NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health and social care directorate

Quality standards and indicators

Briefing paper

Quality standard topic: Medicines optimisation

Output: Prioritised quality improvement areas for development.

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Contents

1 Introduction

This briefing paper presents a structured overview of potential quality improvement areas for medicines optimisation. It provides the Committee with a basis for discussing and prioritising quality improvement areas for development into draft quality statements and measures for public consultation.

1.1 Structure

This briefing paper includes a brief description of the topic, a summary of each of the suggested quality improvement areas and supporting information.

If relevant, recommendations selected from the key development source below are included to help the Committee in considering potential statements and measures.

1.2 Development source

The key development source referenced in this briefing paper is:

Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes NICE guideline NG5 (2015).

2 Overview

2.1 Focus of quality standard

This quality standard will cover the safe and effective use of medicines in NHS/healthcare settings for all people who use medicines, and people who are receiving suboptimal benefit from medicines.

This quality standard will not cover aspects of medicines management specific to care home settings because this is covered by another quality standard.

2.2 Definition

Medicines optimisation is defined as 'a person-centred approach to safe and effective medicines use, to ensure people obtain the best possible outcomes from their medicines'. Medicines optimisation applies to people who may or may not take their medicines effectively.

2.3 Use of medicines

Getting the most from medicines for both patients and the NHS is becoming increasingly important as more people are taking more medicines. Medicines

prevent, treat or manage many illnesses or conditions and are the most common intervention in healthcare. However, it has been estimated that between 30% and 50% of medicines prescribed for long-term conditions are not taken as intended (World Health Organization 2003). This issue is worsened by the growing number of people with long-term conditions. In 2012, the Department of Health published Long term conditions compendium of information: third edition (2012), which suggested that about 15 million people in England now have a long-term condition and the number of long-term conditions a person may have also increases with age: 14% of people aged under 40 years and 58% of people aged 60 years and over report having at least one long-term condition. The report defines a long-term condition as 'a condition that cannot, at present, be cured but is controlled by medication and/or other treatment/therapies'. When one or more non-curable long-term conditions are diagnosed, this is termed 'multimorbidity'. The number of people with multimorbidity in 2008 was 1.9 million, but this is expected to rise to 2.9 million by 2018. Twenty-five per cent of people aged over 60 years report having 2 or more long-term conditions.

Data from the Health and Social Care Information Centre (HSCIC) shows that between 2003 and 2013 the average number of prescription items per year for any one person in England increased from 13 (in 2003) to 19 (in 2013). When a person is taking multiple medicines this is called polypharmacy. With an ageing population, polypharmacy has become more important to consider when making clinical decisions for individual people.

2.4 Management

As the population ages and life expectancy increases, more people are living with several long-term conditions that are being managed with an increasing number of medicines.

Effective shared decision-making requires health professionals' understanding of a person's desired level of involvement in decision-making about their medicines. It is often difficult for the person and the health professional to decide whether the medicines being taken are appropriate and the decision may be different for each individual person.

The safety of medicines is another important consideration when optimising medicines and can be a continual challenge. A report commissioned by the Department of Health, Exploring the costs of unsafe care in the NHS (2008), found that 5% to 8% of unplanned hospital admissions are due to medication issues. This report focused on preventable adverse events which can be attributed to a specific error or errors. Incidents involving medicines have a number of causes, for example: lack of knowledge, failure to follow systems and protocols, interruptions (for example,

during prescribing, administration or dispensing), staff competency, poor instruction, and poor communication. Organisations should have a standard approach to determine when a medicines‐related incident or error should be referred to local safeguarding services. Effective systems and processes can minimise the risk of preventable medicines‐related problems such as side effects, adverse effects or interactions with other medicines or comorbidities. The risk of people suffering harm from their medicines increases with polypharmacy.

Adverse events of medicines represent a considerable burden on the NHS and have a significant impact on patients. When people transfer between different care providers, or at hospital admission or discharge, there is a greater risk of poor communication and unintended changes to medicines. When people move from one care setting to another, between 30% and 70% of patients have an error or unintentional change to their medicines.

Patient safety in relation to medicines is not a new issue and several national initiatives exist to help improve patient safety. In 1964, the Medicines and Healthcare products Regulatory Agency (MHRA) and Commission on Human Medicines launched the national yellow card scheme for reporting side effects to medicines. The scheme is still in existence today and over 600,000 UK yellow cards have been received.

The National Reporting and Learning System (NRLS) was introduced in 2010 by the National Patient Safety Agency (NPSA) as a single, national reporting system for patient safety incidents in England and Wales. The NRLS staff reviewed all alerts to help NHS organisations understand patient safety incidents and why and how they happened, learning from these experiences and taking action to prevent future harm to people. In June 2012, the key functions and expertise for patient safety developed by the NPSA transferred to NHS England.

In 2014, NHS England and the MHRA issued a joint patient safety alert: improving medication error reporting and learning. The alert aimed to improve the quality of data reported by providers and to introduce national networks to maximise learning and also provide guidance on minimising harm relating to medication error reporting. NHS England also launched at this time a new National Patient Safety Alerting System (NPSAS) to strengthen the rapid dissemination of urgent patient safety alerts to healthcare providers via the Central Alerting System (CAS). The new system is a three‐stage system to provide 'useful educational and implementation resources to support providers to put appropriate measures in place to prevent harm and encourage and share best practice in patient safety'.

To further support the patient safety agenda, the NHS Safety Thermometer was introduced by the Department of Health as a measurement tool to support an additional programme of work aimed at supporting patient safety and improvement.

The tool is accessible to organisations across all healthcare settings, such as hospitals, care homes and community nursing, and allows them to measure, monitor and analyse patient harms and harm‑free care at a local level to assess improvement over time.

Use of medicines can be complex, and how people can take their medicines safely and effectively has been a challenge for the health service for many years. NHS policy and legislation, for example the Health and Social Care Act (2012) and the NHS Constitution (2013) outline values such as the right of patients to make informed decisions about their care, including their use of medicines.

Before medicines optimisation, the term 'medicines management' was used which has been defined as 'a system of processes and behaviours that determines how medicines are used by the NHS and patients' (National Prescribing Centre 2002). Medicines management has primarily been led by pharmacy teams. Medicines management is an important enabler of medicines optimisation. The definition of 'optimise' is to 'make the best or most effective use of (a situation or resource)'. Medicines optimisation focuses on actions taken by all health and social care practitioners and requires greater patient engagement and professional collaboration across health and social care settings.

The Royal Pharmaceutical Society produced Medicines optimisation: helping patients make the most of medicines (2013) to support the medicines optimisation agenda. This guide suggests 4 guiding principles for medicines optimisation, aiming to lead to improved patient outcomes:

• Aim to understand the patient's experience

• Evidence based choice of medicines

• Ensure medicines use is as safe as possible

• Make medicines optimisation part of routine practice.

To further support the implementation of the guiding principles, NHS England launched the prototype medicines optimisation dashboard (2014). The dashboard aims to 'encourage Clinical Commissioning Groups (CCGs) and trusts to think more about how well their patients are supported to use medicines and less about focusing on cost and volume of drugs'.

2.5 National Outcome Frameworks

Tables 1–2 show the outcomes, overarching indicators and improvement areas from the frameworks that the quality standard could contribute to achieving.

Table 1 The Adult Social Care Outcomes Framework 2015–16

Domain	Overarching and outcome measures
1 Enhancing quality of life for people with care and support needs	***Overarching measure*** 1A Social care-related quality of life** ***Outcome measures*** **People manage their own support as much as they wish, so they are in control of what, how and when support is delivered to match their needs** 1B Proportion of people who use services who have control over their daily life **Carers can balance their caring roles and maintain their desired quality of life** 1D Carer-reported quality of life**
Alignment with NHS Outcomes Framework and/or Public Health Outcomes Framework * Indicator is shared ** Indicator is complementary Indicators in italics in development	

Table 2 NHS Outcomes Framework 2015–16

Domain	Overarching indicators and improvement areas
2 Enhancing quality of life for people with long-term conditions	***Overarching indicator*** 2 Health-related quality of life for people with long-term conditions** ***Improvement areas*** **Ensuring people feel supported to manage their condition** 2.1 Proportion of people feeling supported to manage their condition **Improving functional ability in people with long-term conditions** 2.2 Employment of people with long-term conditions*, ** **Reducing time spent in hospital by people with long-term conditions** 2.3 i Unplanned hospitalisation for chronic ambulatory care sensitive conditions ii Unplanned hospitalisation for asthma, diabetes and epilepsy in under 19s **Enhancing quality of life for carers** 2.4 Health-related quality of life for carers** **Enhancing quality of life for people with mental illness** 2.5 i Employment of people with mental illness** *ii Health-related quality of life for people with mental illness*** **Improving quality of life for people with multiple long-term conditions** *2.7 Health-related quality of life for people with three or more long-term conditions***
5 Treating and caring for people in a safe environment and protecting them from avoidable harm	***Overarching indicators*** *5a Deaths attributable to problems in healthcare* *5b Severe harm attributable to problems in healthcare* ***Improvement areas*** **Reducing the incidence of avoidable harm** **Improving the culture of safety reporting** 5.6 Patient safety incidents reported
Alignment with Adult Social Care Outcomes Framework and/or Public Health Outcomes Framework * Indicator is shared ** Indicator is complementary Indicators in italics in development	

3 Summary of suggestions

3.1 Responses

In total 29 stakeholders responded to the 2-week engagement exercise 08/06/2015 – 22/06/2015.

Stakeholders were asked to suggest up to 5 areas for quality improvement. Specialist committee members were also invited to provide suggestions. The responses have been merged and summarised in table 3 for further consideration by the Committee.

Full details of all the suggestions provided are given in appendix 1 for information.

