAg levels and HBeAg status before starting entecavir or
181 lamivudine, 12, 24 and 48 weeks after starting treatment and then every 6 months to determine
182 treatment response and medicines adherence[10].
- 183 1.6.14 Monitor HBV DNA levels every 12 weeks in people with HBeAg-negative disease who have
184 been taking lamivudine for 5 years or longer[10].
- 185 1.6.15 Monitor full blood count, liver function (including bilirubin, albumin and ALT), renal function
186 (including urea and electrolyte levels and urine protein/creatinine ratio), and phosphate levels in
187 people with compensated liver disease before starting tenofovir disoproxil, 4 weeks after starting
188 treatment and then every 3 months to detect adverse effects[10].

- 189 1.6.16 Monitor HBV DNA and quantitative HBsAg levels and HBeAg status before starting tenofovir
190 disoproxil, 12, 24 and 48 weeks after starting treatment and then every 6 months to determine
191 treatment response and medicines adherence[10].
- 192 1.6.17 Monitor full blood count, liver function (including bilirubin, albumin and ALT), renal function
193 (including urea and electrolyte levels and urine protein/creatinine ratio), blood clotting, HBV DNA
194 level and HBeAg status in people with decompensated liver disease before starting entecavir or
195 lamivudine and weekly after starting treatment to assess treatment response and adverse effects.
196 When the person is no longer decompensated, follow the recommendations in 'Children, young
197 people and adults with compensated liver disease taking entecavir or lamivudine'[10].
- 198 1.6.18 Monitor full blood count, liver function (including bilirubin, albumin and ALT), renal function
199 (including urea and electrolyte levels and urine protein/creatinine ratio) and phosphate, blood
200 clotting, HBV DNA level and HBeAg status in people with decompensated liver disease before starting
201 tenofovir disoproxil and weekly after starting treatment to assess treatment response and adverse
202 effects. When the person is no longer decompensated, follow the recommendations in 'Children,
203 young people and adults with compensated liver disease taking tenofovir disoproxil'[10].
- 204 1.7.1 Perform 6-monthly surveillance for HCC by hepatic ultrasound and alpha-fetoprotein testing in
205 people with significant fibrosis (METAVIR stage greater than or equal to F2 or Ishak stage greater
206 than or equal to 3) or cirrhosis.
- 207 1.7.2 In people without significant fibrosis or cirrhosis (METAVIR stage less than F2 or Ishak stage less
208 than 3), consider 6-monthly surveillance for HCC if the person is older than 40 years and has a family
209 history of HCC and HBV DNA greater than or equal to 20,000 IU/ml.
- 210 1.7.3 Do not offer surveillance for HCC in people without significant fibrosis or cirrhosis (METAVIR
211 stage less than F2 or Ishak stage less than 3) who have HBV DNA less than 20,000 IU/ml and are
212 younger than 40 years.

Q134 Neurological conditions

214 Epilepsy

- 215 The epilepsies: the diagnosis and management of the epilepsies in adults and children in primary and
216 secondary care. CG137. Published January 2012
- 217 1.20.1 Children, young people and adults with epilepsy should have a regular structured review and
218 be registered with a general medical practice. [2004]
- 219 1.20.2 Adults should have a regular structured review with their GP, but depending on the person's
220 wishes, circumstances and epilepsy, the review may be carried out by the specialist. [2004]
- 221 1.20.4 For adults, the maximum interval between reviews should be 1 year but the frequency of
222 review will be determined by the person's epilepsy and their wishes. [2004]
- 223 1.20.6 Adults should have regular reviews. In addition, access to either secondary or tertiary care
224 should be available to ensure appropriate diagnosis, investigation and treatment if the person or
225 clinician view the epilepsy as inadequately controlled. [2004]
- 226 1.20.7 Adults with well-controlled epilepsy may have specific medical or lifestyle issues (for example,
227 pregnancy or drug cessation) that may need the advice of a specialist. [2004]
- 228 1.20.8 If the structured review is to be conducted by the specialist, this may be best provided in the
229 context of a specialist clinic. [2004]

- 230 1.20.9 Treatment should be reviewed at regular intervals to ensure that children, young people and
231 adults with epilepsy are not maintained for long periods on treatment that is ineffective or poorly
232 tolerated and that concordance with prescribed medication is maintained. [2004]
- 233 1.20.10 Annual review should include an enquiry about side effects and a discussion of the treatment
234 plan to ensure concordance and adherence to medication. [2004]
- 235 1.20.11 At the review, children, young people and adults should have access to: written and visual
236 information; counselling services; information about voluntary organisations; epilepsy specialist
237 nurses; timely and appropriate investigations; referral to tertiary services including surgery, where
238 appropriate. [2004]

Q15 Respiratory conditions

240 Asthma - diagnosis and monitoring. In development, to publication delayed until later this year

- 241 1.3.1 Monitor asthma control at every review. If control is suboptimal:
- 242 • confirm the person's adherence to prescribed treatment in line with recommendations 1.2.1,
243 1.2.2 and 1.2.3 in the NICE guideline on medicines adherence
- 244 • review the person's inhaler technique
- 245 • review if treatment needs to be changed
- 246 • if relevant, ask about occupational asthma and/or other triggers.
- 247 1.3.2 Consider using a validated questionnaire (the Asthma Control Questionnaire or Asthma
248 Control Test) to monitor asthma control in adults and young people older than 16.
- 249 1.3.3 Monitor asthma control at each review in adults and children aged 5 years and over by
250 measuring either spirometry (FEV1) or peak flow.
- 251 1.3.4 Do not routinely use FeNO to monitor asthma control.
- 252 1.3.5 Consider FeNO measurement as an option to support asthma management in people who
253 are symptomatic despite using inhaled corticosteroids. (This recommendation is from NICE's
254 diagnostics guidance on measuring fractional exhaled nitric oxide concentration in asthma.)
- 255 1.3.6 Do not use challenge testing to monitor asthma control.
- 256 1.3.7 Observe and give advice on the inhaler technique of people with asthma:
- 257 • at every consultation relating to an asthma attack, in all care settings
- 258 • when there is deterioration in asthma control
- 259 • when the device is changed
- 260 • at every annual review
- 261 • if the person asks for it to be checked.

262 COPD

263 Chronic obstructive pulmonary disease: Management of chronic obstructive pulmonary disease in
264 adults in primary and secondary care (partial update). CG101 Published June 2010

- 265 1.2.14.1 Follow-up of all patients with COPD should include:
- 266 • highlighting the diagnosis of COPD in the case record and recording this using Read codes on a
267 computer database

- 268 • recording the values of spirometric tests performed at diagnosis (both absolute and percent
269 predicted)
- 270 • offering smoking cessation advice
- 271 • recording the opportunistic measurement of spirometric parameters (a loss of 500 ml or more
272 over 5 years will select out those patients with rapidly progressing disease who may need
273 specialist referral and investigation). [2004]
- 274 1.2.14.2 Patients with COPD should be reviewed at least once per year, or more frequently if
275 indicated, and the review should cover the issues listed in table 6. [2004]
- 276 1.2.14.3 For most patients with stable severe disease regular hospital review is not necessary, but
277 there should be locally agreed mechanisms to allow rapid access to hospital assessment when
278 necessary. [2004]
- 279 1.2.14.4 When patients with very severe COPD are reviewed in primary care, they should be seen at
280 least twice a year, and specific attention should be paid to the issues listed in [2004]

281 **Table 61: Summary of follow-up of patients with COPD in primary care**

	Mild/moderate/severe (stages 1 to 3)	Very severe (stage 4)
Frequency	At least annual	At least twice per year
Clinical assessment	<ul style="list-style-type: none"> • Smoking status and desire to quit • Adequacy of symptom control: <ul style="list-style-type: none"> – breathlessness – exercise tolerance – estimated exacerbation frequency • Presence of complications • Effects of each drug treatment • Inhaler technique • Need for referral to specialist and therapy services • Need for pulmonary rehabilitation 	<ul style="list-style-type: none"> • Smoking status and desire to quit • Adequacy of symptom control: <ul style="list-style-type: none"> – breathlessness – exercise tolerance – estimated exacerbation frequency • Presence of cor pulmonale • Need for long-term oxygen therapy • Patient's nutritional state • Presence of depression • Effects of each drug treatment • Inhaler technique • Need for social services and occupational therapy input • Need for referral to specialist and therapy services • Need for pulmonary rehabilitation
Measurements to make	<ul style="list-style-type: none"> • FEV1 and FVC • calculate BMI • MRC dyspnoea score 	<ul style="list-style-type: none"> • FEV1 and FVC • calculate BMI • MRC dyspnoea score • SaO2

- 282 1.2.14.5 Patients with severe disease requiring interventions such as long-term non-invasive
283 ventilation should be reviewed regularly by specialists. [2004]
- 284 1.3.1 Definition of an exacerbation

285 An exacerbation is a sustained worsening of the patient's symptoms from their usual stable state
 286 which is beyond normal day-to-day variations, and is acute in onset. Commonly reported symptoms
 287 are worsening breathlessness, cough, increased sputum production and change in sputum colour.
 288 The change in these symptoms often necessitates a change in medication.

289 1.3.2.1 Factors that should be used to assess the need to treat patients in hospital are listed in table
 290 7. [2004]

291 **Table 62: Factors to consider when deciding where to treat the patient**

Factor	Treat at home	Treat in hospital
Able to cope at home	Yes	No
Breathlessness	Mild	Severe
General condition	Good	Poor/deteriorating
Level of activity	Good	Poor/confined to bed
Cyanosis	No	Yes
Worsening peripheral oedema	No	Yes
Level of consciousness	Normal	Impaired
Already receiving LTOT	No	Yes
Social circumstances	Good	Living alone/not coping
Acute confusion	No	Yes
Rapid rate of onset	No	Yes
Significant comorbidity (particularly cardiac disease and insulin-dependent diabetes)	No	Yes
SaO ₂ < 90%	No	Yes
Changes on chest radiograph	No	Present
Arterial pH level	≥ 7.35	< 7.35
Arterial PaO ₂	≥ 7 kPa	< 7 kPa

Q126 Rheumatoid arthritis

293 1.5.1.1 Measure CRP and key components of disease activity (using a composite score such as DAS28)
 294 regularly in people with RA to inform decision-making about:

- 295 •increasing treatment to control disease
- 296 •cautiously decreasing treatment when disease is controlled. [2009]

297 1.5.1.2 In people with recent-onset active RA, measure CRP and key components of disease activity
 298 (using a composite score such as DAS28) monthly until treatment has controlled the disease to a
 299 level previously agreed with the person with RA. [2009]

300 1.5.1.3 Offer people with satisfactorily controlled established RA review appointments at a frequency
 301 and location suitable to their needs. In addition, make sure they:

- 302 •have access to additional visits for disease flares,
- 303 •know when and how to get rapid access to specialist care, and
- 304 •have ongoing drug monitoring. [2009]

305 1.5.1.4 Offer people with RA an annual review to:

- 306 •assess disease activity and damage, and measure functional ability (using, for example, the Health
307 Assessment Questionnaire [HAQ])
- 308 •check for the development of comorbidities, such as hypertension, ischaemic heart disease,
309 osteoporosis and depression
- 310 •assess symptoms that suggest complications, such as vasculitis and disease of the cervical spine,
311 lung or eyes
- 312
- 313 •organise appropriate cross referral within the multidisciplinary team
- 314 •assess the need for referral for surgery (see section 1.6)
- 315 •assess the effect the disease is having on a person's life. [2009]

Q167 Type 1 and type 2 diabetes

317 Type 1 diabetes CG15

- 318 1.2.5. Set up an individual care plan jointly agreed with the adult with type 1 diabetes, review it
319 annually and modify it taking into account changes in the person's wishes, circumstances and
320 medical findings, and record the details. The plan should include aspects of:
- 321 • diabetes education, including nutritional advice
- 322 • insulin therapy, including dose adjustment
- 323 • self-monitoring
- 324 • avoiding hypoglycaemia and maintaining awareness of hypoglycaemia
- 325 • for women of childbearing potential, family planning, contraception and pregnancy planning
- 326 • cardiovascular risk factor monitoring and management
- 327 • complications monitoring and management
- 328 • means and frequency of communicating with the diabetes professional team
- 329 • frequency and content of follow-up consultations, including review of HbA1c levels and
330 experience of hypoglycaemia, and next annual review. [2004, amended 2015]
- 331 1.6.10. Advise routine self-monitoring of blood glucose levels for all adults with type 1 diabetes, and
332 recommend testing at least 4 times a day, including before each meal and before bed. [new 2015]
- 333 1.6.11. Support adults with type 1 diabetes to test at least 4 times a day, and up to 10 times a day if
334 any of the following apply:
- 335 • the desired target for blood glucose control, measured by HbA1c level (see recommendation 41),
336 is not achieved
- 337 • the frequency of hypoglycaemic episodes increases
- 338 • there is a legal requirement to do so (such as before driving, in line with the Driver and Vehicle
339 Licensing Agency [DVLA] At a glance guide to the current medical standard of fitness to drive)
- 340 • during periods of illness
- 341 • before, during and after sport
- 342 • when planning pregnancy, during pregnancy and while breastfeeding (see the NICE guideline on
343 diabetes in pregnancy)

- 344 • if there is a need to know blood glucose levels more than 4 times a day for other reasons (for
345 example, impaired awareness of hypoglycaemia, high-risk activities). [new 2015]
- 346 1.6.18. Educate adults with type 1 diabetes about how to measure their blood glucose level,
347 interpret the results and know what action to take. Review these skills at least annually. [new 2015]
- 348 1.6.19. Support adults with type 1 diabetes to make the best use of data from self-monitoring of
349 blood glucose through structured education. [new 2015]
- 350 1.6.22. Consider real-time continuous glucose monitoring for adults with type 1 diabetes who are
351 willing to commit to using it at least 70% of the time and to calibrate it as needed, and who have any
352 of the following despite optimised use of insulin therapy and conventional blood glucose monitoring:
- 353 • More than 1 episode a year of severe hypoglycaemia with no obviously preventable precipitating
354 cause.
- 355 • Complete loss of awareness of hypoglycaemia.
- 356 • Frequent (more than 2 episodes a week) asymptomatic hypoglycaemia that is causing problems
357 with daily activities.
- 358 • Extreme fear of hypoglycaemia.
- 359 • Hypoglycaemia (HbA1c level of 75 mmol/litre [9%] or higher) that persists despite testing at least
360 10 times a day (see recommendations 47 and 48). Continue real-time continuous glucose
361 monitoring only if HbA1c can be sustained at or below 53 mmol/mol [7%] and/or there has been a
362 fall in HbA1c of 27 mmol/mol [2.5%] or more. [new 2015]

363 **Type 2 diabetes NG 28**

- 364 1.4.1 Measure blood pressure at least annually in an adult with type 2 diabetes without previously
365 diagnosed hypertension or renal disease. Offer and reinforce preventive lifestyle advice. [2009]
- 366 1.4.2 For an adult with type 2 diabetes on antihypertensive drug treatment when diabetes is
367 diagnosed, review blood pressure control and medications used. Make changes only if there is poor
368 control or if current drug treatment is not appropriate because of microvascular complications or
369 metabolic problems. [2009]
- 370 1.4.3 Repeat blood pressure measurements within:
- 371 • 1 month if blood pressure is higher than 150/90 mmHg
- 372 • 2 months if blood pressure is higher than 140/80 mmHg
- 373 • 2 months if blood pressure is higher than 130/80 mmHg and there is kidney, eye or cerebrovascular
374 damage.
- 375 Provide lifestyle advice (diet and exercise) at the same time. [2009]
- 376 1.4.4 Provide lifestyle advice (see section 1.3 in this guideline and the lifestyle interventions section
377 in hypertension in adults [NICE guideline CG127]) if blood pressure is confirmed as being consistently
378 above 140/80 mmHg (or above 130/80 mmHg if there is kidney, eye or cerebrovascular damage).
379 [2009]
- 380 1.4.5 Add medications if lifestyle advice does not reduce blood pressure to below 140/80 mmHg
381 (below 130/80 mmHg if there is kidney, eye or cerebrovascular damage). [2009]

- 382 1.4.6 Monitor blood pressure every 1–2 months, and intensify therapy if the person is already on
383 antihypertensive drug treatment, until the blood pressure is consistently below 140/80 mmHg
384 (below 130/80 mmHg if there is kidney, eye or cerebrovascular damage). [2009]
- 385 1.4.14 Monitor the blood pressure of a person who has attained and consistently remained at his or
386 her blood pressure target every 4–6 months. Check for possible adverse effects of antihypertensive
387 drug treatment – including the risks from unnecessarily low blood pressure. [2009]
- 388 1.6.1 In adults with type 2 diabetes, measure HbA1c levels at:
- 389 •3–6-monthly intervals (tailored to individual needs), until the HbA1c is stable on unchanging
390 therapy
 - 391 •6-monthly intervals once the HbA1c level and blood glucose lowering therapy are stable. [2015]
- 392 1.6.12 Take the Driver and Vehicle Licensing Agency (DVLA) At a glance guide to the current medical
393 standards of fitness to drive into account when offering self-monitoring of blood glucose levels for
394 adults with type 2 diabetes. [new 2015]
- 395 1.6.13 Do not routinely offer self-monitoring of blood glucose levels for adults with type 2 diabetes
396 unless:
- 397 •the person is on insulin or
 - 398 •there is evidence of hypoglycaemic episodes or
 - 399 •the person is on oral medication that may increase their risk of hypoglycaemia while driving or
400 operating machinery or
 - 401 •the person is pregnant, or is planning to become pregnant. For more information, see the NICE
402 guideline on diabetes in pregnancy. [new 2015]
- 403 1.6.14 Consider short-term self-monitoring of blood glucose levels in adults with type 2 diabetes (and
404 review treatment as necessary):
- 405 •when starting treatment with oral or intravenous corticosteroids or
 - 406 •to confirm suspected hypoglycaemia. [new 2015]
- 407 1.6.15 Be aware that adults with type 2 diabetes who have acute intercurrent illness are at risk of
408 worsening hyperglycaemia. Review treatment as necessary. [new 2015]
- 409 1.6.16 If adults with type 2 diabetes are self-monitoring their blood glucose levels, carry out a
410 structured assessment at least annually. The assessment should include:
- 411 •the person's self-monitoring skills
 - 412 •the quality and frequency of testing
 - 413 •checking that the person knows how to interpret the blood glucose results and what action to take
 - 414 •the impact on the person's quality of life
 - 415 •the continued benefit to the person
 - 416 •the equipment used. [2015]

- 417 1.6.36 Monitor adults with type 2 diabetes who are on a basal insulin regimen (NPH insulin, insulin
418 detemir or insulin glargine) for the need for short-acting insulin before meals (or a pre-mixed
419 [biphasic] insulin preparation). [2015]
- 420 1.6.37 Monitor adults with type 2 diabetes who are on pre-mixed (biphasic) insulin for the need for a
421 further injection of short-acting insulin before meals or for a change to a basal bolus regimen with
422 NPH insulin or insulin detemir or insulin glargine[8], if blood glucose control remains inadequate.
423 [2015]
- 424 1.7.13 Offer men with type 2 diabetes the opportunity to discuss erectile dysfunction as part of their
425 annual review. [2015]
- 426 1.7.17 Arrange or perform eye screening at or around the time of diagnosis. Arrange repeat of
427 structured eye screening annually. [2009]
- 428 1.7.22 Depending on the findings, follow structured eye screening by:
- 429 •routine review in 1 year or
- 430 •earlier review or
- 431 •referral to an ophthalmologist. [2009]

Appendix R: Mental health of adults in contact with the criminal justice system appendices

R.1 Review protocols

5 Recognition and assessment

Item No.	Item [Prospero field No.]	Details
	PROSPERO: Reg. No.	CRD#####
Guideline details		
1.	Guideline*	Mental health of adults in contact with the criminal justice system
2.	Guideline chapter*	Recognition and assessment
3.	Topic Group (if used)	
4.	Sub-section lead*	
5.	Review team lead*	
6.	Objective of review*	<ul style="list-style-type: none"> To estimate the diagnostic accuracy of brief recognition tools that assess need for further assessment of adults in contact with the criminal justice system with a suspected mental health problem To estimate the diagnostic accuracy of formal assessment tools To identify the key components of a comprehensive assessment
Review title and timescale		

7.	Review title [1]*	The recognition and assessment of mental health problems in adults in contact with the criminal justice system																								
8.	Anticipated or actual start date [3]																									
9.	Anticipated completion date [4]																									
10.	Stage of review at time of registration [5]	<table border="0" style="width: 100%;"> <thead> <tr> <th style="width: 60%;"></th> <th style="text-align: center;">Started</th> <th style="text-align: center;">Completed</th> </tr> </thead> <tbody> <tr> <td>Preliminary searches</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Piloting of the study selection process</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Formal screening of search results against eligibility criteria</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Data extraction</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Risk of bias (quality) assessment</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Data analysis</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Prospective meta-analysis</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table> <p>Provide any other relevant information about the stage of the review here (e.g. Funded proposal, final protocol not yet finalised).</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>		Started	Completed	Preliminary searches	<input type="checkbox"/>	<input type="checkbox"/>	Piloting of the study selection process	<input type="checkbox"/>	<input type="checkbox"/>	Formal screening of search results against eligibility criteria	<input type="checkbox"/>	<input type="checkbox"/>	Data extraction	<input type="checkbox"/>	<input type="checkbox"/>	Risk of bias (quality) assessment	<input type="checkbox"/>	<input type="checkbox"/>	Data analysis	<input type="checkbox"/>	<input type="checkbox"/>	Prospective meta-analysis	<input type="checkbox"/>	<input type="checkbox"/>
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Prospective meta-analysis	<input type="checkbox"/>	<input type="checkbox"/>																								
Review team details																										

11.	Named contact [6]	Odette Megnin-Viggars
12.	Named contact email [7]	omegnin@rcpsych.ac.uk
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14.	Named contact phone number [9]	020 3701 2645
15.	Review team members and their organisational affiliations [10]	Dr. Odette Megnin-Viggars NCCMH
16.	Organisational affiliation of the review [11]	National Collaborating Centre for Mental Health
17.	Funding sources/ sponsors [12]	National Institute for Health and Care Excellence
18.	Conflicts of interest [13]	<input checked="" type="radio"/> None known <input type="radio"/> Yes
19.	Collaborators [14]	Title/First name/Last name/Organisation details
Review methods		
20.	Review question(s) [15]*	RQ 2.1: What are the most appropriate tools for the recognition of mental health problems, or what modifications are needed to recognition tools recommended in existing NICE guidance, for adults: <ul style="list-style-type: none"> • in contact with the police? • in police custody? • for the court process?

