National Institute for Health and Care Excellence

Rehabilitation in adults with complex psychosis and related severe mental health conditions

[Q] Factors associated with successful transition through rehabilitation services

NICE guideline TBC

Evidence review

January 2020

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7 primary care systems?

8 Introduction

9 The aim of rehabilitation services is to help people with complex psychosis and
10 related severe mental health conditions develop the necessary skills to progress in
11 the rehabilitation pathway and transition to a lesser level of support. Some personal
12 and service level characteristics may influence the effectiveness of mental health
13 rehabilitation and the transition through the rehabilitation pathway. The aim of this
14 review question was to identify personal and service level factors associated with
15 successful transition through rehabilitation services to other parts of the mental
16 health, social care and primary care systems for people receiving mental health
17 rehabilitation services.

18 Summary of the protocol

19 Please see Table 1 for a summary of the population, predictive factors and outcome
20 characteristics of this review.

21 **Table 1: Summary of the protocol**

Population	Adults (aged 18 years and older) with complex psychosis and related severe mental health conditions (as defined in scope) who move from rehabilitation to other parts of the mental health, social care or primary care systems

Predictive factors	Predictive factors:
	• Holistic assessment of personal factors such as:
	  ○ activities of daily living
	  ○ interpersonal functioning
	  ○ engagement in community
	  ○ risks to self or others
	  ○ detention under MHA
	  ○ complex comorbidities (including substance misuse)
	  ○ cognitive impairment
	  ○ psychosis symptoms
	• Service factors:
	  ○ support to manage medication
	  ○ relapse prevention
	  ○ a flexible crisis plan
	  ○ an expected timeframe for rehabilitation
	  ○ recovery orientation
	  ○ discharge care plan

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	o continuity of care coordination o family support/engagement o availability of a range of local components of the rehab pathway/ care packages (with appropriate staffing to deliver rehab psychosocial interventions)
Comparison	Not applicable
Outcomes	**Critical outcomes** • Successful transition from rehabilitation service to other parts of the mental health, social care or primary care systems. • Being stuck in an inappropriate rehabilitation service • Use of out of area services **Important outcomes** • None specified

1   *MHA: Mental Health Act*

2   For further details, see the review protocol in appendix A.

3   **Clinical evidence**

4   **Included studies**

5   Five observational studies were included in the review (D'Avanzo 2004, de Girolamo
6   2014, Killaspy 2013, Killaspy 2016 and Killaspy 2019).

7   Two studies were conducted in Italy (D'Avanzo 2004 and de Girolamo 2014) and 3 in
8   the UK (Killaspy 2013, Killaspy 2016 and Killaspy 2019). Four were conducted in
9   residential or inpatient rehabilitation units (D'Avanzo 2004, de Girolamo 2014,
10   Killaspy 2013 and Killaspy 2016) and 1 in supported accommodation (Killaspy 2019).

11   The included studies are summarised in Table 2.

12   See the literature search strategy in appendix B and study selection flow chart in
13   appendix C.

14   **Excluded studies**

15   Studies not included in this review with reasons for their exclusions are provided in
16   appendix K.

17   **Summary of clinical studies included in the evidence review**

18   A summary of the studies that were included in this review are presented in Table 2.

19   **Table 2: Summary of included studies**

Study	Population	Predictive factors	Outcomes
D'Avanzo 2004 Prospective cohort study Italy	N=1792 Patients in 179 community residential facilities for psychiatric patients; mean age 47 (SD 14) years, majority male (59.2%) and most of them having a	• Level of education • Staying in touch with people • Violent behaviour • Suicide attempts • Diagnosis	• Discharge from rehabilitation in community residential facilities to home, lower/higher intensity of care psychiatric residential facilities

Study	Population	Predictive factors	Outcomes
	diagnosis of schizophrenia or other psychosis (67%)	• Length of current admission in rehabilitation unit • Placement before current admission • Employment • HoNOS score	Follow-up duration: 1 year
de Girolamo 2014 Prospective cohort study Italy	N=403 Patients staying in 23 residential facilities mean age 49 (SD 10) years, majority male (66.7%) with most of them having a diagnosis of schizophrenia (67.5 %).	• Duration of illness • Social support • Diagnosis • Psychopathology • Working skills	• Home discharge from residential facilities Follow-up duration: 1 year
Killaspy 2016 Prospective cohort study United Kingdom	N=329 Patients of 50 inpatient mental health rehabilitation units in England, majority male (65%) and most with a diagnosis of schizophrenia (68%)	• Social function • Receiving Cognitive behavioural therapy • Length of current admission in rehabilitation unit • Engagement in activity • QuIRC Recovery Based Practice domain score	• Successful discharge/ ready for discharge to community Follow-up duration: 1 year
Killaspy 2013 Retrospective cohort study United Kingdom	N=141 All clients of an inpatient and residential rehabilitation service, with mean age 44 years, mostly male (68%) and having a diagnosis of schizophrenia or schizoaffective disorder (93%)	• Gender • Ethnicity • Marital status • Needs • History of sexual abuse • History of physical health problems • History of separation from parents in childhood • Family history of psychiatric illness • Problematic drug use • Problematic alcohol use • Age • Involuntary detention • Medication adherence • Social function • Challenging behaviour • History of physical abuse	• Successful progression to more independent living Follow-up duration: 5 years
Killaspy 2019 Cohort study UK	N=619 People living in mental health supported accommodation. 68% had schizophrenia, schizoaffective	• Supported accommodation • Residential care • Floating outreach services	• Successful discharge from rehabilitation services (moving on to less supported accommodation)

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Study	Population	Predictive factors	Outcomes

	disorder or bipolar disorder.	• QuIRC-SA domain scores:
		  ○ Treatments and Interventions
		  ○ Self-Management and Autonomy
		  ○ Social Inclusion
		  ○ Human Rights
		  ○ Recovery-Based Practice
			Follow-up duration: 30 months

1 *HoNOS: health of the nation outcomes scales; QuIRC: Quality Indicator for Rehabilitative Care; QuIRC-*
2 *SA: Quality Indicator for Rehabilitative Care – Supported Accommodation; SD: standard deviation*

3 See the full evidence tables in appendix D and the forest plots in appendix E.

Quality assessment of clinical outcomes included in the evidence review

5 See the clinical evidence profiles in appendix F.

Economic evidence

Included studies

8 A systematic review of the economic literature was conducted but no economic
9 studies were identified which were applicable to this review question.

Excluded studies

11 Studies not included in this review with reasons for their exclusions are provided in
12 appendix K.

Summary of studies included in the economic evidence review

14 No economic studies were identified which were applicable to this review question.

Economic model

16 No economic modelling was undertaken for this review because the committee
17 agreed that other topics were higher priorities for economic evaluation.

Evidence statements

Clinical evidence statements

Critical outcomes

Successful transition from rehabilitation service to other parts of the mental health, social care or primary care systems

23 *Predictive factors: personal*

24 **Gender, ethnicity, marital status, needs, history of sexual abuse, history of**
25 **physical health problems, history of separation from parents in childhood,**

family history of psychiatric illness, problematic drug or alcohol use, level of education and staying in touch with people

Low quality evidence from 1 cohort study (N=124) found no significant association between gender, ethnicity, marital status, needs (assessed using Camberwell assessment of needs short appraisal scale), history of sexual abuse, history of physical health problems, history of separation from parents in childhood, family history of psychiatric illness, problematic drug use or problematic alcohol use and successful progression in rehabilitation. These factors were analysed in the study but not included in the final predictive model.

Moderate quality evidence from 1 cohort study (N=1792) found no significant association between level of education and staying in touch with people (none versus someone) with successful discharge to home and lower intensity of care settings at 1-year follow-up among people with complex psychosis and related severe mental health conditions residing in community residential facilities.

Violent behaviour

Moderate quality evidence from 1 cohort study (N=1792) found no significant association between violent behaviour (none vs presence of violent behaviour) with successful discharge to home and lower intensity of care settings at 1-year follow-up among people with complex psychosis and related severe mental health conditions residing in community residential facilities.

Suicide attempts

Moderate quality evidence from 1 cohort study (N=1792) found no significant association between suicide attempts (none vs presence of violent attempts) with successful discharge to home and lower intensity of care settings at 1-year follow-up among people with complex psychosis and related severe mental health conditions residing in community residential facilities.

Age at admission (per year older vs. younger)

Low quality evidence from 1 cohort study (N=124) found no significant association between age at admission and successful progression to more independent living at 5 years follow-up, among people with complex psychosis and related severe mental health conditions receiving inpatient and residential rehabilitation services.

Involuntary Detention (detained vs. not detained)

Low quality evidence from 1 cohort study (N=124) found no significant association between involuntary detention and successful progression to more independent living at 5 years follow-up, among people with complex psychosis and related severe mental health conditions receiving inpatient and residential rehabilitation services.

Duration of illness (<15 years vs. >15 years)

Moderate quality evidence from 1 cohort study (N=393) found a significant association between duration of illness less than 15 years and home discharge at 1 year follow-up compared to more than 15 years illness duration, among people with complex psychosis and related severe mental health conditions receiving rehabilitation services in non-hospital residential facilities.

Medication adherence (history of adherence vs. history of episodes of non-adherence)

Moderate quality evidence from 1 cohort study (N=124) found a significant association between medication adherence and successful progression to more independent living at 5 years follow-up compared to medication non-adherence, among people with complex psychosis and related severe mental health conditions receiving inpatient and residential rehabilitation services.

Social support (available vs. unavailable in the last year)

Moderate quality evidence from 1 cohort study (N=393) found a significant association between availability of social support and home discharge at 1-year follow-up compared to no social support, among people with complex psychosis and related severe mental health conditions receiving rehabilitation services in non-hospital residential facilities.

Diagnosis

Moderate quality evidence from 1 cohort study (N=393) found a significant association between diagnosis (schizophrenia versus unipolar depression) and no home discharge at 1-year follow-, among people with complex psychosis and related severe mental health conditions receiving rehabilitation services in non-hospital residential facilities.

Moderate quality evidence from 1 cohort study (N=1792) found no significant association between diagnosis (schizophrenia and other psychoses versus affective disorders) and successful discharge to home and lower intensity of care settings at 1-year follow-up among people with complex psychosis and related severe mental health conditions residing in community residential facilities.

Psychopathology (Brief Psychiatric Rating Scale score; low vs. moderate score)

Moderate quality evidence from 1 cohort study (N=393) found a significant association between low psychopathology score (assessed using BPRS scale) with home discharge at 1-year follow-up compared to moderate score, among people with complex psychosis and related severe mental health conditions receiving rehabilitation services in non-hospital residential facilities.

Working skills (Specific levels of functioning scale)

Moderate quality evidence from 1 cohort study (N=393) found a significant association between high working skills score (better working skills assessed using SLOF scale) and home discharge at 1-year follow-up compared to low score, among people with complex psychosis and related severe mental health conditions receiving rehabilitation services in non-hospital residential facilities.

Social function (Life skills profile communication subscale score)

High quality evidence from 1 cohort study (N=329) found a significant association between higher social function score at the time of admission in rehabilitation unit and successful discharge to community rehabilitation service at 1-year follow-up, among people with complex psychosis and related severe mental health conditions receiving inpatient rehabilitation services.

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1 Low quality evidence from 1 cohort study (N=124) found no significant association
2 between social function score and successful progression to more independent living
3 at 5 years follow-up, among people with complex psychosis and related severe
4 mental health conditions receiving inpatient and residential rehabilitation services.

5 **Receiving cognitive behavioural therapy (% service users in the unit who**
6 **received CBT in the year before recruitment)**

7 Moderate quality evidence from 1 cohort study (N=329) found no significant
8 association between receiving cognitive behavioural therapy at the time of admission
9 in rehabilitation unit with successful discharge to community rehabilitation service at
10 1-year follow-up, among people with complex psychosis and related severe mental
11 health conditions receiving inpatient rehabilitation services.

12 **Challenging behaviour (Special problems rating scale; low vs. high score)**

13 Low quality evidence from 1 cohort study (N=124) found no significant association
14 between challenging behaviour (assessed using Special Problems Rating Scale) and
15 successful progression to more independent living at 5 years follow-up, among
16 people with complex psychosis and related severe mental health conditions receiving
17 inpatient and residential rehabilitation services.

18 **History of physical abuse**

19 Low quality evidence from 1 cohort study (N=124) found no significant association
20 between history of physical abuse and successful progression to more independent
21 living at 5 years follow-up, among people with complex psychosis and related severe
22 mental health conditions receiving inpatient and residential rehabilitation services.

23 **Length of current admission in rehabilitation unit**

24 Moderate quality evidence from 1 cohort study (N=329) found no significant
25 association between the length of current admission in rehabilitation unit(months)
26 and successful discharge to community rehabilitation service at 1-year follow-up,
27 among people with complex psychosis and related severe mental health conditions
28 receiving inpatient rehabilitation services.

29 Moderate quality evidence from 1 cohort study (N=1792) found a significant
30 association between shorter length of current admission in community residential
31 facility (<1 years) and successful discharge to home and lower intensity of care
32 settings, compared to those with higher duration (1-2 years) at 1-year follow-up,
33 among people with complex psychosis and related severe mental health conditions
34 residing in community residential facilities.

35 **Placement before current admission**

36 Moderate quality evidence from 1 cohort study (N=1792) found a significant
37 association between placement at home before current admission and successful
38 discharge to home and lower intensity of care settings, compared to those placed at
39 psychiatric hospitals before admission at 1-year follow-up, among people with
40 complex psychosis and related severe mental health conditions residing in
41 community residential facilities.

42 Moderate quality evidence from 1 cohort study (N=1792) found a significant
43 association between placement at other institution before current admission and
44 successful discharge to home and lower intensity of care settings, compared to those

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1 placed at psychiatric hospitals before admission at 1-year follow-up, among people
2 with complex psychosis and related severe mental health conditions residing in
3 community residential facilities.

4 **Employment (no job vs. regular job at admission)**

5 Moderate quality evidence from 1 cohort study (N=1792) found a significant
6 association between having work at the time of admission (no job versus regular job)
7 and successful discharge to home and lower intensity of care settings, compared to
8 those without work at 1-year follow-up, among people with complex psychosis and
9 related severe mental health conditions residing in community residential facilities.

10 **Engagement in activities (Time use diary score; low vs. high score)**

11 High quality evidence from 1 cohort study (N=329) found a significant association
12 between high engagement in activities score and successful discharge to community
13 rehabilitation service at 1-year follow-up compared to a low score, among people with
14 complex psychosis and related severe mental health conditions receiving inpatient
15 rehabilitation services.

16 **Health of the Nation Outcome Scales (HoNOS) score**

17 Moderate quality evidence from 1 cohort study (N=1792) found a significant
18 association between having lower HoNOS scores and successful discharge to home
19 and lower intensity of care settings at 1-year follow-up, compared to those with
20 higher score (>15) among people with complex psychosis and related severe mental
21 health conditions residing in community residential facilities.

22 *Predictive factors: service level*

23 **Recovery orientation of services**

24 Moderate quality evidence from 1 cohort study (N=329) found a significant
25 association between recovery orientation of services (QuIRC Recovery Based
26 Practice domain score) and successful discharge to community rehabilitation service
27 at 1-year follow-up compared to a low score, among people with complex psychosis
28 and related severe mental health conditions receiving inpatient rehabilitation
29 services. The other QuIRC domains (Living Environment; Therapeutic Environment;
30 Treatments and Interventions; Self-Management and Autonomy; Social Inclusion;
31 Human Rights) were not associated with successful discharge.

32 Moderate quality evidence from 1 prospective cohort study (n=619) found a
33 significant association between QuIRC-SA domains for Human Rights and Recovery
34 Based practice and successful transition from supported accommodation.