Table 3 Summary of suggested quality improvement areas

Suggested area for improvement	Stakeholders
Identifying, reporting and learning • Information quality and robust reporting • PINCER principles • STOPP/START tool • Medication safety officer	NHSE, TRCPCH, RPS, SCM
Medicines reconciliation and medication review • Medicines reconciliation at change in care setting • Reducing inappropriate polypharmacy • Approach to structured medication review • Medication review by appropriate health professional • Children and young people	SCM, RPS, SCM, APLTD, SU, NIHR
Communication systems when patients move from one care setting to another • Discharge information to community pharmacies • Timely and accurate sharing of information • Patient held medicines record • Support for older people after hospital discharge	SCM, NRAS, RPS, SCM, BUKLTD, NDNHSHT
Patient involvement • Self-management plan • Patient involvement in decision-making • Clinical decision support applications	SCM, NDNHSHT, NRAS, BHIVA&HIVPA, RPS, NHNHSFT, ABPI, RPS, APLTD
Models of organisational and cross sector working • Multidisciplinary approach	SCM
Other areas • Specific conditions • Antibiotics • Prescribing • Anticoagulation services	THCCG, BUKLTD, BTS, IGA, MS&DLTD, BHIVA&HIVPA, AZUKMC, PUK, NHSE, NRAS, TRCPCH, NHNHSFT, RPS, PLTD

Suggested area for improvement	Stakeholders
ABPI, Association of the British Pharmaceutical Industry APLTD, Astellas Pharma Ltd AZUCMC, AstraZeneca UK Marketing Company BHIVA&HIVPA, British HIV Association and HIV Pharmacy Association BTS, British Thoracic Society BUKLTD, Boots UK Ltd CMHP, College of Mental Health Pharmacy IGA, International Glaucoma Association MS&DLTD, Merck Sharp & Dohme Ltd NDNHSHT, North Devon NHS Healthcare Trust NHSE, NHS England NHNHSFT, Northumbria Healthcare NHS Foundation Trust NIHR, National Institute of Health Research NRAS, National Rheumatoid Arthritis Society PLTD, Phizer Ltd PUK, Parkinson's UK RCP, Royal College of Physicians RCN, Royal College of Nursing RPS, Royal Pharmaceutical Society SCM, Special Committee Member SU, Swansea University THCCG, Tower Hamlets Clinical Commissioning Group TRCPCH, The Royal College of Paediatrics and Child Health	

4 Suggested improvement areas

4.1 Identifying, reporting and learning

4.1.1 Summary of suggestions

Information quality and robust reporting

Stakeholders highlighted the need to improve the quality and frequency of reporting medicines-related patient safety incidents, including medication side effects. Reporting of incidents with a good quality of information can lead to learning about the causes and action to avoid future incidents.

PINCER principles

Stakeholders suggested that the use of the PINCER principles can aid education and reduce the number of medicines-related patient safety incidents. PINCER (pharmacist-led information technology intervention for medication errors) is a method for reducing a range of medication errors in general practices with computerised clinical records.

STOPP/START tool

Stakeholders suggested the use of a screening tool, such as the STOPP/START tool in older people to identify potential medicines-related patient safety incidents. Using screening tools can help to identify patients most likely to benefit from medicines reconciliation and medication review.

Medication safety officer

A stakeholder highlighted the role of the medication safety officer in NHS organisations, in minimising medication error by being responsible for the quality and frequency of incident reporting.

4.1.2 Selected recommendations from development source

Table 4 below highlights recommendations that have been provisionally selected from the development source that may support potential statement development. These are presented in full after table 4 to help inform the Committee's discussion.

Table 4 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Information quality and robust reporting	**Identifying, reporting and learning** NICE NG5 Recommendation 1.1.3
PINCER principles	**Identifying, reporting and learning** NICE NG5 Recommendation 1.1.8
STOPP/START tool	**Identifying, reporting and learning** NICE NG5 Recommendation 1.1.9
Medication safety officer	Not directly covered in NICE NG5 and no recommendations are presented

Information quality and robust reporting

NICE NG5 – Recommendation 1.1.3

Organisations should ensure that robust and transparent processes are in place to identify, report, prioritise, investigate and learn from medicines‑related patient safety incidents, in line with national patient safety reporting systems – for example, the National Reporting and Learning System.

PINCER principles

NICE NG5 – Recommendation 1.1.8

Organisations and health professionals should consider applying the principles of the PINCER intervention to reduce the number of medicines-related patient safety incidents, taking account of existing systems and resource implications. These principles include:

- using information technology support
- using educational outreach with regular reinforcement of educational messages
- actively involving a multidisciplinary team, including GPs, nurses and support staff
- having dedicated pharmacist support
- agreeing an action plan with clear objectives

- providing regular feedback on progress
- providing clear, concise, evidence-based information.

STOPP/START tool

NICE NG5 – Recommendation 1.1.9

Consider using a screening tool – for example, the STOPP/START tool in older people – to identify potential medicines-related patient safety incidents in some groups. These groups may include:

- adults, children and young people taking multiple medicines (polypharmacy)
- adults, children and young people with chronic or long-term conditions
- older people.

Medication safety officer

There are no recommendations in NG5 about the role of the medication safety officer. (Note that healthcare organisations are required to identify a medication safety officer)[1].

4.1.3 Current UK practice

Information quality and robust reporting

Recent data from the Department of Health showed that a fifth of acute trusts may be under-reporting medical errors which include bed sores, blood clots and medication errors[2].

PINCER principles

No information on current practice for this area has been identified.

STOPP/START tool

No information on current practice for this area has been identified.

Medication safety officer

No information on current practice for this area has been identified.

[1] NHS England and MHRA, Patient Safety Alert NHS/PSA/D/2014/005: Stage Three: Directive – Improving medication error incident reporting and learning, March 2014.
[2] A fifth of acute trusts may be under-reporting medical errors, BMJ 2014;348:g4257

4.2 Medicines reconciliation and medication review

4.2.1 Summary of suggestions

Medicines reconciliation at change in care setting

Stakeholders suggested that medicines reconciliation should happen within 24 hours when a person moves from one care setting to another and may happen on more than one occasion during a hospital stay. This can help identify problems with medicines and prioritise the pharmaceutical needs of individual patients.

Reducing inappropriate polypharmacy

Stakeholders highlighted the need to reduce inappropriate polypharmacy, particularly in older people. Polypharmacy is the use of multiple medicines by a person. This is important as with the ageing population there is an increasing number of people with comorbidities who therefore have to take more medicines. Reducing inappropriate polypharmacy can reduce adverse reactions and improve the quality of life of these patients.

Approach to structured medication review

Stakeholders suggested that medication review can identify and resolve problems with a patient's medicines. It can also reduce unnecessary prescribing. Stakeholders suggested that a structured medication review can be effective in mitigating the harms associated with medicines use as well as addressing wider effects in relation to symptom reduction, tolerability, treatment goals and quality of life. Stakeholders listed what a structured medication review should take into account in line with recommendation 1.4.3 from NICE guideline NG5.

Medication review by appropriate health professional

Stakeholders suggested that to ensure medication reviews achieve the desired outcomes, the professionals that undertake them must be appropriately skilled and trained. This requires organisations to have plans in place to meet these training needs. Stakeholders emphasised the need to train undergraduate trainees and non-medical prescribers and not just established clinicians.

Children and young people

Stakeholders suggested immediate medication review for children and young people after discharge from hospital. It was claimed that this can ensure that any collaboration required between hospital and primary care clinicians is clear and working optimally.

4.2.2 Selected recommendations from development source

Table 6 below highlights recommendations that have been provisionally selected from the development source that may support potential statement development. These are presented in full after table 6 to help inform the Committee's discussion.

Table 6 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Medicines reconciliation at change in care setting	**Medicines reconciliation** NICE NG5 Recommendation 1.3.1 NICE NG5 Recommendation 1.3.2 NICE NG5 Recommendation 1.3.3
Reducing inappropriate polypharmacy	**Medication review** NICE NG5 Recommendation 1.4.1
Approach to structured medication review	**Medication review** NICE NG5 Recommendation 1.4.3
Medication review by appropriate health professional	**Medication review** NICE NG5 Recommendation 1.4.2
Children and young people	**Medication review** NICE NG5 Recommendation 1.4.1

Medicines reconciliation at change in care setting

NICE NG5 Recommendation 1.3.1

In an acute setting, accurately list all of the person's medicines (including prescribed, over-the-counter and complementary medicines) and carry out medicines reconciliation within 24 hours or sooner if clinically necessary, when the person moves from one care setting to another – for example, if they are admitted to hospital.

NICE NG5 Recommendation 1.3.2

Recognise that medicines reconciliation may need to be carried out on more than one occasion during a hospital stay – for example, when the person is admitted, transferred between wards or discharged.

NICE NG5 Recommendation 1.3.3

In primary care, carry out medicines reconciliation for all people who have been discharged from hospital or another care setting. This should happen as soon as is practically possible, before a prescription or new supply of medicines is issued and within 1 week of the GP practice receiving the information.

Reducing inappropriate polypharmacy

NICE NG5 Recommendation 1.4.1

Consider carrying out a structured medication review for some groups of people when a clear purpose for the review has been identified. These groups may include:

- adults, children and young people taking multiple medicines (polypharmacy)
- adults, children and young people with chronic or long-term conditions
- older people.

Approach to structured medication review

NICE NG5 Recommendation 1.4.3

During a structured medication review, take into account:

- the person's, and their family members or carers where appropriate, views and understanding about their medicines
- the person's, and their family members' or carers' where appropriate, concerns, questions or problems with the medicines
- all prescribed, over-the-counter and complementary medicines that the person is taking or using, and what these are for
- how safe the medicines are, how well they work for the person, how appropriate they are, and whether their use is in line with national guidance
- whether the person has had or has any risk factors for developing adverse drug reactions (report adverse drug reactions in line with the yellow card scheme)
- any monitoring that is needed.

Medication review by appropriate health professional

NICE NG5 Recommendation 1.4.2

Organisations should determine locally the most appropriate health professional to carry out a structured medication review, based on their knowledge and skills, including all of the following:

- technical knowledge of processes for managing medicines
- therapeutic knowledge on medicines use
- effective communication skills.

The medication review may be led, for example, by a pharmacist or by an appropriate health professional who is part of a multidisciplinary team.

Children and young people

NICE NG5 Recommendation 1.2.6

Organisations should consider arranging additional support for some groups of people when they have been discharged from hospital, such as pharmacist counselling, telephone follow-up, and GP or nurse follow-up home visits. These groups may include:

- adults, children and young people taking multiple medicines (polypharmacy)
- adults, children and young people with chronic or long-term conditions

NICE NG5 Recommendation 1.4.1

Consider carrying out a structured medication review for some groups of people when a clear purpose for the review has been identified. These groups may include:

- adults, children and young people taking multiple medicines (polypharmacy)
- adults, children and young people with chronic or long-term conditions
- older people.

4.2.3 Current UK practice

Medicines reconciliation at change in care setting

Information from the National Prescribing Centre[3] shows that over half of all medication incidents are reported at interfaces of care and most commonly at

[3] National prescribing centre. Medicines reconciliation: a guide to implementation

admission. This leaves a high number of incidents that happen before and after admission.

Reducing inappropriate polypharmacy

No information on current practice for this area has been identified.