	<ul style="list-style-type: none">• at reception into prison?• at subsequent time points in prison?• in the community (serving a community sentence, released from prison on licence or released from prison and in contact with a community rehabilitation company [CRC] or the probation service)? <p>RQ 2.2: What are the most appropriate tools to support or assist in the assessment of mental health problems, or what modifications are needed to assessment tools recommended in existing NICE guidance, for adults:</p> <ul style="list-style-type: none">• in contact with the police?• in police custody?• for the court process?• at reception into prison?• at subsequent time points in prison?• in the community (serving a community sentence, released from prison on licence or released from prison and in contact with a community rehabilitation company [CRC] or the probation service)? <p>RQ 2.3: What are the most appropriate tools to support or assist in risk assessment, for adults with mental health problems:</p> <ul style="list-style-type: none">• in contact with the police?• in police custody?• for the court process?• at reception into prison?• at subsequent time points in prison?• in the community (serving a community sentence, released from prison on licence or released from prison and in contact with a community rehabilitation company [CRC] or the probation service)?
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		<p>RQ 2.4: What are the key components of, and the most appropriate structure for a comprehensive assessment of mental health problems for adults:</p> <ul style="list-style-type: none"> • in police custody? • for the court process? • at reception into prison? • at subsequent time points in prison? • in the community (serving a community sentence, released from prison on licence or released from prison and in contact with a community rehabilitation company [CRC] or the probation service)?
21.	Sub-question(s)	<p>Where possible, consideration should be given to the specific needs of:-</p> <ul style="list-style-type: none"> • people with neurodevelopmental disorders (including learning disabilities) • women • older adults (aged 50 years and over) • young black men • young adults that have transitioned from juvenile services
22.	Searches [16]*	<p>Mainstream databases:</p> <p>CENTRAL (date range), Embase (date range), MEDLINE (date range), PsycINFO (date range)</p> <p>Topic specific databases:</p> <p>[add]</p> <p>Other resources of evidence: [amend as appropriate]:</p> <ul style="list-style-type: none"> • Reference lists of included studies • Citation tracking for included papers in Scopus and Web of Knowledge (WoK)

		<ul style="list-style-type: none"> • Calls for evidence from stakeholders • Contacting authors of relevant works for ‘sibling’ studies • “Related articles” searching in PubMed • PROSPERO (http://www.crd.york.ac.uk/Prospero/) • Conference abstracts will be assessed for eligibility and potentially eligible studies will be checked to determine if they have been published in full • Dissertation titles/abstracts will be assessed for eligibility and potentially eligible studies will be checked to determine if they have been published in full • Non-English language papers (with English abstracts) will be assessed for eligibility and potentially eligible studies will be checked to determine if they have been published in an English language journal. <p>*The number of citations that might relate to relevant trials that haven’t been included will be recorded.</p> <p>Note. Unpublished data will only be included where a full study report is available with sufficient detail to properly assess the risk of bias. Authors of unpublished evidence will be asked for permission to use such data, and will be informed that summary data from the study and the study’s characteristics will be published in the full guideline.</p>
23.	Condition or domain being studied [18]*	<p>Mental health problems in adults in contact with the criminal justice system</p> <p>'Mental health problems' includes: common mental health problems; severe mental illness; personality disorders; drug and alcohol problems; paraphilias; neurodevelopmental disorders; acquired cognitive impairment</p>

		Contact with the criminal justice system includes people: in police custody; in court custody; in contact with liaison, diversion and street triage services; remanded on bail; remanded in prison; who have been convicted and are serving a prison or community sentence; released from prison on licence; released from prison and in contact with a community rehabilitation company (CRC) or the probation service.
24.	Participants/ population [19]*	<p>Included: Adults (aged 18 and over) with, or at risk of developing, a mental health problem who are in contact with the criminal justice system</p> <p>Excluded:</p> <ul style="list-style-type: none"> • people who are cared for in hospital, except for providing guidance on managing transitions between criminal justice system settings and hospital • people in immigration removal centres • children and young people (aged under 18 years) • people who are in contact with the criminal justice system solely as a result of being a witness or victim.
25.	Intervention(s), exposure(s) [20]*	<p>RQ 2.1-2.3: Included: Any formal recognition and assessment tools considered appropriate and suitable for use</p> <p>Index test: Recognition or assessment tool</p> <p>RQ 2.1:</p> <p>Included:</p> <ul style="list-style-type: none"> • 6-Item Cognitive Impairment Test (6-CIT) • Abbreviated Mental test (AMT)

		<ul style="list-style-type: none"> • Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) • Alcohol Use Disorders Inventory Test (AUDIT) • Amritsar Depression Inventory (ADI) • Anxiety and Depression Detector • Autism-Spectrum Quotient (AQ-10 or AQ-20 or AQ-50) • Autism Behavior Checklist (ABC) • Autism Screening Questionnaire (ASQ) now known as the Social Communication Questionnaire (SCQ) • Autonomic Nervous System Questionnaire (ANS) • Beck Anxiety Inventory (BAI) • Beck Depression Inventory (BDI) and BDI – short form • Binge Eating Scale (BES) • Brief DSMPTSD–III–R and DSMPTSD–IV • Brief Jail Mental Health Screen (BJMHS) or Brief Jail Mental Health Screen - Revised (BJMHS-R) • Bulimic Investigatory Test, Edinburgh (BITE) • CAGE questionnaire and CAGE questionnaire adapted to include drugs (CAGE-AID) • Caribbean Culture-Specific Screen for emotional distress (CCSS) • Center for Epidemiological Studies Depression Scale (CES-D) • Chemical Use Abuse and Dependency (CUAD) • Clock-drawing test • Co-occurring Disorders Screening Instruments (CODSI) – any mental disorder and severe mental disorder • Confusion Assessment Method, short or long version (CAM) • Correctional Mental Health Screen for Men (CMHS-M) or Correctional Mental Health Screen for Women (CMHS-W) • Dartmouth Assessment of Lifestyle Instrument (DALI) • Davidson Trauma Scale (DTS) • Delirium Rating Scale (DRS) or Delirium Rating Scale-Revised-98 (DRS-R-98) • Disaster-Related Psychological Screening Test (DRPST) • Distress Thermometer • Don Grubin prison reception health screening tool
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	<ul style="list-style-type: none"> • Drug Abuse Screening Test (DAST-10) • Drug Use Disorders Identification Test (DUDIT) • Eating Attitudes Test (EAT-12 or EAT-26) • Eating Disorder Diagnostic Scale (EDDS) • Eating Disorder Examination Questionnaire (EDE-Q) • Eating Disorders Screen for Primary Care (ESP) • Eating Disturbance Scale (EDS-5) • Edinburgh Postnatal Depression Scale (EPDS) • England Mental Health Screen (EMHS) • General Health Questionnaire (GHQ-12 or GHQ-28 or GHQ-30) • General Practitioner Assessment of Cognition (GPCOG) • Generalized Anxiety Disorder scale (the GAD) • Geriatric Depression Scale (GDS) and short form (GDS-15) • Global appraisal of individual needs Short Screener version 1 (GSS) • Hamilton Anxiety Rating Scale (HAM-A) • Hamilton Rating Scale for Depression (HRSD), also called the Hamilton Depression Rating Scale (HDRS/HAM-D) • Health Screening of People in Police Custody (HELP-PC) • Hospital Anxiety and Depression Scale (HADS) • Impact of Event Scale (IES) • Jail Screening Assessment Tool (JSAT) • Kessler-6 or Kessler-10 (K6 or K10) • Mental Disability/Suicide Intake Screen (MDSIS) • Mental Health Screen for Adults (MHS-A) • Mental Health Screening Form (MHSF) • Michigan Alcoholism Screening Test (MAST) • Millon Clinical Multiaxial Inventory-III (MCMI-III) • Mini Mental State Examination (MMSE) • Mini Social Phobia Inventory (Mini-SPIN) • Mood Disorder Questionnaire (MDQ) • National Strategy for Police Information Systems (NSPIS) custody risk assessment
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	<ul style="list-style-type: none"> • New York State brief screening tool (NYS BST) • Newcastle Mental Test Score • Paddington Alcohol Test • Panic and Agoraphobia Scale (PAS) • Panic Disorder Severity Scale, self-report (PDSS-SR) • Patient Health Questionnaire (PHQ-2 or PHQ-8 or PHQ-9) • Penn Inventory • Personality Assessment Screener (PAS) • Pervasive Developmental Disorder in Mental Retardation Scale (PDD-MRS) • Post-traumatic Stress Disorder Questionnaire (PTSD-Q) • Posttraumatic Stress Symptom Scale – Self-Report version (PSS-SR) and Post-traumatic Diagnostic Scale (PDS) • Prisoner Intake Screening Procedure (PISP) • PTSD Checklist – Civilian version (PCL-C) • Referral Decision Scale (RDS) • Richmond Agitation Sedation Scale (RASS) • Risk Behaviors Related to Eating Disorders (RiBED-8) • SCOFF questionnaire • Screen for Post-traumatic Stress Symptoms (SPTSS) • Screening Instrument for Psychosis (PS) • Self-Rating Inventory for Post-traumatic Stress Disorder (SRIP) • Self-Rating Scale for Post-traumatic Stress Disorder (SRS-PTSD) • Seven-minute screen • Sheehan Disability Scale (SDS) • Sheehan Patient-Related Anxiety Scale (SPRAS) • Single Alcohol Screening Question (SASQ) • Social Communication Questionnaire (SCQ) • Social Phobia Questionnaire (SPQ) • Social Phobia module of the Structured Clinical Interview for DSM-IV (SCID-SP) – screening questions • SPAN test
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	<ul style="list-style-type: none"> • Symptom Checklist 90 (SCL-90) or Symptom Checklist 90-Revised (SCL-90-R) • T-ACE Screening Tool • Trauma Screening Questionnaire (TSQ) • TWEAK alcohol screening test • ‘Whooley questions’ • Zung Self Rated Depression Scale <p>RQ 2.2:</p> <p>Included:</p> <ul style="list-style-type: none"> • Aberrant behaviour checklist (ABC) • Addenbrooke’s Cognitive Examination (ACE) • Adult Asperger Assessment (AAA) • Alcohol Problems Questionnaire (APQ) • Alcohol Use Disorders Inventory Test (AUDIT) • Alzheimer’s Disease Assessment Scale cognitive subscale (ADAS-cog) • Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV) • Asperger Syndrome (and high-functioning autism) Diagnostic Interview (ASDI) • Autism-Diagnostic Interview – Revised (ADI-R) • Autism Diagnostic Observation Schedule (ADOS) • Autism Spectrum Disorders Diagnosis Scale for Intellectually Disabled Adults (ASD-DA) • Behavior Summarized Evaluation – Revised (BSE-R) • Behaviour Problem Inventory (BPI-01) or Behaviour Problem Inventory - Short Form (BPI-S) • Cambridge Cognitive Examination – Revised (CAMCOG-R) • Challenging Behaviour Interview (CBI) • Childhood Autism Rating Scale (CARS) • Clinical Institute Withdrawal Assessment for Alcohol scale, revised (CIWA-Ar) • Developmental Behaviour Checklist for adults (DBC-A) • Developmental, Dimensional and Diagnostic Interview (3di) • Diagnostic Interview for Social and Communication Disorders (DISCO) • Eating Disorder Inventory (EDI)
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		<ul style="list-style-type: none"> • Functional Analysis Screening Tool (FAST) • Leeds Dependence Questionnaire (LDQ) • Middlesex Elderly Assessment of Mental State (MEAMS) • Modified Overt Aggression Scale (MOAS) • Movie for the Assessment of Social Cognition (MASC) • Pervasive Developmental Disorders Rating Scale (PDDRS) • Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) • Ritvo Autism and Asperger’s Diagnostic Scale (RAADS) or Ritvo Autism and Asperger’s Diagnostic Scale – Revised (RAADS-R) • Severity of Alcohol Dependence Questionnaire (SADQ) • Social Responsiveness Scale (SRS) <p>RQ 2.3:</p> <p>Included:</p> <ul style="list-style-type: none"> • Adult Suicide Ideation Questionnaire (ASIQ) • Beck Depression Inventory (BDI) • Beck Hopelessness Scale (BHS) • Brøset-Violence Checklist (BVC) • Dynamic Appraisal of Situational Aggression – Inpatient Version (DASA-IV) • Edinburgh Risk of Repetition Scale (ERRS) • Global Clinical Assessment (GCA) • Hamilton Depression Rating Scale (HDRS) • Health Screening of People in Police Custody (HELP-PC) • Historical, Clinical, Risk Management-20 (HCR-20) • Level of Supervision Inventory (LSI) • Manchester Self-harm Rule (MSHR) • National Strategy for Police Information Systems (NSPIS) custody risk assessment • Offender Group Reconviction Scale (OGRS) • Psychopathy Checklist (PCL), Psychopathy Checklist-Revised (PCL-R) or Psychopathy Checklist-Screening Version (PCL-SV)
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		<ul style="list-style-type: none"> • Reasons for Living Inventory (RFL) • Risk Assessment Management and Audit Systems (RAMAS) • Scale for Suicide Ideation (SSI) • Suicide Assessment Scale (SUAS) • Suicide Behaviours Questionnaire – Revised (SBQ-R) • Suicide Checklist (SCL) • Suicide Concerns for Offenders in Prison Environment (SCOPE) • Suicide Intent Scale (SIS) • Suicide Potential Scale • Suicide Probability Scale (SPS) • Violence Risk Assessment Guide (VRAG) <p>RQ 2.1-2.2: Excluded: N/A</p> <p>RQ 2.3: Excluded: Risk assessment tools measuring risk of offending or reoffending where the offending behaviour is not linked to the mental health problem</p> <p>RQ 2.4: Key components of, and the most appropriate structure for a comprehensive assessment of mental health problems for adults in contact with the criminal justice system</p>
26.	Comparator(s)/ control [21]*	<p>RQ 2.1-2.3: Included: Gold standard</p> <p>RQ 2.1-2.2: Reference test: Diagnosis Statistical Manual (DSM) or International Classification of Diseases (ICD) diagnosis</p>

		<p>Excluded: N/A</p> <p>RQ 2.4: N/A</p>
27.	Types of study to be included initially [22]*	<p>RQ 2.1-2.3: Included: Systematic reviews of diagnostic test accuracy studies, diagnostic cross-sectional studies (including cohort studies, case-control studies and nested case-control studies)</p> <p>Excluded: N/A</p> <p>RQ 2.4: N/A; GDG consensus-based</p>
28.	Context [23]*	<p>Included: Care and shared care provided or commissioned by health and social care services, for people in contact with the criminal justice system in any Organisation for Economic Co-operation and Development (OECD) country</p> <p>Excluded: Studies from non-OECD countries</p>
29.	Primary/Critical outcomes [24]*	<p>RQ 2.1-2.3:</p> <ul style="list-style-type: none"> • Sensitivity: the proportion of true positives of all cases diagnosed with autism in the population • Specificity: the proportion of true negatives of all cases not-diagnosed with autism in the population • Reliability (for instance, inter-rater or test-retest reliability or internal consistency) • Validity (for instance, criterion or construct validity)

		<p>RQ 2.4: Key components of, and the most appropriate structure for a comprehensive assessment of mental health problems for adults in contact with the criminal justice system. Consider:-</p> <ul style="list-style-type: none"> • the nature and content of the interview and observation • formal diagnostic methods/ psychological tools for the assessment of mental health problems • the assessment of risk to self and others • the assessment of need of self and others • the setting(s) in which the assessment takes place • the role of any informants • gathering of independent and accurate information from informants
30.	Secondary/Important, but not critical outcomes [25]*	<p>RQ 2.1 & 2.2:</p> <ul style="list-style-type: none"> • Positive Predictive Value (PPV): the proportion of patients with positive test results who are correctly diagnosed. • Negative Predictive Value (NPV): the proportion of patients with negative test results who are correctly diagnosed. • Area under the Curve (AUC): are constructed by plotting the true positive rate as a function of the false positive rate for each threshold. <p>RQ 2.4: N/A</p>
31.	Data extraction (selection and coding) [26]*	<p>Citations from each search will be downloaded into EndNote and duplicates removed. Records will then be screened independently by two reviewers against the eligibility criteria of the review (if there is disagreement, resolution will be by discussion or a third reviewer). Initially 10% of references will be double-screened. If inter-rater agreement is good (percentage agreement =>90%) then the remaining references will be screened by one reviewer. The unfiltered search results will be saved and retained for future potential re-analysis. All primary-level studies included after the first scan of citations will be acquired in full and re-evaluated for eligibility at the time they are being entered into a study database (standardised template created in Microsoft Excel). Eligibility will be confirmed by at least one member of the Guideline Development Group (GDG). Two researchers will extract data into the study database, comparing a sample of each other's work (10%) for reliability. Discrepancies or difficulties with coding will be resolved through discussion between reviewers or with members of</p>

		<p>the GDG.</p> <p>Data to be extracted:</p> <p>Study characteristics: RQ addressed, study design, country, N, age, recruitment location, target condition, index test, no. of items, cut-off, reference standard, CJS setting</p> <p>Outcomes: Sensitivity, specificity, number of ‘cases’, N, PPV, NPV, TP, FP, FN, TN, PLR, NLR, prevalence, AUR (mean), AUR (sd)</p>
32.	Risk of bias (quality) assessment [27]*	The quality of individual studies will be assessed using the QUADAS-2 quality checklist (available from: http://www.bris.ac.uk/media-library/sites/quadas/migrated/documents/quadas2.pdf)
33.	Strategy for data synthesis [28]*	<p>RQ 2.1-2.3:</p> <p>If existing reviews are found, the review team with advice from the GDG will assess their quality, completeness, and applicability to the NHS and to the scope of the guideline. If the GDG agree that a systematic review appropriately addresses a review question we will assess if any additional studies, conducted or published since the review was conducted, could affect the conclusions of the previous review. If new studies could change the conclusions, we will conduct a new analysis to update the review. If new studies could not change the conclusions of an existing review, the GDG will use the existing review to inform their recommendations.</p> <p>Review Manager 5 will be used to summarise diagnostic accuracy data from each study using forest plots and summary ROC plots. Where appropriate (where more than two studies report comparable data), a bivariate diagnostic accuracy meta-analysis will be conducted using Metadisc (Zamora et al., 2006, publically available at http://www.hrc.es/investigacion/metadisc_en.htm), in order to obtain pooled estimates of sensitivity and specificity using a random effects model. Alternatively, a</p>

		narrative synthesis will be used. RQ 2.4: The GDG will use a consensus-based approach to identify the key components of an effective assessment
34.	Analysis of subgroups or subsets [29] (including sensitivity analyses)	Heterogeneity is usually much greater in meta-analyses of diagnostic accuracy studies compared with RCTs. Therefore, a higher threshold for acceptable heterogeneity in such meta-analyses is required. Where substantial heterogeneity exists, sensitivity analyses will be considered, including: <ul style="list-style-type: none"> • Excluding case-control (from cohort) studies • Excluding non-UK studies
General information		
35.	Type of review [30]	Diagnostic
36.	Dissemination plans [35]	This review is being conducted for the NICE guideline on Mental health of adults in contact with the criminal justice system. Further information about the guideline and plans for implementation can be found on the NICE website: http://guidance.nice.org.uk The review findings will be included in the full guideline developed by the National Collaborating Centre for Mental Health: http://www.nccmh.org.uk/
37.	Details of any existing review of the same topic by the same authors [37]*	
38.	Review status [38]	Ongoing
Further information (not needed for Prospero registration)		