35 The Social Interface domain was negatively associated with successful transition.
36 Moderate quality evidence from 1 prospective cohort study (n=619) found no
37 significant association between QuIRC-SA domains (Treatments and Interventions;
38 Self-Management and Autonomy) and successful transition from supported
39 accommodation.

40 **Supported housing services**

41 Moderate quality evidence from 1 cohort study (N=390) found a significant
42 association between receiving supported housing services and reduction in support
43 at 30 months follow-up compared to those receiving residential care.

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Floating outreach services

Moderate quality evidence from 1 cohort study (N=440) found a significant association between receiving floating outreach services and reduction in support at 30 months follow-up compared to those residing in supported housing.

Moderate quality evidence from 1 cohort study (N=342) found a significant association between receiving floating outreach services and reduction in support at 30 months follow-up compared to those receiving residential care.

Being stuck in an inappropriate rehabilitation service

No evidence was identified to inform this outcome.

Use of out of area services

No evidence was identified to inform this outcome.

Important outcomes

No important outcomes were specified.

Economic evidence statements

No economic evidence was identified which was applicable to this review question.

The committee's discussion of the evidence

Interpreting the evidence

The outcomes that matter most

Successful transition from rehabilitation service to other parts of the mental health, social care or primary care systems and being stuck in an inappropriate rehabilitation service were critical outcomes, because effective rehabilitation should enable service users to participate in society with increased independence. Out of area treatment was also a critical outcome because lack of a local rehabilitation service would require service users to be rehabilitated away from their family and community. All outcomes were considered critical and no important outcomes were specified.

The quality of the evidence

A modification of the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) methodology was used to evaluate the quality of the evidence for, and confidence in, each outcome in the evidence review.

Evidence for the predictive factors receiving cognitive behavioural therapy, and engagement in activities score was high quality.

Evidence for the predictive factors level of education, violent behaviour, suicide attempts, being in touch with people, HoNOS score, employment, placement before current admission, length of current admission in rehabilitation unit, working skills, psychopathology score, duration of illness, medication adherence, social support, diagnosis, QuIRC domain scores, being in floating outreach, supported housing and residential care was moderate quality. The main reason for downgrading of the evidence was imprecision.

1 Evidence for the predictive factors age, involuntary detention, social function,
2 challenging behaviour and history of physical abuse was low quality. The evidence
3 was mainly downgraded for imprecision resulting from small sample size, but also for
4 indirectness of outcome which was reported as those discharged from residential
5 facilities, without taking into account the level of support. Evidence for the predictive
6 factor social function varied from high to low. The reason for downgrading of
7 evidence was imprecision resulting from small sample size.

8 There was no evidence found for predictive factors support to manage medication,
9 relapse prevention, flexible crisis plan, expected timeframe for rehabilitation,
10 discharge care plan, continuity of care coordination and availability of a range of local
11 components of the rehab pathway/ care packages (with appropriate staffing to deliver
12 rehab psychosocial interventions). No evidence was identified for the outcomes being
13 stuck in an inappropriate rehabilitation service and use of out of area rehabilitation
14 services.

15 The committee noted that the rate of successful transition from rehabilitation to other
16 parts of the mental health, social care or primary care systems varied across studies.
17 They discussed that this may be due to the difference in settings and level of support
18 in which the studies were conducted, difference in the follow-up duration across the
19 studies and composition of the study population. For example, the committee noted
20 that the rate of transition from floating outreach (Killaspy 2019) was high, but they
21 agreed that this can partly be explained by the fact that those receiving floating
22 outreach services are likely to have milder symptomatology, need lesser support and
23 are more likely to benefit from rehabilitation and progress.

24 The committee also acknowledged that the studies with shorter duration of follow-up
25 may not have captured as many transitions as the studies with longer follow-up
26 duration, and hence have lower rates of transition.

27 The committee noted the differences in the settings and the level of support provided
28 across studies. Two studies were based in community residential facilities in Italy,
29 while three were based in NHS settings in the UK. The committee discussed that
30 there were differences in rehabilitation offered in both settings and prioritised the
31 evidence from UK while making the recommendations, as it closely reflected the
32 settings in which the recommendations will be implemented.

33 *Benefits and harms*

34 The committee agreed, based on their experience, that people should be able to join
35 and leave the rehabilitation pathway at different points, and to move between parts of
36 the rehabilitation pathway that provide higher or lower levels of support according to
37 their changing needs.

38 The committee thought that to ensure smooth transitions between mental health
39 teams or to primary care the lead commissioner would need to ensure a number of
40 things are in place including: clearly defined local criteria, early planning of transitions
41 with all involved, a period of co-working between services before transition, a local
42 panel to give advice on referrals and an option for swift re-referral if the person's
43 needs increase.

44 **Cost effectiveness and resource use**

45 No relevant studies were identified in a systematic review of the economic evidence.

46 The recommendation to follow recommendations in the NICE guideline (NG53) which
47 represents principles of current practice. However, there is some evidence included

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in the economic analysis conducted for review question E that many people with complex psychosis are stuck in inpatient mental health settings, often in out-of-area placements. Therefore, this recommendation may have an additional resource impact if more people are discharged at greater rate to community settings than is currently the case. This resource impact would fall on Local Authorities who have a statutory obligation to provide accommodation under Section 117 of the Mental Health Act 1983 (as amended). Due to regional differences, the distribution of this resource impact will be more pronounced in areas that have a higher number of service users.

Other considerations

The committee were aware of the NICE guideline on transition between inpatient mental health settings and community or care home settings [NG53] and discussed that the recommendations of the guidance will also be applicable for the people in rehabilitation settings and hence cross referred to this guideline.

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1 Appendices

2 Appendix A – Review protocols

3 Review protocol for review question 7.1: What factors are associated with successful transition through rehabilitation
4 services to other parts of the mental health, social care and primary care systems?

5 **Table 3: Review protocol for factors associated with successful transition through rehabilitation services**

Field (based on PRISMA-P)	Content
Review question	What factors are associated with successful transition through rehabilitation services to other parts of the mental health, social care and primary care systems?
Type of review question	Prognostic review
Objective of the review	To identify personal characteristics and service factors that enable a person to progress smoothly along the rehabilitation pathway.
Eligibility criteria – population/disease/condition/issue/domain	Adults (aged 18 years and older) with complex psychosis and related severe mental health conditions (as defined in scope) who move from rehabilitation to other parts of the mental health, social care or primary care systems. Studies with mixed populations should include at least 66% with complex psychosis and related severe mental health conditions.
Eligibility criteria – prognostic factor(s)	• Holistic assessment of personal factors such as: ○ activities of daily living ○ interpersonal functioning ○ engagement in community ○ risks to self or others ○ detention under MHA ○ complex comorbidities (including substance misuse) ○ cognitive impairment ○ psychosis symptoms • Service factors:

Field (based on PRISMA-P)	Content
	o support to manage medication
	o relapse prevention
	o a flexible crisis plan
	o an expected timeframe for rehabilitation
	o recovery orientation
	o discharge care plan
	o continuity of care coordination
	o family support/engagement
	o availability of a range of local components of the rehab pathway/ care packages (with appropriate staffing to deliver rehab psychosocial interventions)
	Studies should report multivariable analysis including any of the personal and service factors listed above.
Eligibility criteria – comparator(s)/control or reference (gold) standard	Not applicable
Outcomes and prioritisation	• Successful transition from rehabilitation service to other parts of the mental health, social care or primary care systems.
	• Being stuck in an inappropriate rehabilitation service
	• Use of out of area services
Eligibility criteria – study design	Studies reporting multivariable analysis including personal and/or service criteria will be included
Other inclusion exclusion criteria	Date limit: 1990
	The date limit for studies after 1990 was suggested by the GC considering the change in provision of mental health services from institutionalized care in the 1970s to deinstitutionalise and community based care from 1990s onwards.
	Country limit: UK, USA, Australasia, Europe, Canada. The GC limited to these countries because they have similar cultures to the UK, given the importance of the cultural setting in which mental health rehabilitation takes place.
Proposed sensitivity/sub-group analysis, or meta-regression	Subgroup analysis
	• Type of rehabilitation
	o High dependency
	o Longer term high dependency and complex care

Field (based on PRISMA-P)	Content
	o Highly specialist high dependency o Community o Low secure This is because different types of rehabilitation unit serve different levels of need and are likely to have different referral and discharge criteria.
Selection process – duplicate screening/selection/analysis	A random sample of the references identified in the search will be sifted by a second reviewer. This sample size of this pilot round will be 10% of the total, (with a minimum of 100 studies). All disagreements in study inclusion will be discussed and resolved between the two reviewers. The senior systematic reviewer or guideline lead will be involved if discrepancies cannot be resolved between the two reviewers.
Data management (software)	NGA STAR software will be used for study sifting, data extraction, recording quality assessment using checklists and generating bibliographies/citations. RevMan will be used to generate plots and for any meta-analysis. 'GRADEpro' will be used to assess the quality of evidence for each outcome
Information sources – databases and dates	Potential sources to be searched: Medline, Medline In-Process, CCTR, CDSR, DARE, HTA , Embase, PsycINFO Limits (e.g. date, study design): • Apply standard animal/non-English language exclusion • Dates: from 1990
Identify if an update	Not an update
Author contacts	For details please see https://www.nice.org.uk/guidance/indevelopment/gid-ng10092
Highlight if amendment to previous protocol	For details please see section 4.5 of Developing NICE guidelines: the manual 2014
Search strategy – for one database	For details please see appendix B.
Data collection process – forms/duplicate	A standardised evidence table format will be used, and published as appendix D (clinical evidence tables) or H (economic evidence tables).
Data items – define all variables to be collected	For details please see evidence tables in appendix D (clinical evidence tables) or H (economic evidence tables).

Field (based on PRISMA-P)	Content
Methods for assessing bias at outcome/study level	Standard study checklists were used to critically appraise individual studies. For details please see section 6.2 of Developing NICE guidelines: the manual 2014. The risk of bias across all available evidence was evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group http://www.gradeworkinggroup.org/.
Criteria for quantitative synthesis	For details please see section 6.4 of Developing NICE guidelines: the manual 2014
Methods for quantitative analysis – combining studies and exploring (in)consistency	For details please see the methods and process section of the main file
Meta-bias assessment – publication bias, selective reporting bias	For details please see section 6.2 of Developing NICE guidelines: the manual 2014.
Confidence in cumulative evidence	For details please see sections 6.4 and 9.1 of Developing NICE guidelines: the manual 2014 Modified GRADE will be used
Rationale/context – what is known	For details please see the introduction to the evidence review in the main file.
Describe contributions of authors and guarantor	A multidisciplinary committee developed the evidence review. The committee was convened by the National Guideline Alliance (NGA) and chaired by Dr Gillian Baird in line with section 3 of Developing NICE guidelines: the manual 2014. Staff from the NGA undertook systematic literature searches, appraised the evidence, conducted meta-analysis and cost effectiveness analysis where appropriate, and drafted the guideline in collaboration with the committee. For details please see Developing NICE guidelines: the manual.
Sources of funding/support	NGA is funded by NICE and hosted by RCOG
Name of sponsor	NGA is funded by NICE and hosted by RCOG
Roles of sponsor	NICE funds NGA to develop guidelines for those working in the NHS, public health and social care in England
PROSPERO registration number	Not registered with PROSPERO

1   *CCTR: Cochrane controlled trials register; CDSR: Cochrane database of systematic reviews; DARE: database of abstracts of reviews of effects; GC: guideline committee;*
2   *GRADE: Grading of Recommendations Assessment, Development and Evaluation; MHA: Mental health act; NGA: National Guideline Alliance; NHS: National health service;*
3   *NICE: National Institute for Health and Care Excellence; RCOG: Royal College of Obstetricians and Gynaecologists; RCT: randomised controlled trial; RoB: risk of bias; UK:*
4   *United Kingdom; USA: United States of America*

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1 # Appendix B – Literature search strategies

2 **Literature search strategies for review question 7.1: What factors are**
3 **associated with successful transition through rehabilitation services to**
4 **other parts of the mental health, social care and primary care systems?**

5 **Databases: Embase/Medline/PsycINFO**

6 Date searched: 10/06/2019

#	Searches
1	exp psychosis/ use emczd
2	Psychotic disorders/ use ppez
3	exp psychosis/ use psyh
4	(psychos?s or psychotic).tw.
5	exp schizophrenia/ use emczd
6	exp schizophrenia/ or exp "schizophrenia spectrum and other psychotic disorders"/ use ppez
7	(exp schizophrenia/ or "fragmentation (schizophrenia)"/) use psyh
8	schizoaffective psychosis/ use emczd
9	schizoaffective disorder/ use psyh
10	(schizophren* or schizoaffective*).tw.
11	exp bipolar disorder/ use emczd
12	exp "Bipolar and Related Disorders"/ use ppez
13	exp bipolar disorder/ use psyh
14	((bipolar or bipolar type) adj2 (disorder* or disease or spectrum)).tw.
15	Depressive psychosis/ use emczd
16	Delusional disorder/ use emczd
17	delusions/ use psyh
18	(delusion* adj3 (disorder* or disease)).tw.
19	mental disease/ use emczd
20	mental disorders/ use ppez
21	mental disorders/ use psyh
22	(psychiatric adj2 (illness* or disease* or disorder* or disabilit* or problem*)).tw.
23	((severe or serious) adj3 (mental adj2 (illness* or disease* or disorder* or disabilit* or problem*))).tw.
24	(complex adj2 (mental adj2 (illness* or disease* or disorder* or disabilit* or problem*))).tw.
25	or/1-24
26	(Rehabilitation/ or cognitive rehabilitation/ or community based rehabilitation/ or psychosocial rehabilitation/ or rehabilitation care/ or rehabilitation center/) use emczd
27	(exp rehabilitation/ or exp rehabilitation centers/) use ppez
28	(Rehabilitation/ or cognitive rehabilitation/ or neuropsychological rehabilitation/ or psychosocial rehabilitation/ or independent living programs/ or rehabilitation centers/ or rehabilitation counselling/) use psyh
29	residential care/ use emczd
30	(residential facilities/ or assisted living facilities/ or halfway houses/) use ppez
31	(residential care institutions/ or halfway houses/ or assisted living/) use psyh
32	(resident* adj (care or centre or center)).tw.
33	(halfway house* or assist* living).tw.
34	((inpatient or in-patient or long-stay) adj3 (psychiatric or mental health)).tw.
35	(Support* adj (hous* or accommodat* or living)).tw.
36	(rehabilitation or rehabilitative or rehabilitate).tw.
37	rehabilitation.fs.
38	or/26-37
39	Transitional care/ use emczd

#	Searches
40	Transitional care/ use ppez
41	Transition.tw.
42	aftercare/
43	(aftercare or after care).tw.
44	*patient discharge/ use ppez
45	hospital discharge/ use emczd
46	(discharge planning/ or facility discharge/ or institutional release/ or hospital discharge/ or psychiatric hospital discharge/) use psyh
47	((discharg* or readmit* or readmission* or re-admit* or re-admission* or predischarg* or postdischarg* or release) adj4 (high-dependency unit or communit* or facility or hospital* or inpatient or in-patient* or institute* or long-stay or rehab*)).tw.
48	((return* or enter* or renter* or entry or reentry or move or moving or transfer*) adj3 (communit* or home or housing or rehab* or residential* or support* accommodation* or temporary accommodation*)).tw.
49	Case management/
50	Patient care planning/ use ppez
51	Patient care planning/ use emczd
52	(care adj2 plan*).tw.
53	("continuity of patient care"/ or patient handoff/ or patient transfer/ or retention in care/) use ppez
54	clinical handover/ use emczd
55	("continuum of care"/ or client transfer/) use psyh
56	("case management" or collaborat* or continuity or co-ordination or coordination or handover or hand-over or seamless or seam-less).tw.
57	("intermediate care" or "intermediate service" or "intermediary care" or "intermediary service").tw.
58	(step-up or step-down or stepup or stepdown).tw.
59	(step* adj2 care).tw.
60	((follow-up or followup) adj3 (care or clinic* or service* or team*)).tw.
61	("out of area*" or OOA* or OAT*).tw.
62	shared decision making/ use emczd
63	(share* adj3 decision*).tw.
64	or/39-63
65	25 and 38 and 64
66	limit 65 to (yr="1990 - current" and english language)
67	limit 66 to yr=1990-2015
68	limit 66 to yr=2016 - current
69	remove duplicates from 67
70	remove duplicates from 68
71	69 or 70
72	Letter/ use ppez
73	letter.pt. or letter/ use emczd
74	note.pt.
75	editorial.pt.
76	Editorial/ use ppez
77	News/ use ppez
78	news media/ use psyh
79	exp Historical Article/ use ppez
80	Anecdotes as Topic/ use ppez
81	Comment/ use ppez
82	Case Report/ use ppez
83	case report/ or case study/ use emczd
84	Case report/ use psyh
85	(letter or comment*).ti.
86	or/72-85
87	randomized controlled trial/ use ppez