Approach to structured medication review

No information on current practice for this area has been identified.

Medication review by appropriate health professional

Research on behalf of National Institute of Health Research[4] found that junior doctors knew little about medication review, their role in the process and the existence of medication tools. However, this is a small scale research in which 20 junior doctors participated.

Children and young people

Related to hospital admissions, rather than discharges, an observational study[5] (2006/7) of paediatric patients admitted to a neurosurgical ward at Birmingham Children's hospital found that initial admission medication orders for children differed from prescribed pre-admission medication in 39% of cases.

[4] A pilot survey of junior doctors' attitudes and awareness around medication review Eur J Hosp Pharm doi:10.1136/ejhpharm-2015-000664

[5] Clinical significance of medication reconciliation in children admitted to a UK pediatric hospital: observational study of neurosurgical patients. Paediatr Drugs. 2010 Oct 1;12(5):331-7. doi: 10.2165/11316230-000000000-00000

4.3 Communication systems when patients move from one care setting to another

4.3.1 Summary of suggestions

Discharge information to community pharmacies

Stakeholders suggested that changes to a patients' medicines should be communicated to their community pharmacy on discharge, as this can reduce the risk of prescribing errors post-discharge. Many patients have repeat prescriptions pre-dispensed at their pharmacy, waiting for collection. If the pharmacy is not aware that the patient has been admitted to hospital, the patient may receive medicines which should have been stopped or have had a dose change. The community pharmacist is aware of the patient's discharge from hospital, they can provide help and advice.

Timely and accurate sharing of information

Stakeholders highlighted the need to share complete and accurate information about a patient's medicines within 24 hours of care transfer. This includes transfers within an organisation or from one organisation to another.

Patient held medicines record

Stakeholders highlighted that patients should be given a complete and accurate list of their medicines in a format that is suitable to them. It was suggested this should include a medication print out with the electronic discharge summary.

Support for older people after hospital discharge

Stakeholders suggested tailored pharmacy-led support for older patients using multiple medicines as it is shown to improve quality of life and reduce the number of falls. This support should also be extended to the patient's home.

4.3.2 Selected recommendations from development source

Table 5 below highlights recommendations that have been provisionally selected from the development source that may support potential statement development. These are presented in full after table 5 to help inform the Committee's discussion.

Table 5 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Discharge information to community pharmacies	**Communication systems when patients move from one care setting to another** NICE NG5 Recommendation 1.2.3 NICE NG5 Recommendation 1.2.5
Timely and accurate sharing of information	**Communication systems when patients move from one care setting to another** NICE NG5 Recommendation 1.2.1 NICE NG5 Recommendation 1.2.2 NICE NG5 Recommendation 1.2.3
Patient held medicines record	**Communication systems when patients move from one care setting to another** NICE NG5 Recommendation 1.2.4
Support for older people after hospital discharge	**Communication systems when patients move from one care setting to another** NICE NG5 Recommendation 1.2.6

Discharge information to community pharmacies

NICE NG5 – Recommendation 1.2.3

Health and social care practitioners should share relevant information about the person and their medicines when a person transfers from one care setting to another. This should include, but is not limited to, all of the following:

- details of other relevant contacts identified by the person and their family members or carers where appropriate – for example, their nominated community pharmacy

NICE NG5 – Recommendation 1.2.5

Consider sending a person's medicines discharge information to their nominated community pharmacy, when possible and in agreement with the person.

Timely and accurate sharing of information

NICE NG5 – Recommendation 1.2.1

Organisations should ensure that robust and transparent processes are in place, so that when a person is transferred from one care setting to another:

- the current care provider shares complete and accurate information about the person's medicines with the new care provider **and**
- the new care provider receives and documents this information, and acts on it.

Organisational and individual roles and responsibilities should be clearly defined. Regularly review and monitor the effectiveness of these processes. See also section 1.3 on medicines reconciliation.

NICE NG5 – Recommendation 1.2.2

For all care settings, health and social care practitioners should proactively share complete and accurate information about medicines:

- ideally within 24 hours of the person being transferred, to ensure that patient safety is not compromised **and**
- in the most effective and secure way, such as by secure electronic communication, recognising that more than one approach may be needed.

NICE NG5 – Recommendation 1.2.3

Health and social care practitioners should share relevant information about the person and their medicines when a person transfers from one care setting to another. This should include, but is not limited to, all of the following:

- contact details of the person and their GP
- details of other relevant contacts identified by the person and their family members or carers where appropriate – for example, their nominated community pharmacy
- known drug allergies and reactions to medicines or their ingredients, and the type of reaction experienced (see the NICE guideline on drug allergy)
- details of the medicines the person is currently taking (including prescribed, over-the-counter and complementary medicines) – name, strength, form, dose, timing, frequency and duration, how the medicines are taken and what they are being taken for
- changes to medicines, including medicines started or stopped, or dosage changes, and reason for the change

- date and time of the last dose, such as for weekly or monthly medicines, including injections
- what information has been given to the person, and their family members or carers where appropriate
- any other information needed – for example, when the medicines should be reviewed, ongoing monitoring needs and any support the person needs to carry on taking the medicines. Additional information may be needed for specific groups of people, such as children.

Patient held medicines record

NICE NG5 – Recommendation 1.2.4

Health and social care practitioners should discuss relevant information about medicines with the person, and their family members or carers where appropriate, at the time of transfer. They should give the person, and their family members or carers where appropriate, a complete and accurate list of their medicines in a format that is suitable for them. This should include all current medicines and any changes to medicines made during their stay.

Support for older people after hospital discharge

NICE NG5 – Recommendation 1.2.6

Organisations should consider arranging additional support for some groups of people when they have been discharged from hospital, such as pharmacist counselling, telephone follow-up, and GP or nurse follow-up home visits. These groups may include:

- adults, children and young people taking multiple medicines (polypharmacy)
- adults, children and young people with chronic or long-term conditions
- older people.

4.3.3 Current UK practice

Discharge information to community pharmacies

The Royal Pharmaceutical Society has designed a toolkit[6] to facilitate referral of patients from hospital to the community pharmacist either for pharmaceutical consultation post-discharge, or to ensure changes to a person's medicines are

[6] Royal Pharmaceutical Society. Hospital referral to community pharmacy

known and acted upon in order to improve medicines safety and efficacy when they return to their home. No information is available about the current use of this toolkit.

The East Lancashire Hospitals Trust will soon start the Refer to Pharmacy scheme[7] which aims to allow hospital pharmacists and pharmacy technicians to refer patients directly to their community pharmacist for free NHS services such as the New Medicine Service or a Discharge Medication Review. It is expected that 60-80 patients will be referred daily.

Timely and accurate sharing of information

No information on current practice for this area has been identified.

Patient held medicines record

All Wales Medical Strategy Group was requested to consider the provision of medicines reminder charts in Wales following anecdotal examples of difficulties experienced by patients when discharged from hospital. Consequently, a short questionnaire was sent to hospital pharmacies across Wales to identify both current practice and examples of medicines reminder charts and information leaflets. The findings showed that medicines reminder charts were not routinely provided to patients[8].

The My Medicines project[9], is a child centred project, to improve medicines safety to children with complex conditions, and at the end of life, through the implementation of robust medicines reconciliation and a parent held medicines record. It has resulted in 40 children with complex conditions being offered a hand held paper record of their medicines (produced and validated by clinicians), which they take around with them wherever they go. The My Medicines pilot has proven safety benefits, including probable prevention of serious medicines incidents and promotion of linked governance.

Support for older people after hospital discharge

The Community Pharmacy Future project[10] was created in 2011 by Boots UK, Lloyds Pharmacy, Rowlands Pharmacy and Well. It aims to design pathways for pharmacy services that give patients and carers support for getting the best outcomes from medicines that have been prescribed for long-term conditions. A study[11] found that it helped community pharmacies to make improvements to medicines adherence and quality of life for older patients who are taking multiple medicines, leading to reductions in falls and better medicines optimisation.

[7] East Lancashire Hospitals NHS Trust. Refer to pharmacy
[8] All Wales Medicines Strategy Group. Medicine reminder chart
[9] Developing and implementing a parent held medicines record for children with complex conditions
[10] http://www.communitypharmacyfuture.org.uk/
[11] http://www.communitypharmacyfuture.org.uk/pages/newspage_250368.cfm

A stakeholder provided information about the Exeter Pharmacy Service which offers a service to vulnerable older adults with comorbidities in their own homes. According the information provided, the service has recently been subject to an evaluation audit which showed that over a nine month period 346 patients were referred to the service. 79% of those patients were unable to visit their GP surgery or community pharmacy for a medication review at the time of referral.

4.4 Patient involvement

4.4.1 Summary of suggestions

Self-management plan

Stakeholders suggested that specific patient groups would benefit from self-management plans in the context of documented care plans. It was suggested this would improve communication between care providers and enable patients to be informed about the role and importance of medication, side effects and are able to self-manage their condition.

Patient involvement in decision-making

Stakeholders suggested that health professionals should discuss medication with patients as this can increase the patients' knowledge about their medicines and help to improve levels of medication adherence.

Stakeholders suggested that patients should be given the opportunity to be involved to decision-making about their condition. Involving patients in decision-making can empower them to manage their condition and improve health outcomes. Stakeholders suggested that this can be done with the use of patient decision aids which can offer a structured approach to consultations, address time constraints in the clinical setting and avoid elements of overly directive behaviours by healthcare practitioners.

Clinical decision support applications

Stakeholders highlighted the need locally to register and manage applications used for medicines-related clinical decision support. Those applications are used by prescribers to make a joint-decision with the patient on the choice of medication and dosage regimens.

4.4.2 Selected recommendations from development source

Table 7 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 7 to help inform the Committee's discussion.

Table 7 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Self-management plan	**Self-management plans** NICE NG5 Recommendation 1.5.1 NICE NG5 Recommendation 1.5.2

Patient involvement in decision-making	**Patient decision aids used in consultations involving medicines** NICE NG5 Recommendation 1.6.1 NICE NG5 Recommendation 1.6.2 NICE NG5 Recommendation 1.6.4
Clinical decision support applications	**Clinical decision support** NICE NG5 Recommendation 1.7.2

Self-management plan

NICE NG5 Recommendation 1.5.1

When discussing medicines with people who have chronic or long-term conditions, consider using an individualised, documented self-management plan to support people who want to be involved in managing their medicines. Discuss at least all of the following:

- the person's knowledge and skills needed to use the plan, using a risk assessment if needed
- the benefits and risks of using the plan
- the person's values and preferences
- how to use the plan
- any support, signposting or monitoring the person needs.