	Existing reviews utilised in this review:*	
39.	<ul style="list-style-type: none">• Updated	
40.	<ul style="list-style-type: none">• Not updated	

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R.2 Evidence table

Study ID	RQ	Study design	Country	N	Age range	Mean age	Gender (% female)	Ethnicity(% white)
Baksheev 2012	2.1	Cohort	Australia	150	NR	30.4	9	81
Ford 2007	2.1	Cohort	US	302	NR	NR	33	43
Ford 2009	2.1	Cohort	US	206	NR	NR	49	NR
Harrison 2007	2.1	Cohort	US	100	NR	34.1	51	79
Louden 2013	2.1	Cohort	US	149	NR	33.9	33	39
McKinnon 2014	2.1	Cohort	UK	323	NR	32.1	10	57
McKinnon 2015	2.1	Cohort	UK	351	NR	NR	NR	NR
Sacks 2007a	2.1	Cohort	US	100	NR	NR	25	NR
Sacks 2007b	2.1	Cohort	US	180	NR	34.5	41	52
Steadman 2005	2.1	Cohort	US	357	NR	32	41	NR
Steadman 2007	2.1	Cohort	US	464	NR	NR	56	NR
Teplin 1989a	2.1	Cohort	US	728	16-68	25	0	12
Teplin 1989b	2.1	Cohort	US	1149	NR	27.2	NR	45
Mokros 2012	2.2	Cohort	Austria	105	15-60	33.2	0	NR

Study ID	Recruitment location	CJS setting	Target condition	Index test
Baksheev 2012	Police custody	in police custody	Serious mental illness	Brief Jail Mental Health Screen (BJMHS)/Brief Jail Mental Health Screen - Revised (BJMHS-R)
			Axis-I (exc substance use)	Brief Jail Mental Health Screen (BJMHS)/Brief Jail Mental Health Screen - Revised (BJMHS-R)
			Current depression/suicidality	Custody Risk Assessment Form - Depression/Suicidal Item
			Axis-I (exc substance use)	Custody Risk Assessment Form - Mentally Ill item
Ford 2007	Prison	at reception into prison	Affective disorders	Brief Jail Mental Health Screen (BJMHS)/Brief Jail Mental Health Screen - Revised (BJMHS-R)
			Anxiety disorders	Brief Jail Mental Health Screen (BJMHS)/Brief Jail Mental Health Screen - Revised (BJMHS-R)

Study ID	Recruitment location	CJS setting	Target condition	Index test
			Axis 1 disorder	Brief Jail Mental Health Screen (BJMHS)/Brief Jail Mental Health Screen - Revised (BJMHS-R)
			Axis 1 or 2	Brief Jail Mental Health Screen (BJMHS)/Brief Jail Mental Health Screen - Revised (BJMHS-R)
			Affective disorders	Correctional Mental Health Screen for Men (CMHS-M)
			Anxiety disorders	Correctional Mental Health Screen for Men (CMHS-M)
			Axis 1 disorder	Correctional Mental Health Screen for Men (CMHS-M)
			Axis 1 or 2	Correctional Mental Health Screen for Men (CMHS-M)
			Affective disorders	Correctional Mental Health Screen for Women (CMHS-W)
			Anxiety disorders	Correctional Mental Health Screen for Women (CMHS-W)
			Axis 1 disorder	Correctional Mental Health Screen for Women (CMHS-W)
			Axis 1 or 2	Correctional Mental Health Screen for Women (CMHS-W)
			Affective disorders	Referral Decision Scale (RDS)
			Anxiety disorders	Referral Decision Scale (RDS)
			Axis 1 disorder	Referral Decision Scale (RDS)
			Axis 1 or 2	Referral Decision Scale (RDS)
Ford 2009	Prison	at reception into prison	Axis 1 or 2	Correctional Mental Health Screen for Men (CMHS-M)
			Axis 1 or 2 exc ASPD	Correctional Mental Health Screen for Men (CMHS-M)
			Axis 1 or 2	Correctional Mental Health Screen for Women (CMHS-W)
			Axis 1 or 2 exc ASPD	Correctional Mental Health Screen for Women (CMHS-W)
Harrison 2007	Prison	at subsequent time points in prison	Depression	Referral Decision Scale (RDS) - Depression subscale
Louden 2013	Probation	in the community	Axis-I (exc substance use)	Brief Jail Mental Health Screen (BJMHS)/Brief Jail Mental Health Screen - Revised (BJMHS-R)
McKinnon 2014	Police custody	in police custody	Psychosis	HELP-PC
			Depression	HELP-PC
McKinnon 2015	Police custody	in police custody	Learning disabilities	HELP-PC
Sacks 2007a	Prison - new admissions	at subsequent time points	General mental health	Co-occurring Disorders Screening Instruments (CODSI) – any mental disorder and severe mental disorder

Study ID	Recruitment location	CJS setting	Target condition	Index test
	to substance abuse treatment	in prison	Serious mental illness	Co-occurring Disorders Screening Instruments (CODSI) – any mental disorder and severe mental disorder
Sacks 2007b	Prison - new admissions to substance abuse treatment	at subsequent time points in prison	General mental health	Co-occurring Disorders Screening Instruments (CODSI) – any mental disorder and severe mental disorder
			Serious mental illness	Co-occurring Disorders Screening Instruments (CODSI) – any mental disorder and severe mental disorder
Steadman 2005	Prison	at reception into prison	Serious mental illness	Brief Jail Mental Health Screen (BJMHS)/Brief Jail Mental Health Screen - Revised (BJMHS-R)
Steadman 2007	Prison	at reception into prison	Serious mental illness	Brief Jail Mental Health Screen (BJMHS)/Brief Jail Mental Health Screen - Revised (BJMHS-R)
			Serious mental illness	Brief Jail Mental Health Screen (BJMHS)/Brief Jail Mental Health Screen - Revised (BJMHS-R)
Teplin 1989a	Prison	at reception into prison	Bipolar disorder	Referral Decision Scale (RDS) - Bipolar subscale
			Depression	Referral Decision Scale (RDS) - Depression subscale
			Schizophrenia	Referral Decision Scale (RDS) - Schizophrenia subscale
Teplin 1989b	Prison	at subsequent time points in prison	Serious mental illness	Referral Decision Scale (RDS)
Mokros 2012	Evaluated at Federal Evaluation Centre for Violent and Sexual Offenders	at subsequent time points in prison	Sexual Sadism	Severe Sexual Sadism Scale (SSSS)

Study ID	No. of items	Cut off	Reference standard	Full reference 1
Baksheev 2012	8	2 from S1 and/or 1 from S2	DSM-IV	Baksheev, G. N., J. Ogloff, et al. (2012). "Identification of mental illness in police cells: A comparison of police processes, the Brief Jail Mental Health Screen and the Jail Screening Assessment Tool." <i>Psychology, Crime & Law</i> 18(6): 529-542.
	8	2 from S1 and/or 1 from S2		
	1	1		
	1	1		
Ford 2007	8	1-5	DSM-IV	Ford, J. D., R. L. Trestman, et al. (2007). "Development and validation of a brief mental health screening instrument for newly incarcerated adults." <i>Assessment</i>
	8	1-5		
	8	1-5		
	8	1-5		

Study ID	No. of items	Cut off	Reference standard	Full reference 1
	12	4-7		14(3): 279-299.
	12	4-7		
	12	4-7		
	12	4-7		
	8	1-6		
	8	1-6		
	8	1-6		
	8	1-6		
	14	1-9		
	14	1-9		
	14	1-9		
	14	1-9		
Ford 2009	12	1-12	DSM-IV	Ford, J. D., R. L. Trestman, et al. (2009). "Validation of a brief screening instrument for identifying psychiatric disorders among newly incarcerated adults." <i>Psychiatric Services</i> 60(6): 842-846.
	12	1-12		
	8	1-8		
	8	1-8		
Harrison 2007	5	1-4	DSM-IV	Harrison, K. S. and R. Rogers (2007). "Axis I screens and suicide risk in jails: A comparative analysis." <i>Assessment</i> 14(2): 171-180.
Louden 2013	8	2 from S1 and/or 1 from S2	DSM-IV	Louden, J. E., J. L. Skeem, et al. (2013). "Comparing the predictive utility of two screening tools for mental disorder among probationers." <i>Psychological Assessment</i> 25(2): 405-415.
McKinnon 2014	NR	NR	Diagnosis - criteria unknown	McKinnon, I., & Grubin, D. (2014). Evidence-Based Risk Assessment Screening in Police Custody: The HELP-PC Study in London, UK. <i>Policing</i> ,8(2), 174-182
	NR	NR		
McKinnon 2015	4	1	Diagnosis - criteria unknown	McKinnon, I. Thorp, J., Grubin, D. , (2015), "Improving the detection of detainees with suspected intellectual disability in police custody", <i>Advances in Mental Health and Intellectual Disabilities</i> ,9,4,174 - 185
Sacks 2007a	6	1-6	DSM-IV	Sacks, S., G. Melnick, et al. (2007). "CJDATS Co-occurring Disorders Screening Instrument for Mental Disorders (CODSI-MD): A pilot study." <i>The Prison Journal</i> 87(1): 86-110.
	3	2		
Sacks 2007b	6	3	DSM-IV	Sacks, S., G. Melnick, et al. (2007). "CJDATS Co-Occurring Disorders Screening Instrument for Mental Disorders: A validation study." <i>Criminal Justice and Behavior</i> 34(9): 1198-1215.
	3	2		
Steadman 2005	8	2 from S1 and/or 1 from S2	DSM-IV	Steadman, H. J., J. E. Scott, et al. (2005). "Validation of the brief jail mental health screen." <i>Psychiatric Services</i> 56(7): 816-822.
Steadman 2007	8	2 from S1 and/or 1 from S2	DSM-IV	Steadman, H. J., P. C. Robbins, et al. (2007). "Revalidating the brief jail mental health screen to increase accuracy for women."

Study ID	No. of items	Cut off	Reference standard	Full reference 1
	12	2 from S1 and/or 1 from S2		Psychiatric Services 58(12): 1598-1601.
Teplin 1989a	5	1-5	DSM-III	Teplin, L. A. and J. Swartz (1989). "Screening for severe mental disorder in jails. The development of the referral decision scale." Law and Human Behavior 13(1): 1-18.
	5	1-5		
	5	1-5		
Teplin 1989b	13	2 on schizophrenia/depression subscales, 3 on bipolar subscale	DSM-III	Teplin, L. A. and J. Swartz (1989). "Screening for severe mental disorder in jails. The development of the referral decision scale." Law and Human Behavior 13(1): 1-18.
Mokros 2012	11	4-7	DSM-IV-TR	Mokros, A., F. Schilling, et al. (2012). "The Severe Sexual Sadism Scale: cross-validation and scale properties." Psychological assessment 24(3): 764-769.

R.3 Forest plots

R.3.1 Most appropriate tools for the recognition of mental health problems

Figure 1: Sensitivity and specificity of index tests for the recognition of depression

HELP-PC

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
McKinnon 2014	21	60	7	235	0.75 [0.55, 0.89]	0.80 [0.75, 0.84]		

Referral Decision Scale (RDS): Depression Subscale - Cut-Off 2

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Harrison 2007	11	44	2	43	0.85 [0.55, 0.98]	0.49 [0.39, 0.60]		
Teplin 1989a	33	14	3	678	0.92 [0.78, 0.98]	0.98 [0.97, 0.99]		

Figure 2: Summary of ROC curve for the index tests for depression

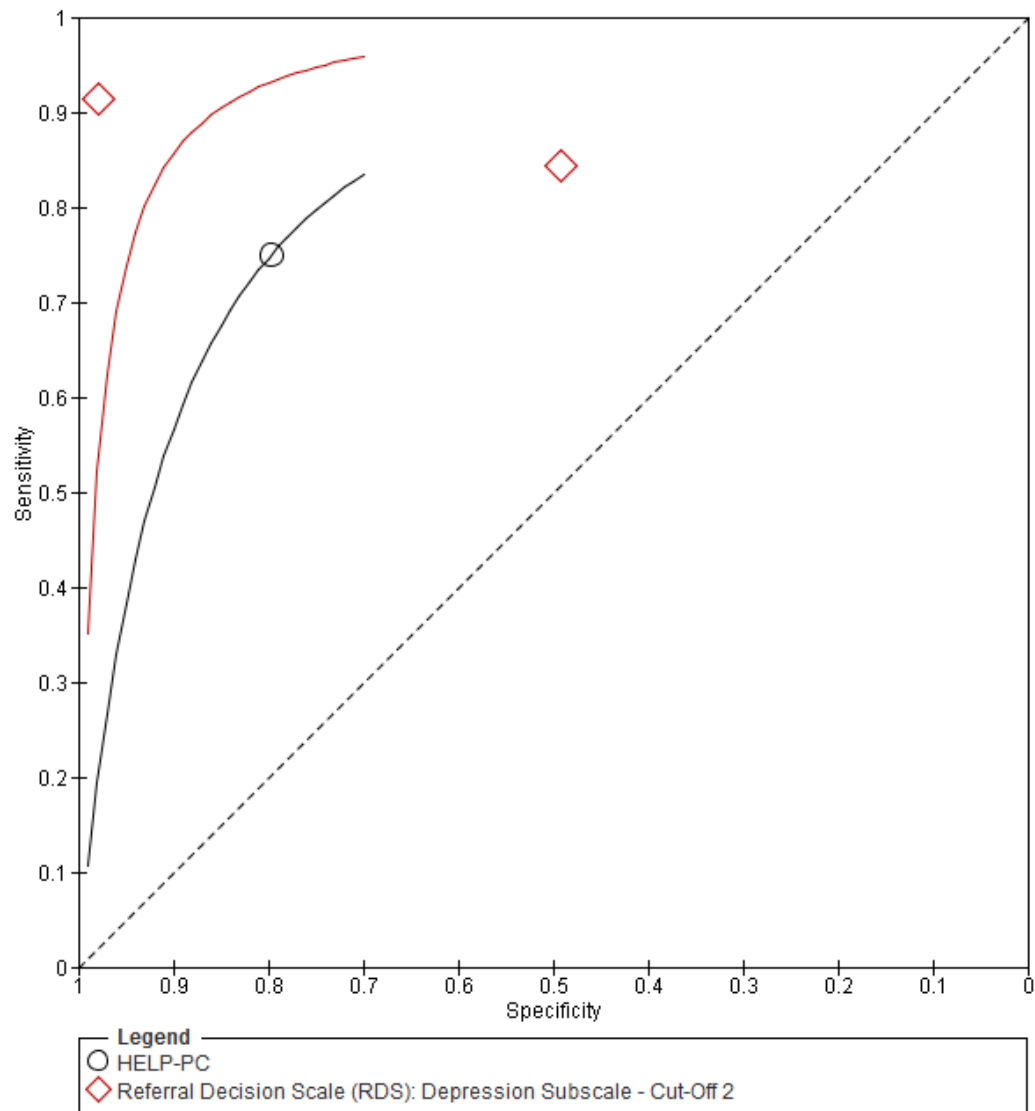


Figure 3: Sensitivity and specificity of the RDS for the recognition of bipolar disorder

Referral Decision Scale (RDS): Bipolar Subscale - Cut-off 1

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Teplin 1989a	24	92	0	612	1.00 [0.86, 1.00]	0.87 [0.84, 0.89]		

Referral Decision Scale (RDS): Bipolar Subscale - Cut-off 2

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Teplin 1989a	22	14	2	690	0.92 [0.73, 0.99]	0.98 [0.97, 0.99]		

Referral Decision Scale (RDS): Bipolar Subscale - Cut-off 3

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Teplin 1989a	20	0	4	704	0.83 [0.63, 0.95]	1.00 [0.99, 1.00]		

Figure 4: Summary of ROC curve for the RDS for bipolar disorder

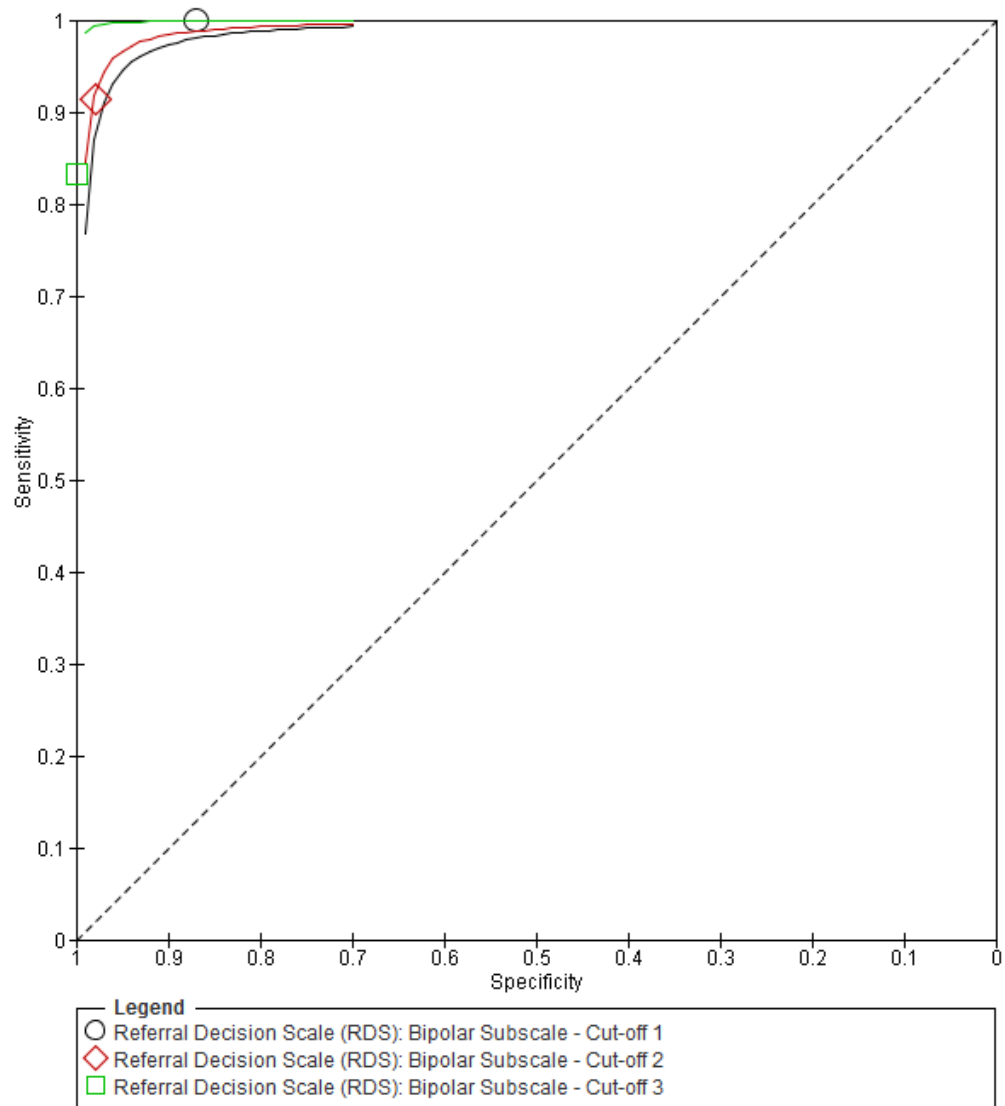


Figure 5: Sensitivity and specificity of index tests for the recognition of affective disorder

Correctional Mental Health Screen for Men (CMHS-M) - Cut-off 7 - All Men

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Ford 2007	20	48	4	129	0.83 [0.63, 0.95]	0.73 [0.66, 0.79]		

Correctional Mental Health Screen for Men (CMHS-M) - Cut-off 7 - Caucasian Men

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Ford 2007	17	18	1	62	0.94 [0.73, 1.00]	0.78 [0.67, 0.86]		

Correctional Mental Health Screen for Men (CMHS-M) - Cut-off 7 - Black Men

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Ford 2007	3	20	0	46	1.00 [0.29, 1.00]	0.70 [0.57, 0.80]		

Correctional Mental Health Screen for Women (CMHS-W) - Cut-off 5

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Ford 2007	24	20	9	47	0.73 [0.54, 0.87]	0.70 [0.58, 0.81]		