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#	Searches
88	randomized controlled trial/ use emczd
89	random*.ti,ab.
90	cohort studies/ use ppez
91	cohort analysis/ use emczd
92	cohort analysis/ use psyh
93	case-control studies/ use ppez
94	case control study/ use emczd
95	or/87-94
96	86 not 95
97	animals/ not humans/ use ppez
98	animal/ not human/ use emczd
99	nonhuman/ use emczd
100	"primates (nonhuman)"/
101	exp Animals, Laboratory/ use ppez
102	exp Animal Experimentation/ use ppez
103	exp Animal Experiment/ use emczd
104	exp Experimental Animal/ use emczd
105	animal research/ use psyh
106	exp Models, Animal/ use ppez
107	animal model/ use emczd
108	animal models/ use psyh
109	exp Rodentia/ use ppez
110	exp Rodent/ use emczd
111	rodents/ use psyh
112	(rat or rats or mouse or mice).ti.
113	or/96-112
114	71 not 113

1

2 Database: Cochrane Library

3 Date searched: 10/06/2019

#	Searches
1	MeSH descriptor: [Psychotic Disorders] explode all trees
2	(psychos?s or psychotic):ti,ab,kw
3	MeSH descriptor: [Schizophrenia] explode all trees
4	(schizophren* or schizoaffective*):ti,ab,kw
5	MeSH descriptor: [Bipolar Disorder] explode all trees
6	(((bipolar or bipolar type) near/2 (disorder* or disease or spectrum))):ti,ab,kw
7	MeSH descriptor: [Delusions] this term only
8	((delusion* near/3 (disorder* or disease))):ti,ab,kw
9	MeSH descriptor: [Mental Disorders] this term only
10	((psychiatric near/2 (illness* or disease* or disorder* or disabilit* or problem*))):ti,ab,kw
11	(((severe or serious) near/3 (mental adj2 (illness* or disease* or disorder* or disabilit* or problem*)))):ti,ab,kw
12	((complex near/2 (mental adj2 (illness* or disease* or disorder* or disabilit* or problem*)))):ti,ab,kw
13	(#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12)
14	MeSH descriptor: [Rehabilitation] this term only
15	MeSH descriptor: [Rehabilitation, Vocational] this term only
16	MeSH descriptor: [Residential Facilities] this term only
17	MeSH descriptor: [Assisted Living Facilities] this term only
18	MeSH descriptor: [Halfway Houses] this term only

#	Searches
19	((resident* near (care or centre or center))):ti,ab,kw
20	(((inpatient or in-patient or long-stay) near/3 (psychiatric or mental health))):ti,ab,kw
21	(((Support*) near (hous* or accommodat* or living))):ti,ab,kw
22	((halfway house* or assist* living)):ti,ab,kw
23	(rehabilitation or rehabilitative or rehabilitate):ti,ab,kw
24	(#14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23)
25	MeSH descriptor: [Transitional Care] this term only
26	(transition*):ti,ab,kw
27	MeSH descriptor: [Aftercare] this term only
28	(aftercare or after care):ti,ab,kw
29	MeSH descriptor: [Patient Discharge] this term only
30	(discharg* or readmit* or readmission* or re-admit* or re-admission* or predischarg* or postdischarg* or release) near/4 (high-dependency unit or communit* or facility or hospital* or inpatient or in-patient* or institute* or long-stay or rehab*):ti,ab,kw
31	(return* or enter* or renter* or entry or reentry or move or moving or transfer*) near/3 (communit* or home or housing or rehab* or residential* or support* accommodation* or temporary accommodation*):ti,ab,kw
32	MeSH descriptor: [Case Management] this term only
33	MeSH descriptor: [Patient Care Planning] this term only
34	(care near/2 plan*):ti,ab,kw
35	MeSH descriptor: [Continuity of Patient Care] this term only
36	MeSH descriptor: [Patient Handoff] this term only
37	MeSH descriptor: [Patient Transfer] this term only
38	MeSH descriptor: [Retention in Care] this term only
39	("case management" or collaborat* or continuity or co-ordination or coordination or handover or hand-over or seamless or seam-less):ti,ab,kw
40	("intermediate care" or "intermediate service" or "intermediary care" or "intermediary service"):ti,ab,kw
41	(step-up or step-down or stepup or stepdown):ti,ab,kw
42	("out of area*" or OOA* or OAT*):ti,ab,kw
43	(share* near/3 decision*):ti,ab,kw
44	#25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43
45	#13 AND #24 AND #44

1 Database: CRD

2 Date searched: 10/06/2018

#	Searches
1	MeSH DESCRIPTOR Psychotic Disorders EXPLODE ALL TREES IN DARE,HTA
2	(psychos*s or psychotic) IN DARE, HTA
3	MeSH DESCRIPTOR Schizophrenia EXPLODE ALL TREES IN DARE,HTA
4	(schizophren* or schizoaffective*) IN DARE, HTA
5	MeSH DESCRIPTOR Bipolar Disorder EXPLODE ALL TREES IN DARE,HTA
6	(((bipolar or bipolar type) NEAR2 (disorder* or disease or spectrum))) IN DARE, HTA
7	MeSH DESCRIPTOR Delusions IN DARE,HTA
8	(delusion* NEAR3 (disorder* or disease)) IN DARE, HTA
9	MeSH DESCRIPTOR Mental Disorders IN DARE,HTA
10	(psychiatric NEAR2 (illness* or disease* or disorder* or disabilit* or problem*)) IN DARE, HTA
11	((severe or serious) NEAR3 (mental NEAR2 (illness* or disease* or disorder* or disabilit* or problem*))) IN DARE, HTA
12	(complex NEAR2 (mental NEAR2 (illness* or disease* or disorder* or disabilit* or problem*))) IN DARE, HTA
13	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12
14	MeSH DESCRIPTOR Rehabilitation IN DARE,HTA
15	MeSH DESCRIPTOR Rehabilitation, Vocational IN DARE,HTA
16	MeSH DESCRIPTOR Residential Facilities IN DARE,HTA

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#	Searches
17	MeSH DESCRIPTOR Assisted Living Facilities IN DARE,HTA
18	MeSH DESCRIPTOR Halfway Houses IN DARE,HTA
19	(resident* NEAR (care or centre or center)) IN DARE, HTA
20	((inpatient or in-patient or long-stay) NEAR3 (psychiatric or mental health)) IN DARE, HTA
21	((Support*) NEAR (hous* or accommodat* or living)) IN DARE, HTA
22	(halfway house* or assist* living) IN DARE, HTA
23	(rehabilitation or rehabilitative or rehabilitate) IN DARE, HTA
24	#14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23
25	#13 AND #24

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1 Appendix C – Clinical evidence study selection

2 Clinical study selection for review question 7.1: What factors are
3   associated with successful transition through rehabilitation services to
4   other parts of the mental health, social care and primary care systems?

Figure 1: Study selection flow chart

```
                    ┌─────────────────────┐
                    │  Titles and abstracts│
                    │  identified, N= 5483 │
                    └──────────┬──────────┘
             ┌─────────────────┴─────────────────┐
             ▼                                     ▼
   ┌──────────────────┐              ┌────────────────────────┐
   │ Full copies      │              │ Excluded, N=5386       │
   │ retrieved        │              │ (not relevant population,
   │ and assessed for │              │ design, intervention,  │
   │ eligibility, N= 97│             │ comparison, outcomes,  │
   └────────┬─────────┘              │ unable to retrieve)    │
            │                        └────────────────────────┘
     ┌──────┴───────┐
     ▼              ▼
┌──────────────┐ ┌──────────────────┐
│ Publications │ │ Publications     │
│ included     │ │ excluded         │
│ in review,   │ │ from review, N= 92│
│ N= 5         │ │ (refer to excluded│
└──────────────┘ │ studies list)    │
                 └──────────────────┘
```
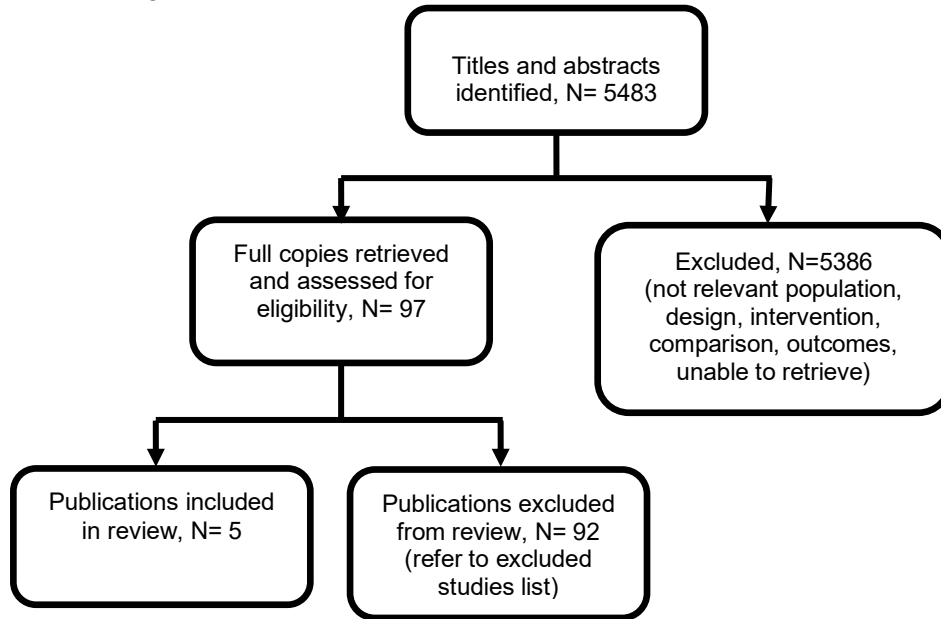
5

6

1 Appendix D – Clinical evidence tables

2 **Clinical evidence tables for review question 7.1: What factors are associated with successful transition through**
3 **rehabilitation services to other parts of the mental health, social care and primary care systems?**

4   **Table 4:   Clinical evidence tables**

Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
Full citation D'Avanzo, B., Battino, R. N., Gallus, S., Barbato, A., Factors predicting discharge of patients from community residential facilities: A longitudinal study from Italy, Australian and New Zealand Journal of Psychiatry, 38, 619-628, 2004 **Ref Id** 894085 **Country/ies where the study was carried out** Italy **Study type** Prospective cohort study **Aim of the study**	**Sample size** 1792 **Characteristics** Mean(SD) age: 47(14) years; Schizophrenia and other psychoses 67%, mental retardation 10%,personality disorders 10%, affective disorders 7% and other disorders 6%; 37% admitted from psychiatric ward **Inclusion criteria** Patients who used community residential facilities in Lombardy, Italy during the study duration. **Exclusion criteria** Patients who used community residential facilities only for day care Community facilities that opened after the beginning of the study	**Interventions** The community residential facilities were grouped into four categories, classified as: residential care centres (24-hour staffed facilities, mainly for post-acute, relatively short admissions); high-staffed facilities for longer stays and for severe long-term conditions (24-hour); mid-staffed (12-hour) facilities for relatively independent patients who can stay alone overnight; and low-staffed facilities (≤ 8-hour) for more independent patients	**Follow up duration:** 1 year	**Results** Predictors of discharge from community residential facilities to lower intensity of care settings: No significant association: Age,sex, level of education, diagnosis, violent behaviour, suicide attempts, people in touch (none versus someone), physical health problems (no versus some), adequacy accommodation in staff's opinion, sector(public versus private),no. of types of interventions delivered at least weekly in daily life activities, social and	Assessment of risk of bias using Quality in prognostic studies(QUIPS) risk of bias assessment tool: 1) Study participation: The study sample represents the population of interest on key characteristics. The baseline study sample is adequately described for key characteristics. Inclusion and exclusion criteria are adequately described. There is adequate participation in the study by eligible individuals. 2) Study attrition: Response rate is adequate. Reasons for loss to follow-up are provided. 3) Prognostic factor measurement: Prognostic factors are clearly defined.

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Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
To investigate the factors predicting discharge of patients from community residential facilities in northern Italy

Study dates
2000-2001

Source of funding
This research work was supported by the Regione Lombardia (unclear if the support is financial). | Community facilities outside Lombardy region or those which did not agree to participate | (the so-called group homes were included in mid- or low-staffed facilities, and supported flats in the low-staffed ones).Psychosocial interventions delivered to the patients included daily life activity interventions, social and recreational activities like going out together, practising sports, going for dinner, organizing and going to parties and more structured activities, such as gardening or other semi vocational activities. Psychological interventions included individual therapy, group therapy, self-help groups, family therapy, psycho-education sessions, social skills training groups and meetings | | recreational, psychological, vocational training, and search for accommodation

Odds ratios (and 95% confidence intervals) of discharge from community residential facilities to lower intensity of care settings:

Employment:

No job versus regular job: 0.6 (0.3–0.9)

Placement before current admission:

Other institution versus psychiatric hospital: 8.3 (3.1–22.0)

Home versus psychiatric hospital: 17.2 (6.4–46.0)

Duration of current admission (years):

1-2 years versus <1year: 0.5 (0.3–0.7)

>2 years versus <1year: 0.3 (0.2–0.4)

HoNOS score: | Standard methods used to measure prognostic factors to limit misclassification bias. The method and setting of measurement of prognostic factor is the same for all study participants. Adequate proportion of the study sample has complete data for prognostic factor variable.

4) Outcome measurement: Outcomes are clearly defined and measured. The method and setting of outcome measurement is the same for all study participants.

5) Study confounding: The method and setting of confounding measurement are the same for all study participants. Important potential confounders are accounted for in the analysis. All estimates are adjusted for sex, age, duration of the current admission, placement before current admission, and intensity of care. |

Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
		between relatives and professionals.		> 15 versus <10: 0.5 (0.3–0.7) Intensity of care: low intensity versus residential care centre:0.3 (0.1–0.8) high intensity versus residential care centre:0.5 (0.3–0.7)	6) Statistical analysis and reporting: There is sufficient presentation of data to assess the adequacy of the analysis. The strategy for model building is appropriate and is based on a conceptual framework or model. The selected statistical model is adequate for the design of the study. There is no selective reporting of results.
Full citation de Girolamo, G., Candini, V., Buizza, C., Ferrari, C., Boero, M. E., Giobbio, G. M., Goldschmidt, N., Greppo, S., Iozzino, L., Maggi, P., Melegari, A., Pasqualetti, P., Rossi, G., Is psychiatric residential facility discharge possible and predictable? A multivariate analytical approach applied to a prospective study in Italy, Social Psychiatry	**Sample size** 403 **Characteristics** 1) Mean age: 49 years (SD = 10) 2) Gender: 66.7% male 3) Primary diagnosis: Number(percentage) Schizophrenic disorders: 272 (67.5) Personality disorders: 72 (17.9) Other disorders: 59 (14.6) 4) Length of stay in residential facility: Number(percentage) ≤ 3 years: 245(60.8) 3-6 years: 76(18.9)	**Interventions** Rehabilitation Services : Social skills training in 80 % of facilities Individual and group psychoeducation in 65 % Job training in 65 % Expressive/manual activities in all residential facilities	**Details** Follow-up period: 1 year Lost to follow up:2 Refused to follow up: 14 Death: 10 (1 due to suicide)	**Results** Number and percentage of people discharged from residential facility: Total discharges: 104 (25.8%) Home discharge: 55 (13.6%) Discharge to other residential facilities: 33 (8.2%) Supported housing: 9 (2.2%) Prison: 6 (1.5%) Home discharged–stayer differences	**Limitations** Assessment of risk of bias using Quality in prognostic studies(QUIPS) risk of bias assessment tool: 1) Study participation: The study sample represents the population of interest on key characteristics. The baseline study sample is adequately described for key characteristics. Inclusion and exclusion criteria are adequately described. There is adequate participation in the study by eligible individuals.

Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
and Psychiatric Epidemiology, 49, 157-167, 2014 **Ref Id** 855001 **Country/ies where the study was carried out** Italy **Study type** Prospective cohort study **Aim of the study** To describe characteristics of residential facility patients during study period, identify predictors and features linked with discharge at the 1-year follow-up and to assess clinicians' predictions about each patient's likelihood of home discharge **Study dates** September 2010 **Source of funding** The study was funded by a grant from the	>6 years: 80(19.8) **Inclusion criteria** 1) Age between 18 and 64 years 2) Patients staying in the St John of God Order's 23 residential facilities 3) A primary psychiatric diagnosis **Exclusion criteria** 1) Age 65 years or older 2) Primary diagnosis of organic mental disorder			in service user characteristics (at baseline) :(Number, percentage) 1) Primary diagnosis Home discharged(N=55) Schizophrenic disorders: 23 (41.8 %) Personality disorders: 17 (30.9 %) Unipolar depression: 12 (21.8 %) Stayers(N=338) Schizophrenic disorders: 242 (76.6 %) Personality disorders: 54 (17.1 %) Unipolar depression: 20 (6.3 %) 2) Mean illness duration (years) Home discharged(N=55): 16.3 (SD = 11.5) Stayers(N=338): 23.9 (SD = 10.9) 3) Length of residential facility stay (years)	2) Study attrition: Response rate is adequate. Outcome data on 393 out of 403 participants is available. Reasons for loss to follow-up are provided. 3) Prognostic factor measurement: Prognostic factors are clearly defined. Standard methods used to measure prognostic factors to limit misclassification bias. The method and setting of measurement of prognostic factor is the same for all study participants. Adequate proportion of the study sample has complete data for prognostic factor variable. 4) Outcome measurement: Outcomes are clearly defined and measured. The method and setting of outcome measurement is the same for all study participants. 5) Study confounding: The method and setting of confounding measurement are the same for all study participants. Important

Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
Associazione Fatebenefratelli for Research (AFAR).				Home discharged(N=55): 2.3 (SD = 1.96) Stayers(N=338): 4.6 (SD = 5.8) 4) Social support in the last year Home discharged(N=55) Available and effective: 28 (50.9 %) Ineffective or absent: 27 (49.1 %) Stayers(N=338) Available and effective: 93 (27.7 %) Ineffective or absent: 243 (72.3 %) 5) Currently married or cohabiting* Home discharged (N=55): 11(20%) Stayers (N=338): 33(9.8%) 6) Employed in a supported work* Home discharged (N=55): 8 (14.5%) Stayers (N=338): 17(5%)	potential confounders are accounted for in the analysis 6) Statistical analysis and reporting: There is sufficient presentation of data to assess the adequacy of the analysis. The strategy for model building is appropriate and is based on a conceptual framework or model. The selected statistical model is adequate for the design of the study. There is no selective reporting of results. **Other information** There was indirectness of outcome which was reported as home discharge, instead of sustained move to a less supported placement. The odds ratio for home discharge with working skills is reported as 4.6 (1.2–11.5) (low versus high score). The description in the text and also the raw data reported in Table 3, both of suggest that better working skills (high SLOF) were

Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
				*Number of subjects were calculated by NGA team based on the percentage of subjects reported in the research article Results from logistic regression model included in the forest plots	associated with home discharge. Hence the odds ratio has been interpreted as higher working skills associated with a greater likelihood of home discharge.
Full citation Killaspy, H., Marston, L., Green, N., Harrison, I., Lean, M., Holloway, F., Craig, T., Leavey, G., Arbuthnott, M., Koeser, L., McCrone, P., Omar, R. Z., King, M., Clinical outcomes and costs for people with complex psychosis; a naturalistic prospective cohort study of mental health rehabilitation service users in England, BMC Psychiatry, 16 (1) (no pagination), 2016 **Ref Id** 894905	**Sample size** 349 **Characteristics** Gender: Male 65%) Ethnicity: White (90%) Diagnosis: Schizophrenia (68%) **Inclusion criteria** Patients at 50 mental health rehabilitation units, which scored above the median on the Quality Indicator for Rehabilitative Care assessment in national survey of inpatient mental health rehabilitation units in England during the recruitment phase of the study (July 2011 to December 2012)	**Interventions** Rehabilitation services: Mental health rehabilitation services in the United Kingdom provide specialist, tertiary care to those with complex needs and cannot be discharged from a standard inpatient mental health unit.	**Details** Length of follow up : 12 months Data analysis method: Random effects regression models	**Results** Successful discharge: 187 (56%) Ready for discharge but no suitable vacancy: 48(14%)	**Limitations** Assessment of risk of bias using Quality in prognostic studies(QUIPS) risk of bias assessment tool: 1) Study participation: The study sample represents the population of interest on key characteristics. The baseline study sample is adequately described for key characteristics. Inclusion and exclusion criteria are adequately described. There is adequate participation in the study by eligible individuals. 2) Study attrition: Response rate is adequate. Data on 329 participants out of 362 recruited is available.

Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
Country/ies where the study was carried out United Kingdom **Study type** Prospective cohort study **Aim of the study** To study longitudinal outcomes and costs for patients in mental health rehabilitation services and the predictors of successful discharge outcome. **Study dates** July 2011 to December 2012 **Source of funding** This study was funded by the National Institute of Health Research though a Programme Grant for Applied Research (RP-PG-0707-10093).	**Exclusion criteria** 1) Patients who were on leave or those who had absconded) from the unit at the time of recruitment 2) Patients who lacked adequate English to give informed consent 3) Patients who were occupying a respite bed rather than a rehabilitation bed in the unit 4) Patients who were assessed as having capacity to give informed consent but declined to participate were not recruited				Reasons for loss to follow-up are provided. 3) Prognostic factor measurement: Prognostic factors are clearly defined and reliably measured using standard scales. The method and setting of measurement of prognostic factor is the same for all study participants. Adequate proportion of the study sample has complete data for prognostic factor variable. 4) Outcome measurement: Outcomes are clearly defined including duration of follow-up and level and extent of the outcome construct. The method and setting of outcome measurement is the same for all study participants. 5) Study confounding: The method and setting of confounding measurement are the same for all study participants. Important potential confounders are accounted for in the analysis.

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Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
					6) Statistical analysis and reporting: There is sufficient presentation of data to assess the adequacy of the analysis. The strategy for model building is appropriate and is based on a conceptual framework or model. The selected statistical model is adequate for the design of the study. There is no selective reporting of results. **Other information** -
Full citation Killaspy, H., Zis, P., Predictors of outcomes for users of mental health rehabilitation services: a 5-year retrospective cohort study in inner London, UK, Social Psychiatry and Psychiatric Epidemiology, 48, 1005-1012, 2013 **Ref Id** 894908 **Country/ies where the study was carried out**	**Sample size** 141 **Characteristics** Mean age: 44 years Gender: Males (n=84,68%) Diagnosis: Schizophrenia or schizoaffective disorder (n=115,93%) Mean length of illness: 22 years (SD=12). Accommodation: In hospital rehabilitation: 47(33.3%) Community rehabilitation: 44(31.2%)	**Interventions** Rehabilitation services: Psychiatric rehabilitation services in this study aimed to facilitate recovery, autonomy and successful community living in the users. The services collaborated with service users and their families to agree individually tailored treatment and care plans, with medical and	**Details** Follow up duration: 5 years Lost from study due to death: 17(12%)	**Results** Total number of patients available for follow up at 5 years: 124 Number of patients discharged: 50(40.3%) Number of patients who remained stable: 33(23.6%) Number of patients relapsed: 41(33.1%) Service user characteristics in univariate analysis: • Mean age	**Limitations** Assessment of risk of bias using Quality in prognostic studies(QUIPS) risk of bias assessment tool: 1) Study participation: The study sample represents the population of interest on key characteristics. The baseline study sample is adequately described for key characteristics. Exclusion criteria is not described. There is adequate participation in the study by eligible individuals.

Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
United Kingdom **Study type** Retrospective cohort study **Aim of the study** To study the outcomes at 5 year duration for users of psychiatric rehabilitation services for complex, longer term mental health problems **Study dates** 2005 to 2010 **Source of funding** One of the study authors was supported by funding from the Legacy "In memory of Maria Zaousi".	Supported accommodation: 50(35.4%) **Inclusion criteria** Clients of inpatient and residential rehabilitation services of Camden and Islington NHS Foundation Trust rehabilitation service during the study recruitment period **Exclusion criteria** Not reported	psychological interventions and occupational therapy that aim to reduce symptoms and to enable skills in activities of daily living and engagement in community activities.		• Gender • Ethnicity • Marital status • Mean (SD) years contact with psychiatric services • Mean (SD) previous admissions • Diagnosis • Mean (SD) years in placement Details of the multivariate regression analysis are reported in the forest plots.	2) Study attrition: Response rate is adequate. Data on 124 out of 141 study participants is available. Reasons for loss to follow-up are provided. 3) Prognostic factor measurement: Prognostic factors are clearly defined and reliably measured using standard scales. The method and setting of measurement of prognostic factor is the same for all study participants. Adequate proportion of the study sample has complete data for prognostic factor variable. 4) Outcome measurement: Outcomes are clearly defined including duration of follow-up and level and extent of the outcome construct. The method and setting of outcome measurement is the same for all study participants. 5) Study confounding: The method and setting of confounding measurement are the same for all study

Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
					participants. Important potential confounders are accounted for in the analysis. 6) Statistical analysis and reporting: There is sufficient presentation of data to assess the adequacy of the analysis. The strategy for model building is appropriate and is based on a conceptual framework or model. The selected statistical model is adequate for the design of the study. There is no selective reporting of results. **Other information** -
Full citation H, Killaspy., S, Priebe., P, McPherson., Z, Zenasni., L, Greenberg., P, McCrone., S, Dowling., I, Harrison., J, Krotofil., C, Dalton-Locke., R, McGranahan.,, M, Arbuthnott., S, Curtis., G, Leavey., G, Shepherd., S, Eldridge	**Sample size** N=619 services users. Services were residential care (N=22), supported housing (N=35) or floating outreach (N=30). **Characteristics** Location of supported accommodation was: residential care (N=159 service users), supported housing (N=251) or floating outreach (N=209). 66% were male, 81%	A multivariable analysis of factors predicting successfully moving on included: QuIRC-SA domains (social interface, human rights, recovery-based practice), participant age, whether the participant had psychosis, length of	The outcome of having 'successfully moved on' was defined as the proportion of participants who moved to more independent accommodation without placement breakdown over	243/586 (41.5%) participants successfully moved on to less supported accommodation (residential care 15/146 [10.3%], supported housing 96/244 [39.3%], floating outreach 132/196 [67.3%])	**Limitations** Assessment of risk of bias using Quality in prognostic studies(QUIPS) risk of bias assessment tool: 1) Study participation: The study sample represents the population of interest on key characteristics. The baseline study sample is adequately described for key characteristics. Inclusion and exclusion

Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
and M, King., Predictors of moving on from mental health supported accommodation in England: national cohort study., The British journal of psychiatry, 1-7, 2019 **Ref Id** 1013731 **Country/ies where the study was carried out** UK **Study type** Prospective cohort study **Aim of the study** To investigating service user and service factors which predict outcomes for users of mental health supported accommodation. **Study dates** 2013-2014 recruitment (then 30 month follow-up)	were white, 3% were in paid employment. Diagnosis was 53% schizophrenia, 9% schizoaffective disorder, 6% bipolar disorder, 21% depression or anxiety, 11% other. **Inclusion criteria** Service users participating in the national survey component of the QuEST programme were eligible. In 2013 - 2014 the QuEST programme recruited 619 users of mental health supported accommodation across England (159 residential care, 251 supported housing, 209 floating outreach), randomly sampled from 87 services (22 residential care, 24 supported housing, 25 floating outreach). These services were randomly sampled from 14 nationally representative local authority areas, using an index developed by. A mean of seven service users were recruited per service.	stay with service in months, LSP total at baseline, CANSAS unmet needs at baseline, SPRS total at baseline, drug use assessed by CADs at baseline, self-neglect and/or vulnerability to exploitation.	the 30-month follow-up period. Since floating outreach is provided to people living in a permanent tenancy, the primary outcome for this group was defined as managing with fewer hours of support per week rather than moving home. The analysis used a logistic mixed-effects model which was fitted in Stata, using xtmelogit, with a random intercept for service and a fixed effect for area as this was used in the sampling frame as a design variable.	Association of service variables and primary outcome: QuIRC-SA social interface domain score, OR 0.95 (95% CI 0.91, 0.98) QuIRC-SA human rights domain score, OR 1.09 (1.02, 1.16) QuIRC-SA recovery-based practice domain score, OR 1.04 (1.00, 1.08)	criteria are adequately described. There is adequate participation in the study by eligible individuals. 2) Study attrition: those included only 5% were lost to follow-up over 30 months. 3) Prognostic factor measurement: A clear description of prognostic factors is provided. Only those prognostic factors which could be reliably measured are included. The method and setting of measurement of prognostic factor is the same for all study participants. Adequate proportion of the study sample has complete data for prognostic factor variable. 4) Outcome measurement: Outcomes are clearly defined. The method and setting of outcome measurement is the same for all study participants. 5) Study confounding: Potential confounders are accounted for in the analysis.

Study details	Participants	Prognostic factors	Methods	Outcomes and Results	Comments
Source of funding National Institute of Health Research (RP-PG-0610-10097)	**Exclusion criteria** None reported.				6) Statistical analysis and reporting: Multivariate analysis is reported

1   *HoNOS: health of the nation outcomes scales; SD: standard deviation;*

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1 Appendix E – Forest plots

2 Forest plots for review question 7.1: What factors are associated with
3 successful transition through rehabilitation services to other parts of the
4 mental health, social care and primary care systems?