Record the discussion in the person's medical notes or care plan as appropriate.

NICE NG5 Recommendation 1.5.2

When developing an individualised, documented self-management plan, provide it in an accessible format for the person and consider including:

- the plan's start and review dates
- the condition(s) being managed
- a description of medicines being taken under the plan (including the timing)
- a list of the medicines that may be self-administered under the plan and their permitted frequency of use, including any strength or dose restrictions and how long a medicine may be taken for

- known drug allergies and reactions to medicines or their ingredients, and the type of reaction experienced (see the NICE guideline on drug allergy)
- arrangements for the person to report suspected or known adverse reactions to medicines
- circumstances in which the person should refer to, or seek advice from, a health professional
- the individual responsibilities of the health professional and the person
- any other instructions the person needs to safely and effectively self-manage their medicines.

Patient involvement in decision-making

NICE NG5 Recommendation 1.6.1

Offer all people the opportunity to be involved in making decisions about their medicines. Find out what level of involvement in decision-making the person would like and avoid making assumptions about this.

NICE NG5 Recommendation 1.6.2

Find out about a person's values and preferences by discussing what is important to them about managing their condition(s) and their medicines. Recognise that the person's values and preferences may be different from those of the health professional and avoid making assumptions about these.

NICE NG5 Recommendation 1.6.4

In a consultation about medicines, offer the person, and their family members or carers where appropriate, the opportunity to use a patient decision aid (when one is available) to help them make a preference-sensitive decision that involves trade-offs between benefits and harms. Ensure the patient decision aid is appropriate in the context of the consultation as a whole.

Clinical decision support applications

NICE NG5 Recommendation 1.7.2

Organisations should ensure that robust and transparent processes are in place for developing, using, reviewing and updating computerised clinical decision support systems.

4.4.3 Current UK practice

Self-management plan

No information on current practice for this area has been identified.

Patient involvement in decision-making

In the inpatient survey 2014[12] 10% of respondents said they were not involved as much as they wanted to be in decisions about their care and treatment and 20% said that 'not enough' information about their condition or treatment was given to them.

The Kings Fund paper Making shared decision-making a reality[13] reports that shared decision-making is not yet the norm with at least half of patients in hospital wishing to have more involvement about decisions in their care. The same paper states that clinicians think that they involve patients more than they actually do.

Clinical decision support applications

No information on current practice for this area has been identified.

[12] Care Quality Commission. National results from the 2014 inpatient survey
[13] King's Fund Making-shared-decision-making-a-reality-paper-Angela-Coulter-Alf-Collins-July-2011_0.pdf

4.5 Models of organisational and cross sector working

4.5.1 Summary of suggestions

Multidisciplinary approach

Stakeholders suggested a multidisciplinary team approach to improve patient outcomes in the care of people with long-term conditions who use multiple medicines .

4.5.2 Selected recommendations from development source

Table 8 below highlights a recommendation that has been provisionally selected from the development source that may support potential statement development. It is presented in full after table 8 to help inform the Committee's discussion.

Table 8 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Multidisciplinary approach	**Models of organisational and cross sector working** NICE NG5 Recommendation 1.8.1

Multidisciplinary approach

NICE NG5 Recommendation 1.8.1

Organisations should consider a multidisciplinary team approach to improve outcomes for people who have long-term conditions and take multiple medicines (polypharmacy).

4.5.3 Current UK practice

Multidisciplinary approach

No information on current practice for this area has been identified.

4.6 Additional areas

Summary of suggestions

The improvement areas below were suggested as part of the stakeholder engagement exercise. However they were felt to be either unsuitable for development as quality statements, outside the remit of this particular quality standard referral or require further discussion by the Committee to establish potential for statement development.

There will be an opportunity for the QSAC to discuss these areas at the end of the session on 31st July 2015.

Specific conditions

Stakeholders made suggestions that relate to medicines for specific conditions, such as diabetes, heart failure, stroke, dementia, chronic obstructive pulmonary disease etc. The development source (NICE NG5) does not have recommendations that cover those specific areas in terms of medicines optimisation. Also, there are specific quality standards on those conditions.

Antibiotics

Stakeholders suggested the reduction of antibiotic use. This area is not contained within the development source and there will be an antimicrobial stewardship quality standard which will cover this area.

Prescribing

Stakeholders made suggestions about prescribing. More specifically, they said there is a need to standardise prescribing across the country, increase the uptake of repeat dispensing and electronic prescribing service, and consider alternative methods of prescribing. The development source does not have recommendations for these specific areas.

Anticoagulation services

A stakeholder suggested the move of anticoagulant services to community locations that improve access, convenience and speed for patients while reducing costs for the NHS. The development source does not cover this area.

Appendix 1: Key priorities for implementation (NG5)

Recommendations that are key priorities for implementation in the source guideline and that have been referred to in the main body of this report are highlighted in grey.

Systems for identifying, reporting and learning from medicines-related patient safety incidents

- Organisations should consider using multiple methods to identify medicines-related patient safety incidents – for example, health record review, patient surveys and direct observation of medicines administration. They should agree the approach locally and review arrangements regularly to reflect local and national learning. [recommendation 1.1.1]

Medicines-related communication systems when patients move from one care setting to another

- Health and social care practitioners should share relevant information about the person and their medicines when a person transfers from one care setting to another. This should include, but is not limited to, all of the following:
    - contact details of the person and their GP
    - details of other relevant contacts identified by the person, and their family members or carers where appropriate – for example, their nominated community pharmacy
    - known drug allergies and reactions to medicines or their ingredients, and the type of reaction experienced (see the NICE guideline on drug allergy)
    - details of the medicines the person is currently taking (including prescribed, over-the-counter and complementary medicines) – name, strength, form, dose, timing, frequency and duration, how the medicines are taken and what they are being taken for
    - changes to medicines, including medicines started or stopped, or dosage changes, and reason for the change
    - date and time of the last dose, such as for weekly or monthly medicines, including injections
    - what information has been given to the person, and their family members or carers where appropriate
    - any other information needed – for example, when the medicines should be reviewed, ongoing monitoring needs and any support the

person needs to carry on taking the medicines. Additional information may be needed for specific groups of people, such as children.

[recommendation 1.2.3]

- Consider sending a person's medicines discharge information to their nominated community pharmacy, when possible and in agreement with the person. [recommendation 1.2.5]

Medicines reconciliation

- Organisations should ensure that medicines reconciliation is carried out by a trained and competent health professional – ideally a pharmacist, pharmacy technician, nurse or doctor – with the necessary knowledge, skills and expertise including:
    - effective communication skills
    - technical knowledge of processes for managing medicines
    - therapeutic knowledge of medicines use.

[recommendation 1.3.5]

Appendix 2: Suggestions from stakeholder engagement exercise – registered stakeholders

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
1	Royal Pharmaceutical Society	Key area for quality improvement 6 Measurement, collection and analysis of data	Measurement is essential – you need to be able to measure what you are doing and analyse it to see if you are making a difference. The use of this data can be a key enabler to system change.	Whilst we have the medicines optimisation dashboard there needs to be better measures linked to patient outcomes to support the medicines optimisation agenda. Utilising data, combined with the right analytical skills and modelling, can provide a holistic view of the delivery of care – nationally, regionally, even to the individual patient - and provide actionable insights for change and improvements in efficiency and patient outcomes.	Medicines optimisation dashboard, NHS England
2	NHS England	Key area for quality improvement 1 Improvement in the quality and frequency of reporting for patient safety incidents concerning medicines	Reporting of incidents with sufficient quality of information leads to learning and understanding as to root causes and potential system barriers to avoid future events	Morbidity and mortality in the NHS would be reduced with fewer medication errors. The quality standard of reported harm/no harm incidents in the current Medicines Optimisation dashboard (V2.0) is collected and made available by the National Reporting and Learning system.	Royal Pharmaceutical Society Medicines Optimisation: Helping patients to make the most of medicines, 2013;(May) http://www.rpharms.com/promoting-pharmacy-pdfs/helping-patients-make-the-most-of-their-medicines.pdf
3	The Royal College of Paediatrics and Child Health	Key area for quality improvement 1	Reporting of adverse events	Few paediatricians report medication adverse events through Yellow card scheme	
4	SCM – 1	Education	NICE Medicines Optimisation NG5 1.1.8 Organisations and health professionals should consider applying the principles of	There is regional variation. In many localities (England & Wales) therapeutics education for prescribers has diminished considerably and where present can be	Wales Audit Office 2013 http://www.audit.wales/searchresults?query=prescribing

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
			the PINCER intervention to reduce the number of medicines-related patient safety incidents, taking account of existing systems and resource implications. These principles include: -using information technology support -using educational outreach with regular reinforcement of educational messages -actively involving a multidisciplinary team, including GPs, nurses and support staff -having dedicated pharmacist support -agreeing an action plan with clear objectives -providing regular feedback on progress -providing clear, concise, evidence-based information.	focused on short-term cost-based issues. The lack of emphasis on quality, safety and best practice can leave a void. This can be readily filled by less independent sources of teaching. The need to reaching the multidisciplinary team to ensure a coordinated approach has been recognised for many years but is not routinely occurring. For example district nurses are often a first point of contact for many older people but in my experience, are not well represented in therapeutic committees or multidisciplinary therapeutics education.	
5	SCM – 1	1.1.9 Consider using a screening tool – for example, the STOPP/START[3] tool in older people – to identify potential medicines-related patient safety incidents in some groups. These groups may include: adults, children and young people taking multiple medicines	NICE Medicines Optimisation NG5 Rec 1.1.9 Consider using a screening tool …These screening tools help to identify patients most likely to benefit from medicines optimisation. Many of the STOPP criteria remain valid and still occur in practice e.g. people can be left on treatment dose of proton pump inhibitors instead of being stepped down.	These are fundamental medicines interventions which if not undertaken can cause harm and put patients at risk of hospital admission.	Various companies are developing software to support this recommendation.