Figure 6: Summary of ROC curve for the index tests for affective disorder

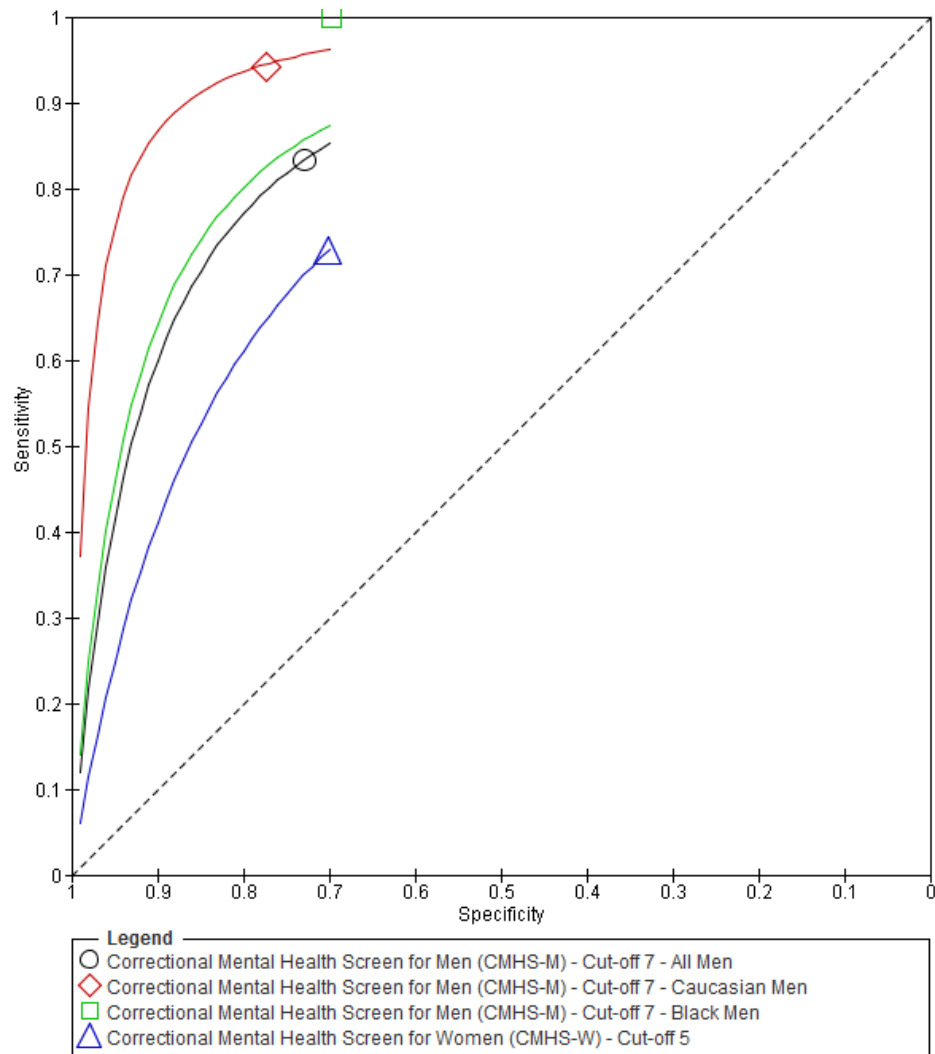


Figure 7: Sensitivity and specificity of the HELP-PC (cut-off 1) for the recognition of learning disabilities

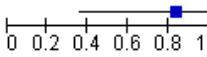
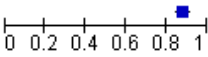
Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
McKinnon 2015	5	41	1	304	0.83 [0.36, 1.00]	0.88 [0.84, 0.91]		

Figure 8: Summary of ROC curve for the HELP-PC for learning disabilities

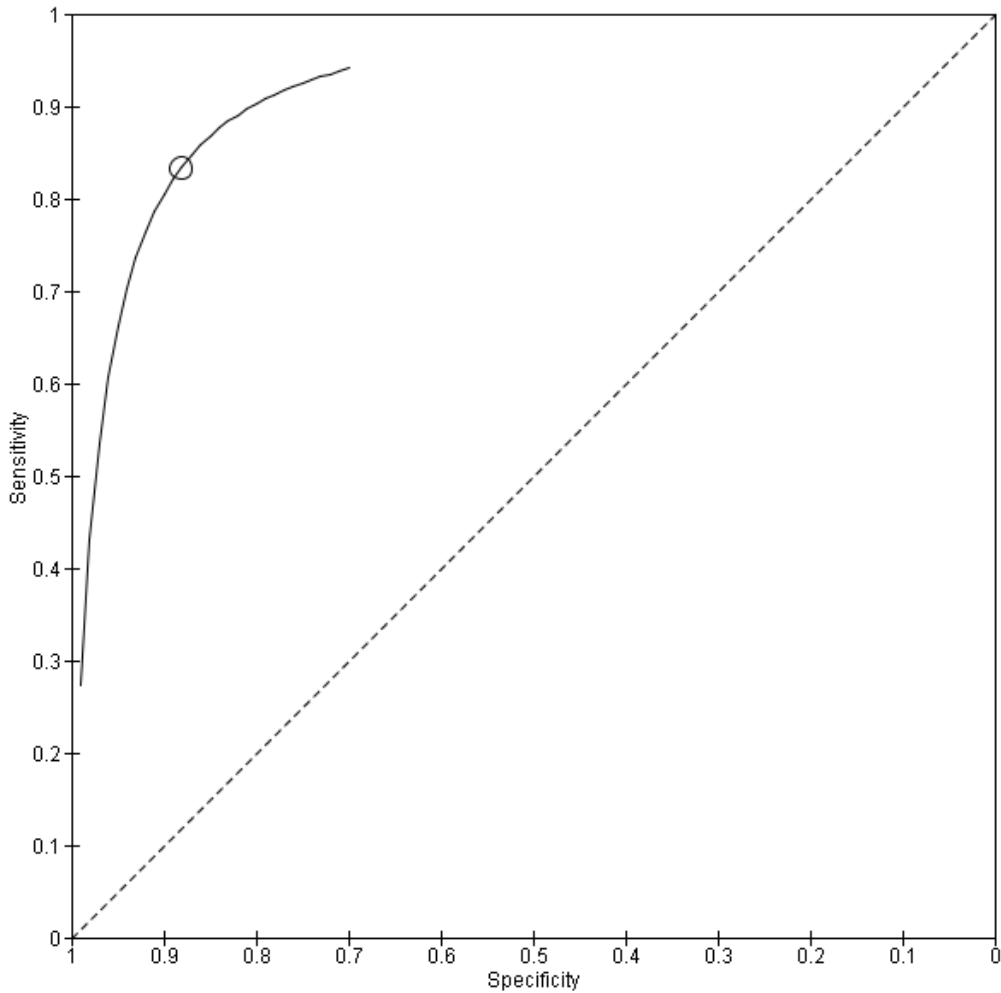


Figure 9: Sensitivity and specificity of RDS: schizophrenia subscale (cut-off 1) for the recognition of schizophrenia

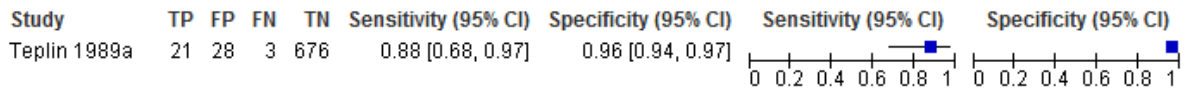


Figure 10: Summary of ROC curve for the RDS: schizophrenia subscale for schizophrenia

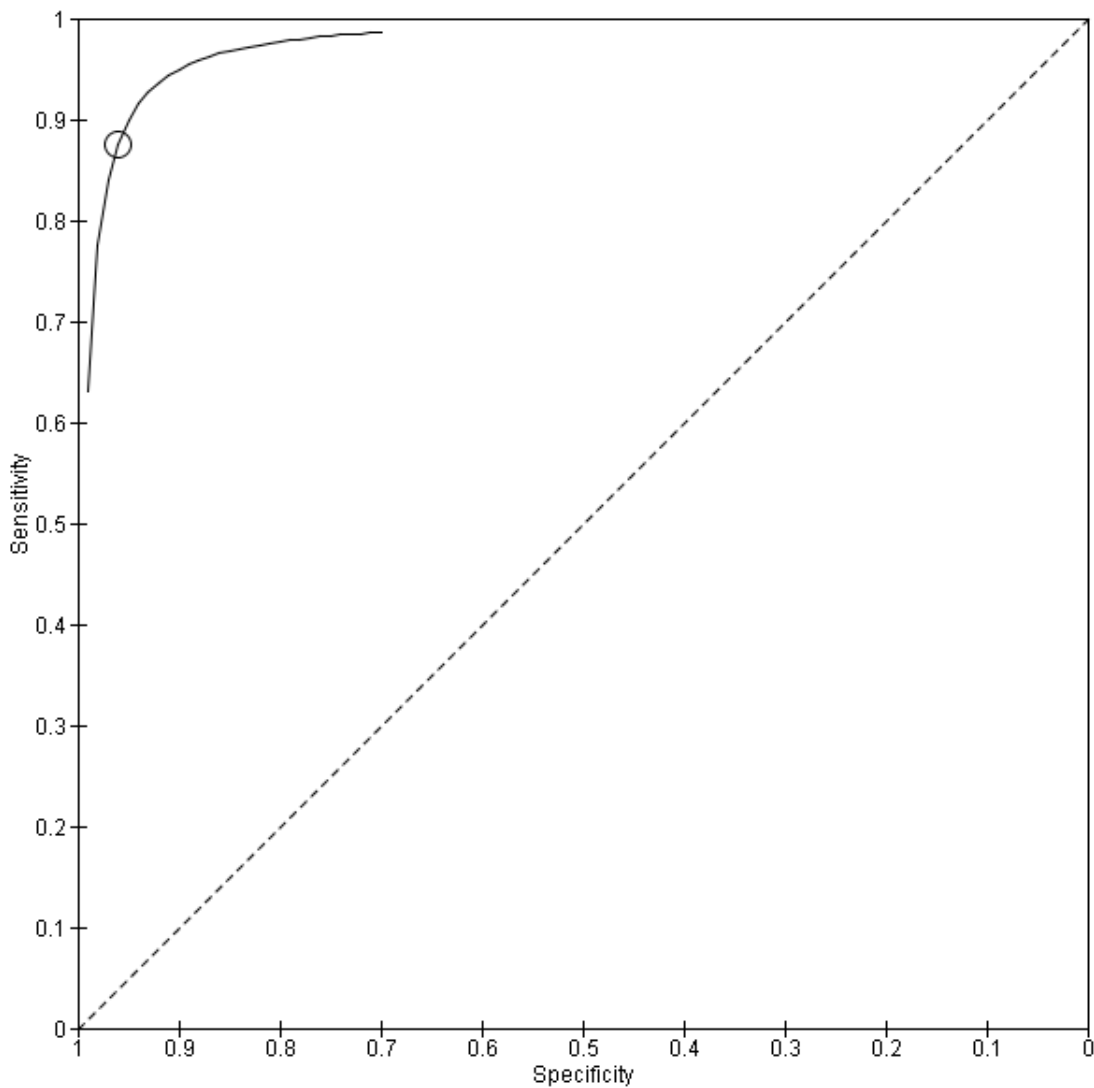


Figure 11: Sensitivity and specificity of the HELP-PC (cut-off not reported) for the recognition of psychosis

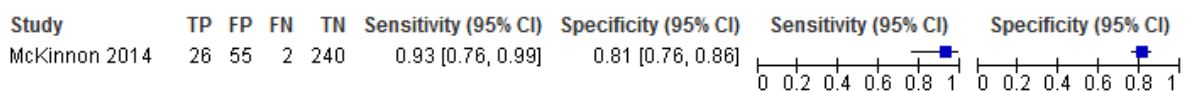


Figure 12: Summary of ROC curve for the HELP-PC for psychosis

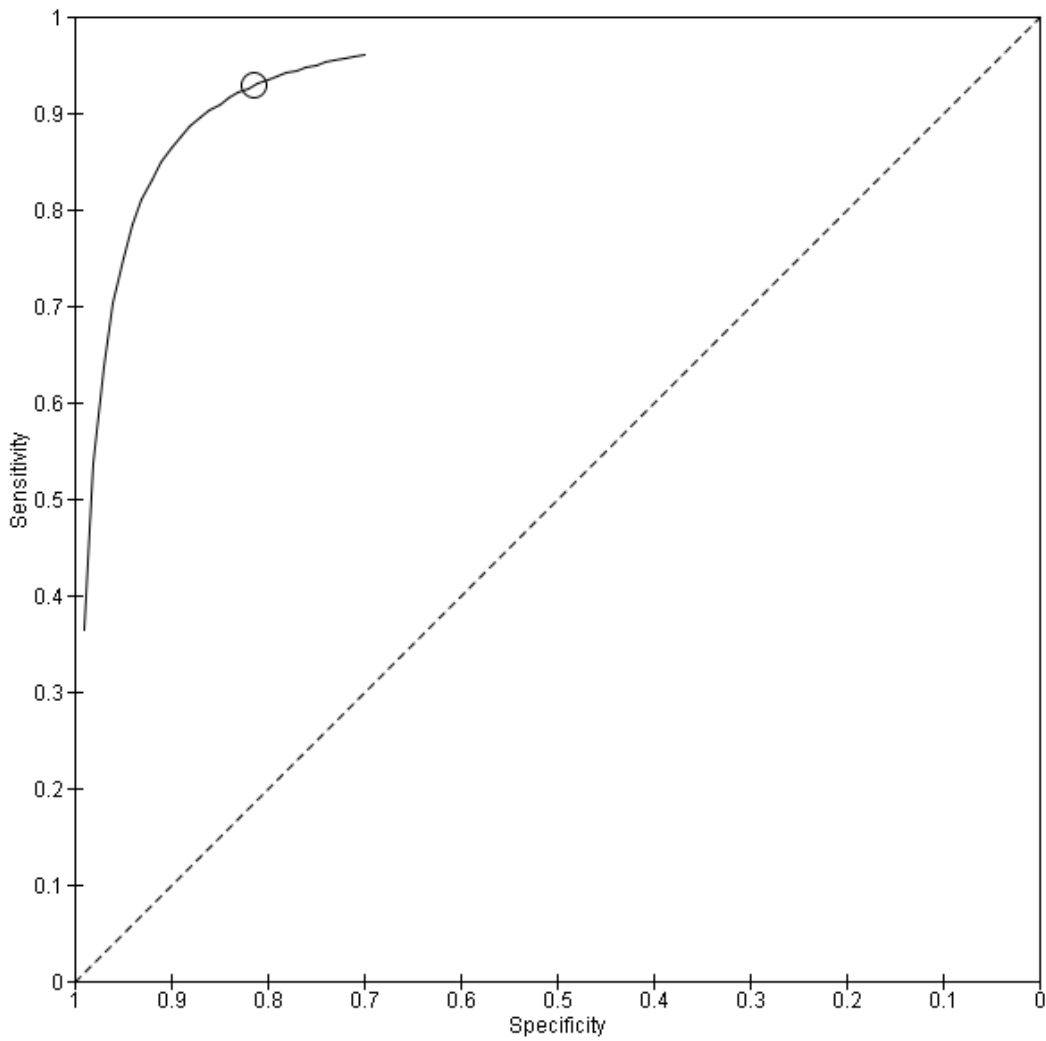


Figure 13: Sensitivity and specificity of the CMHS-W (cut-off 4) for the recognition of Axis-I or Axis-II disorder

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Ford 2009	51	5	17	27	0.75 [0.63, 0.85]	0.84 [0.67, 0.95]		

Figure 14: Summary of ROC curve for the CMHS-W for Axis-I or Axis-II disorder

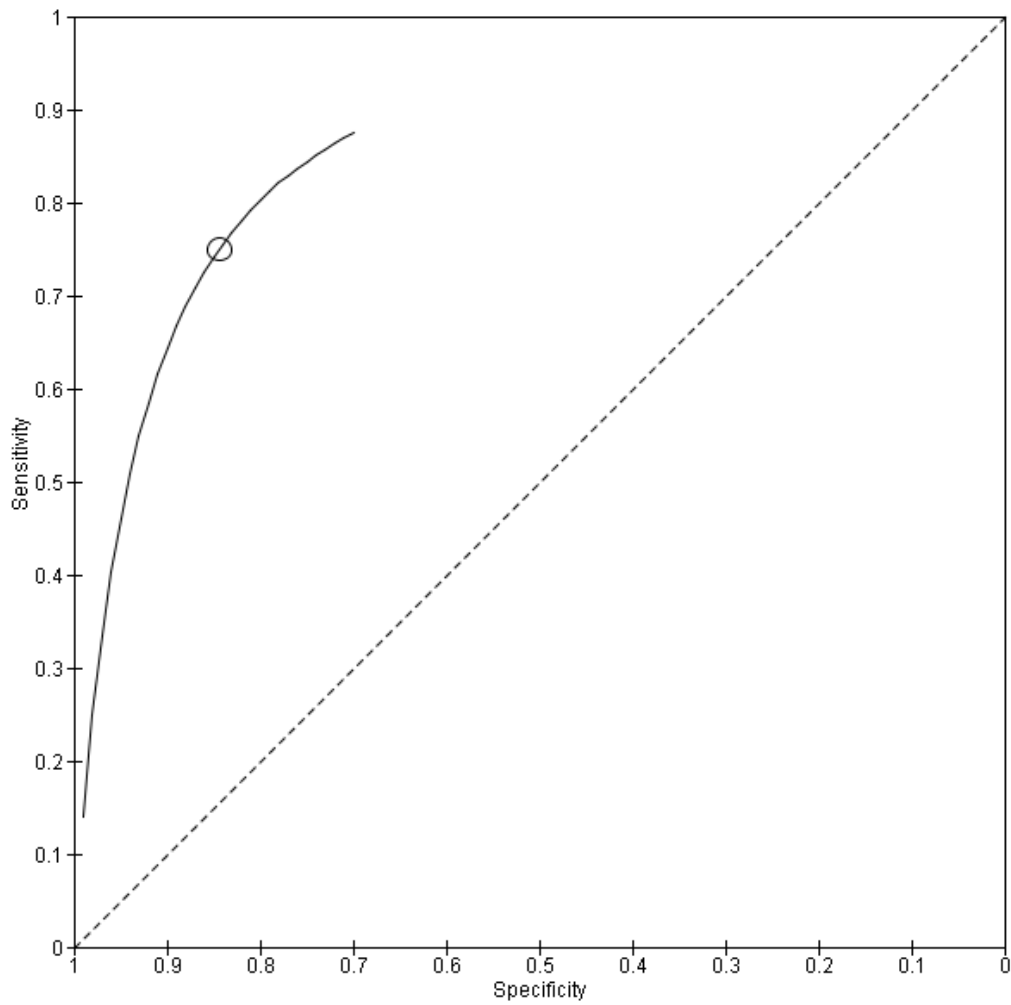


Figure 15: Sensitivity and specificity of index tests for the recognition of Axis-I or Axis-II disorder excluding Anti-Social Personality Disorder**Correctional Mental Health Screen for Men (CMHS-M) - Cut-off 5**

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Ford 2009	37	13	9	47	0.80 [0.66, 0.91]	0.78 [0.66, 0.88]		

Correctional Mental Health Screen for Men (CMHS-M) - Cut-off 6

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Ford 2007	51	33	18	99	0.74 [0.62, 0.84]	0.75 [0.67, 0.82]		
Ford 2009	32	10	14	50	0.70 [0.54, 0.82]	0.83 [0.71, 0.92]		

Correctional Mental Health Screen for Men (CMHS-M) - Cut off 6 - Caucasian Men

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Ford 2007	27	14	6	50	0.82 [0.65, 0.93]	0.78 [0.66, 0.87]		

Correctional Mental Health Screen for Men (CMHS-M) - Cut-off 6 - Black Men

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Ford 2007	16	14	4	35	0.80 [0.56, 0.94]	0.71 [0.57, 0.83]		

Correctional Mental Health Screen for Women (CMHS-W) - Cut-off 4

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Ford 2009	45	11	16	28	0.74 [0.61, 0.84]	0.72 [0.55, 0.85]		

Referral Decision Scale (RDS) - Cut-off 3

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Ford 2007	11	2	4	10	0.73 [0.45, 0.92]	0.83 [0.52, 0.98]		

Figure 16: Summary of ROC curve for the index tests for Axis-I or Axis-II disorder excluding Anti-Social Personality Disorder