Figure 2: Personal predictive factors associated with successful transition through rehabilitation services to other parts of the mental health, social care and primary care systems

Study or Subgroup	log[Odds Ratio]	SE	Odds Ratio IV, Fixed, 95% CI
1.1.1 Violent behaviour (none vs. presence of violent behaviour)			
D'Avanzo 2004	-0.2231	0.3537	0.80 [0.40, 1.60]
1.1.2 Suicide attempts (none vs. presence of suicide attempts)			
D'Avanzo 2004	0	0.3537	1.00 [0.50, 2.00]
1.1.3 Age (per year older vs. younger)			
Killaspy 2013	-0.0305	0.0259	0.97 [0.92, 1.02]
1.1.4 Involuntary detention (detained vs. not detained)			
Killaspy 2013	-1.0906	0.772	0.34 [0.07, 1.53]
1.1.5 Duration of illness (<15 vs. >15 years)			
deGirolamo 2014	0.9933	0.3351	2.70 [1.40, 5.21]
1.1.6 Medication adherence (history of adherence vs. history of episodes of non-adherence in last 5 years)			
Killaspy 2013	2.1513	0.4725	8.60 [3.40, 21.70]
1.1.7 Social support in the last year(available vs. unavailable)			
deGirolamo 2014	0.8755	0.3128	2.40 [1.30, 4.43]
1.1.8 Diagnosis (schizophrenia vs. unipolar depression)			
deGirolamo 2014	-1.6094	0.4074	0.20 [0.09, 0.44]
1.1.9 Diagnosis (schizophrenia and other psychoses vs.affective disorders)			
D'Avanzo 2004	0.47	0.2936	1.60 [0.90, 2.84]
1.1.10 Psychopathology (BPRS low vs. moderate score)			
deGirolamo 2014	1.5476	0.6179	4.70 [1.40, 15.78]
1.1.11 Working skills subscale score (SLOF high vs. low score)			
deGirolamo 2014	1.5261	0.6856	4.60 [1.20, 17.63]
1.1.12 Social function (LSP high vs. low score)			
Killaspy 2013	-0.0965	0.2252	0.91 [0.58, 1.41]
Killaspy 2016	0.1222	0.0423	1.13 [1.04, 1.23]
1.1.13 Receiving Cognitive behavioural therapy (% service users in the unit who received CBT in the year before recruitment)			
Killaspy 2016	-0.0101	0.0052	0.99 [0.98, 1.00]
1.1.14 Challenging behaviour (SPRS low vs. high score)			
Killaspy 2013	0.1604	0.5293	1.17 [0.42, 3.31]
1.1.15 History of physical abuse (No history vs.history of physical abuse in childhood)			
Killaspy 2013	0.6951	0.6854	2.00 [0.52, 7.68]
1.1.16 Length of current admission in rehabilitation unit (longer vs. shorter duration in months)			
Killaspy 2016	-0.001	0.0046	1.00 [0.99, 1.01]
1.1.17 Length of current admission (1-2 years vs. <1 year)			
D'Avanzo 2004	-0.6931	0.2606	0.50 [0.30, 0.83]
1.1.18 Placement before current admission (Home vs. psychiatric hospital)			
D'Avanzo 2004	2.8449	0.5044	17.20 [6.40, 46.22]
1.1.19 Placement before current admission (Other institution vs. psychiatric hospital)			
D'Avanzo 2004	2.1163	0.5025	8.30 [3.10, 22.22]
1.1.20 Employment (no job vs. regular job at admission)			
D'Avanzo 2004	-0.5108	0.3537	0.60 [0.30, 1.20]
1.1.21 Engagement in activities score (Time use diary high vs. low score)			
Killaspy 2016	0.0488	0.0148	1.05 [1.02, 1.08]
1.1.22 Health of the Nation Outcome Scales (HoNOS) score (low versus high score)			
D'Avanzo 2004	-0.6931	0.2606	0.50 [0.30, 0.83]

BPRS: brief psychiatric rating scale; CI: confidence interval; IV: inverse variance; LSP: life skills profile scale; SLOF: specific level of functioning scale; SPRS: special problem rating scale; SE: standard error

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Figure 3: Service level predictive factors associated with successful transition through rehabilitation services to other parts of the mental health, social care and primary care systems

			Odds Ratio		Odds Ratio
Study or Subgroup	log[Odds Ratio]	SE	IV, Fixed, 95% CI		IV, Fixed, 95% CI
1.2.1 Recovery orientation of service (QuIRC recovery based practice domain score)					
Killaspy 2016	0.0392	0.02	1.04 [1.00, 1.08]		
1.2.2 Recovery orientation of service (QuIRC recovery based practice domain score)					
Killaspy 2019	0.0392	0.02	1.04 [1.00, 1.08]		
1.2.3 Promotion of human rights (QuIRC SA human rights domain score)					
Killaspy 2019	0.0862	0.0339	1.09 [1.02, 1.16]		
1.2.4 Promoting engagement in community activities/family members involvement in care (QuIRC social interface domain score)					
Killaspy 2019	-0.0513	0.0164	0.95 [0.92, 0.98]		
1.2.5 Supported housing services vs. residential care					
Killaspy 2019	1.0647	0.5183	2.90 [1.05, 8.01]		
1.2.6 Floating outreach services vs. supported housing					
Killaspy 2019	1.008	0.5092	2.74 [1.01, 7.43]		
1.2.7 Floating outreach services vs. residential care					
Killaspy 2019	2.0744	0.5117	7.96 [2.92, 21.70]		

0.1 0.2 0.5 1 2 5 10
Transition less likely Transition more likely

CI: confidence interval; IV: inverse variance: SE: standard error; QuIRC (SA): Quality Indicator for Rehabilitative Care (Supported Accommodation)
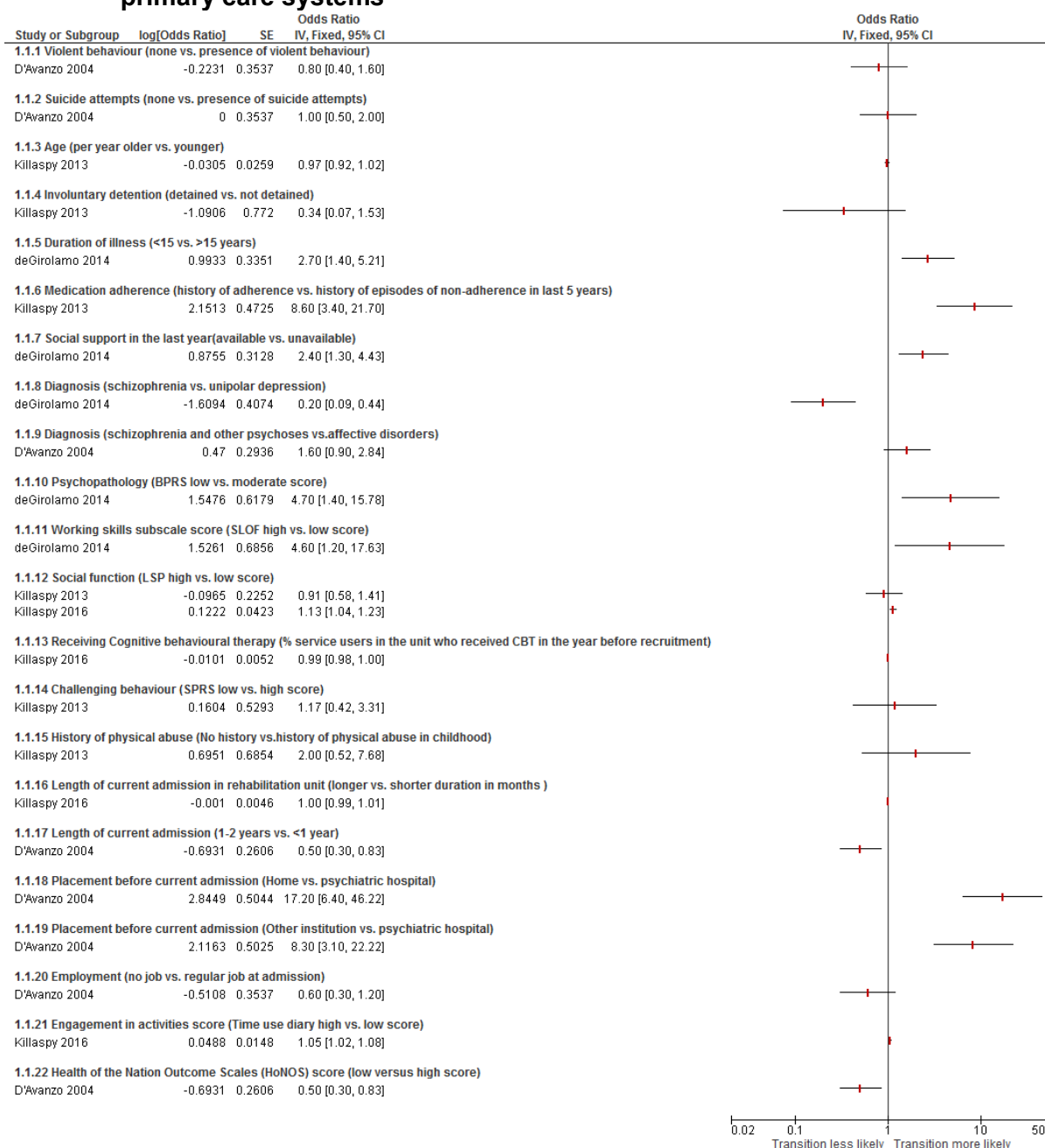
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1 **Appendix F – GRADE tables**

2 **GRADE tables for review question 7.1: What factors are associated with successful transition through rehabilitation services**
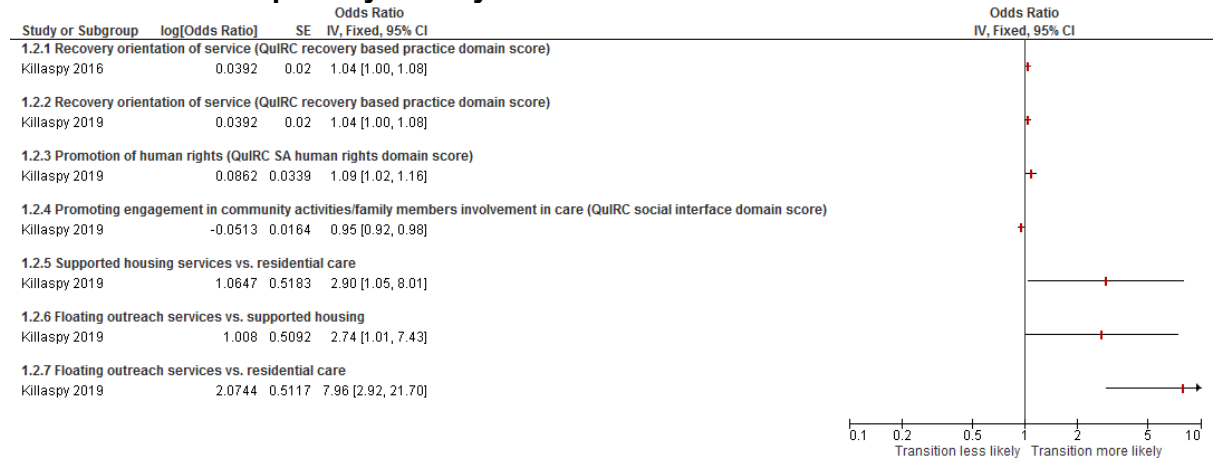3 **to other parts of the mental health, social care and primary care systems?**

4 **Table 5: Clinical evidence profile for factors associated with successful transition through rehabilitation services**

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Rehabilitation transition	No transition	Relative (95% CI)	Absolute	Quality	Importance
Predictive factors of rehabilitation transition - Gender at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	NR (P not significant)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition – Ethnicity at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	NR (P not significant)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition – Marital status at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	NR (P not significant)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition – Needs (Camberwell assessment of needs short appraisal scale) at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	NR (P not significant)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition – History of sexual abuse at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	NR (P not significant)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition – History of physical health problems at 5 years follow-up												

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Rehabilitation transition	No transition	Relative (95% CI)	Absolute	Quality	Importance
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	NR (P not significant)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition – History of separation from parents in childhood at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	NR (P not significant)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition – Family history of psychiatric illness at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	NR (P not significant)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition – Problematic drug use at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	NR (P not significant)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition – Problematic alcohol use at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	NR (P not significant)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition - Level of education at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[2]	no serious imprecision	none	191	1601	NR (P not significant)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Staying in touch with people (none vs some) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[2]	no serious imprecision	none	191	1601	NR (P not significant)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Violent behaviour (no violent behaviour vs presence of violent behaviour) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[2]	no serious imprecision	none	191	1601	OR 0.8 (0.4 to 1.8)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition- Suicide attempts (no attempts vs presence of suicide attempts) at 1 year follow-up												

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Rehabilitation transition	No transition	Relative (95% CI)	Absolute	Quality	Importance
1	observational studies	no serious risk of bias	no serious inconsistency	serious[2]	no serious imprecision	none	191	1601	OR 1.0 (0.5 to 2.0)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Age (per year older vs. younger) at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	OR 0.97 (0.92 to 1.02)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition - Involuntary detention (detained vs. not detained) at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	OR 0.34 (0.07 to 1.53)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition - Duration of illness (<15 vs. >15 years) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[3]	no serious imprecision	none	55	338	OR 2.7 (1.4 to 5.21)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Medication adherence (history of adherence vs. history of episodes of non-adherence) at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	OR 8.6 (3.4 to 21.7)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Social support in the last year (available vs. unavailable) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[3]	no serious imprecision	none	55	338	OR 2.4 (1.3 to 4.43)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Diagnosis (schizophrenia vs. unipolar depression) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[3]	no serious imprecision	none	55	338	OR 0.2 (0.09 to 0.44)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Diagnosis (schizophrenia and other psychoses vs. affective disorders) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[2]	no serious imprecision	none	191	1601	OR 1.6 (0.9 to 2.8)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Psychopathology (low vs. moderate score) at 1 year follow-up												

Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Rehabilitation transition	No transition	Relative (95% CI)	Absolute	Quality	Importance
1	observational studies	no serious risk of bias	no serious inconsistency	serious[3]	no serious imprecision	none	55	338	OR 4.7 (1.4 to 15.78)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Working skills subscale score (low vs. high score) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[3]	no serious imprecision	none	55	338	OR 4.6 (1.2 to 17.63)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Social function (low vs. high score) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	219	110	OR 1.13 (1.04 to 1.24)	-	HIGH	CRITICAL
Predictive factors of rehabilitation transition - Social function (low vs. high score) at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	OR 0.91 (0.58 to 1.41)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition - Receiving Cognitive behavioural therapy (% service users in the unit who received CBT in the year before recruitment) at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	219	110	OR 0.99 (0.98 to 1.00)	-	HIGH	CRITICAL
Predictive factors of rehabilitation transition - Challenging behaviour (low vs. high score) at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	OR 1.17 (0.42 to 3.31)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition - History of physical abuse (history vs. no history of physical abuse in childhood) at 5 years follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	very serious[1]	none	50	74	OR 2 (0.52 to 7.68)	-	LOW	CRITICAL
Predictive factors of rehabilitation transition - Length of current admission in rehabilitation unit at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	219	110	OR 1 (0.99 to 1.01)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Length of current admission in rehabilitation unit (< 1 years vs 1-2 years) at 1 year follow-up												

No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Rehabilit ation transitio n	No transition	Relative (95% CI)	Absol ute	Qualit y	Importance
			Quality assessment				No of patients		Effect			
1	observational studies	no serious risk of bias	no serious inconsistency	serious[2]	no serious imprecision	none	191	1601	OR 0.5 (0.3 to 0.7)		MODE RATE	CRITICAL
Predictive factors of rehabilitation transition -Placement before current admission (Home vs. psychiatric hospital) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[2]	no serious imprecision	none	191	1601	OR 17.2 (6.4 to 46.0))	-	MODE RATE	CRITICAL
Predictive factors of rehabilitation transition -Placement before current admission (Other institution vs. psychiatric hospital) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[2]	no serious imprecision	none	191	1601	OR 8.3 (3.1 to 22.0)	-	MODE RATE	CRITICAL
Predictive factors of rehabilitation transition -Employment (no job vs. regular job at admission) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[2]	no serious imprecision	none	191	1601	OR 0.6 (0.3 to 0.9))	-	MODE RATE	CRITICAL
Predictive factors of rehabilitation transition - Engagement in activities score (low vs. high score) at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	no serious imprecision	none	219	110	OR 1.05 (1.02 to 1.08)	-	HIGH	CRITICAL
Predictive factors of rehabilitation transition - Health of the Nation Outcome Scales (HoNOS) score at 1 year follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	serious[2]	no serious imprecision	none	191	1601	OR 0.5 (0.3 to 0.7)	-	MODE RATE	CRITICAL
Predictive factors of rehabilitation transition - QuIRC Recovery Based Practice domain score (per 10% increase)												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	219	110	OR 1.04 (1.0 to 1.08)	-	MODE RATE	CRITICAL
Predictive factors of rehabilitation transition – QuIRC-SA Recovery Based Practice domain score (per 10% increase) at 30 months follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	243	343	OR 1.04 (1.00, 1.08)	-	MODE RATE	CRITICAL
Predictive factors of rehabilitation transition – QuIRC-SA Human Rights domain score (per 10% increase) at 30 months follow-up												