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
		(polypharmacy) adults, children and young people with chronic or long-term conditions			
6	Tower Hamlets CCG	Additional developmental areas of emergent practice 2	strategies for deprescribing of medicines of marginal benefit and increased risk of harm	Existing STOP and other schemes not validated or adequately tested in RCTs of reduction and outcomes and reduction should be related to the drug rather than simply the number (tho its true the number is relevant ie >5 medications	Lots
7	NHS England	Key area for quality improvement 2 Active involvement of the Medication Safety Officer (MSO) in local and national actions to minimise medication error	A stage 3 Alert on NHS England created a raft of MSOs in NHS England. They are responsible for the quality and frequency of incident reporting. Without their engagement it is less likely that Key area for quality improvement 1 will be realised.	The NHS needs a driving force for the safety aspect of MO. The MSO provides a fully recognised workforce of 370 in all sectors of healthcare including the Independent However; we need to be assured that MSOs are fully engaged and effective. Having a quality standard that ensures all organisations; have an MSO, can demonstrate engagement with the MSO network (a requirement of the Alert), are fully engaged in learning from local errors and are leading implementation of system changes that creat barrierd against errors are all readily identified actions against which standards can be developed.	Alert NHS England Stage Three: Directive Improving medication error incident reporting and learning http://www.england.nhs.uk/wp-content/uploads/2014/03/psa-med-error.pdf
8	Northern Devon NHS Healthcare Trust	Key area for quality improvement 3 1.1 Systems for identifying, reporting and learning from medicines related	Pharmacists to take responsibility for the accuracy of the therapeutic record (on the NHS spine) by receiving requests for repeat prescriptions from patients.	Pharmacists are very good at reconciling therapy. There is a projected short fall in the number of GPs to sign prescriptions.	

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
		patient safety incidents 1.2 Medicines-related communication systems when patients move from one care setting to another 1.3 Medicines reconciliation 1.4 Medication review 1.5 Self-management plans 1.6 Patient decision aids used in consultations involving medicines 1.7 Clinical decision support 1.8 Medicines-related models of organisational and cross-sector working	Pharmacists to be paid for this activity, to avoid the perverse financial incentive to dispense as many drugs as possible in the present community pharmacy contract.	Use of non-medical prescribers. Future scenario – Care closer to home It is 28th January 2020 and Jean Smith aged 78 years is thinking of re-ordering her medicines. Jean has Parkinson's disease, mild heart failure and COPD and is housebound in a council flat. In her living room there is a 42" flat screen "Smart" Television, supplied by Health and Social Care "Telecare", in order to give Jean access to a virtual day care centre via Skype, where she can engage with her new friends, including doing the arm-chair exercise class. Jean uses her remote to highlight and click on the Medicines icon on the TV desktop. This defaults to the holistic Medicine Reminder Chart (MRC) of her complete therapy. Jean often chooses to simplify this presentation to the list of medicines to be taken at a given real time of day, which provides an alarm and talking labels to prompt her to take her medicines. The visible LCD display boldly names the day of	

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
				the week and the time of the day. From the MRC, she can point and click on the medicines that she believes that she needs. To inform the patient and the Health care professionals (HCPs) about adherence to the medicines, there are a number of mechanisms to manage the quantities of the medicines. On an integrated medicine supply record, all prescribed medicines are tracked in real time as to where they are; still at the surgery, in the pharmacy or delivered to the patient. During Jean's recent in-patient stay when she was supplied with medicines from the hospital, rather than her own supply, allowance is made for this change, including the additional supplies from the hospital at discharge. There is a virtual tablet count, reducing the total remaining quantity each day, assuming 100% compliance . There is an electronic App in the lid of each dispensing container that records when the product is open, assuming subsequent consumption of the correct dose. Finally the Carers who visit Jean twice daily to provide social care, scan the bar code on each medicine product after they have prompted Jean to take the medicines, in order to update the Medicine Administration record (MAR) that is one	

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
				presentation on screen of the medicine Record. Jean herself can also record her own self-administration. So Jean should have a number of mechanisms to determine the number of each medicine that she would expect to have left. The nice man Gareth at the pharmacy has asked Jean to actively count the number of tablets remaining each month and to enter this data onto the screen via the remote, before she re-orders the medicines. Jean discovers that she still has 21 of one of her daily tablets which tells her and the HCP that she must have missed taking them on up to 7 days of that month. Jean feels a bit guilty, but she is happy to talk this through with Gareth. The pharmacy could potentially dispense an exact number of tablets to synchronise supplies, however this is not compatible with original pack dispensing. Arguably for simple generic medicines manipulating small numbers of tablets in a pharmacy may not be cost effective. However if this information could be transmitted back to the factory where the medicine was originally packaged (for this named patient) then quantities could be more flexible.	

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
				For another medicine she seems very short and she knows Gareth will encourage her to look around the flat, so she goes hunting and discovers a quantity in a dispensing bag that has been put down besides the kitchen table, together with some other items. Yet another item she can't find anywhere and feels she may have lost them, which she will have to talk to Gareth about. Looking at the screen while re-ordering the medicines, prompts Jean to click the link onto additional information about her most recently started medicine. There is lots of written text in plain English about this particular product, what it looks like and what it is for. There are also some interesting "Cates plots" of smiley faces that give her a sense of the relative risk about the side effects. She has not had any problems so far. Regarding the inhalers that she takes for her COPD there is a link to U-tube video clip of how to use the inhalers as well as how to use her eye-drops. This instills confidence in Jean to know that there are always these reminders available to look at if she has any doubts about how to use these devices. Jean also takes the opportunity to write on the MRC her perception of what this new	

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
				medicine is for because the original MRC describes the Gabapentin for preventing seizures, whereas her GP said that it was to prevent nerve pain. It is a bit convoluted to make this change because the record required her to confirm who was making this change as an audit trail, however she perseveres. When Jean is ready to send the completed order she links to the "shopping-basket" page and submits the requested order on-line. The information that Jean has sent including the change of purpose of the Gabapentin, influences the drop-down menu for the drug indication, which has the most popular choice at the top. This represents an important mechanism for populating the indications directory for the less usual drugs, which would be informed by the users themselves for personal/cultural or linguistic reasons. This third month Gareth has asked Jean to contact him by Skype, so that they can work together to update the full MRC, so that he can take responsibility for the "accuracy" of the record (which is a mechanism by which he gets paid). Gareth is always very friendly and Jean can confirm the change that she made to the Gabapentin and discuss her	

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
				missing taking one of her tablets and the ones she can't find. Jean has also stopped taking one medicine this month, agreed with the GP over the phone, because she was having terrible side effects and Gareth is able to capture this change, the reason why the medicine was stopped and record the drug as an allergy/interaction, to inform future prescribing. With monitoring of outcomes, this record represents a pharmaceutical care plan or care pathway for patient centred and epidemiological analysis	
9	Astellas Pharma Ltd	Reducing medicines-related patient safety incidents due to polypharmacy	Improved learning from medicines-related patient safety incidents is critical to improving clinical practice and minimising patient harm.	Evidence suggests that polypharmacy increases the risk of inappropriate prescribing and is associated with adverse events, given that it is often the result of input from a range of specialities and involves more extensive medicines usage . Reducing patient harm should therefore be central to the medicines optimisation quality standard.	The King's Fund: Polypharmacy and medicines optimisation. http://www.kingsfund.org.uk/publications/polypharmacy-and-medicines-optimisation NHS Specialist Pharmacy Service: Seven steps to managing polypharmacy. http://www.nhsiq.nhs.uk/media/2612222/polypharmacy_and_medication_review_-_seven_steps_-_vs2_jan_2015__nb_.pdf
10	British HIV Association	Key area for quality improvement 2	Appropriate screening of prescriptions by competent		

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
	(BHIVA) and HIV Pharmacy Association (HIVPA)		pharmacists particularly in specialised areas such as oncology, transplant patients and HIV, etc., including expert knowledge of drug interactions¶		
11	British HIV Association (BHIVA) and HIV Pharmacy Association (HIVPA)	Appropriate clinical screening of complex prescriptions including drug interaction	Many specialised areas of medicine have complex prescribing patterns and complex drug interactions which require specialist pharmacist input to ensure safe and accurate prescribing particularly when the patient is seen by many prescribers	It is a key area to ensure someone is a key person to link all the polypharmacy that is an increasing risk as the population ages. These clinical screens were originally discussed in the 2002 "Room for Review", in the 2008 NPC "A Guide to Medication Review" and the 2012/13 Quality and Outcomes Framework guidance for GMS contract.	British HIV Association (BHIVA) and HIV Pharmacy Association (HIVPA)
12	Association of the British Pharmaceutical Industry	Key area for quality improvement 1Evidence Based Choice of Medicine	Optimising the use of medicines to ensure patients gain the best possible outcomes from their treatments must start at the point of medicine choice and prescribing. Ensuring that the medicine prescribed has an evidence base to demonstrate its clinical and cost effectiveness as shown through a robust appraisal process, must be adopted routinely as best practice for clinicians .	With increasing pressures within the health service, medicines optimisation often focuses narrowly on the use of the medicine by the patient ie adherence, waste, safety issues. This however does not take into account that the initial choice of medicine can have a significant determination on outcomes. The principles of medicines optimisation defined by the Royal Pharmaceutical Society in their guidance Helping Patients Make The Most of Their Medicines, sets out 4 core principles of medicines optimisation, underpinned by measurements and centred on a patient-centred approach to care; Understanding the patient's experience Using the appropriate evidence based choice of	http://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-technology-appraisal-guidance http://www.rpharms.com/promoting-pharmacy-pdfs/helping-patients-make-the-most-of-their-medicines.pdf https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/282523/Pharmaceutical_Price_Regulation.pdf

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
				medicine [first time] Ensuring medicine use is as safe as possible Embedding medicines optimisation principles and practices into routine practice By adopting an evidence based approach to the choice of medicine, whereby the medicine has been appraised for its clinical and cost effectiveness, there is a potential reduction of risk of prescribing a medicine that may not provide the beneficial outcomes expected and consequently delay recovery/improvement in patient care and increase unnecessary medicines taking. The most costly medicine to the NHS is the one that either isn't taken as intended or doesn't produce the benefits as expected. By using the right evidence based medicine first time, resources attributable to waste and poor outcomes can be reduced. The NICE technology appraisal process was introduced to help to standardise access to technologies across the country and to provide a robust system of review of the clinical and cost effectiveness of technologies Both industry and the NHS have a shared goal to promote appropriate and evidence-based prescribing that will lead to a positive outcome for patients. The 2014 Pharmaceutical Price Regulation Scheme (PPRS) agreement is a five-year agreement between industry and government where industry has agreed to	

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
				underwrite the growth in branded medicines, within agreed boundaries through direct industry payments to the Department of Health – a guarantee that enables prescribing decisions to be based on clinical factors rather than on a need to cut costs. We have completed 15 roadshows held in partnership with NHSE across all the Academic Health Science Networks. At all these roadshows ABPI have shared the platform with NHSE, speaking to NHS medicines management pharmacists, commissioners, clinicians and finance people. A key message has been that £800 million from PPRS payments was included in NHSE allocation for 2014-15. NHSE are making it very clear that without this, baseline funding would be less. The programme then challenges the NHS to think more widely than cost containment as they make decisions on how to optimise medicines' use. The joint PPRS-Medicines Optimisation programme with NHS England addresses these issues by putting the patient at the centre. Ultimately, issues around waste, incorrect use, access to new medicines, and evidence-based prescribing all share this one goal: to ensure the right patients get the right choice of medicine at the right time. That is what 'medicines optimisation' is all about.	