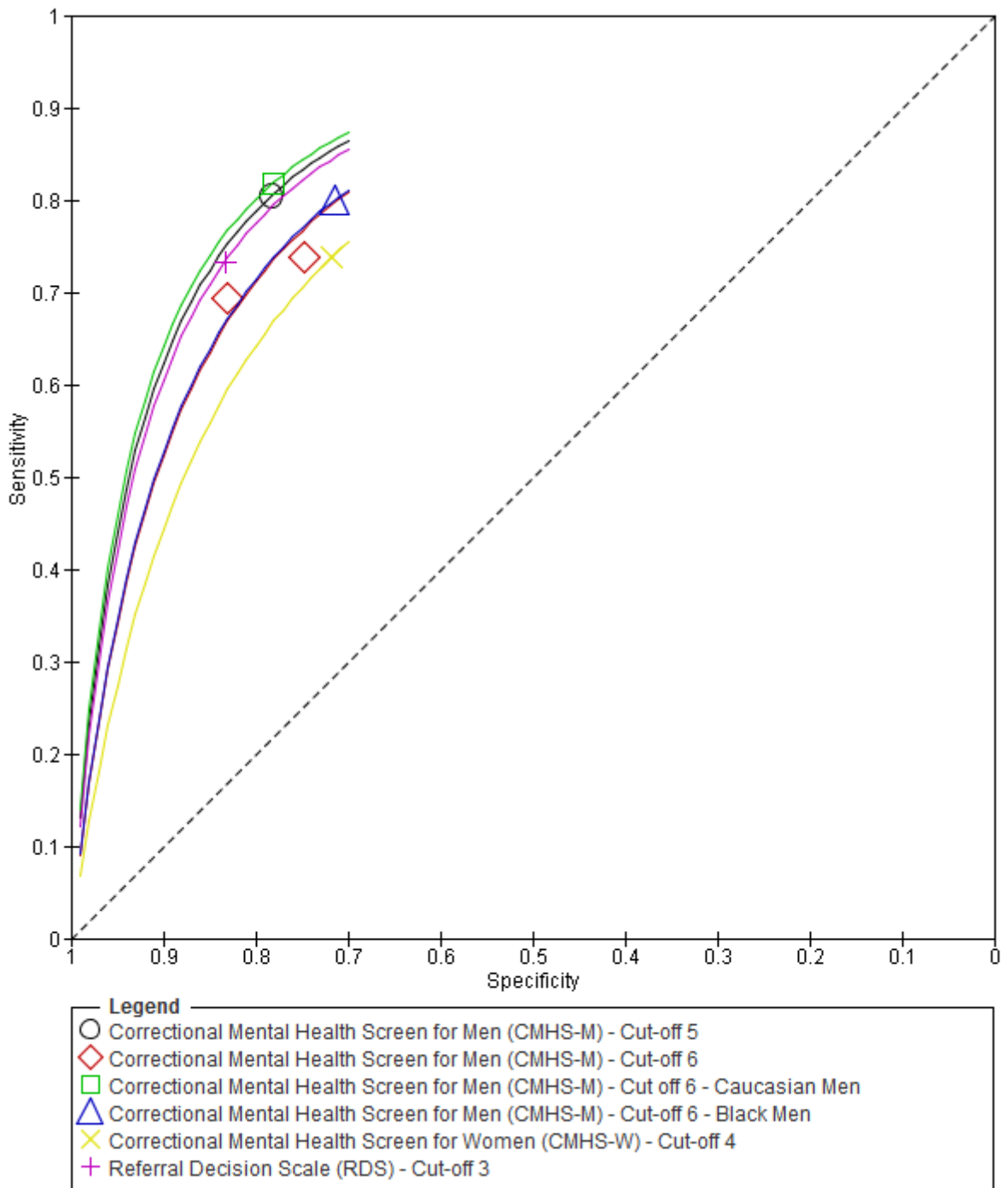
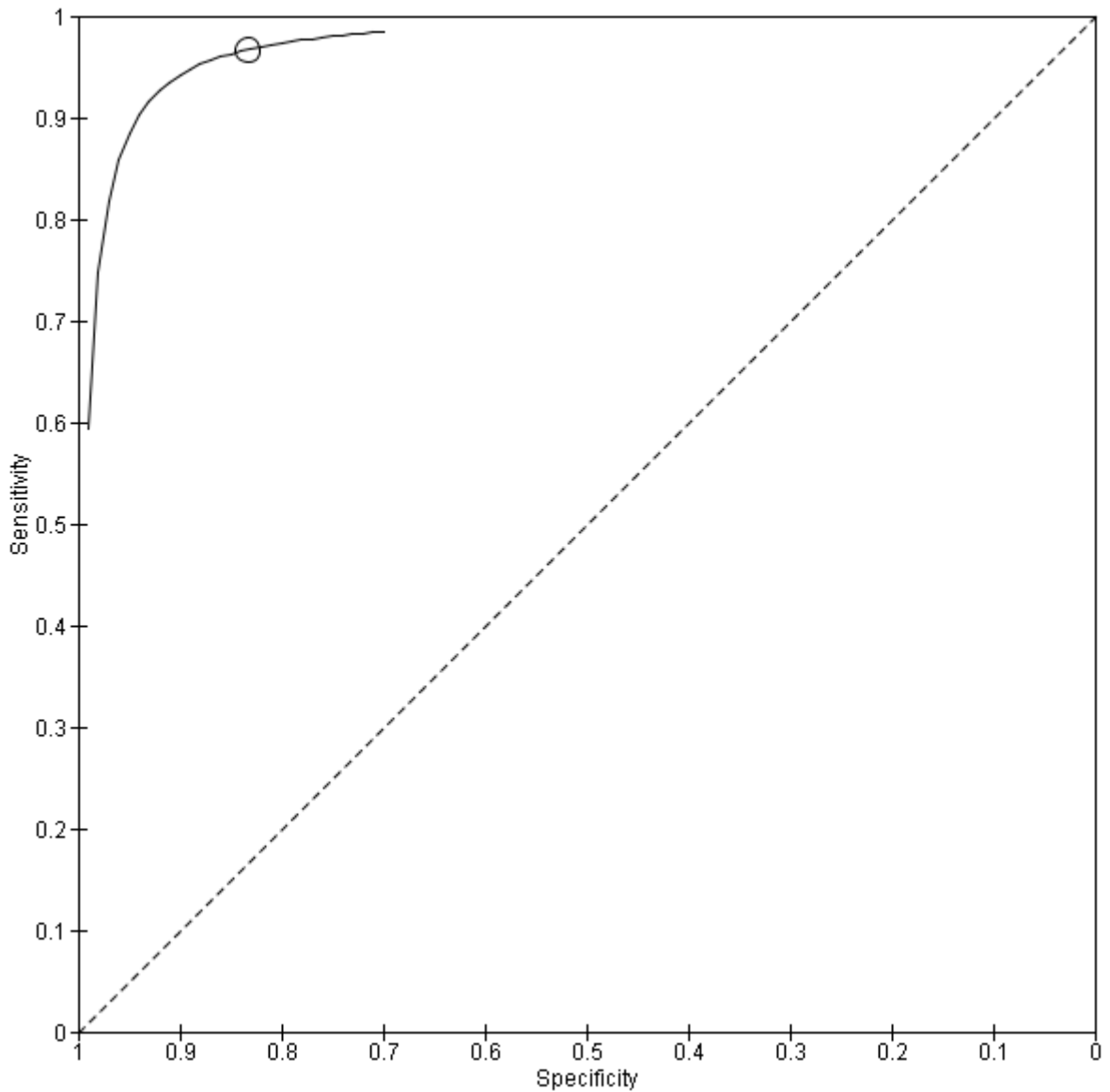


Figure 17: Sensitivity and specificity of the current prison reception health screen (cut-off 1) for the recognition of serious mental illness

Study	TP	FP	FN	TN	Sensitivity (95% CI)	Specificity (95% CI)	Sensitivity (95% CI)	Specificity (95% CI)
Grubin 2002	29	20	1	100	0.97 [0.83, 1.00]	0.83 [0.75, 0.90]		

Figure 18: Summary of ROC curve for the current prison reception health screen for serious mental illness



R.4 Methodological quality

Study ID	RQ	Index test	Reference standard	Target condition
Baksheev 2012	2.1	BJMHS; Custody Risk Assessment Form	DSM-IV	Serious mental illness; Axis-I disorder (exc. Substance misuse)
Ford 2007	2.1	BJMHS; CMHS-M; CMHS-W; RDS	DSM-IV	Affective disorders; anxiety disorder; Axis-I disorder; Axis-I or Axis-II disorder
Ford 2009	2.1	CMHS-M; CMHS-W	DSM-IV	Axis-I or Axis-II disorder; Axis-I or Axis-II disorder (exc. ASPD)
Harrison 2007	2.1	RDS: Depression subscale	DSM-IV	Depression
Louden 2013	2.1	BJMHS	DSM-IV	Axis-I disorder (exc. Substance misuse)
McKinnon 2014	2.1	HELP-PC	Diagnosis - criteria unknown	Psychosis; Depression
McKinnon 2015	2.1	HELP-PC	Diagnosis - criteria unknown	Learning disabilities
Mokros 2012	2.2	SSSS	DSM-IV-TR	Sexual Sadism
Sacks 2007a	2.1	CODSI-MD; CODSI-SMD	DSM-IV	General mental health; serious mental illness
Sacks 2007b	2.1	CODSI-MD; CODSI-SMD	DSM-IV	General mental health; serious mental illness
Steadman 2005	2.1	BJMHS	DSM-IV	Serious mental illness
Steadman 2007	2.1	BJMHS; BJMHS-R	DSM-IV	Serious mental illness
Teplin 1989a	2.1	RDS	DSM-III	Bipolar disorder; depression; schizophrenia
Teplin 1989b	2.1	RDS	DSM-III	Serious mental illness

Study ID	DOMAIN 1: PATIENT SELECTION						
	1A: RISK OF BIAS					1B: CONCERNS REGARDING APPLICABILITY	
	Describe methods of patient selection	Was a consecutive or random sample of patients enrolled?	Was a case-control design avoided?	Did the study avoid inappropriate exclusions?	Could the selection of patients have introduced bias?	Describe included patients (prior testing, presentation S, intended use of index test and setting)	Is there concern that the included patients do not match the review question?
Baksheev 2012	Unclear whether patients were selected consecutively or randomly.	Unclear	Yes	Yes	UNCLEAR		LOW
Ford 2007	Randomly selected inmates from 2,196 adults admitted into Connecticut jail within the previous 24 to 72 hours. After reviewing the first 1,000 screenings, Whites were overrepresented and Hispanics were underrepresented. The sampling strategy was modified to oversample Hispanics and undersample Whites for the remaining 1,196 study screenings.	Yes	Yes	Yes	LOW		LOW
Ford 2009	Study participants were recruited Feb 2003-Sept 2003 in five correctional facilities that serve as the jails for all adults incarcerated in Connecticut. Persons were eligible for the study if they entered jail 24 to 72 hours before recruitment, were 18 years or older, were able to speak English, were not "high bond" security risks (these persons could not be interviewed without a custody officer present), were not admitted to the medical unit for immediate care because of wounds or injuries or acute substance intoxication or detoxification, and were not admitted to the medical unit for acute psychosis, mania, suicidality, or delirium or a history of psychiatric treatment. Unclear if they approached everyone that met these criteria.	Unclear	Yes	No	HIGH		LOW
Harrison 2007	Prospective participants used sign-up sheets to indicate their interests in the research; these sheets were used in the consecutive selection of potential participants.	No	Yes	Yes	HIGH		LOW

Study ID	DOMAIN 1: PATIENT SELECTION						
	1A: RISK OF BIAS					1B: CONCERNS REGARDING APPLICABILITY	
	Describe methods of patient selection	Was a consecutive or random sample of patients enrolled?	Was a case-control design avoided?	Did the study avoid inappropriate exclusions?	Could the selection of patients have introduced bias?	Describe included patients (prior testing, presentation S, intended use of index test and setting)	Is there concern that the included patients do not match the review question?
Louden 2013	Adult probationers in a large probation agency completed the screen as part of their standard probation intake paperwork. Approximately 10% of probationers did not complete the screen because they could not read English well enough to do so. Probationers who completed the screens were asked to provide their contact information on a separate form if they were interested in potentially completing a later research interview.	Unclear	Yes	Yes	UNCLEAR		LOW
McKinnon 2014	Detainees aged 18 years who were arrested and detained under the auspices of PACE between 23/05/12 and 17/08/12 were eligible for inclusion. Researchers were present in the custody suite 7 days a week for at least 10 h per day to ensure that a cross-section of arrest times was achieved. Detainees who lacked capacity to consent were not interviewed by the researchers, but the basis of the incapacity was recorded and included in the overall data analysis.	Yes	Yes	Yes	LOW		LOW
McKinnon 2015	Limited information - 352 detainees were recruited by researchers over the three month HELP-PC screen pilot in 2012. One detainee was inadvertently screened using the existing NSPIS screen and was excluded from the comparison to the HELP-PC screen.	Unclear	Yes	Unclear	UNCLEAR		LOW
Mokros 2012	Participants were 105 adult male sexual offenders who had been evaluated between 2002 and 2004 at the Federal Evaluation Centre for Violent and Sexual Offenders (FECVSO) of the Austrian Prison Service. Participants were included consecutively if they had a sexual crime (rape,	Yes	Yes	Yes	LOW		LOW

Study ID	DOMAIN 1: PATIENT SELECTION						
	1A: RISK OF BIAS					1B: CONCERNS REGARDING APPLICABILITY	
	Describe methods of patient selection	Was a consecutive or random sample of patients enrolled?	Was a case-control design avoided?	Did the study avoid inappropriate exclusions?	Could the selection of patients have introduced bias?	Describe included patients (prior testing, presentation S, intended use of index test and setting)	Is there concern that the included patients do not match the review question?
	sexual homicide) as the index offense.						
Sacks 2007a	The sample consisted of consecutive new admissions to prison substance abuse treatment programs across the participating CJDATS research centers. The 100 pilot cases for the current paper were randomly chosen from the 182 cases available the time of the analysis. A stratified random sampling procedure was used to ensure an equal distribution across three of the participating CJDATS research centers with an additional 8 cases from the University of California, Los Angeles, which had fewer cases at the time of the analysis. By design, women represented 25% of the sample (75 male and 25 female), a ratio similar to that of men to women in the prison populations at these sites.	Yes	Yes	Unclear	UNCLEAR		LOW
Sacks 2007b	The sample consisted of 180 remaining consecutive new admissions to prison substance abuse treatment programs across the participating CJDATS research centers (excluding the 100 cases included in the previous pilot study (Sacks 2007a).	Yes	Yes	Unclear	UNCLEAR		LOW
Steadman 2005	BJHMHS completed on reception into jail. Those interviewed were selected from people with valid screening data but unclear how.	Unclear	Yes	Yes	UNCLEAR		LOW
Steadman 2007	Those screened appear to be all admissions to four county jails November 2005-June 2006. Unclear how those	Unclear	Yes	Yes	UNCLEAR		LOW

Study ID	DOMAIN 1: PATIENT SELECTION						
	1A: RISK OF BIAS					1B: CONCERNS REGARDING APPLICABILITY	
	Describe methods of patient selection	Was a consecutive or random sample of patients enrolled?	Was a case-control design avoided?	Did the study avoid inappropriate exclusions?	Could the selection of patients have introduced bias?	Describe included patients (prior testing, presentation S, intended use of index test and setting)	Is there concern that the included patients do not match the review question?
	administered the reference standard were selected from the larger sample						
Teplin 1989a	Subjects were randomly selected to participate in the study as they waited to be processed in the CCDC intake area. AU jail detainees are assigned a sequential ID number as soon as they arrive at CCDC. A list of computer-generated ID numbers was used by the interviewer to target potential subjects. In order to ensure that the sample consisted of approximately equal subsamples of misdemeanants and felons, the interviewers alternated between felons and misdemeanants in the sampling process.	Yes	Yes	Yes	LOW		LOW
Teplin 1989b	NR - administered the NIMH-DIS to a sample of 1,149 North Carolina prisoners between March and May of 1983.	Unclear	Yes	Unclear	UNCLEAR		LOW

Study ID	DOMAIN 2: INDEX TEST				
	2A: RISK OF BIAS				2B: CONCERNS REGARDING APPLICABILITY
	Describe the index test and how it was conducted and interpreted	Were the index test results interpreted without knowledge of the results of the reference standard?	2.1/2.2: If a threshold was used, was it pre-specified? 2.3: Is information available to facilitate clinical judgment of risk?	Could the conduct or interpretation of the index test have introduced bias?	Is there concern that the index test, its conduct, or interpretation differ from the review question?
Baksheev 2012	BJMHS: Orally administered by researcher in secure interview room; Custody Risk Assessment Form: Completed by a police officer, usually the Custody Sergeant, upon entry into custody.	BJMHS: No; Custody Risk Assessment Form: Unclear	Unclear	BJMHS: HIGH; Custody Risk Assessment Form: Unclear	LOW
Ford 2007	Index tests conducted by trained RAs.	Yes	No	UNCLEAR	LOW
Ford 2009	Limited information - Screens were administered by bachelor's-level research staff.	Yes	No	UNCLEAR	LOW
Harrison 2007	Bachelor's-level student administered the RDS. No formal training in assessment and diagnosis was given to approximate the procedures often followed in jails, in which correctional officers with limited training are responsible for the initial screenings.	Yes	No	UNCLEAR	LOW
Louden 2013	Limited information about how screen was administered.	Yes	Yes	LOW	LOW
McKinnon 2014	Pilot study - Custody officers are directed to ask specific questions of the detainee, then make an objective comment based upon their observation, with specific observational prompts provided in the mental disorders section. If detainees are uncooperative or do not answer questions, the observations sections are still completed. Where morbidity is identified, the screening tool provides the CO with guidance regarding the next steps, such as	Yes	Unclear	UNCLEAR	LOW

Study ID	DOMAIN 2: INDEX TEST				
	2A: RISK OF BIAS				2B: CONCERNS REGARDING APPLICABILITY
	Describe the index test and how it was conducted and interpreted	Were the index test results interpreted without knowledge of the results of the reference standard?	2.1/2.2: If a threshold was used, was it pre-specified? 2.3: Is information available to facilitate clinical judgment of risk?	Could the conduct or interpretation of the index test have introduced bias?	Is there concern that the index test, its conduct, or interpretation differ from the review question?
	when to call for a HCP (and if so with what level of urgency) as well as consideration of whether an AA is required. Guidance is also given on the circumstance in which an emergency ambulance should be called. Number of items/cut-off points not reported.				
McKinnon 2015	No information about how it was conducted. Screen consists of three questions and one observational cue to assist Custody Officers in identifying detainees with ID.	Unclear	Yes	UNCLEAR	LOW
Mokros 2012	The criteria of the SSSS were coded based on clinical and court files. Coding was done by an experienced forensic psychologist who had not been involved in the diagnostic assessment and risk assessment procedures for the cases at hand within the FECVSO, and thus was blinded against the clinical diagnoses.	Yes	No	UNCLEAR	LOW
Sacks 2007a	Administered orally by trained interviewers in face to face interviews. CODSI-MD items derived from items on the GSS, MINI and MHSF that are significantly correlated with the SCID. Designed as a screen for co-occurring disorders (substance abuse and mental disorder), which may be too specific; however, data presented is just for detection of general mental health problems/severe mental health problems. CODSI-SMD developed in the same way using those items most associated with severe mental disorders (schizophrenia, major depression, bipolar).	Yes	No	UNCLEAR	UNCLEAR

Study ID	DOMAIN 2: INDEX TEST				
	2A: RISK OF BIAS				2B: CONCERNS REGARDING APPLICABILITY
	Describe the index test and how it was conducted and interpreted	Were the index test results interpreted without knowledge of the results of the reference standard?	2.1/2.2: If a threshold was used, was it pre-specified? 2.3: Is information available to facilitate clinical judgment of risk?	Could the conduct or interpretation of the index test have introduced bias?	Is there concern that the index test, its conduct, or interpretation differ from the review question?
Sacks 2007b	Administered orally by trained interviewers in face to face interviews. CODSI-MD items derived from items on the GSS, MINI and MHSF that are significantly correlated with the SCID. Designed as a screen for co-occurring disorders (substance abuse and mental disorder), which may be too specific; however, data presented is just for detection of general mental health problems/severe mental health problems. CODSI-SMD developed in the same way using those items most associated with severe mental disorders (schizophrenia, major depression, bipolar).	Yes	Yes	LOW	UNCLEAR
Steadman 2005	Administered by trained correctional classification officers. Mean administration time was 2.5 minutes. An additional item regarding whether the individual had ever been treated in a jail or prison for emotional or mental health problems was added, but then excluded from the analysis as it did not improve accuracy.	Yes	Unclear	UNCLEAR	LOW
Steadman 2007	Administered by trained correctional classification officers.	Yes	Unclear	UNCLEAR	LOW
Teplin 1989a	Development study - Subjects were interviewed in a soundproof, private glass booth within the CCDC intake area using the National Institute of Mental Health Diagnostic Interview Schedule (NIMH-DIS) by interviewers with extensive training in psychopathology and interviewing techniques. Items to include in the RDS were selected using discriminant analysis in SPSS. Once relevant items were chosen, sensitivity and specificity were examined for all possible cut-off points to determine optimum cut-off.	Unclear	No	HIGH	UNCLEAR
Teplin 1989b	NR	Unclear	Yes	UNCLEAR	UNCLEAR