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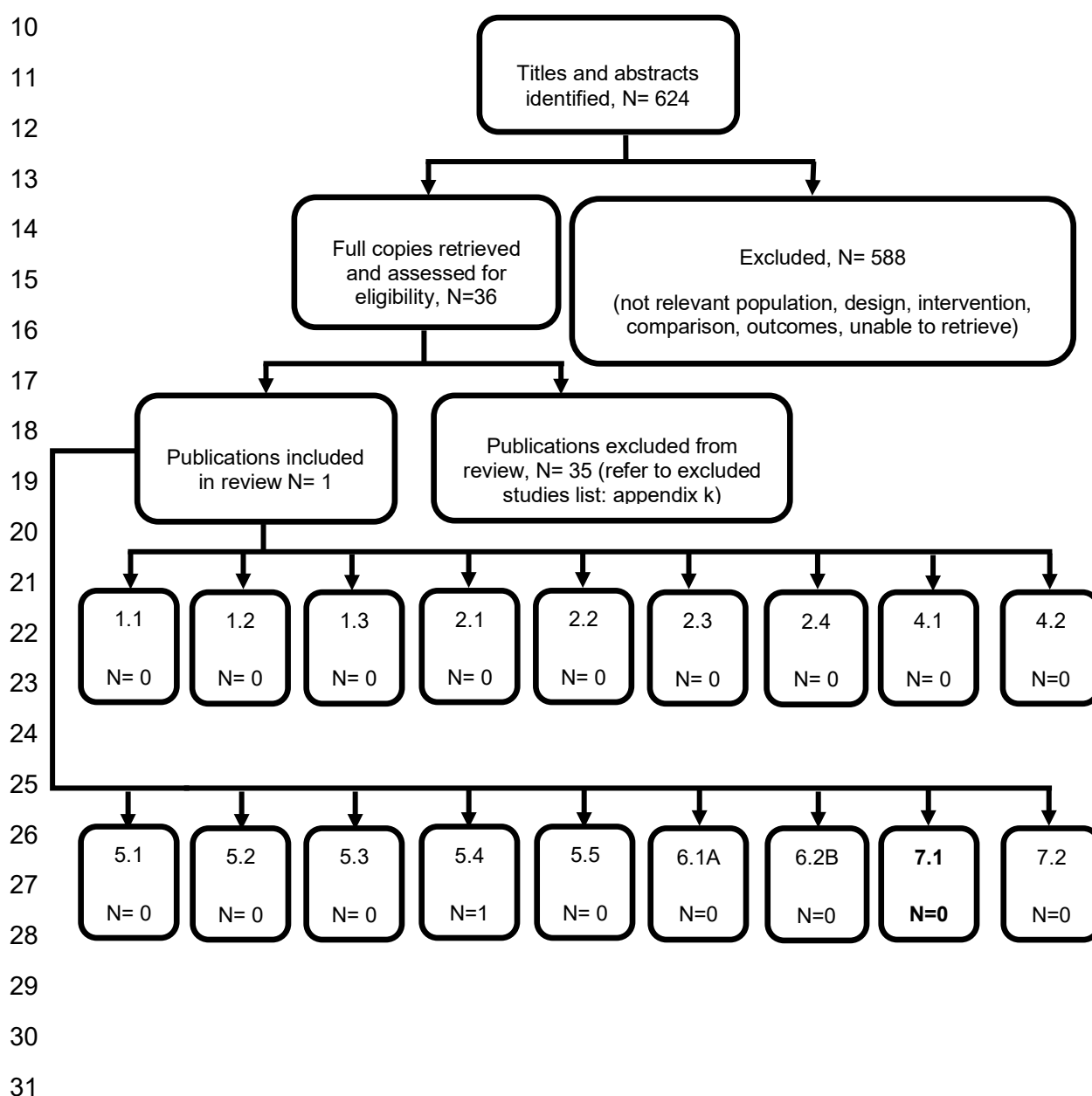| Quality assessment							No of patients		Effect			
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Rehabilitation transition	No transition	Relative (95% CI)	Absolute	Quality	Importance
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	243	343	OR 1.09 (1.02 to 1.16)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition – QuIRC Social Interface domain score (per 10% increase) at 30 months follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	243	343	OR 0.95 (0.92 to 0.98)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition – Supported housing vs. residential care at 30 months follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	111	279	OR 2.90 (1.05 to 8.01)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition - Floating outreach vs. supported housing at 30 months follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	228	212	OR 2.74 (1.01 to 7.43)	-	MODERATE	CRITICAL
Predictive factors of rehabilitation transition – Floating outreach vs. residential care at 30 months follow-up												
1	observational studies	no serious risk of bias	no serious inconsistency	no serious indirectness	serious[4]	none	147	195	OR 7.96 (2.92 to 21.70)	-	MODERATE	CRITICAL

1   *CI: confidence interval; NR: not reported; OR: Odds ratio; QuIRC: Quality Indicator for Rehabilitative Care*
2   *1The quality of evidence was downgraded by 2 levels due to very serious imprecision resulting from small sample size (<150)*
3   *2The quality of evidence was downgraded by 1 level due to serious indirectness of outcome which was reported as home discharge, instead of transition in rehabilitation*
4   *3The quality of evidence was downgraded by 1 level due to serious indirectness of outcome which was reported as those discharged from residential facilities, without taking*
5   *into account the level of support*
6   *4The quality of evidence was downgraded by 1 level as imprecision could not be assessed*
7

1 Appendix G – Economic evidence study selection

2 **Economic evidence study selection for review question 7.1: What criteria**
3 **are associated with successful transition through rehabilitation services**
4 **to other parts of the mental health, social care and primary care**
5 **systems?**

6 A global health economic literature search was undertaken, covering all review
7 questions in this guideline. However, as shown in Figure 4, no evidence was
8 identified which was applicable to review question 7.1.

9 **Figure 4: Health economic study selection flow chart**

10

11 Titles and abstracts
identified, N= 624

12

13

14 Full copies retrieved
and assessed for
eligibility, N=36

15 Excluded, N= 588

(not relevant population, design, intervention,
comparison, outcomes, unable to retrieve)

16

17

18 Publications included
in review N= 1

19 Publications excluded from
review, N= 35 (refer to excluded
studies list: appendix k)

20

21

22 | 1.1 | 1.2 | 1.3 | 2.1 | 2.2 | 2.3 | 2.4 | 4.1 | 4.2 |
23 | N= 0 | N= 0 | N= 0 | N= 0 | N= 0 | N= 0 | N= 0 | N= 0 | N=0 |

24

25

26 | 5.1 | 5.2 | 5.3 | 5.4 | 5.5 | 6.1A | 6.2B | **7.1** | 7.2 |
27 | N= 0 | N= 0 | N= 0 | N=1 | N= 0 | N=0 | N=0 | **N=0** | N=0 |

28

29

30

31

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1 Appendix H – Economic evidence tables

2 **Economic evidence tables for review question 7.1: What criteria are**
3 **associated with successful transition through rehabilitation services to**
4 **other parts of the mental health, social care and primary care systems?**

5   No evidence was identified which was applicable to this review question.

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1 Appendix I – Economic evidence profiles

2 **Economic evidence profiles for review question 7.1: What criteria are**
3 **associated with successful transition through rehabilitation services to**
4 **other parts of the mental health, social care and primary care systems?**

5 No evidence was identified which was applicable to this review question.

6

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1 Appendix J – Economic analysis

2 **Economic evidence analysis for review question 7.1: What criteria are**
3   **associated with successful transition through rehabilitation services to**
4   **other parts of the mental health, social care and primary care systems?**

5   No economic analysis was conducted for this review question.

6

7

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1 Appendix K – Excluded studies

2 **Excluded clinical and economic studies for review question 7.1: What**
3 **factors are associated with successful transition through rehabilitation**
4 **services to other parts of the mental health, social care and primary care**
5 **systems?**

6 **Clinical studies**

7 **Table 6: Excluded studies and reasons for their exclusion**

Excluded studies -7.1 Successful transitions	
Study	Reason for Exclusion
Ahmed, A. O., Murphy, C. F., Latoussakis, V., McGovern, K. E., English, J., Bloch, A., Anthony, D. T., Savitz, A. J., An examination of neurocognition and symptoms as predictors of post-hospital community tenure in treatment resistant schizophrenia, Psychiatry Research, 236, 47-52, 2016	Study reports on post discharge tenure. The outcomes reported are not in a format for inclusion for data extraction.
Anderson, R. L., Lewis, D. A., Clinical characteristics and service use of persons with mental illness living in an intermediate care facility, Psychiatric Services, 50, 1341-1345, 1999	Data not reported in format to be included in analysis (no multivariable analysis)
Anthony, William A., Brown, Mary Alice, Rogers, E., Derringer, Suzanne, A supported living/supported employment program for reducing the number of people in institutions, Psychiatric Rehabilitation Journal, 23, 57-61, 1999	Study does not report rehabilitation transition outcomes
Atyeo, H., Forchuk, C., Psychiatric/psychosocial rehabilitation (PSR) in relation to residential environments: Housing and homelessness, Current Psychiatry Reviews, 9, 188-194, 2013	Does not report outcome of interest
Bergen, J., Hunt, G., Armitage, P., Bashir, M., Six-month outcome following a relapse of schizophrenia, Australian and New Zealand Journal of Psychiatry, 32, 815-822, 1998	Study does not report rehabilitation outcomes
Berghofer, G., Schmidl, F., Rudas, S., Steiner, E., Schmitz, M., Predictors of treatment discontinuity in outpatient mental health care, Social Psychiatry & Psychiatric Epidemiology, 37, 276-82, 2002	Study does not report rehabilitation outcomes
Bredski, J., Watson, A., Mountain, D. A., Clunie, F., Lawrie, S. M., The prediction of discharge from in-patient psychiatric rehabilitation: A case-control study, BMC Psychiatry, 11 (no pagination), 2011	Data not reported in a format to be included in analysis
Brekke, J. S., Ansel, M., Long, J., Slade, E., Weinstein, M., Intensity and continuity of services and functional outcomes in the rehabilitation of persons with schizophrenia, Psychiatric Services, 50, 248-256, 1999	Study does not report rehabilitation transition outcomes

Excluded studies -7.1 Successful transitions	
Bruffaerts, R., Sabbe, M., Demyttenaere, K., Effects of patient and health-system characteristics on community tenure of discharged psychiatric inpatients, Psychiatric Services, 55, 685-90, 2004	Study does not report rehabilitation transition outcomes.
Cardona, F. A., Davis, E. R., Switzer 3rd, P. K., The Kiva project, Journal of the South Carolina Medical Association (1975), 92, 220-224, 1996	Study does not report on predictors of rehabilitation transition outcomes
Casper, E. S., Clark, D., Service utilization, incidents, and hospitalizations among people with mental illnesses and incarceration histories in a supportive housing program, Psychiatric Rehabilitation Journal, 28, 181-184, 2004	Study does not report on predictors of rehabilitation transition outcomes
Caton, C. L., Mayers, L., Gralnick, A., The long-term hospital treatment of the young chronic patient: follow-up findings, Psychiatric Hospital, 21, 25-30, 1990	Does not report on the population of interest
Cherner, Rebecca, Aubry, Tim, Ecker, John, Kerman, Nick, Nandlal, Joan, Transitioning into the community: Outcomes of a pilot housing program for forensic patients, The International Journal of Forensic Mental Health, 13, 62-74, 2014	Study does not report on predictors of rehabilitation transition outcomes; not specific to population of interest.
Chopra, P., Herrman, H. E., The long-term outcomes and unmet needs of a cohort of former long-stay patients in Melbourne, Australia, Community Mental Health Journal, 47, 531-541, 2011	Study does not report on predictors of rehabilitation transition outcomes
Clarke, S., Oades, L. G., Crowe, T. P., Recovery in mental health: a movement towards well-being and meaning in contrast to an avoidance of symptoms, Psychiatric rehabilitation journal, 35, 297-304, 2012	Study does not report on predictors of rehabilitation transition outcomes
Cohen, K., Edstrom, K., Smith-Papke, L., Identifying early dropouts from a rehabilitation program for psychiatric outpatients, Psychiatric Services, 46, 1076-1078, 1995	Only 55% (less than 2/3rd) population had psychotic illness.
Conning, A. M., Brownlow, J. M., Determining suitability of placement for long-stay psychiatric inpatients, Hospital & community psychiatry, 43, 709-12, 1992	Study does not report on predictors of rehabilitation transition outcomes
Cook, J. A., Independent community living among women with severe mental illness: A comparison with outcomes among men, Journal of Mental Health Administration, 21, 361-373, 1994	Study does not report on predictors of rehabilitation transition outcomes
Cooper, M., Holly, P., Hampson, S., A specialist unit for difficult to manage patients: Preliminary findings, Behavioural and Cognitive Psychotherapy, 25, 67-77, 1997	Study does not report on predictors of rehabilitation transition outcomes
Creighton, F. J., Hyde, C. E., Farragher, B., Douglas house. Seven years' experience of a community hostel ward, British Journal of Psychiatry, 159, 500-504, 1991	Data not reported in format to be included in analysis (no multivariable analysis)

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Excluded studies -7.1 Successful transitions	
Dayson, D., Gooch, C., Thornicroft, G., 16: Difficult to place, long term psychiatric patients: Risk factors for failure to resettle long stay patients in community facilities, British Medical Journal, 305, 993-995, 1992	Study reports on community tenure following closure of two psychiatric hospitals, rather than transition in rehabilitation pathway
Draine, Jeffrey, Solomon, Phyllis, Comparison of seriously mentally ill case management clients with and without arrest histories, Journal of Psychiatry & Law, 20, 335-349, 1992	Study reports on predictors of arrest histories; not report outcome of interest
Durbin, J., Goering, P., Cochrane, J., Macfarlane, D., Sheldon, T., Needs-Based Planning for Persons with Schizophrenia Residing in Board-and-Care Homes, Schizophrenia Bulletin, 30, 123-132, 2004	Study does not report on predictors of rehabilitation transition outcomes
Ferdinandi, A. D., Yoottanasumpun, V., Pollack, S., Bermanzohn, P. C., Predicting rehabilitation outcome among patients with schizophrenia, Psychiatric Services, 49, 907-9, 1998	Editorial: Does not report data on predictors of rehabilitation transition outcomes
Fernando, M. L., Velamoor, V. R., Cooper, A. J., Cernovsky, Z., Some factors relating to satisfactory post-discharge community maintenance of chronic psychotic patients, Canadian Journal of Psychiatry - Revue Canadienne de Psychiatrie, 35, 71-3, 1990	Study does not report on predictors of rehabilitation transition outcomes
Fukui, S., Goscha, R., Rapp, C. A., Mabry, A., Liddy, P., Marty, D., Strengths model case management fidelity scores and client outcomes, Psychiatric Services, 63, 708-10, 2012	Study does not report on predictors of rehabilitation transition outcomes
Gantt, A. B., Cohen, N. L., Sainz, A., Impediments to the discharge planning effort for psychiatric inpatients, Social Work in Health Care, 29, 1-14, 1999	Study does not report on predictors of rehabilitation transition outcomes
Gardner, J., Swarbrick, M., Ackerman, A., Church, T., Rios, V., Valente, L., Rutledge, J., Effects of Physical Limitations on Daily Activities Among Adults With Mental Health Disorders: Opportunities for Nursing and Occupational Therapy Interventions, Journal of Psychosocial Nursing & Mental Health Services, 55, 45-51, 2017	Study population includes people with mental health disorders in general; study does not report on predictors of rehabilitation transition outcomes
Gerber, G. J., Coleman, G. E., Johnston, L., Lafave, H. G., Quality of life of people with psychiatric disabilities 1 and 3 years after discharge from hospital, Quality of Life Research, 3, 379-383, 1994	Study does not report on predictors of rehabilitation transition outcomes
Green, C. A., Polen, M. R., Janoff, S. L., Castleton, D. K., Wisdom, J. P., Vuckovic, N., Perrin, N. A., Paulson, R. I., Oken, S. L., Understanding how clinician-patient relationships and relational continuity of care affect recovery from serious mental illness: STARS study results, Psychiatric rehabilitation journal, 32, 9-22, 2008	Mixed methods study; Study does not report on predictors of rehabilitation transition outcomes.