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
13	SCM – 2	Key area for quality improvement 2 Sending discharge information to Community Pharmacies	NICE NG5 recommends sending a patient's medicines discharge information to their nominated community pharmacy when possible, with the patient's agreement	Many patients have repeat prescription pre-dispensed at their pharmacy, waiting for them to collect. If the pharmacy is not aware that the patient has been admitted to hospital, the patient may well receive the medicines which should have been stopped or have a dose change. Also, if the community pharmacist is aware of that a patient has recently been discharged from a hospital, they can provide help and advice to the patients, e.g. via the New Medicines Service (NMS).	Royal Pharmaceutical Society. Hospital referral to community pharmacy: An innovators' toolkit to support the NHS in England London: Royal Pharmaceutical Society; 2014. Available from: http://www.rpharms.com/support-pdfs/3649---rps---hospital-toolkit-brochure-web.pdf. NHS Employers. Community pharmacy services: Guidance for hospitals London: NHS Employers; 2012. Available from: http://psnc.org.uk/wp-content/uploads/2013/07/Community_pharmacy_services_-_guidance_for_hospitals_January_2012.pdf.
14	SCM – 3	Key area for quality improvement 2	Consider sending a person's medicines discharge information to their nominated community pharmacy, when possible and in agreement with the person.	It is important that changes to a patients medicines are communicated to their community pharmacy as well as their GP. This would help reduce the risk of prescribing errors post discharge from secondary care.	SCM – Nigel Westwood
15	SCM – 4	Key area for quality improvement 1Timely	This is one of the recommendations in NG5: For all	It is a well-established area of medicines error with potential cause of harm to	GMC Prescribing Guidance 2013 Sharing

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
		sharing of information about a person's medicines in transfers of care	care settings health & social care professionals should proactively share complete and accurate information about medicines ideally within 24 hours of care transfer in the most effective & secure way . Also Health and social care practitioners should discuss relevant information about medicines with the person…at the time of transfer. They should give the person…a complete and accurate list of their medicines in a format that is suitable for them. This should include all current medicines and any changes to medicines made during their stay	patients (cf reports in supporting information). Evidence of interventional benefit is of low quality (cf NG5), but the GDG made the recommendations none the less, to begin to address to issue. There appears to be no agreed standard documentation, processes, time limits or level of patient involvement to follow in sharing information on transfers of care.	information with colleagues RPS Guidance 2011 Keeping Patients Safe 2012
16	National Rheumatoid Arthritis Society (NRAS)	1 Movement from one care setting to another	The passing of accurate current medication/contra indications details is essential for efficacy and safety. In the case of RA medication history and disease response is vital where changes and step-up to biologic therapy are required and this should be shared with and known by the patient.	Holistic care and treatment plans, agreed via shared decision making, provided on paper or electronically can ensure this happens but as yet only a minority of MSK patients have these. Surveys NRAS helped conduct with CCGs in Sussex, Wilts and Bath & NE Somerset showed less than 20% of patients had even been offered.	NICE RA guidance NHSE guidance on care for people with LTCs NAO Report 2009 on services for people with RA. Relevant to sections : 1.2.1, 1.2.3, 1.2.4,1.3.6 and 1.3.7 of Guidelines (NG5)
17	Royal Pharmaceutical Society	Key area for quality improvement 5 Transfer of care	When patients move between care settings they often experience problems with their medicines, often due to poor	Whilst medicines reconciliation does mainly occur on hospital admission there should be a similar process on discharge back into primary care.	There is much evidence to demonstrate that problems occur with medicines when a patient is transferred

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
			information provision, confusion and lack of seamless systems.		between care settings, some of this is summarised in the RPS guidance 'Keeping patients safe when they transfer between care providers: Getting the medicines right' which can be found at http://www.rpharms.com/previous-projects/getting-the-medicines-right.asp?
18	SCM – 3	Key area for quality improvement 1	Health and social care practitioners should share relevant information about the person and their medicines when a person transfers from one care setting to another	In my experience and in talking to other patients, it is clear that changes to medicines in one care setting are sometimes not passed to the next care team and are often not communicated effectively to the patient.	
19	SCM – 2	Key area for quality improvement 1Information sharing across care interfaces	NICE NG5 recommends that complete and accurate information about medicines should be shared between health and social care practitioners when a patient moves from one care setting to another, including transfers within an organisation (e.g. between wards), or from one organisation to another (e.g. on admission or discharge). Effective communication should take place within 24 hours of the transfer	The former National Patient Safety Agency (NPSA) highlighted the risk of poor communication when patients move between care settings. This can lead to errors, delay or omission of medicines. The last NPSA report was issued in 2009. 6 years on, information sharing between primary and secondary care is still poor in both the quality and the timing. The same problem occurs in the Out of Hours service in primary care. OOH GPs do not have access to the patients' full medical record. Summary Care Record is available if the	NPSA. Safety in Doses - Improving the use of medicines in the NHS London: National Patient Safety Agency; 2009. Available from: http://www.nrls.npsa.nhs.uk/resources/?entryid45=61625.

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
				patients have given prior consent but for patients who have not consented, OOH clinicians will have to do their best without the information.	
20	SCM – 5	Medicines-related communication systems when patients move from one care setting to another	There is a substantial body of evidence that shows when patients move between care providers the risk of ¶miscommunication and unintended changes to medicines ¶remain a significant problem. See NICE guidance (NG5)	Although guidance has been published by the Royal Pharmaceutical Society, this is not well-embedded in practice and awareness in other healthcare professions is low. There are numerous local initiatives to address this issue and it would benefit from a national quality standard for a core common data set and process.	http://www.rpharms.com/current-campaigns-pdfs/rps-transfer-of-care-final-report.pdf
21	SCM – 1	Patient-held medicines record	Medicines Optimisation NG5 1.2.4 Health and social care practitioners should discuss relevant information about medicines with the person, and their family members or carers where appropriate, at the time of transfer. They should give the person, and their family members or carers where appropriate, a complete and accurate list of their medicines in a format that is suitable for them. This should include all current medicines and any changes to medicines made during their stay.	Empowers patients Easier for patients to keep up to date with latest medication. Very time consuming to handwrite, with risk of errors. A small software development could support patients significantly. With electronic discharge summaries it is a small step to build in the option to print out a patient-held copy of the medicines taken at the point of discharge or in primary care. (it should include what the medicine is for & when to take using appropriate terminology)	: http://www.awmsg.org/docs/awmsg/medman/Patient%20Information%20at%20the%20Point%20of%20Discharge%20-%20Medicine%20Reminder%20Chart.pdf
22	Boots UK Ltd	Support for older people using multiple medicines	Tailored pharmacist-led support for older patients using multiple	Patients with long-term conditions take up the majority of NHS spending but they are	The Community Pharmacy Future Four or More

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		(polypharmacy)	medicines has been shown to improve quality of life and reduce the number of falls. This service can be integrated with other health and social care support for older patients as part of an holistic Pharmacy Care Plan that helps patients achieve self-identified health goals.	offered limited on-going support in primary care settings. Delivering tailored support to patients in pharmacies at the time when they are collecting prescribed medicines allows pharmacists to identify and address other health and social issues. Support can be linked to other NHS services, including Medicines Use Reviews, New Medicines Service and flu vaccinations. Regular reinforcement of key messages and health advice/brief interventions helps support ongoing behaviour change. Pharmacy teams are also well placed to detect early changes in health status linked to seasonal changes ("Under the weather") or poor adherence.	Medicines Support service demonstrated clear benefits for patients and savings for the NHS http://onlinelibrary.wiley.com/doi/10.1111/ijpp.12196/abstract http://www.communitypharmacyfuture.org.uk/ NHS England "Under the weather" publicity campaigns encouraging older people and carers to use community pharmacies earlier ran in January/February and March/April 2015 in association with "Choose well" campaigns on NHS Choices.
23	Northern Devon NHS Healthcare Trust	Key area for quality improvement 1 Medicines reconciliation Medication review	Exeter Cluster Pharmacy Service provides a patient-centred service to vulnerable older adults with comorbidities in their own homes. The service has recently been subject to an evaluation audit. Background: The cluster pharmacy service is based within an integrated community health and social care team, providing a	Medicines in the community are complicated. Patients do not understand their medicines. Method: Activity data, recorded on the trust's internal database, was analysed both retrospectively (Feb-July 2014) and prospectively (Sept-Dec 2014). Data included details of referral type and source, patient contacts made, subsequent interventions and outcomes. The prospective analysis collected additional detailed information about patient	Short-listed for 2015 HSJ awards; "Value and Improvement in Medicines Management" Posters to RPS & UKCPA autumn conferences Results: Over the nine month combined data analysis period 346 patients were referred to the cluster pharmacy service,

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			citywide domiciliary pharmacy service. It consists of three pharmacists (1.8wte) and two technicians (0.8wte). The service aims to optimise medication for frail elderly patients at risk of medicines related harm, reducing harm and preventing hospital admission. It provides level 3 clinical medication review, medicines reconciliation and advice in the home. The majority of referrals come from GPs and the community health and social care team.	demographics, clinical activity and outcomes. Potential admissions avoided were recorded and the resulting data independently validated using NPSA and RIO risk assessment tools. Patient and professional stakeholder surveys were also undertaken. This service evaluation did not require ethics approval	resulting in 599 patient contacts. 58% of patients referred were aged 80 years old or over. Prospective data analysis showed that 79% of patients were unable to visit their GP surgery or community pharmacy for a medication review at the time of referral (n=112). Patients were pharmaceutically complex: 54% were prescribed ten or more medicines and 85% had an impairment affecting their ability to manage medicines. Cluster pharmacy input resulted in medication changes for 57% of patients. 79% of proposed medication changes were accepted by GPs and a further 12% accepted with modifications. Patient and professional stakeholders rated the service positively, with the quality of the service being rated positively by 100% of