Study ID	DOMAIN 3: REFERENCE STANDARD				
	3A: RISK OF BIAS				3B: CONCERNS REGARDING APPLICABILITY
	Describe the reference standard and how it was conducted and interpreted	Is the reference standard likely to correctly classify the target condition?	Were the reference standard results interpreted without knowledge of the results of the index test?	Could the reference standard, its conduct, or its interpretation have introduced bias?	Is there concern that the target condition as defined by the reference standard does not match the review question?
Baksheev 2012	SCID-IV used to make DSM-IV diagnoses.	Yes	BJMHS: No; Custody Risk Assessment Form: Unclear	BJMHS: HIGH; Custody Risk Assessment Form: Unclear	LOW
Ford 2007	DSM-IV diagnoses made by trained research assistants.	Yes	Yes	LOW	LOW
Ford 2009	Bachelor's-, master's-, or M.D.-level clinical research assessors who were blind to screening results gathered a second consent from interviewees and conducted follow-up interviews within five days of the initial screening. The SCID-P and SCID-II (Structured Clinical Interview for DSM-IV Axis II Disorders) were used to assess axis I and II disorders, except for PTSD. In order to use the best validated structured interview for PTSD, we used the Clinician Administered Posttraumatic Stress Disorder Scale (CAPS).	Yes	Yes	LOW	LOW
Harrison 2007	DSM-IV diagnoses of major depression made by a graduate student with several years experience in psychological assessment using the SADS.	Yes	Yes	LOW	LOW
Louden 2013	DSM-IV diagnoses made by trained research assistants using the SCID. Interviews lasted approximately 60 to 90 min and were conducted in the probationer's home, a quiet public place (such as a coffee	Yes	Unclear	UNCLEAR	LOW

Study ID	DOMAIN 3: REFERENCE STANDARD				
	3A: RISK OF BIAS				3B: CONCERNS REGARDING APPLICABILITY
	Describe the reference standard and how it was conducted and interpreted	Is the reference standard likely to correctly classify the target condition?	Were the reference standard results interpreted without knowledge of the results of the index test?	Could the reference standard, its conduct, or its interpretation have introduced bias?	Is there concern that the target condition as defined by the reference standard does not match the review question?
	shop), or in a private room in the probation agency.				
McKinnon 2014	Limited information - In order to evaluate the efficacy of the new screen, detainees were subsequently assessed by research doctors blinded to the outcome of the COs' screens.	Unclear	Yes	UNCLEAR	LOW
McKinnon 2015	As in McKinnon 2015a with the addition of a screening questionnaire from a local forensic ID service in London (Galloway and Ali, 2011).	Unclear	Unclear	UNCLEAR	LOW
Mokros 2012	Limited information - evaluated by experienced forensic psychiatrists and psychologists at the FECVSO according to DSM-IV-TR criteria.	Yes	Unclear	UNCLEAR	LOW
Sacks 2007a	The SCID interviews (the second session) were conducted by personnel trained in SCID administration under the oversight of a highly experienced SCID supervisor who reviewed all interviews for completeness and accuracy. To avoid contaminating the SCID interview and diagnosis with the results of the Screening Battery, SCID interviewers had no knowledge of the results of the first session.	Yes	Yes	LOW	LOW

Study ID	DOMAIN 3: REFERENCE STANDARD				
	3A: RISK OF BIAS				3B: CONCERNS REGARDING APPLICABILITY
	Describe the reference standard and how it was conducted and interpreted	Is the reference standard likely to correctly classify the target condition?	Were the reference standard results interpreted without knowledge of the results of the index test?	Could the reference standard, its conduct, or its interpretation have introduced bias?	Is there concern that the target condition as defined by the reference standard does not match the review question?
Sacks 2007b	The SCID interviews (the second session) were conducted by personnel trained in SCID administration under the oversight of a highly experienced SCID supervisor who reviewed all interviews for completeness and accuracy. To avoid contaminating the SCID interview and diagnosis with the results of the Screening Battery, SCID interviewers had no knowledge of the results of the first session.	Yes	Yes	LOW	LOW
Steadman 2005	DSM-IV diagnoses made by trained clinical research interviewers using the SCID. Mean time 76 minutes.	Yes	Yes	LOW	LOW
Steadman 2007	DSM-IV diagnoses made by trained clinical research interviewers using the SCID.	Yes	Yes	LOW	LOW
Teplin 1989a	DSM-III diagnoses made from NIMH-DIS interview data scored by a computer.	Yes	Unclear	UNCLEAR	LOW
Teplin 1989b	DSM-III diagnoses made from NIMH-DIS interview data scored by a computer.	Yes	Unclear	UNCLEAR	LOW

Study ID	DOMAIN 4: FLOW AND TIMING						
	4A: RISK OF BIAS						
	Describe any patients who did not receive the index test(s) and/or reference standard or who were excluded from the 2x2 table	Describe the time interval and any interventions between index test(s) and reference standard	Was there an appropriate interval between index test(s) and reference standard?	Did all patients receive a reference standard?	Did patients receive the same reference standard?	Were all patients included in the analysis?	Could the patient flow have introduced bias?
Baksheev 2012	No record of number of people who chose not to participate, not everyone received the BJMHS or Custody Risk Assessment Form.	Reference standard and index test conducted at same time point.	Yes	Unclear	Yes	Yes	LOW
Ford 2007	There were no differences in age, education level, and criminal charges between interview participants (302) and all jail admissions (2196), but Whites were overrepresented (43% vs. 28% in the jail census) and Blacks and Hispanics (35% and 22% vs. 44% and 27%, respectively, in the jail census) were underrepresented.	Within 5 days.	No	No	Yes	No	HIGH
Ford 2009	Of the 1,094 detainees invited to participate, 104 (10%) declined. Gender, age, and race or ethnicity were unrelated to likelihood of refusal to participate in screening; however, black women (N=27 of 175, 15%) were more likely than white women (N=19 of 237, 8%) or Hispanic women (N=6 of 114, 5%) to refuse ($\chi^2=13.0$, $df=2$, $p=.002$). Criminal charge data were obtained from Department of Correction records for 90% of the 990 participants (N=882); 108 participants did not consent to	Within 5 days.	Yes	No	Yes	No	HIGH

Study ID	DOMAIN 4: FLOW AND TIMING						
	4A: RISK OF BIAS						
	Describe any patients who did not receive the index test(s) and/or reference standard or who were excluded from the 2x2 table	Describe the time interval and any interventions between index test(s) and reference standard	Was there an appropriate interval between index test(s) and reference standard?	Did all patients receive a reference standard?	Did patients receive the same reference standard?	Were all patients included in the analysis?	Could the patient flow have introduced bias?
	release this information to the study. Gender, age, and ethnicity did not differ for participants regardless of whether they consented to release of their records. After completing the screening, 223 randomly selected participants, stratified by gender, were invited to participate in a follow-up structured diagnostic interview for standardized clinical cross-validation; 17 (8%) declined, leaving 206 to participate. There was no difference between those interviewed and other participants in race, age, marital status, or education. Men (N=14 of 120, 12%) were more likely than women (N=2 of 102, 2%) to refuse the interview ($\chi^2=4.5$, $df=1$, $p<.05$).						
Harrison 2007	All patients received the SADS.	Immediately after.	Yes	Yes	Yes	Yes	LOW
Louden 2013	4670 people completed the screen, 1579 agreed to be contact regarding diagnostic interview, 149 ultimately consented to interview (out of 255 approached). Age and ethnicity did not differ	Mean time between index test and ref standard 87 days (SD=75.4).	No	No	Yes	No	HIGH

Study ID	DOMAIN 4: FLOW AND TIMING						
	4A: RISK OF BIAS						
	Describe any patients who did not receive the index test(s) and/or reference standard or who were excluded from the 2x2 table	Describe the time interval and any interventions between index test(s) and reference standard	Was there an appropriate interval between index test(s) and reference standard?	Did all patients receive a reference standard?	Did patients receive the same reference standard?	Were all patients included in the analysis?	Could the patient flow have introduced bias?
	across the 3 groups. However, women were more likely to agree to be contacted, and those that agreed to be contacted had high scores on screening tools.						
McKinnon 2014	In total, 1284 detainees were brought into custody during the pilot. 606 detainees were eligible for inclusion of whom 323 detainees (53%) were interviewed. Twenty-eight detainees (5%) lacked capacity to consent to take part in the research. There were a number of other reasons eligible detainees were not interviewed by researchers: 96 (16%) were not available for us to approach, 77 (13%) declined consent, 55 (9%) had insufficient English to understand the study information, 6 (1%) were intoxicated and had not sobered sufficiently for researchers to re-approach, 17 (3%) were considered by the CO to be too high a risk for researchers to interview alone, two agreed but were released before consent could be taken, and one detainee required urgent medical attention and was taken to hospital. No	Unclear - subsequent to interview with CO, but unclear if this was immediate.	Unclear	No	Yes	No	HIGH

Study ID	DOMAIN 4: FLOW AND TIMING						
	4A: RISK OF BIAS						
	Describe any patients who did not receive the index test(s) and/or reference standard or who were excluded from the 2x2 table	Describe the time interval and any interventions between index test(s) and reference standard	Was there an appropriate interval between index test(s) and reference standard?	Did all patients receive a reference standard?	Did patients receive the same reference standard?	Were all patients included in the analysis?	Could the patient flow have introduced bias?
	discussion of whether those included were significantly different from the remaining individuals.						
McKinnon 2015	No record of how many people were approached.	NR	Unclear	Unclear	Yes	Unclear	UNCLEAR
Mokros 2012	Does not appear to be any drop-out/missing information.	Unclear	Unclear	Yes	Yes	Yes	UNCLEAR
Sacks 2007a	Throughout the studies (Sacks 2007a/2007b; pilot and validation), 29 participants refused to participate either in the full CODSI study or in completing the SCID, representing a 9% refusal rate (does not report refusal rate for individual studies. Because this rate of refusal is relatively low and not a threat to validity, the authors did not collect any additional information on the participants who refused to participate.	Within 1 month.	No	No	Yes	No	HIGH
Sacks 2007b	Throughout the studies (Sacks 2007a/2007b; pilot and validation), 29 participants refused to participate either in the full CODSI study or in completing the SCID, representing a 9% refusal rate (does not report refusal rate for individual	Within 1 month.	No	No	Yes	No	HIGH

Study ID	DOMAIN 4: FLOW AND TIMING						
	4A: RISK OF BIAS						
	Describe any patients who did not receive the index test(s) and/or reference standard or who were excluded from the 2x2 table	Describe the time interval and any interventions between index test(s) and reference standard	Was there an appropriate interval between index test(s) and reference standard?	Did all patients receive a reference standard?	Did patients receive the same reference standard?	Were all patients included in the analysis?	Could the patient flow have introduced bias?
	studies. Because this rate of refusal is relatively low and not a threat to validity, the authors did not collect any additional information on the participants who refused to participate.						
Steadman 2005	11,438 people received screening tests but only 357 received reference standard. Samples similar in terms of ethnicity, age, pretrial status. More males (87% vs 59%) were present in screening sample.	Within 96 hours of admission.	Yes	No	Yes	No	HIGH
Steadman 2007	10562 were admitted to one of the four jails during the study period and 10255 had valid screening data. Only 464 were interviewed with the SCID. No comment on whether this group differs significantly from the larger sample.	Within 72 hours of admission.	Yes	No	Yes	No	HIGH
Teplin 1989a	35 (4.6%) refused to participate. Four other subjects were eliminated: two who had been interviewed previously, one who was thought to be lying, and one who did not meet the subject eligibility requirements (he was incarcerated solely for "safekeeping"). No discussion of whether these individuals	Scored from same interview data.	Yes	No	Yes	No	UNCLEAR

DOMAIN 4: FLOW AND TIMING							
4A: RISK OF BIAS							
Study ID	Describe any patients who did not receive the index test(s) and/or reference standard or who were excluded from the 2x2 table	Describe the time interval and any interventions between index test(s) and reference standard	Was there an appropriate interval between index test(s) and reference standard?	Did all patients receive a reference standard?	Did patients receive the same reference standard?	Were all patients included in the analysis?	Could the patient flow have introduced bias?
	different from included participants.						
Teplin 1989b	No record of number of people approached and whether these differed from those included.	Scored from same interview data.	Yes	Unclear	Yes	Unclear	UNCLEAR

R.5 Excluded studies

Study ID	Reason for exclusion	Reference
Alexander 2008	Tool outside scope	Alexander, M. J., G. Haugland, et al. (2008). "Mental health screening in addiction, corrections and social service settings: Validating the MMS." <i>International Journal of Mental Health and Addiction</i> 6(1): 105-119.
Baker 2009	Study design: systematic review	Baker, A. and R. Velleman (2009). "Helping non-specialist professionals to detect and assist with co-existing mental health and drug and alcohol problems." <i>Mental Health and Substance Use: Dual Diagnosis</i> 2(3): 173-181.
Barker 1992	Study design: narrative review	Barker, J. G. and R. J. Howell (1992). "The plethysmograph: A review of recent literature." <i>Bulletin of the American Academy of Psychiatry & the Law</i> 20(1): 13-25.
Baumgartner 2002	Population outside scope: cared for in hospital	Baumgartner, J. V., M. J. Scalora, et al. (2002). "Assessment of the Wilson Sex Fantasy Questionnaire among child molesters and nonsexual forensic offenders." <i>Sexual Abuse: Journal of Research & Treatment</i> 14(1): 19-30.
Becker 1993	Study design: narrative review	Becker, J. V. and V. L. Quinsey (1993). "Assessing suspected child molesters." <i>Child Abuse and Neglect</i> 17(1): 169-174.
Ben-Porath 1995	Outcome: no sensitivity/specificity	Ben-Porath, Y. S., D. D. Shondrick, et al. (1995). "MMPI-2 and race in a forensic diagnostic sample." <i>Criminal Justice and Behavior</i> 22(1): 19-32.
Bentz 1983	No gold standard	Bentz, W. K. and R. W. Noel (1983). "The incidence of psychiatric disorder among a sample of men entering prison." <i>Corrective & Social Psychiatry & Journal of Behavior Technology, Methods & Therapy</i> 29(1): 22-28.
Berman 2005	Refer to existing guidance	Berman, A. H., H. Bergman, et al. (2005). "Evaluation of the Drug Use Disorders Identification Test (DUDIT) in criminal justice and detoxification settings and in a Swedish population sample." <i>European Addiction Research</i> 11(1): 22-31.
Black 2004	Outcome: no sensitivity/specificity	Black, D. W., S. Arndt, et al. (2004). "Use of the mini international neuropsychiatric interview (MINI) as a screening tool in prisons: Results of a preliminary study." <i>Journal of the American Academy of Psychiatry and the Law</i> 32(2): 158-162.
Blanchard 2001	Population outside scope: cared for in hospital	Blanchard, R., P. Klassen, et al. (2001). "Sensitivity and specificity of the phallometric test for pedophilia in nonadmitting sex offenders." <i>Psychological Assessment</i> 13(1): 118-126.
Boone 2002	Population outside scope: not in contact with CJS	Boone, K. B., P. Lu, et al. (2002). "Sensitivity and specificity of the Rey Dot Counting Test in patients with suspect effort and various clinical samples." <i>Archives of Clinical Neuropsychology</i> 17(7): 625-642.
Brackett 2008	No gold standard	Brackett, R. E., R. L. Jackson, et al. (2008). "The Hare PSCAN and its relationship to psychopathy in a sample of civilly committed sexual offenders." <i>The International Journal of Forensic Mental Health</i> 7(1): 29-37.
Brinkley 2001	No gold standard	Brinkley, C. A., W. A. Schmitt, et al. (2001). "Construct validation of a self-report psychopathy scale: Does Levenson's self-report psychopathy scale measure the same constructs as Hare's psychopathy checklist-revised?" <i>Personality and Individual Differences</i> 31(7): 1021-1038.
Campbell 2005	Refer to existing guidance	Campbell, T. C., N. G. Hoffmann, et al. (2005). "UNCOPE: A Screen for Substance Dependence Among State Prison Inmates." <i>The Prison Journal</i> 85(1): 7-17.
Carr 2006	Population outside scope: cared for in hospital	Carr, W. A., M. Rotter, et al. (2006). "Structured Assessment of Correctional Adaptation (SACA): A measure of the impact of incarceration on the mentally ill in a therapeutic setting." <i>International Journal of Offender Therapy and Comparative Criminology</i> 50(5): 570-581.
Caviness 2009	No gold standard	Caviness, C. M., C. Hatgis, et al. (2009). "Three brief alcohol screens for detecting hazardous drinking in incarcerated women." <i>Journal of Studies on Alcohol and Drugs</i> 70(1): 50-54.
Chalmers 1993	No gold standard	Chalmers, D., N. L. Olenick, et al. (1993). "Dispositional traits as risk in problem drinking." <i>Journal of substance abuse</i> 5(4): 401-410.

Study ID	Reason for exclusion	Reference
Chang 2001	No formal assessment tool	Chang, I., S. C. Lapham, et al. (2001). "Alcohol use in inventory: Screening and assessment of first-time driving-while-impaired offenders. II. Typology and predictive validity." <i>Alcohol and Alcoholism</i> 36(2): 122-130.
Chantry 1994	No gold standard	Chantry, K. and R. J. Craig (1994). "Psychological screening of sexually violent offenders with the MCMI." <i>Journal of Clinical Psychology</i> 50(3): 430-435.
Christo 2000	Population outside scope: not in contact with CJS	Christo, G., S. Spurrell, et al. (2000). "Validation of the Christo Inventory for Substance-misuse Services (CISS): A simple outcome evaluation tool." <i>Drug and Alcohol Dependence</i> 59(2): 189-197.
Conley 2001	Outcome: no sensitivity/specificity	Conley, T. B. (2001). "Construct validity of the MAST and AUDIT with multiple offender drunk drivers." <i>Journal of Substance Abuse Treatment</i> 20(4): 287-295.
Copestake 2011	No gold standard	Copestake, S., N. S. Gray, et al. (2011). "A comparison of a self-report measure of psychopathy with the psychopathy checklist-revised in a UK sample of offenders." <i>Journal of Forensic Psychiatry and Psychology</i> 22(2): 169-182.
Coulton 2012	No gold standard	Coulton, S., D. Newbury-Birch, et al. (2012). "Screening for alcohol use in criminal justice settings: An exploratory study." <i>Alcohol and Alcoholism</i> 47(4): 423-427.
Craig 1999	Study design: narrative review	Craig, R. J. (1999). "Testimony based on the Millon clinical multi-axial inventory: Review, commentary, and guidelines." <i>Journal of Personality Assessment</i> 73(2): 290-304.
Dansky 1997	Population outside scope: not in contact with CJS	Dansky, B. S., M. E. Saladin, et al. (1997). "Use of self-report measures of crime-related posttraumatic stress disorder with substance use disordered patients." <i>Journal of Substance Abuse Treatment</i> 14(5): 431-437.
Davison 2001	Tool outside scope	Davison, S., M. Leese, et al. (2001). "Examination of the screening properties of the personality diagnostic questionnaire 4+ (PDQ-4+) in a prison population." <i>Journal of Personality Disorders</i> 15(2): 180-194.
de Pauda Serafim 2014	No gold standard	de Pauda Serafim, A., D. M. de Barros, et al. (2014). "Personality traits and violent behavior: A comparison between psychopathic and non-psychopathic male murderers." <i>Psychiatry Research</i> 219(3): 604-608.
Dennis 2006	No gold standard	Dennis, M. L., Y. F. Chan, et al. (2006). "Development and validation of the GAIN Short Screener (GSS) for internalizing, externalizing and substance use disorders and crime/violence problems among adolescents and adults." <i>American Journal on Addictions</i> 15(SUPPL. 1): 80-91.
Di Cataldo 1995	No gold standard	DiCataldo, F., A. Greer, et al. (1995). "Screening prison inmates for mental disorder: An examination of the relationship between mental disorder and prison adjustment." <i>Bulletin of the American Academy of Psychiatry and the Law</i> 23(4): 573-585.
Dillon 2005	Study design: letter	Dillon, J. E. and H. J. Steadman (2005). "Sample for validation, of jail mental health screen [4] (multiple letters)." <i>Psychiatric Services</i> 56(10): 1315-1316.
Doss 1986	Outcome: no sensitivity/specificity	Doss, G. H., D. W. Head, et al. (1986). "A quick measure of mental deficiency among adult offenders." <i>Federal Probation</i> 50(4): 57-59.
Douglas 2007	No gold standard	Douglas, K. S., L. S. Guy, et al. (2007). "The personality assessment inventory as a proxy for the psychopathy checklist-revised: Testing the incremental validity and cross-sample robustness of the antisocial features scale." <i>Assessment</i> 14(3): 255-269.
Durbeej 2010	Refer to existing guidance	Durbeej, N., A. H. Berman, et al. (2010). "Validation of the Alcohol Use Disorders Identification Test and the Drug Use Disorders Identification Test in a Swedish sample of suspected offenders with signs of mental health problems: Results from the Mental Disorder, Substance Abuse and Crime study." <i>Journal of Substance Abuse Treatment</i> 39(4): 364-377.
Edens 2000	Population outside scope: cared for in hospital	Edens, J. F., S. D. Hart, et al. (2000). "Use of the personality assessment inventory to assess psychopathy in offender populations." <i>Psychological Assessment</i> 12(2): 132-139.