Excluded studies -7.1 Successful transitions	
Hall, Barry L., Butt, Mobashar H., Wong, Robert M., Cooperative housing as a component of aftercare for long-term mentally ill residents: A Canadian experience, Adult Residential Care Journal, 5, 263-275, 1991	Study does not report data on predictors of rehabilitation transition outcomes
Hayes, H., Kemp, R. I., Large, M. M., Nielssen, O. B., A 21-year retrospective outcome study of New South Wales forensic patients granted conditional and unconditional release, Australian and New Zealand Journal of Psychiatry, 48, 259-282, 2014	Study reports on offences and imprisonment outcomes;does not report on predictors of rehabilitation transition outcomes
Heatherington, Laurie, Bonner, Bryan L., Rosenberg, David, Patterson, Robert D., Linsley, Jane, Sustaining outcomes research in residential treatment: A 15-year study of the Gould Farm program, Psychological Services, No Pagination Specified, 2018	Study does not report on predictors of rehabilitation transition outcomes
Hosakova, J., Hosak, L., Needs of Hospitalized Schizophrenic Patients in the North Moravia and the Czech Part of Silesia, Acta Medica (Hradec Kralove)Acta Medica (Hradec Kralove), 58, 104-7, 2015	Study does not report on predictors of rehabilitation transition outcomes
Hosakova, J., Jarosova, D., Quality of life and needs of hospitalized schizophrenic patients in the Czech Republic, Neuroendocrinology LettersNeuroendocrinol Lett, 36, 288-93, 2015	Study does not report on predictors of rehabilitation transition outcomes
Hutchison, S. L., MacDonald-Wilson, K. L., Karpov, I., Maise, A. M., Wasilchak, D., Schuster, J. M., Value of psychiatric rehabilitation in a behavioral health medicaid managed care system, Psychiatric Rehabilitation Journal, 40, 216-224, 2017	Study does not report on predictors of rehabilitation transition outcomes
Huz, S., Thorning, H., White, C. N., Fang, L., Smith, B. T., Radigan, M., Dixon, L. B., Time in Assertive Community Treatment: A Statewide Quality Improvement Initiative to Reduce Length of Participation, Psychiatric Services, 68, 539-541, 2017	Study does not report on predictors of rehabilitation transition outcomes
Joannette, J. A., Lawson, J. S., Eastabrook, S. J., Krupa, T., Community tenure of people with serious mental illness in assertive community treatment in Canada, Psychiatric Services, 56, 1387-93, 2005	Study does not report on predictors of rehabilitation transition outcomes
Kaplan, Laura Miriam, Factors predicting success in a residential treatment program for the mentally ill homeless, Dissertation Abstracts International: Section B: The Sciences and Engineering, 58, 2125, 1997	Dissertation, not a peer reviewed publication
Katz, Lynda J., Interagency collaboration in the rehabilitation of persons with psychiatric disabilities, Journal of Vocational Rehabilitation, 1, 45-57, 1991	Study does not report on predictors of rehabilitation transition outcomes
Kelbrick, M., Abu-Kmeil, S., Picchioni, M., Evaluating outcomes in an adult inpatient	The study is a case note audit of patients in an inpatient rehabilitation unit. It reports data on

Excluded studies -7.1 Successful transitions	
psychiatric rehabilitation unit, Progress in Neurology and Psychiatry, 20, 18-24, 2016	number and destination of discharges but does not report on predictors of rehabilitation transition outcomes.
King, Charles, Singh, Krishna, Shepherd, Geoff, An analysis of process and outcomes for new long-stay patients in a "ward-in-a-house.", Journal of Mental Health, 9, 179-191, 2000	Data not reported in format to be included in analysis (no multivariable analysis)
Kirkpatrick, Helen, Younger, Jodi, Links, Paul, Saunders, Pat, Life after years in hospital: What does it hold, Psychiatric rehabilitation journal, 19, 75-78, 1996	Includes a case study and some quantitative data. Does not report on predictors of successful transition in rehabilitation.
Lay, B., Kawohl, W., Rossler, W., Predictors of Compulsory Re-admission to Psychiatric Inpatient Care, Frontiers in psychiatry Frontiers Research Foundation, 10, 120, 2019	Study does not report on predictors of transition in rehabilitation
Lee, Sungeun, Predictors of departure from supported housing among persons with severe mental illness, Dissertation Abstracts International Section A: Humanities and Social Sciences, 68, 1659, 2007	Dissertation, not a peer reviewed publication
LeFebvre, A. M., Dare, B., Farrell, S. J., Cuddeback, G. S., Transitions from Assertive Community Treatment Among Urban and Rural Teams: Identifying Barriers, Service Options, and Strategies, Community Mental Health Journal, 54, 469-479, 2018	Study does not report on predictors of transition in rehabilitation
Lipskaya-Velikovsky, L., Kotler, M., Easterbrook, A., Jarus, T., From hospital admission to independent living: is prediction possible?, Psychiatry Research, 226, 499-506, 2015	Study does not report on predictors of transition in rehabilitation
Lysaker, P. H., Taylor, A., Miller, A., Beattie, N., Strasburger, A., Davis, L. W., The scale to assess narrative development: Association with other measures of self and readiness for recovery in schizophrenia spectrum disorders, Journal of Nervous and Mental Disease, 194, 223-225, 2006	Study does not report on predictors of transition in rehabilitation
Macpherson, R., Butler, J., Effect of treatment in an active rehabilitation hostel on the need for hospital treatment, Psychiatric Bulletin, 23, 594-597, 1999	Study does not report on predictors of rehabilitation transition outcomes
Mathews, C. A., Glidden, D., Murray, S., Forster, P., Hargreaves, W. A., The effect on treatment outcomes of assigning patients to ethnically focused inpatient psychiatric units, Psychiatric Services, 53, 830-835, 2002	Study does not report on predictors of rehabilitation transition outcomes
Maxwell, A., Tsoutsoulis, K., Menon Tarur Padinjareveettil, A., Zivkovic, F., Rogers, J. M., Longitudinal analysis of statistical and clinically significant psychosocial change following mental health rehabilitation, Disability & Rehabilitation, 1-13, 2018	Study does not report on predictors of transition in rehabilitation
McCarthy, John Fitzgerald, Accessibility barriers to care among individuals with psychoses:	Study does not report on predictors of transition in rehabilitation

Excluded studies -7.1 Successful transitions	
Distance effects on health services volume and continuity, Dissertation Abstracts International: Section B: The Sciences and Engineering, 63, 723, 2002	
McCrum, B. W., MacFlynn, G., Psychiatric rehabilitation--does it work? A three year retrospective survey, The Ulster medical journal, 59, 168-173, 1990	Data not reported in format to be included in analysis (no multivariable analysis)
McGilloway, S., Donnelly, M., Service utilisation by former long-stay psychiatric patients in Northern Ireland, International Journal of Social Psychiatry, 44, 12-21, 1998	Study does not report on predictors of transition in rehabilitation
McInerney, S. J., Finnerty, S., Avalos, G., Walsh, E., Better off in the community? A 5-year follow up study of long-term psychiatric patients discharged into the community, Social psychiatry and psychiatric epidemiology, 45, 469-473, 2010	Study does not report on predictors of transition in rehabilitation
McInerney, S. J., Finnerty, S., Walsh, E., Spelman, L., Edgar, N. E., Hallahan, B., McDonald, C., Quality of life and social functioning of former long-stay psychiatric patients transferred into the community: a 10 year follow up study, Social Psychiatry & Psychiatric Epidemiology, 53, 795-801, 2018	Study does not report on predictors of transition in rehabilitation
Meehan, T., Stedman, T., Parker, S., Curtis, B., Jones, D., Comparing clinical and demographic characteristics of people with mental illness in hospital- and community-based residential rehabilitation units in Queensland, Australian health review : a publication of the Australian Hospital Association, 41, 139-143, 2017	Study does not report on predictors of transition in rehabilitation
Melzer, D., Hale, A. S., Malik, S. J., Hogman, G. A., Wood, S., Community care for patients with schizophrenia one year after hospital discharge, British Medical Journal, 303, 1023-1026, 1991	Study does not report on predictors of transition in rehabilitation
Mortensen, P. B., Eaton, W. W., Predictors for readmission risk in schizophrenia, Psychological Medicine, 24, 223-232, 1994	Study does not report on predictors of transition in rehabilitation
O'Neil, A. M., Sadosty, A. T., Pasupathy, K. S., Russi, C., Lohse, C. M., Campbell, R. L., Hours and Miles: Patient and Health System Implications of Transfer for Psychiatric Bed Capacity, The Western Journal of Emergency Medicine, 17, 783-790, 2016	Population is behavioural health patients across age groups
Parker, G., Hadzi-Pavlovic, D., The capacity of a measure of disability (the LSP) to predict hospital readmission in those with schizophrenia, Psychological Medicine, 25, 157-63, 1995	Study does not report on predictors of transition in rehabilitation
Postrado, L. T., Lehman, A. F., Quality of life and clinical predictors of rehospitalization of persons with severe mental illness, Psychiatric Services, 46, 1161-5, 1995	Study does not report on predictors of transition in rehabilitation

Excluded studies -7.1 Successful transitions	
Priebe, S., Hoffmann, K., Isermann, M., Kaiser, W., Do long-term hospitalised patients benefit from discharge into the community?, Social Psychiatry & Psychiatric Epidemiology, 37, 387-92, 2002	Data not reported in a format to allow inclusion in analysis of predictive factors
Rieke, K., McGeary, C., Schmid, K. K., Watanabe-Galloway, S., Risk Factors for Inpatient Psychiatric Readmission: Are There Gender Differences?, Community Mental Health Journal, 52, 675-82, 2016	Study does not report on predictors of transition in rehabilitation
Roque, A. P., Findlay, L. J., Okoli, C., El-Mallakh, P., Patient Characteristics Associated with Inpatient Psychiatric Re-admissions and the Utility of the READMIT Clinical Risk Index, Issues in Mental Health Nursing, 38, 411-419, 2017	Study does not report on predictors of transition in rehabilitation
Rosenheck, R. A., Neale, M. S., Mohamed, S., Transition to low intensity case management in a VA Assertive Community Treatment model program, Psychiatric Rehabilitation Journal, 33, 288-96, 2010	Data not reported in a format to allow inclusion in analysis of predictive factors
Rothmann, Thea L., The role of guardianship in the course of treatment and treatment outcome for individuals recovering from severe mental illness, Dissertation Abstracts International: Section B: The Sciences and Engineering, 66, 3425, 2005	Study does not report on predictors of transition in rehabilitation
Ryan, C. S., Sherman, P. S., Robinson, D. R., Predictors of decompensation among consumers of an intensive case management program, Behavior Therapy, 30, 453-473, 1999	Study does not report rehabilitation transition outcomes
Ryan, T., Carden, J., Higgo, R., Poole, R., Robinson, C. A., An assessment of need for mental health rehabilitation amongst in-patients in a Welsh region, Social Psychiatry & Psychiatric Epidemiology, 51, 1285-91, 2016	Study does not report on predictors of rehabilitation transition outcomes
Ryan, T., Pearsall, A., Hatfield, B., Poole, R., Long term care for serious mental illness outside the NHS: A study of out of area placements, Journal of Mental Health, 13, 425-429, 2004	Study does not report on predictors of rehabilitation transition outcomes
Samele, C., van Os, J., McKenzie, K., Wright, A., Gilvarry, C., Manley, C., Tattan, T., Murray, R., U. K. Group, Does socioeconomic status predict course and outcome in patients with psychosis?, Social Psychiatry & Psychiatric Epidemiology, 36, 573-81, 2001	Study does not report rehabilitation transition outcomes
Schennach, R., Obermeier, M., Meyer, S., Jager, M., Schmauss, M., Laux, G., Pfeiffer, H., Naber, D., Schmidt, L. G., Gaebel, W., Klosterkotter, J., Heuser, I., Maier, W., Lemke, M. R., Ruther, E., Klingberg, S., Gastpar, M., Seemuller, F., Moller, H. J., Riedel, M., Predictors of relapse in the year after hospital	Study does not report rehabilitation transition outcomes

Excluded studies -7.1 Successful transitions	
discharge among patients with schizophrenia, Psychiatric Services, 63, 87-90, 2012	
Schennach, R., Riedel, M., Obermeier, M., Jager, M., Schmauss, M., Laux, G., Pfeiffer, H., Naber, D., Schmidt, L. G., Gaebel, W., Klosterkotter, J., Heuser, I., Maier, W., Lemke, M. R., Ruther, E., Klingberg, S., Gastpar, M., Seemuller, F., Moller, H. J., Remission and recovery and their predictors in schizophrenia spectrum disorder: results from a 1-year follow-up naturalistic trial, Psychiatric Quarterly, 83, 187-207, 2012	Study does not report rehabilitation transition outcomes
Seybolt, Diana Carson, Residential factors predicting community integration and quality of life for persons with serious and persistent mental illness, Dissertation Abstracts International: Section B: The Sciences and Engineering, 62, 1099, 2001	Dissertation, not a peer reviewed publication
Silverstein, S. M., Schenkel, L. S., Valone, C., Nuernberger, S. W., Cognitive deficits and psychiatric rehabilitation outcomes in Schizophrenia, Psychiatric quarterly, 69, 169-191, 1998	Data not reported in a format to include in analysis
Steffen, S., Kosters, M., Becker, T., Puschner, B., Discharge planning in mental health care: a systematic review of the recent literature, Acta Psychiatrica Scandinavica, 120, 1-9, 2009	Studies in this systematic review were not testing an intervention in a rehabilitative setting as was specified in the scope.
Stevens, H. B., Brodsky, S. L., Perceived consequences to the predictor: a variable in the release of psychiatric patients, Psychological Reports, 76, 1371-1378, 1995	Study does not report rehabilitation transition outcomes
Tan, B. L., Ng, W. Y., Sudhasan, J., Chng, T., Mok, I., Lee, J., Factors Associated with Changes in Community Ability and Recovery After Psychiatric Rehabilitation: A Retrospective Study, Community mental health journal, 54, 1221-1227, 2018	Study does not report rehabilitation transition outcomes
Thomas, E. C., Despeaux Katie, E., Drapalski, A. L., Bennett, M., Person-oriented recovery of individuals with serious mental illnesses: A review and meta-Analysis of longitudinal findings, Psychiatric Services, 69, 259-267, 2018	This systematic review does not report rehabilitation transition outcomes
Thompson, J. P., Thornby, J., Boeringa, J. A., Lewis, F., Some selected psychological and social characteristics of veteran psychiatric inpatients without stable housing, Psychological Reports, 76, 391-394, 1995	Study does not report rehabilitation transition outcomes
Thornicroft, G., Bebbington, P., Leff, J., Outcomes for long-term patients one year after discharge from a psychiatric hospital, Psychiatric Services, 56, 1416-1422, 2005	Study does not report rehabilitation transition outcomes
Thornicroft, G., Gooch, C., Dayson, D., 17: Readmission to hospital for long term psychiatric	Study does not report rehabilitation transition outcomes