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					patients.
24	Northern Devon NHS Healthcare Trust	Key area for quality improvement 2 Systems for identifying, reporting and learning from medicines related patient safety incidents Medicines-related communication systems when patients move from one care setting to another Medicines reconciliation Medication review Self-management plans Patient decision aids used in consultations involving medicines Clinical decision support Medicines-related models of organisational and cross-sector working	Exeter Cluster Pharmacy Team (2.6wte) have evidence of net saving of £100,000 annually in prevented hospital admissions	The service has a positive impact on patient safety: risks for patients are reduced and a significant number of hospital admissions and their associated costs are avoided. The evaluation supports the need to ensure proactive pharmaceutical care is available to the frail elderly to optimise medicines use and prevent hospital admissions.	Risk of harm from medicines in the prospective data analysis was shown to be high or extremely high in 76% of patients at referral, reducing to 21% at final contact (assessed using the NPSA risk scoring tool). The retrospective and prospective analyses demonstrated admission avoidance as a result of 53 patient contacts (n=441) and 27 contacts (n=118) respectively. Extrapolating this over a year gives an average of 108 admissions avoided. This equates to a cost saving of £240,000 per year, based on an admission cost of £2230 for patients aged 65 or above at the local acute trust.
25	Northumbria Healthcare NHS Foundation Trust	Medicines optimisation in a patient's own home	Current standards are targeted at healthcare settings. A large population of very vulnerable patients are managed in their own home.	Standards of best practice in the use of medicines are equally relevant to patients in their own homes. Indeed some of the greatest challenges exist in the safe management of medicines within the setting	Much evidence exists that demonstrates the lack of access to care/services of these hard to reach patients e.g. at a very

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				of the patient's own home.	basic level, MUR is only routinely funded if undertaken in a health care setting. Note: to be clear, medicine optimisation goes way beyond MUR.
26	SCM – 2	Key area for quality improvement 3 Medicines Reconciliation	In an acute setting, NICE NG5 recommends that medicines reconciliation should be carried out within 24 hours or sooner when a patient moves from one care setting to another. This may happen on more than one occasion during a hospital stay, i.e. on admission, during transfer between wards and on discharge. In primary care, NICE NG5 recommends that medicines reconciliation should be carried out for all patients who have been discharged from hospital or another care setting. This should happen as soon as possible, before a prescription or new supply of medicines is issued, and no more than 1 week of the GP practice receiving the information	Historically the process of medicines reconciliation has focused on admission to hospital. However, it is widely acknowledged that medicines reconciliation is a wider safety issue than just at hospital admission. Medicines reconciliation is usually carried out by pharmacists and pharmacy technicians. This should be a team approach. NICE NG5 states that medicines reconciliation should be carried out by a pharmacist, pharmacy technician, nurse or doctor with effective communication skills, technical knowledge of processes for managing medicines and therapeutic knowledge of medicines use.	National Prescribing Centre. Medicines Reconciliation: A Guide to Implementation Liverpool: National Prescribing Centre; 2007. Available from: https://www.nicpld.org/courses/hospVoc/assets/MM/NPCMedicinesRecGuideImplementation.pdf.
27	SCM – 4	Key area for quality improvement 2 Medicines reconciliation	Recommendation in NG5: In an acute setting, accurately list all of the person's medicines (including	In 2007, NICE stated 'The key institutional reason behind the absence of medicines reconciliation is the absence of ownership of	GMC Prescribing Guidance 2013 Sharing information with

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		in transfers of care	prescribed, OTC & complementary medicines) and carry out medicines reconciliation within 24 hours or sooner if clinically necessary, when the person moves from one care setting to another. In primary care, carry out medicines reconciliation for all people who have been discharged from hospital or another care setting. This should happen as soon as is practically possible, before a prescription or new supply of medicines is issued and within 1 week of the GP practice receiving the information	the process'. The introduction of the NICE Medicines Reconciliation guidance began a process of formal meds rec in acute care, which was subsequently embedded in NHS England Medicines Optimisation Dashboard. There is still work to be done in this setting, as evidenced in the latest dashboard . In primary care there appears to be no agreed standards for medicines reconciliation. Evidence was moderate to low quality, but showed benefit. It would seem sensible to build on the improvements started in 2007, by increasing ownership, especially in the light of increasing multi-morbidity and polypharmacy.	colleagues RPS Guidance 2011 Keeping Patients Safe 2012 CQC NRLS
28	SCM – 1	Medicines reconciliation within primary care, following discharge	NICE Medicines Optimisation NG5 Rec 1.3.3 In primary care, carry out medicines reconciliation for all people who have been discharged from hospital or another care setting. This should happen as soon as is practically possible, before a prescription or new supply of medicines is issued and within 1 week of the GP practice receiving the information To support medicines reconciliation, avoid inadvertent re-introduction of discontinued	Discrepancies between discharge medication and the next supply of medicine are recognised E.g., Evaluation Of The Discharge Medicines Review Service March 2014 K Hodson et al Practices need to have a clear policy for promptly acting on discharge letters. Discharge letter and associated medicines changes can readily become subsumed within the volume of letters into a practice. (If a GP has been working for 12/13hours+, letters can be viewed as the one task that can be postponed.)	

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			medicines.		
29	SCM – 5	Medicines reconciliation	There is evidence that medicines reconciliation can help identify problems with medicines when patients move from one care setting to another and as a way of prioritising the pharmaceutical needs of individual patients. Medicines reconciliation is recommended in NICE guidance (NG5 replaces PSG001).	In my work with numerous NHS trusts, it is my experience from direct observation that there is significant variation in the way that medicines reconciliation is both undertaken and recorded. It is rarely undertaken more than once during a hospital stay, even when patients move from one ward to another. Discrepancies identified during the process are not always followed up. Reconciliation rarely takes place when patients are transferred back to the care of their General Practitioner.	IH publishes a range of tools to support effective medicines reconciliation http://www.ihi.org/topics/adesmedicationreconciliation/Pages/default.aspx
30	Royal Pharmaceutical Society	Key area for quality improvement 2 Polypharmacy	Reducing inappropriate polypharmacy, particularly in frail, elderly patients, will reduce unplanned admissions and improve the quality of life for these patients	This introduces themes of de-prescribing, 'deeper' medicines clinical reviews, all which relates to the better care of frail, elderly and vulnerable patients. We are disappointed to see that the scope of the process only includes healthcare settings whereas care in patient's home is just as important (if not more so), particularly in supporting independent living.	Kings Fund publication 'Polypharmacy and medicines optimisation: Making it safe and sound' Guthrie et al. BMC Medicine (2015) 13:74. DOI 10.1186/s12916-015-0322-7
31	SCM – 5	Medication review	Medication review is an important opportunity to both identify & resolve problems with a patient's medicines. Medication review is recommended in NICE guidance (NG5) and has previously featured in national service guidelines of older people and	Medication review is not undertaken consistently (no currently agreed national standard exists) and there are few recognised triggers in common use that prompt a review to take place. Contractual levers for reviews in the GP and community pharmacy contracts are not exploited to full effect.	http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/polypharmacy-and-medicines-optimisation-kingsfund-nov13.pdf http://psnc.org.uk/services-commissioning/locally-

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			children. Medication review is a good way of managing problems associated with polypharmacy and to reduce unnecessary prescribing.		commissioned-services/en7-medication-review-full-clinical-review/ http://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/polypharmacy-and-medicines-optimisation-kingsfund-nov13.pdf
32	Astellas Pharma Ltd	Clearly and broadly defining the goals of medication reviews: to improve patient safety, experience and outcomes of care	Effective medicines reviews should focus equally on mitigating the harms associated with medicines use, as well as addressing wider effects in relation to symptom reduction, tolerability, satisfaction, treatment goals and quality of life. Otherwise, there is a risk that the patient does not take the medicine appropriately, or at all, which can not only lead to poorer patient outcomes but also cause medicines waste.	In the absence of a clear statement about the goal of a medicine review, there is a chance that reviews may focus narrowly on reducing adverse events, minimising side effects and reducing non-compliance and medicines wastage. However, as set out in the consultation document, an effective medication review must also support improved patient experience and outcomes. A medication review should therefore equally be based on an informed discussion about which interventions are most likely to reduce symptoms; address patient's needs, goals and concerns (including additional needs and goals that are not already being addressed through existing medication, but could be); and improve outcomes related to experience and quality of life. This can be used to identify whether an alternative treatment could offer additional benefits – such as improved efficacy or tolerability – and may help improve medicines	The King's Fund: Polypharmacy and medicines optimisation. http://www.kingsfund.org.uk/publications/polypharmacy-and-medicines-optimisation

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				adherence, which is an important factor in medicines optimisation.	
33	SCM – 4	Key area for quality improvement 3 Structure of Medication Review	Recommendation in NG5:During review take into account:-views & understanding about medicines-concerns, questions, problems about medicines-all prescribed & non-prescribed medicines - medicine safety, efficacy & use within guidelines-risk factors for ADRs-monitoring .	Although there is a wealth of guidance on how to conduct a medication review, there appears to be no standard method in use, and there is a need for one, to improve the quality and patient benefit from the review, especially where there is multi-morbidity and polypharmacy. Evidence is moderate to low quality, but does show benefit to patients. There is confusion with reviews from other sectors, such as 'Medicines Use Reviews', which are not the same. Reviewing medicines with the patient can improve patient care, and possibly savings where de-prescribing takes place where appropriate.	Good Practice Prescribing Guidance GMC 2013 Polypharmacy & medicines optimisation (King's Fund)
34	Swansea University	Additional developmental areas of emergent practice	I didn't see anything on the monitoring of patients for the known adverse effects of prescribed medicines.	Some 5-8% of unplanned hospital admissions are due to adverse drug reactions (NICE 2015), and most of these would be preventable with more thorough proactive monitoring (reviewed Gabe et al 2011). There is little cost and no risk to nurses taking 10-15 minutes to use a structured monitoring Profile and communicating key findings to pharmacist or prescribers.	Our work has shown that nurse-led patient monitoring can detect problems before they escalate, and enhance care (Jordan et al 2002, 2014, Gabe et al 2014). We've held some discussions with Louise Picton, and it would be good to see this work taken forward.
35	Astellas	Ensuring that medication	To ensure medication reviews	Appropriate training is essential to ensure	Good practice in

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	Pharma Ltd	reviews are undertaken by appropriately trained professionals, and requiring all organisations to have plans in place to meet these training and competency needs	achieve the desired outcomes, professionals must be skilled in how to undertake reviews sensitively and effectively. This requires training in: how to undertake effective medication reviews, including having informed discussions about people's needs, goals, preferences and values the conditions which are most likely to be prevalent in target groups, and how to proactively address these in line with the latest best practice	that medicines reviews openly discuss the latest clinical evidence and patient preferences, goals, concerns and values. This may help patients feel like they are equal partners in their treatment, helping to achieve the principle of person-centred care. In addition, unless clinicians have up-to-date knowledge about the latest best practice from NICE and professional organisations about how to identify and manage conditions which can be most prevalent amongst the target groups set out in the guideline (adults, children and young people taking multiple medicines; adults, children and young people with chronic or long-term conditions; and older people) , there is a risk that treatment may be ineffective, or even harmful. To overcome this risk, training should be provided to those who undertake the medication review on the latest evidence-based guidance for the most common chronic conditions in target groups, such as diabetes, coronary heart disease, heart failure, COPD and incontinence.	prescribing and managing medicines and devices (2013) published by the General Medical Council emphasises the need to take account of the patient's needs, wishes and preferences
36	NIHR	Key area for quality improvement 1	The evidence behind NICE guideline NG51 and related literature is aimed primarily at senior or established clinicians. There is little if any evidence about how to educate	Our initial research on behalf of NIHR CLAHRC NW London found that foundation doctors knew little about medication review, their role in the process, and the existence of medication review tools4. Undergraduate and foundation curricula in	1. http://www.nice.org.uk/guidance/ng5/evidence/full-guideline-6775454 2. http://archinte.jamanetwork.com/article.aspx?