Study ID	Reason for exclusion	Reference
Edens 2008	Population outside scope: cared for in hospital	Edens, J. F. and M. A. Ruiz (2008). "Identification of mental disorders in an in-patient prison psychiatric unit: Examining the criterion-related validity of the Personality Assessment Inventory." <i>Psychological Services</i> 5(2): 108-117.
Edens 2010	Outcome: no sensitivity/specificity	Edens, J. F., M. T. Boccaccini, et al. (2010). "Inter-rater reliability of the PCL-R total and factor scores among psychopathic sex offenders: are personality features more prone to disagreement than behavioral features?" <i>Behavioral sciences & the law</i> 28(1): 106-119.
Evans 2010	Not possible to extract or compute diagnostic accuracy data	Evans, C., P. Brinded, et al. (2010). "Validation of brief screening tools for mental disorders among New Zealand prisoners." <i>Psychiatric Services</i> 61(9): 923-928.
Evren 2014	Refer to existing guidance	Evren, C., K. Ogel, et al. (2014). "Psychometric Properties of the Turkish Versions of the Drug Use Disorders Identification Test (DUDIT) and the Drug Abuse Screening Test (DAST-10) in the Prison Setting." <i>Journal of Psychoactive Drugs</i> 46(2): 140-146.
Firestone 1998a	Population outside scope: cared for in hospital	Firestone, P., J. M. Bradford, et al. (1998). "Homicidal sex offenders: Psychological, phallometric, and diagnostic features." <i>Journal of the American Academy of Psychiatry and the Law</i> 26(4): 537-552.
Firestone 2000a	Population outside scope: cared for in hospital	Firestone, P., J. M. Bradford, et al. (2000). "The relationship of deviant sexual arousal and psychopathy in incest offenders, extrafamilial child molesters, and rapists." <i>Journal of the American Academy of Psychiatry and the Law</i> 28(3): 303-308.
Fischer 1999	Study design: narrative review	Fischer, L. and G. Smith (1999). "Statistical adequacy of the Abel Assessment for Interest in Paraphilias." <i>Sexual Abuse: Journal of Research and Treatment</i> 11(3): 195-205.
Florida 2012	Study design: conference abstract	Florida, D. (2012). "The complex co-morbidity of adult adhd and stimulant abuse." <i>Australian and New Zealand Journal of Psychiatry</i> 46: 36.
Ford 1996	Outcome: no sensitivity/specificity	Ford, B., R. Vitelli, et al. (1996). "The effects of computer versus paper-and-pencil administration on measures of anger and revenge with an inmate population." <i>Computers in Human Behavior</i> 12(1): 159-166.
Gavin 1989	Population outside scope: not in contact with CJS	Gavin, D. R., H. E. Ross, et al. (1989). "Diagnostic validity of the Drug Abuse Screening Test in the assessment of DSM-III drug disorders." <i>British Journal of Addiction</i> 84(3): 301-307.
Golding 1984	Outcome: no sensitivity/specificity	Golding, S. L., R. Roesch, et al. (1984). "Assessment and conceptualization of competency to stand trial: Preliminary data on the Interdisciplinary Fitness Interview." <i>Law and Human Behavior</i> 8(3-4): 321-334.
Green 2013	Population outside scope: cared for in hospital	Green, D., B. Rosenfeld, et al. (2013). "New and Improved? A Comparison of the Original and Revised Versions of the Structured Interview of Reported Symptoms." <i>Assessment</i> 20(2): 210-218.
Grover 2011	Study design: narrative review	Grover, B. L. (2011). "The utility of MMPI-2 scores with a correctional population & convicted sex offenders." <i>Psychology</i> 2(6): 638-642.
Grubin 2002	No gold standard	Grubin, D., Carson, D., Parsons, S. (2002). Report on new prison reception health screening arrangements: the results of a pilot study in 10 prisons
Guthmann 1990	Population outside scope: mean age under 18	Guthmann, D. R. and D. C. Brenna (1990). "The Personal Experience Inventory: An assessment of the instrument's validity among a delinquent population in Washington State." <i>Journal of Adolescent Chemical Dependency</i> 1(2): 15-24.
Hall 1988	Population outside scope: cared for in hospital	Hall, G. C., W. C. Proctor, et al. (1988). "Validity of physiological measures of pedophilic sexual arousal in a sexual offender population." <i>Journal of Consulting and Clinical Psychology</i> 56(1): 118-122.
Hart 1991	Outcome: no sensitivity/specificity	Hart, S. D., A. E. Forth, et al. (1991). "The MCMI-II and psychopathy." <i>Journal of Personality Disorders</i> 5(4): 318-327.
Hart 1993a	Outcome: no sensitivity/specificity	Hart, S. D., D. G. Dutton, et al. (1993). "The prevalence of personality disorder among wife assaulters." <i>Journal of Personality Disorders</i> 7(4): 329-

Study ID	Reason for exclusion	Reference
		341.
Hart 1993b	Outcome: no sensitivity/specificity	Hart, S. D., R. Roesch, et al. (1993). "The referral decision scale: A validation study." <i>Law and Human Behavior</i> 17(6): 611-623.
Haywood 1994	Tool not appropriate for CJS setting	Haywood, T. W., L. S. Grossman, et al. (1994). "Profiling psychological distortion in alleged child molesters." <i>Psychological reports</i> 75(2): 915-927.
Hewitt 2011	Study design: systematic review	Hewitt, C. E., A. E. Perry, et al. (2011). "Screening and case finding for depression in offender populations: A systematic review of diagnostic properties." <i>Journal of Affective Disorders</i> 128(1-2): 72-82.
Hiller 2002	Population outside scope: not in contact with CJS	Hiller, W., W. Rief, et al. (2002). "Dimensional and categorical approaches to hypochondriasis." <i>Psychological Medicine</i> 32(4): 707-718.
Hirschfeld 2010	Study design: narrative review	Hirschfeld, R. M. (2010). "Mood Disorder Questionnaire: It's impact on the field." <i>Depression and Anxiety</i> 27(7): 627-630.
Hoffman 2003	Refer to existing guidance	Hoffmann, N. G., D. E. Hunt, et al. (2003). "UNCOPE: A brief substance dependence screen for use with arrestees." <i>Journal of Drug Issues</i> 33(1): 29-44.
Hunsley 1988	Outcome: no sensitivity/specificity	Hunsley, J., R. K. Hanson, et al. (1988). "A summary of the reliability and stability of MMPI scales." <i>Journal of clinical psychology</i> 44(1): 44-46.
Iverson 1995	Outcome: outside scope	Iverson, G. L., M. D. Franzen, et al. (1995). "Examination of inmates' ability to malingering on the MMPI-2." <i>Psychological Assessment</i> 7(1): 118-121.
Jansen 2013	Population outside scope: cared for in hospital	Jansen, B. P. M., K. F. M. Damen, et al. (2013). "The standardized assessment of personality-abbreviated scale as a screening instrument for personality disorders in substance-dependent criminal offenders." <i>Personality and Mental Health</i> 7(2): 122-132.
Kemp 2008	Refer to existing guidance	Kemp, D. E., R. M. A. Hirschfeld, et al. (2008). "Screening for bipolar disorder in a county jail at the time of criminal arrest." <i>Journal of Psychiatric Research</i> 42(9): 778-786.
Knisely 2008	Refer to existing guidance	Knisely, J. S., M. J. Wunsch, et al. (2008). "Prescription Opioid Misuse Index: A brief questionnaire to assess misuse." <i>Journal of Substance Abuse Treatment</i> 35(4): 380-386.
Kongerslev 2012	Population outside scope: mean age under 18	Kongerslev, M., P. Moran, et al. (2012). "Screening for personality disorder in incarcerated adolescent boys: Preliminary validation of an adolescent version of the Standardised Assessment of Personality-Abbreviated Scale (SAPAS-AV)." <i>BMC Psychiatry</i> 12: 94.
Konstenius 2015	Refer to existing guidance	Konstenius, M., H. Larsson, et al. (2015). "An epidemiological study of ADHD, substance use, and comorbid problems in incarcerated women in Sweden." <i>Journal of Attention Disorders</i> 19(1): 44-52.
Korzec 2001	No formal assessment tool	Korzec, A., B. A. R. Marij, et al. (2001). "Diagnosing alcoholism in high-risk drinking drivers: Comparing different diagnostic procedures with estimated prevalence of hazardous alcohol use." <i>Alcohol and Alcoholism</i> 36(6): 594-602.
Krisak 1981	Outcome: no sensitivity/specificity	Krisak, J., W. D. Murphy, et al. (1981). "Reliability issues in the penile assessment of incarcerants." <i>Journal of Behavioral Assessment</i> 3(3): 199-207.
Kubiak 2005	Outcome: no sensitivity/specificity	Kubiak, S. P., C. J. Boyd, et al. (2005). "The Substance Abuse Treatment Needs of Prisoners: Implementation of an Integrated Statewide Approach." <i>Journal of Offender Rehabilitation</i> 41(2): 1-19.
Kubiak 2009	Outcome: no sensitivity/specificity	Kubiak, S. P., M. L. Beeble, et al. (2009). "Using the K6 to assess the mental health of jailed women." <i>Journal of Offender Rehabilitation</i> 48(4): 296-313.
Kubiak 2010	No gold standard	Kubiak, S. P., M. L. Beeble, et al. (2010). "Testing the validity of the K6 in detecting major depression and PTSD among jailed women." <i>Criminal Justice and Behavior</i> 37(1): 64-80.

Study ID	Reason for exclusion	Reference
Kubiak 2012	No gold standard	Kubiak, S. P., M. Beeble, et al. (2012). "Comparing the validity of the K6 when assessing depression, anxiety, and PTSD among male and female jail detainees." <i>International journal of offender therapy and comparative criminology</i> 56(8): 1220-1238.
Kucharski 2007	Outcome: outside scope	Kucharski, L. T. and S. Duncan (2007). "Differentiation of mentally ill criminal defendants from malingerers on the MMPI-2 and PAI." <i>American Journal of Forensic Psychology</i> 25(3): 21-42.
Langevin 1988	No gold standard	Langevin, R., R. Lang, et al. (1988). "Personality and sexual anomalies: An examination of the Millon Clinical Multiaxial Inventory." <i>Annals of Sex Research</i> 1(1): 13-32.
Lanyon 2007	Study design: narrative review	Lanyon, R. I. (2007). "Utility of the psychological screening inventory: A review." <i>Journal of Clinical Psychology</i> 63(3): 283-307.
Lapham 1995	Outcome: no sensitivity/specificity	Lapham, S. C., B. J. Skipper, et al. (1995). "Alcohol abuse screening instruments: Normative test data collected from a first DWI offender screening program." <i>Journal of Studies on Alcohol</i> 56(1): 51-59.
Laux 2012	Population outside scope: not in contact with CJS	Laux, J. M., N. J. Piazza, et al. (2012). "The Substance Abuse Subtle Screening Inventory-3 and stages of change: A screening validity study." <i>Journal of Addictions & Offender Counseling</i> 33(2): 82-92.
Leonard 2004	No formal assessment tool	Leonard, S. (2004). "The development and evaluation of a telepsychiatry service for prisoners." <i>Journal of Psychiatric and Mental Health Nursing</i> 11(4): 461-468.
Lurigio 2006	Study design: narrative review	Lurigio, A. J. and J. A. Swartz (2006). "Mental Illness in Correctional Populations: The Use of Standardized Screening Tools for Further Evaluation or Treatment." <i>Federal Probation</i> 70(2): 29-35.
Martin 2013	No gold standard	Martin, M. S., A. D. Wamboldt, et al. (2013). "A comparison of scoring models for computerised mental health screening for federal prison inmates." <i>Criminal Behaviour and Mental Health</i> 23(1): 6-17.
Martin 2013	Study design: systematic review	Martin, M. S., I. Colman, et al. (2013). "Mental health screening tools in correctional institutions: a systematic review." <i>BMC psychiatry</i> 13: 275.
Mason 2002	Population outside scope: not in contact with CJS	Mason, J. and G. Murphy (2002). "People with an intellectual disability in the criminal justice system: Developing an assessment tool for measuring prevalence." <i>British Journal of Clinical Psychology</i> 41(3): 315-320.
Mason 2007	Study design: case study	Mason, J. (2007). "Personality assessment in offenders with mild and moderate intellectual disabilities." <i>The British Journal of Forensic Practice</i> 9(1): 31-39.
McConaghy 1989	Study design: narrative review	McConaghy, N. (1989). "Validity and ethics of penile circumference measures of sexual arousal: A critical review." <i>Archives of Sexual Behavior</i> 18(4): 357-369.
McKinnon 2010	Outcome: no sensitivity/specificity	McKinnon, I. Grubin, D. (2010). Health screening in police custody. <i>Journal of Forensic and Legal Medicine</i> , 17, 209-212.
McKinnon 2013a	Outcome: no sensitivity/specificity	McKinnon, I., Srivastava, S., Kaler, G., & Grubin, D. (2013). Screening for psychiatric morbidity in police custody: Results from the HELP-PC project. <i>Psychiatrist</i> , 37(12), 389-394.
McKinnon 2013a	Duplicate	McKinnon, I., Srivastava, S., Kaler, G., & Grubin, D. (2013). Screening for psychiatric morbidity in police custody: Results from the HELP-PC project. <i>Psychiatrist</i> , 37(12), 389-394.
McKinnon 2013b	Outdated tool	McKinnon, I. G., & Grubin, D. (2013). Health screening of people in police custody--evaluation of current police screening procedures in London, UK. <i>European journal of public health</i> , 23(3), 399-405.
McKinnon 2013b	Duplicate	McKinnon, I. G., & Grubin, D. (2013). Health screening of people in police custody--evaluation of current police screening procedures in London, UK. <i>European journal of public health</i> , 23(3), 399-405.
McKinnon 2014	Duplicate	McKinnon, I., & Grubin, D. (2014). Evidence-Based Risk Assessment Screening in Police Custody: The HELP-PC Study in London,

Study ID	Reason for exclusion	Reference
		UK. <i>Policing</i> , 8(2), 174-182
McKinnon 2015	Duplicate	McKinnon, I. Thorp, J., Grubin, D. , (2015), "Improving the detection of detainees with suspected intellectual disability in police custody", <i>Advances in Mental Health and Intellectual Disabilities</i> , 9, 4, 174 - 185
McLearen 2003	No gold standard	McLearen, A. M. and N. L. Ryba (2003). "Identifying severely mentally ill inmates: Can small jails comply with detection standards?" <i>Journal of Offender Rehabilitation</i> 37(1): 25-40.
Michaud 2000	No gold standard	Michaud, P. h., F. Pessione, et al. (2000). "Screening of alcohol-related problems in French detainees using the cage questionnaire." <i>Alcologia</i> 12(1): 19-25.
Miller 1997	Study design: narrative review	Miller, F. G. (1997). "SASSI: Application and assessment for substance-related problems." <i>Journal of Substance Misuse</i> 2(3): 163-166.
Miller 2004	Population outside scope: cared for in hospital	Miller, H. A. (2004). "Examining the Use of the M-FAST with Criminal Defendants Incompetent to Stand Trial." <i>International Journal of Offender Therapy and Comparative Criminology</i> 48(3): 268-280.
Mills 2004	Outcome: no sensitivity/specificity	Mills, J. F. and D. G. Kroner (2004). "A New Instrument to Screen for Depression, Hopelessness, and Suicide in Incarcerated Offenders." <i>Psychological Services</i> 1(1): 83-91.
Mills 2005c	No gold standard	Mills, J. F. and D. G. Kroner (2005). "Screening for suicide risk factors in prison inmates: Evaluating the efficiency of the Depression, Hopelessness and Suicide Screening Form (DHS)." <i>Legal and Criminological Psychology</i> 10(1): 1-12.
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Mischke 1987	No gold standard	Mischke, H. D. and R. L. Venneri (1987). "Reliability and validity of the MAST, Mortimer-Filkins Questionnaire and CAGE in DWI assessment." <i>Journal of Studies on Alcohol</i> 48(5): 492-501.
Mokros 2013	Population outside scope: cared for in hospital	Mokros, A., M. Gebhard, et al. (2013). "Computerized Assessment of Pedophilic Sexual Interest Through Self-Report and Viewing Time: Reliability, Validity, and Classification Accuracy of the Affinity Program." <i>Sexual Abuse: Journal of Research and Treatment</i> 25(3): 230-258.
Morrissey 2005	Population outside scope: cared for in hospital	Morrissey, C., T. E. Hogue, et al. (2005). "Applicability, reliability and validity of the Psychopathy Checklist-Revised in offenders with intellectual disabilities: Some initial findings." <i>The International Journal of Forensic Mental Health</i> 4(2): 207-220.
Murphy 1992	Study design: narrative review	Murphy, W. D. and J. M. Peters (1992). "Profiling child sexual abusers: Psychological considerations." <i>Criminal Justice and Behavior</i> 19(1): 24-37.
Murrie 2002	Population outside scope: mean age under 18	Murrie, D. C. and D. G. Cornell (2002). "Psychopathy screening of incarcerated juveniles: A comparison of measures." <i>Psychological Assessment</i> 14(4): 390-396.
Myerholtz 1997	No gold standard	Myerholtz, L. E. and H. Rosenberg (1997). "Screening DUI offenders for alcohol problems: Psychometric assessment of the substance abuse subtle screening inventory." <i>Psychology of Addictive Behaviors</i> 11(3): 155-165.
Nassir Ghaemi 2005	Population outside scope: not in contact with CJS	Nassir Ghaemi, S., C. J. Miller, et al. (2005). "Sensitivity and specificity of a new bipolar spectrum diagnostic scale." <i>Journal of Affective Disorders</i> 84(2-3): 273-277.
Nielssen 2005	No gold standard	Nielssen, O. and S. Misrachi (2005). "Prevalence of psychoses on reception to male prisons in New South Wales." <i>Australian and New Zealand Journal of Psychiatry</i> 39(6): 453-459.
Nitschke 2009	Population outside scope: cared for in hospital	Nitschke, J., M. Osterheider, et al. (2009). "A cumulative scale of severe sexual sadism." <i>Sexual Abuse: Journal of Research & Treatment</i> 21(3): 262-278.

Study ID	Reason for exclusion	Reference
Noga 2015	Not possible to extract or compute diagnostic accuracy data	Noga, H. L., Walsh, E. C., Shaw, J. J., & Senior, J. (2015). The development of a mental health screening tool and referral pathway for police custody. <i>European Journal of Public Health</i> , 25(2), 237-242.
Ober 2013	Tool outside scope	Ober, C., K. Dingle, et al. (2013). "Validating a screening tool for mental health and substance use risk in an Indigenous prison population." <i>Drug and Alcohol Review</i> 32(6): 611-617.
O'Donohue 1992	Study design: narrative review	O'Donohue, W. and E. Letourneau (1992). "The psychometric properties of the penile tumescence assessment of child molesters." <i>Journal of Psychopathology and Behavioral Assessment</i> 14(2): 123-174.
O'Kane 1996	Population outside scope: cared for in hospital	O'Kane, A., D. Fawcett, et al. (1996). "Psychopathy and moral reasoning: Comparison of two classifications." <i>Personality and Individual Differences</i> 20(4): 505-514.
Otto 1998	Tool outside scope	Otto, R. K., N. G. Poythress, et al. (1998). "Psychometric properties of the MacArthur competence assessment tool- criminal adjudication." <i>Psychological Assessment</i> 10(4): 435-443.
Palmer 2008	No gold standard	Palmer, E. J. and C. Binks (2008). "Psychometric properties of the Beck Depression Inventory-II with incarcerated male offenders aged 18-21 years." <i>Criminal Behaviour and Mental Health</i> 18(4): 232-242.
Panton 1971	Characterisation of offender/non offender populations or different groups of offenders	Panton, J. H. and R. C. Brisson (1971). "Characteristics associated with drug abuse within a state prison population." <i>Corrective Psychiatry & Journal of Social Therapy</i> 17(4): 3-33.
Panton 1972	Tool not appropriate for CJS setting	Panton, J. H. (1972). "A validity study of three MMPI scales measuring alcoholism." <i>Correctional Psychologist</i> 5(3): 160-166.
Pechorro 2013	Population outside scope: mean age under 18	Pechorro, P., J. Maroco, et al. (2013). "Validation of the portuguese version of the antisocial process screening device-self-report with a focus on delinquent behavior and behavior problems." <i>International journal of offender therapy and comparative criminology</i> 57(1): 112-126.
Peters 2000	Refer to existing guidance	Peters, R. H., P. E. Greenbaum, et al. (2000). "Effectiveness of screening instruments in detecting substance use disorders among prisoners." <i>Journal of Substance Abuse Treatment</i> 18(4): 349-358.
Pluck 2012	Tool outside scope	Pluck, G., C. Sirdifield, et al. (2012). "Screening for personality disorder in probationers: Validation of the Standardised Assessment of Personality-Abbreviated Scale (SAPAS)." <i>Personality and Mental Health</i> 6(1): 61-68.
Ponseti 2012	Population outside scope: not in contact with CJS	Ponseti, J., O. Granert, et al. (2012). "Assessment of pedophilia using hemodynamic brain response to sexual stimuli." <i>Archives of General Psychiatry</i> 69(2): 187-194.
Poythress 2006	Outcome: no sensitivity/specificity	Poythress, N. G., K. S. Douglas, et al. (2006). "Internal consistency reliability of the self-report antisocial process screening device." <i>Assessment</i> 13(1): 107-113.
Proctor 2012	Refer to existing guidance	Proctor, S. L. and N. G. Hoffmann (2012). "A brief alternative for identifying alcohol use disorders." <i>Substance use & misuse</i> 47(7): 847-860.
Raine 1986	Not possible to extract or compute diagnostic accuracy data	Raine, A. (1986). "Psychopathy, schizoid personality and borderline/schizotypal personality disorders." <i>Personality and Individual Differences</i> 7(4): 493-501.
Raine 1987	Not possible to extract or compute diagnostic accuracy data	Raine, A. (1987). "Validation of schizoid personality scales using indices of schizotypal and borderline personality disorder in a criminal population." <i>British Journal of Clinical Psychology</i> 26(4): 305-309.
Retzlaff 2002	No gold standard	Retzlaff, P., J. Stoner, et al. (2002). "The use of the MCMI-III in the screening and triage of offenders." <i>International Journal of Offender Therapy and Comparative Criminology</i> 46(3): 319-332.