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Excluded studies -7.1 Successful transitions	
patients after discharge to the community, British Medical Journal, 305, 996-998, 1992	
Thornicroft, G., Gooch, C., Dayson, D., The TAPS project. 17: Readmission to hospital for long term psychiatric patients after discharge to the community, BMJ, 305, 996-8, 1992	Study does not report rehabilitation transition outcomes
Trieman, N., Leff, J., Glover, G., Outcome of long stay psychiatric patients resettled in the community: prospective cohort study, BMJ (Clinical research ed.), 319, 13-16, 1999	Study does not report rehabilitation transition outcomes
Trieman, N., Smith, H. E., Kendal, R., Leff, J., The TAPS Project 41: homes for life? Residential stability five years after hospital discharge. Team for the Assessment of Psychiatric Services, Community Mental Health Journal, 34, 407-17, 1998	Study does not report rehabilitation transition outcomes
Tsai, J., Rosenheck, R. A., Consumer choice over living environment, case management, and mental health treatment in supported housing and its relation to outcomes, Journal of Health Care for the Poor and Underserved, 23, 1671-1677, 2012	Study does not report rehabilitation transition outcomes
Tulloch, A. D., Fearon, P., Fahy, T., David, A., Residential mobility among individuals with severe mental illness: cohort study of UK700 participants, Social Psychiatry and Psychiatric Epidemiology, 45, 767-777, 2010	Study does not report rehabilitation transition outcomes
Vetter, P., Koller, O., Clinical and psychosocial variables in different diagnostic groups: their interrelationships and value as predictors of course and outcome during a 14-year follow-up, Psychopathology, 29, 159-68, 1996	Study does not report rehabilitation transition outcomes
Vieweg, V., Blair, C. E., Tucker, R., Lewis, R., Factors precluding patients' discharge to the community. A geropsychiatric hospital survey, Virginia medical quarterly : VMQ, 122, 275-278, 1995	Study does not report rehabilitation transition outcomes
Vigod, Simone Natalie, Kurdyak, Paul, Fung, Kinwah, Gruneir, Andrea, Herrmann, Nathan, Hussain-Shamsy, Neesha, Isen, Marly, Lin, Elizabeth, Rochon, Paula, Taylor, Valerie H., Seitz, Dallas, Psychiatric hospitalizations: A comparison by gender, sociodemographics, clinical profile, and postdischarge outcomes, Psychiatric Services, 67, 1376-1379, 2016	Not relevant population; study does not report rehabilitation transition outcomes
Weilage, Mark Everett, Predicting outcomes in inpatient treatment of schizophrenia-spectrum disorders: Implications on the role of the community transition program in the Nebraska state mental health system, Dissertation Abstracts International: Section B: The Sciences and Engineering, 58, 4478, 1998	Dissertation; not a peer reviewed publication
White, C., Frimpong, E., Huz, S., Ronsani, A., Radigan, M., Effects of the Personalized	Study does not report rehabilitation transition outcomes

Excluded studies -7.1 Successful transitions	
Recovery Oriented Services (PROS) Program on Hospitalizations, Psychiatric Quarterly, 89, 261-271, 2018	
Wykes, T., Katz, R., Sturt, E., Hemsley, D., Abnormalities of response processing in a chronic psychiatric group. A possible predictor of failure in rehabilitation programmes?, British Journal of Psychiatry, 160, 244-52, 1992	Mixed population group, not specific to people with complex psychosis. No relevant data on analysis of predictors of rehabilitation transition outcomes

1

2 Economic studies

3 A global economic literature search was undertaken for this guideline, covering all 18
4 review questions. The table below is a list of excluded studies across the entire
5 guideline and studies listed were not necessarily identified for this review question.

6 **Table 7: Excluded studies from the economic component of the review**

Study	Reason for Exclusion
Aitchison, K J, Kerwin, R W, Cost-effectiveness of clozapine: a UK clinic-based study (Structured abstract), British Journal of PsychiatryBr J Psychiatry, 171, 125-130, 1997	Available as abstract only.
Barnes, T. R., Leeson, V. C., Paton, C., Costelloe, C., Simon, J., Kiss, N., Osborn, D., Killaspy, H., Craig, T. K., Lewis, S., Keown, P., Ismail, S., Crawford, M., Baldwin, D., Lewis, G., Geddes, J., Kumar, M., Pathak, R., Taylor, S., Antidepressant Controlled Trial For Negative Symptoms In Schizophrenia (ACTIONS): a double-blind, placebo-controlled, randomised clinical trial, Health Technology Assessment (Winchester, England)Health Technol Assess, 20, 1-46, 2016	Does not match any review questions considered in the guideline.
Barton, Gr, Hodgekins, J, Mugford, M, Jones, Pb, Croudace, T, Fowler, D, Cognitive behaviour therapy for improving social recovery in psychosis: cost-effectiveness analysis (Structured abstract), Schizophrenia ResearchSchizophr Res, 112, 158-163, 2009	Available as abstract only.
Becker, T., Kilian, R., Psychiatric services for people with severe mental illness across western Europe: what can be generalized from current knowledge about differences in provision, costs and outcomes of mental health care?, Acta Psychiatrica Scandinavica, SupplementumActa Psychiatr Scand Suppl, 9-16, 2006	Not an economic evaluation.
Beecham, J, Knapp, M, McGilloway, S, Kavanagh, S, Fenyo, A, Donnelly, M, Mays, N, Leaving hospital II: the cost-effectiveness	Available as abstract only.

Study	Reason for Exclusion
of community care for former long-stay psychiatric hospital patients (Structured abstract), Journal of Mental HealthJ Ment Health, 5, 379-94, 1996	
Beecham, J., Knapp, M., Fenyo, A., Costs, needs, and outcomes, Schizophrenia BulletinSchizophr Bull, 17, 427-39, 1991	Costing analysis prior to year 2000
Burns, T., Raftery, J., Cost of schizophrenia in a randomized trial of home-based treatment, Schizophrenia BulletinSchizophr Bull, 17, 407-10, 1991	Not an economic evaluation. Date is prior to 2000
Bush, P. W., Drake, R. E., Xie, H., McHugo, G. J., Haslett, W. R., The long-term impact of employment on mental health service use and costs for persons with severe mental illness, Psychiatric ServicesPsychiatr Serv, 60, 1024-31, 2009	A United States costing analysis. Outcomes which relate to the Welfare system differs in substantial ways to a UK context.
Chalamat, M., Mihalopoulos, C., Carter, R., Vos, T., Assessing cost-effectiveness in mental health: vocational rehabilitation for schizophrenia and related conditions, Australian & New Zealand Journal of PsychiatryAust N Z J Psychiatry, 39, 693-700, 2005	Australian cost-benefit analysis - welfare system differs from UK context.
Chan, S., Mackenzie, A., Jacobs, P., Cost-effectiveness analysis of case management versus a routine community care organization for patients with chronic schizophrenia, Archives of Psychiatric NursingArch Psychiatr Nurs, 14, 98-104, 2000	Study conducted in Hong Kong. A costing analysis.
Clark, R. E., Teague, G. B., Ricketts, S. K., Bush, P. W., Xie, H., McGuire, T. G., Drake, R. E., McHugo, G. J., Keller, A. M., Zubkoff, M., Cost-effectiveness of assertive community treatment versus standard case management for persons with co-occurring severe mental illness and substance use disorders, Health Services ResearchHealth Serv Res, 33, 1285-308, 1998	Not cost-utility analysis. Cost-effectiveness analysis but does not consider UK setting. Date of study is prior to year 2000.
Crawford, M. J., Killaspy, H., Barnes, T. R., Barrett, B., Byford, S., Clayton, K., Dinsmore, J., Floyd, S., Hoadley, A., Johnson, T., Kalaitzaki, E., King, M., Leurent, B., Maratos, A., O'Neill, F. A., Osborn, D., Patterson, S., Soteriou, T., Tyrer, P., Waller, D., Matisse project team, Group art therapy as an adjunctive treatment for people with schizophrenia: a randomised controlled trial (MATISSE), Health Technology Assessment (Winchester, England)Health Technol Assess, 16, iii-iv, 1-76, 2012	Study not an economic evaluation.
Dauwalder, J. P., Ciompi, L., Cost-effectiveness over 10 years. A study of	Practice has changed somewhat since 1980s - not a cost effectiveness study.

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Study	Reason for Exclusion
community-based social psychiatric care in the 1980s, Social Psychiatry & Psychiatric EpidemiologySoc Psychiatry Psychiatr Epidemiol, 30, 171-84, 1995	
Garrido, G., Penades, R., Barrios, M., Aragay, N., Ramos, I., Valles, V., Faixa, C., Vendrell, J. M., Computer-assisted cognitive remediation therapy in schizophrenia: Durability of the effects and cost-utility analysis, Psychiatry ResearchPsychiatry Res, 254, 198-204, 2017	Cost effectiveness study, but population of interest is not focussed on rehabilitation for people with complex psychosis.
Hallam, A., Beecham, J., Knapp, M., Fenyo, A., The costs of accommodation and care. Community provision for former long-stay psychiatric hospital patients, European Archives of Psychiatry & Clinical NeuroscienceEur Arch Psychiatry Clin Neurosci, 243, 304-10, 1994	Economic evaluation predates 2000. Organisation and provision of care may have changed by some degree.
Hu, T. W., Jerrell, J., Cost-effectiveness of alternative approaches in treating severely mentally ill in California, Schizophrenia BulletinSchizophr Bull, 17, 461-8, 1991	A United States costing analysis. Outcomes which relate to the Welfare system differs in substantial ways to a UK context.
Jaeger, J., Berns, S., Douglas, E., Creech, B., Glick, B., Kane, J., Community-based vocational rehabilitation: effectiveness and cost impact of a proposed program model.[Erratum appears in Aust N Z J Psychiatry. 2006 Jun-Jul;40(6-7):611], Australian & New Zealand Journal of PsychiatryAust N Z J Psychiatry, 40, 452-61, 2006	Study is a New Zealand based costing analysis of limited applicability to the UK.
Jonsson, D., Walinder, J., Cost-effectiveness of clozapine treatment in therapy-refractory schizophrenia, Acta Psychiatrica ScandinavicaActa Psychiatr Scand, 92, 199-201, 1995	Costing analysis which predates year 2000.
Knapp, M, Patel, A, Curran, C, Latimer, E, Catty, J, Becker, T, Drake, Re, Fioritti, A, Kilian, R, Lauber, C, Rossler, W, Tomov, T, Busschbach, J, Comas-Herrera, A, White, S, Wiersma, D, Burns, T, Supported employment: cost-effectiveness across six European sites (Structured abstract), World Psychiatry, 12, 60-68, 2013	Available as abstract only.
Lazar, S. G., The cost-effectiveness of psychotherapy for the major psychiatric diagnoses, Psychodynamic psychiatry, 42, 2014	Review of clinical and cost studies on psychotherapy. Studies cited do not match population for relevant review question.
Leff, J, Sharpley, M, Chisholm, D, Bell, R, Gamble, C, Training community psychiatric nurses in schizophrenia family work: a study of clinical and economic outcomes for patients and relatives (Structured abstract), Journal of Mental HealthJ Ment Health, 10, 189-197, 2001	Structured abstract. Not a cost effectiveness study.

Study	Reason for Exclusion
Liffick, E., Mehdiyoun, N. F., Vohs, J. L., Francis, M. M., Breier, A., Utilization and Cost of Health Care Services During the First Episode of Psychosis, Psychiatric ServicesPsychiatr Serv, 68, 131-136, 2017	A United States costing analysis. Outcomes which relate to the Welfare system differs in substantial ways to a UK context.
Mihalopoulos, C., Harris, M., Henry, L., Harrigan, S., McGorry, P., Is early intervention in psychosis cost-effective over the long term?, Schizophrenia BulletinSchizophr Bull, 35, 909-18, 2009	Not a cost utility analysis. Australian costing analysis.
Perlis, R H, Ganz, D A, Avorn, J, Schneeweiss, S, Glynn, R J, Smoller, J W, Wang, P S, Pharmacogenetic testing in the clinical management of schizophrenia: a decision-analytic model (Structured abstract), Journal of Clinical Psychopharmacology, 25, 427-434, 2005	Structured abstract. Does not match any review question considered in this guideline.
Quinlivan, R., Hough, R., Crowell, A., Beach, C., Hofstetter, R., Kenworthy, K., Service utilization and costs of care for severely mentally ill clients in an intensive case management program, Psychiatric ServicesPsychiatr Serv, 46, 365-71, 1995	A United States costing analysis. Outcomes which relate to the Welfare system differs in substantial ways to a UK context.
Roine, E., Roine, R. P., Rasanen, P., Vuori, I., Sintonen, H., Saarto, T., Cost-effectiveness of interventions based on physical exercise in the treatment of various diseases: a systematic literature review, International Journal of Technology Assessment in Health CareInt J Technol Assess Health Care, 25, 427-54, 2009	Literature review on cost effectiveness studies based on physical exercise for various diseases and population groups - none of which are for complex psychosis.
Rosenheck, R A, Evaluating the cost-effectiveness of reduced tardive dyskinesia with second-generation antipsychotics (Structured abstract), British Journal of PsychiatryBr J Psychiatry, 191, 238-245, 2007	Structured abstract. Does not match any review question considered in this guideline.
Rund, B. R., Moe, L., Sollien, T., Fjell, A., Borchgrevink, T., Hallert, M., Naess, P. O., The Psychosis Project: outcome and cost-effectiveness of a psychoeducational treatment programme for schizophrenic adolescents, Acta Psychiatrica ScandinavicaActa Psychiatr Scand, 89, 211-8, 1994	Not an economic evaluation. Cost effectiveness discussed in narrative only, with a few short sentences.
Sacristan, J A, Gomez, J C, Salvador-Carulla, L, Cost effectiveness analysis of olanzapine versus haloperidol in the treatment of schizophrenia in Spain (Structured abstract), Actas Luso-espanolas de Neurologia, Psiquiatria y Ciencias Afines, 25, 225-234, 1997	Available as abstract only.
Torres-Carbajo, A, Olivares, J M, Merino, H, Vazquez, H, Diaz, A, Cruz, E, Efficacy and effectiveness of an exercise program as	Available as abstract only

Study	Reason for Exclusion
community support for schizophrenic patients (Structured abstract), American Journal of Recreation Therapy, 4, 41-47, 2005	
Wang, P S, Ganz, D A, Benner, J S, Glynn, R J, Avorn, J, Should clozapine continue to be restricted to third-line status for schizophrenia: a decision-analytic model (Structured abstract), Journal of Mental Health Policy and Economics, 7, 77-85, 2004	Available as abstract only.
Yang, Y K, Tarn, Y H, Wang, T Y, Liu, C Y, Laio, Y C, Chou, Y H, Lee, S M, Chen, C C, Pharmacoeconomic evaluation of schizophrenia in Taiwan: model comparison of long-acting risperidone versus olanzapine versus depot haloperidol based on estimated costs (Structured abstract), Psychiatry and Clinical Neurosciences, 59, 385-394, 2005	Taiwan is not an OECD country.
Zhu, B., Ascher-Svanum, H., Faries, D. E., Peng, X., Salkever, D., Slade, E. P., Costs of treating patients with schizophrenia who have illness-related crisis events, BMC Psychiatry, 8, 2008	USA costing analysis. The structure of the US health system means that costs do not translate well into a UK context.

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1 Appendix L – Research recommendations

2 **Research recommendations for review question 7.1: What factors are**
3 **associated with successful transition through rehabilitation services to**
4 **other parts of the mental health, social care and primary care systems?**

5 No research recommendations were made for this review question.

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