Study ID	Reason for exclusion	Reference
Richardson 2015	Study design: systematic review	Richardson, R., D. Trepel, et al. (2015). "Screening for psychological and mental health difficulties in young people who offend: A systematic review and decision model." <i>Health Technology Assessment</i> 19(1): 1-158.
Richardson 2015	Duplicate	Richardson, R., Trepel, D., Perry, A., Ali, S., Duffy, S., Gabe, R., . . . McMillan, D. (2015). Screening for psychological and mental health difficulties in young people who offend: A systematic review and decision model. <i>Health Technology Assessment</i> , 19(1), 1-158.
Richoux 2011	Population outside scope: not in contact with CJS	Richoux, C., I. Ferrand, et al. (2011). "Alcohol use disorders in the emergency ward: Choice of the best mode of assessment and identification of at-risk situations." <i>International Journal of Emergency Medicine</i> 4(1).
Robinson 2012	No gold standard	Robinson, L., M. D. Spencer, et al. (2012). "Evaluation of a screening instrument for autism spectrum disorders in prisoners." <i>PLoS ONE</i> 7(5).
Rockwell 2006	Tool outside scope	Rockwell, P. and M. Dunham (2006). "The Utility of the Formal Elements Art Therapy Scale in Assessment for Substance Use Disorder." <i>Art Therapy</i> 23(3): 104-111.
Rogers 1995	No gold standard	Rogers, R., K. W. Sewell, et al. (1995). "The referral decision scale with mentally disordered inmates: A preliminary study of convergent and discriminant validity." <i>Law and Human Behavior</i> 19(5): 481-491.
Rogers 1998	No gold standard	Rogers, R., K. L. Ustad, et al. (1998). "Convergent validity of the personality assessment inventory: A study of emergency referrals in a correctional setting." <i>Assessment</i> 5(1): 3-12.
Rossi 2003a	Population outside scope: not in contact with CJS	Rossi, G., C. Hauben, et al. (2003). "Empirical evaluation of the MCMI-III personality disorder scales." <i>Psychological reports</i> 92(2): 627-642.
Rossi 2003b	No gold standard	Rossi, G., I. Van den Brande, et al. (2003). "Convergent validity of the MCMI-III personality disorder scales and the MMPI-2 scales." <i>Journal of Personality Disorders</i> 17(4): 330-340.
Ruiz 2009	No gold standard	Ruiz, M. A., R. H. Peters, et al. (2009). "Psychometric properties of the Mental Health Screening Form III within a metropolitan jail." <i>Criminal Justice and Behavior</i> 36(6): 607-619.
Sandvik 2012	No gold standard	Sandvik, A. M., A. L. Hansen, et al. (2012). "Assessment of psychopathy: Inter-correlations between Psychopathy Checklist Revised, Comprehensive Assessment of Psychopathic Personality-Institutional Rating Scale, and Self-Report of Psychopathy Scale-III." <i>The International Journal of Forensic Mental Health</i> 11(4): 280-288.
Schroeder 1983	Outcome: no sensitivity/specificity	Schroeder, M. L., K. G. Schroeder, et al. (1983). "Generalizability of a checklist for assessment of psychopathy." <i>Journal of Consulting and Clinical Psychology</i> 51(4): 511-516.
Schut 1983	No gold standard	Schut, B. H., R. R. Hutzell, et al. (1983). "Further evaluation of the CPI Repeated Item Short Form." <i>Journal of Clinical Psychology</i> 39(1): 67-70.
Scott 1982	No gold standard	Scott, N. A., T. E. Hannum, et al. (1982). "Assessment of depression among incarcerated females." <i>Journal of Personality Assessment</i> 46(4): 372-379.
Sellbom 2008a	Population outside scope: not in contact with CJS	Sellbom, M. and R. M. Bagby (2008). "Validity of the MMPI-2-RF (Restructured Form) L-r and K-r Scales in Detecting Underreporting in Clinical and Nonclinical Samples." <i>Psychological Assessment</i> 20(4): 370-376.
Selzer 1971	No gold standard	Selzer, M. L. (1971). "The Michigan Alcoholism Screening Test: The quest for a new diagnostic instrument." <i>The American Journal of Psychiatry</i> 127(12): 1653-1658.
Seto 2001a	Study design: narrative review	Seto, M. C. (2001). "The value of phallometry in the assessment of male sex offenders." <i>Journal of Forensic Psychology Practice</i> 1(2): 65-75.
Shaw 1999	Outcome: no sensitivity/specificity	Shaw, J., F. Creed, et al. (1999). "Prevalence and detection of serious psychiatric disorder in defendants attending court." <i>Lancet</i> 353(9158): 1053-1056.

Study ID	Reason for exclusion	Reference
Shaw 2003	Not possible to extract or compute diagnostic accuracy data	Shaw, J. J., B. Tomenson, et al. (2003). "A screening questionnaire for the detection of serious mental illness in the criminal justice system." <i>Journal of Forensic Psychiatry and Psychology</i> 14(1): 138-150.
Shearer 1999	Study design: narrative review	Shearer, R. A. and C. R. Carter (1999). "Screening and assessing substance-abusing offenders: Quantity and quality." <i>Federal Probation</i> 63(1): 30-34.
Sheppard 1972	Population outside scope: cared for in hospital	Sheppard, C., E. Ricca, et al. (1972). "Cross-validation of a heroin addiction scale from the Minnesota Multiphasic Personality Inventory." <i>The Journal of Psychology: Interdisciplinary and Applied</i> 81(2): 263-268.
Sherman 1989	Study design: narrative review	Sherman, L. G. and P. C. Morschauser (1989). "Screening for suicide risk in inmates." <i>Psychiatric Quarterly</i> 60(2): 119-138.
Skinner 1978	Outcome: no sensitivity/specificity	Skinner, T. J. and K. Charalampous (1978). "Interpretive procedures entailed in using the Michigan Alcoholism Screening Test." <i>British Journal of Addiction</i> 73(2): 117-121.
Sloan 2004	No formal assessment tool	Sloan, I. J. J., M. R. Bodapati, et al. (2004). "Respondent misreporting of drug use in self-reports: Social desirability and other correlates." <i>Journal of Drug Issues</i> 34(2): 269-292.
Slobogin 1984	Population outside scope: cared for in hospital	Slobogin, C., G. B. Melton, et al. (1984). "The feasibility of a brief evaluation of mental state at the time of the offense." <i>Law and Human Behavior</i> 8(3-4): 305-320.
Sondenaa 2008	No gold standard	Sondenaa, E., K. Rasmussen, et al. (2008). "The prevalence and nature of intellectual disability in Norwegian prisons." <i>Journal of Intellectual Disability Research</i> 52(12): 1129-1137.
Spaans 2015	Population outside scope: cared for in hospital	Spaans, M., T. Rinne, et al. (2015). "The DAPP-SF as a screener for personality disorder in a forensic setting." <i>Journal of Personality Assessment</i> 97(2): 172-181.
Spiers 2007	No gold standard	Spiers, L. (2007). "An evaluation of the PCL-R in assessing prisoners with low intellectual functioning." <i>The British Journal of Forensic Practice</i> 9(1): 10-15.
Streiner 1990	Population outside scope: not in contact with CJS	Streiner, D. L. and H. R. Miller (1990). "Maximum likelihood estimates of the accuracy of four diagnostic techniques." <i>Educational and Psychological Measurement</i> 50(3): 653-662.
Sturek 2008	No gold standard	Sturek, J. C., A. B. Loper, et al. (2008). "Psychopathy in female inmates: The SCID-II Personality Questionnaire and the PCL-R." <i>Psychological Services</i> 5(4): 309-319.
Swanson 1995	Population outside scope: cared for in hospital	Swanson, S. C., D. I. Templer, et al. (1995). "Development of a three-scale MMPI: The MMPI-TRI." <i>Journal of Clinical Psychology</i> 51(3): 361-373.
Swartz 1998	No gold standard	Swartz, J. A. (1998). "Adapting and using the Substance Abuse Subtle Screening Inventory-2 with criminal justice offenders: Preliminary results." <i>Criminal Justice and Behavior</i> 25(3): 344-365.
Swartz 2008	No gold standard	Swartz, J. A. (2008). "Using the K6 scale to screen for serious mental illness among criminal justice populations: Do psychiatric treatment indicators improve detection rates?" <i>International Journal of Mental Health and Addiction</i> 6(1): 93-104.
Talina 2013	Tool outside scope	Talina, M., S. Thomas, et al. (2013). "CANFOR Portuguese version: Validation study." <i>BMC Psychiatry</i> 13(157).
Taylor 2013	Population outside scope: cared for in hospital	Taylor, J. L. and R. W. Novaco (2013). "A brief screening instrument for emotionally unstable and dissocial personality disorder in male offenders with intellectual disabilities." <i>Research in Developmental Disabilities</i> 34(1): 546-553.
Templer 1978	No gold standard	Templer, D. I., C. F. Ruff, et al. (1978). "Psychometric assessment of alcoholism in convicted felons." <i>Journal of Studies on Alcohol</i> 39(11): 1948-1951.

Study ID	Reason for exclusion	Reference
To 2015	Population outside scope: not in contact with CJS	To, W. T., S. Vanheule, et al. (2015). "Screening for intellectual disability in persons with a substance abuse problem: Exploring the validity of the Hayes Ability Screening Index in a Dutch-speaking sample." <i>Research in Developmental Disabilities</i> 36: 498-504.
Tulevski 1989	No gold standard	Tulevski, I. G. (1989). "Michigan Alcoholism Screening Test (MAST) - Its possibilities and shortcomings as a screening device in a pre-selected non-clinical population." <i>Drug and Alcohol Dependence</i> 24(3): 255-260.
Uzieblo 2012	Study design: narrative review	Uzieblo, K., J. Winter, et al. (2012). "Intelligent diagnosing of intellectual disabilities in offenders: food for thought." <i>Behavioral Sciences & the Law</i> 30(1): 28-48.
Vien 2006	Study design: narrative review	Vien, A. and A. R. Beech (2006). "Psychopathy: theory, measurement, and treatment." <i>Trauma, violence & abuse</i> 7(3): 155-174.
Vieweg 1984	Study design: narrative review	Vieweg, B. W. and J. L. Hedlund (1984). "Psychological screening inventory: A comprehensive review." <i>Journal of Clinical Psychology</i> 40(6): 1382-1393.
Vitacco 2010	No gold standard	Vitacco, M. J. and D. S. Kosson (2010). "Understanding Psychopathy Through an Evaluation of Interpersonal Behavior: Testing the Factor Structure of the Interpersonal Measure of Psychopathy in a Large Sample of Jail Detainees." <i>Psychological Assessment</i> 22(3): 638-649.
Warren 2005a	Outcome: no sensitivity/specificity	Warren, J. I., P. Chauhan, et al. (2005). "Screening for psychopathy among incarcerated women: Psychometric properties and construct validity of the Hare P-SCAN." <i>The International Journal of Forensic Mental Health</i> 4(2): 175-189.
Webster 2007	Tool outside scope	Webster, S. D., R. E. Mann, et al. (2007). "Further validation of the short self-esteem scale with sexual offenders." <i>Legal and Criminological Psychology</i> 12(2): 207-216.
White 2006	Not possible to extract or compute diagnostic accuracy data	White, P. and D. Chant (2006). "The psychometric properties of a psychosis screen in a correctional setting." <i>International Journal of Law and Psychiatry</i> 29(2): 137-144.
Wickersham 2015	No gold standard	Wickersham, J. A., M. M. Azar, et al. (2015). "Validation of a brief measure of opioid dependence: The Rapid Opioid Dependence Screen (RODS)." <i>Journal of Correctional Health Care</i> 21(1): 12-26.
Wilson 1985	Outcome: no sensitivity/specificity	Wilson, J. H., P. J. Taylor, et al. (1985). "The validity of the SCL-90 in a sample of British men remanded to prison for psychiatric reports." <i>British Journal of Psychiatry</i> 147(OCT.): 400-403.
Wish 2000	Population outside scope: No MH problem	Wish, E. D., T. Gray, et al. (2000) An experiment to enhance the reporting of drug use by arrestees. <i>Journal of drug issues</i> 30, 55-76
Wolff 2015	Tool outside scope	Wolff, N., G. McHugo, et al. (2015). "Screening for PTSD among incarcerated men: A comparative analysis of computer-administered and orally administered modalities." <i>Criminal Justice and Behavior</i> 42(2): 219-236.
Wong 1988	No gold standard	Wong, S. (1988). "Is Hare's Psychopathy Checklist reliable without the interview?" <i>Psychological Reports</i> 62(3): 931-934.
Yacobian 2000	No formal assessment tool	Yacobian Jr, G. S. (2000). "Reassessing the need for urinalysis as a validation technique." <i>Journal of Drug Issues</i> 30(2): 323-334.
Yacobian 2003	No formal assessment tool	Yacobian Jr, G. S. (2003). "Does the calendar method enhance drug use reporting among Portland arrestees?" <i>Journal of Substance Use</i> 8(1): 27-32.
Young 2013	Outcome: no sensitivity/specificity	Young, S., E. J. Goodwin, et al. (2013). "The effectiveness of police custody assessments in identifying suspects with intellectual disabilities and attention deficit hyperactivity disorder." <i>BMC Medicine</i> 11(1).
Zarella 1990	No gold standard	Zarella, K. L. and J. M. Schuerger (1990). "Estimation of MCMI DSM-III axis II constructs from MMPI scales and subscales." <i>Journal of Personality Assessment</i> 55(1-2): 195-201.

<u>Study ID</u>	<u>Reason for exclusion</u>	<u>Reference</u>
Zung 1975	No gold standard	Zung, B. J. and K. D. Charalampous (1975). "Item analysis of the Michigan Alcoholism Screening Test." <i>Journal of Studies on Alcohol</i> 36(1): 127-132.
Zung 1979	No gold standard	Zung, B. J. (1979). "Psychometric properties of the MAST and two briefer versions." <i>Journal of Studies on Alcohol</i> 40(9): 845-859.

1

2 **Appendix S: NICE technical team**

Name	Role
Christine Carson	Guideline Lead
Martin Allaby	Clinical Advisor
Toni Tan	Technical Lead
Bhash Naidoo	Health Economist
Caroline Keir	Guideline Commissioning Manager
Helen Dickinson	Guideline Coordinator
Leonie Gregson	Editor

3

1 Appendix T: Summary of evidence submitted for call for evidence: Physical 2 Health in Prison

3 A call for evidence was conducted inviting reports (randomised controlled trials, observational or qualitative studies) relating to the scope of the guideline for
4 adults (18 and older) in prisons or young offender institutions from registered stakeholders. All submitting information was considered for inclusion for review
5 questions, however no new evidence was identified that met our review protocols for inclusion, as detailed below.

6

Report sent from or Report title	Description of findings	Relevant to any question?	Include/ Exclude
HMP Kilmarnock Health Needs Assessment	Performed a health needs assessment and gives results (not comparative findings and no diagnostic data given). Interviews with prisons on self reported health and health promotion. Other sections on smoking, nutrition etc. Chapter 5 discusses anticipated healthcare needs on release. - did not meet review protocol.	Health Promotion, Communication and Continuity of care	Exclude
HMP Wakefield	Cardiovascular Disease (CVD) Nurse Specialist appointed in HMP Wakefield providing specialist healthcare. Before and after quantitative and qualitative data on diagnosis of CVD related conditions and NHS health checks. Plan to review NICE guidance for this question.	Chronic conditions	Exclude
Healthwatch Peterborough	Study on prisoners acting as wellbeing representatives (through peer-to-peer working). Aim to train wellbeing reps, promote preventative health and wellbeing campaigns to improve prisoner health. No quantitative data. (http://www.healthwatchpeterborough.co.uk/Pilot-Prisoner-Engagement)	Health promotion.	Exclude
Oral health/ dentistry	Heidari, E., Dickinson, C., Newton T (2014) An overview of the prison population and the general health status of prisoners. British Dental Journal. 217(1): 15-19. No comparative data or qualitative findings.	No	Exclude
Oral health/ dentistry	Heidari, E., Dickinson C., Newton T. (2014) Oral health of adult prisoners and factors that impact oral health. British Dental Journal. 217 (2):69-71. Focus on barriers to going to the dentist (outside of our remit), rather than oral hygiene.	No	Exclude
Oral health/ dentistry	WHO. Health in prisons, a WHO guide to the essentials in prison health. http://www.euro.who.int/__data/assets/pdf_file/0009/99018/E90174.pdf This report has a chapter on dental health and it outlines the importance of education of patients and prison staff or oral self-care. It also outlines the importance of oral health in relation to improving health and wellbeing,	No	Exclude

Report sent from or Report title	Description of findings	Relevant to any question?	Include/Exclude
	health needs assessment and the continuity of healthcare on release. No comparative data or qualitative findings.		
Oral health/dentistry	Delivering Better Oral Health – an evidence based toolkit for prevention. June 2014 https://www.gov.uk/government/publications/delivering-better-oral-health-an-evidence-based-toolkit-for-prevention Not prison specific (guidance)	No	Exclude
Oral health/dentistry	This document is a useful tool for assisting patients with self-care. Heidari, Dickinson, Fiske (2008) Prison and Lay Opinions of a Prison-issue Oral health kit BDJ http://www.napduk.org/wp/wp-content/downloads/clinical-papers/HeidariKit.pdf Qualitative study on prisoner opinion on oral health kit (tooth brush and toothpaste) - did not meet review protocol.	Check health promotion qualitative question	Exclude
Oral health/dentistry	Health needs assessment. Kipping RR., Scott P., Gray C (2011) Health needs assessment in a male prison in England. Public Health (125(4): 229-33. “The areas of greatest health needs were identified as dental care, mental health and substance misuse”. No relevant data that could be included within quantitative or qualitative question.	Check health promotion qualitative question	Exclude
Oral health/dentistry	Coordination , case management and communication between healthcare professionals involved in primary care, mental health, misuse care and secondary care Public Health England (2014) A survey of dental services in adult prisons in England and Wales. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/328177/A_survey_of_prison_dental_services_in_England_and_Wales_2014.pdf This work highlights the need to include oral health in health needs assessment and coordination between healthcare professionals.	No	Exclude
Oral health/dentistry	NHS England (2015) Prison dental service specification http://www.napduk.org/wp/wp-content/downloads/Prison_Dental_Service_Specification.pdf Service specification (recommendations) No comparative data or qualitative findings.	No	Exclude
Oral health/dentistry	The oral health and psychosocial needs of Scottish prisoners and young offenders. http://dentistry.dundee.ac.uk/sites/dentistry.dundee.ac.uk/files/media/SOHIPP-report.pdf Incidence data only. No comparative data or qualitative findings.	No	Exclude
Oral health/dentistry	The status of prison dentistry in England and Wales (2013) National Association of Prison Dentistry UK. http://www.napduk.org/ Incidence data only. No comparative data, no qualitative data.	No	Exclude
Managing	Overview of best practice in managing persistent pain and describes how this practice might be implemented in	Medication	Exclude

Report sent from or Report title	Description of findings	Relevant to any question?	Include/ Exclude
persistent pain in secure settings	secure environments, including prisons, police custody and immigration removal centres. No comparative data or qualitative findings.	question	
Peer-based interventions to maintain and improve offender health	Already in file. References checked for quantitative - only 1 study, already included. Economics already included. Note that population is broader than our protocol (includes mental health and other non-physical health outcomes such as motivation and self-esteem).	Health promotion - (referencess checked for qualitative studies.)	Include

1

2 **Appendix U: References**

3

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