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			undergraduate or foundation trainees (particularly doctors and pharmacists) or non-medical prescribers to introduce the concepts around medicines optimisation, particularly medication review and 'deprescribing'. This is important because foundation trainees in particular are often not sufficiently aware of the need to review medicines; and may feel: a) Ill equipped to prompt a review by senior clinicians/GPs b) ill-prepared for their future senior role in medication review The concept of and the term 'deprescribing' are becoming more prominent in the medication review literature, with deprescribing algorithms now being published.2,3	pharmacy/medicine, as well as non-medical prescribing programmes and the undergraduate medical 'safe prescribing' examination, contain few explicit references to the concepts of medicines optimisation and the deprescribing aspects of medication review. We have begun to articulate a 'bottom up approach to education in medication review and deprescribing'4 by starting to plan and run workshops in pharmacy and medical schools in London, and writing appropriate learning outcomes for the London foundation pharmacy curriculum. We are beginning to obtain student and trainee feedback on both the workshops and examination questions. We believe that this is emergent educational practice, which has the potential to make a wider educational/clinical impact nationally and beyond. We believe that a NICE recommendation about education in medication review and deprescribing would be a straightforward strategy to begin a change in culture by getting juniors to start thinking about reviewing and stopping medicines appropriately. It would also begin to prepare the clinical professions to articulate and practice the RPS four principles of medicines optimisation from the start of their careers.	articleid=2204035 3. http://www.prescriber.co.uk/details/journalArticle/7891891/Medicines_management_the_importance_of_when_to_stop.html 4. http://ejhp.bmj.com/content/early/2015/06/03/ejhpharm-2015-000664.full
37	SCM – 6	Key area for quality	NICE guidance PSG001 Dec	NG5 supersedes PSG001 and now	Please see: The clinical

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		improvement 2 – Medication reconciliation for children and young people.	2007 concerning medication reconciliation excluded children and young people. However there is wide acknowledgement that the benefits of medication reconciliation in adults is mirrored by that in children and young people.	supports medication reconciliation for younger patients especially those requiring long term medication. This important extension of previous guidance can reduced unintentional medication changes at transfer of care; with consequential clinical benefits.	significance of medicines reconciliation (MR) in children admitted to hospital: development & evaluation of pharmacy led admission services. Final report to the Neonatal Paediatric Pharmacists' Group. 25th April 2013. Chi Huynh, Stephen Tomlin, Yogini Jani, Helen Haley, Rachel E Smith, Andrew Lowey, Anthony Sinclair, Guirish Solanki, Keith Wilson, Ian Wong, David Terry Terry DRP, Solanki GA, Sinclair AG, Marriott JF, Wilson KA. Clinical Significance of Medication Reconciliation in Children Admitted to a UK Pediatric Hospital. Observational Study of Neurosurgical Patients. Pediatr Drugs. 2010;12(5):331-7.
38	Astellas Pharma Ltd	Improving the use of existing medications – as well as identifying areas of unmet clinical need – through medicines	In its review of polypharmacy practice, The King's Fund cites evidence about the under-use of some treatments in older people . It also notes that "falls and other	Astellas Pharma Ltd remains concerned that some clinical needs – such as urinary incontinence – may remain unaddressed if existing medications remain the principal focus of the review. This is a particular	The King's Fund (2013), Polypharmacy and medicines optimisation. http://www.kingsfund.org.uk/publications/polypharma

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		reviews	complications such as urinary incontinence are well-recognised adverse effects in older or frail people that may not have been considered during guideline development"2. An effective medication review may therefore justifiably require some medicines to be stopped – particularly where they no longer demonstrate patient benefit, or potentially cause harm. However, a review may require a new prescription to be provided, based on unmet clinical need.	challenge for urinary incontinence, which may not receive adequate focus where this develops as a side effect or co-morbidity through treatment for multiple chronic illnesses. In addition, medication reviews are important opportunities to identify unmet clinical need where there is a cultural or societal reluctance to seek medical help for certain diagnoses – such as continence or mental health issues. Evidence shows that people with urinary incontinence who actively seek help can be as low as 20% , often due to embarrassment about their condition or acceptance of the symptoms. Ensuring that medication reviews proactively identify these needs will therefore not only help achieve more effective personalised care, but it may help support commissioners to plan services for people with long term conditions.	cy-and-medicines-optimisation
39	SCM – 2	Key area for quality improvement 4 Medication Review	NICE NG5 recommends that a structure medication review (full definition in NG5: "a structured, critical examination of a person's medicines with the objective of reaching an agreement with the person about treatment, optimising the impact of medicines, minimising the number of medication-related problems and reducing waste") should be	The rates of prescribing are expected to rise with the ageing population and the increase in the number of people with long-term conditions and multi-morbidity. A growing body of evidence shows that medicines are often used sub-optimally. Up to half of the medicines prescribed for a long-term condition are not used as intended by the prescriber	Department of Health. Long Term Conditions Compendium of Information. 3rd ed. Leeds: Department of Health; 2012.

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			carried out for people who are using multiple medicines (polypharmacy), who have chronic or long-term conditions and older people.		
40	SCM – 1	Medication review 1.4.1 Consider carrying out a structured medication review for some groups of people when a clear purpose for the review has been identified. These groups may include: adults, children and young people taking multiple medicines (polypharmacy) adults, children and young people with chronic or long-term conditions older people.	Medicines Optimisation NG5 1.4.1 Consider carrying out a structured medication review…Adverse Drug reactions have been shown to account for 6.5% hospital admissions, median stay 8 days, 4% of bed occupancy. Pirmohamed M et al. Adverse Drug Reactions as a Cause of Admission to hospital: Prospective analysis of 18820 pts, BMJ 329:15-19 (2004) An effective medication review takes time and expertise. A dedicated appointment for medication review enables a systematic assessment of the person and their medications and can establish Views on their medicines, whether still needed /taken/prefer not to take Monitoring requirements – tests and disease control Changes in the evidence since last reviewed Identification of adverse effects & avoiding the 'prescribing cascade'	When General Practices struggle to recruit or are under pressure, calling patients in or visiting patients solely for a dedicated medication review becomes increasingly difficult. An ad hoc review, for example when seeing a person for unrelated symptoms, is less likely to support critical assessment of all repeat medications. If GPs undertake dedicated medication reviews they would usually take place during a routine 10-minute consultation. Medication review is no longer included in the QoF GP contract in England. It may be included in some Local Enhanced Services. It has been retained in Wales and Scotland. Wales 2015,16 MED007W. A medication review is recorded in the notes in the preceding 15 months for all patients being prescribed 4 or more repeat medicines Standard 80% 10 points Medication review could take place in hospital or community setting. Currently most are taken within general practice. There is ample evidence that young patients may require special consideration if their	The risks of polypharmacy have been prioritised in Wales and this has been included as one of three cluster domain activities 2014- ongoing: CND 008W :Minimising the harms of polypharmacy The contractor will: 1. Identify and record number the % of patients aged 85 years or more receiving 6 or more medications (excluding dressings etc.) 2. Undertake face to face medication reviews, using the "No Tears " approach or similar tool as agreed within the cluster, for at least 60% of the cohort defined in 1 above (for a minimum number equivalent to 5/1000 registered patients. … Pirmohamed M et al.

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			(treating a side effect as a new symptom, adding a further medication) Risks –e.g. is this person now at risk of falls/postural hypotension Simplification of regime or switches Adverse Drug reactions have been shown to account for 6.5% hospital admissions, median stay 8 days,	long-term medication is to be managed and provided safely. Direct medication review post discharge from hospital will ensure that any collaboration required between hospital and primary care clinicians is clear and working optimally. Failure to align collaboration can lead to clinical risk to the patients and greater costs to the NHS. Although the practice of producing care plans is well established in some fields of healthcare (eg. mental health, maternity), the same cannot be said of pharmaceutical care plans. As the complexity of care and the likelihood that patients will be under the care of multiple care providers increases, pharmaceutical care plans provide an opportunity to improve interprofessional communications and involve patients more in their care. The NHS in Scotland is moving towards a standardised approach to pharmaceutical care planning. 4% of bed occupancy.	Adverse Drug Reactions as a Cause of Admission to hospital: Prospective analysis of 18820 pts, BMJ 329:15-19 (2004) A significant percentage of people over 74years are prescribed 10 or more repeat medications Welsh data 2013/14 suggests up to a third patients over 74yrs are prescribed 10 or more repeat medications http://www.awmsg.org/docs/awmsg/medman/Polypharmacy%20-%20Guidance%20for%20Prescribing%20in%20Frail%20Adults.pdf
41	SCM – 6	Key area for quality improvement 3 – ¶¶Support for children and young people taking long term medicines after discharge from hospital.	Most adults requiring long term medicines will obtained these from their GP. However, due to concerns related to the use of unlicensed or 'off-label' medicines this may be different for children and young people, with prescriptions and clinical		Please see: Terry D, Sinclair A. Prescribing for children at the interfaces of care. Arch Dis Child Educ Pract Ed 2012;97:152–6 doi 10.1136/edpract-2011-301254. Huynh, C., Wong,

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			management provided by both primary and secondary care in collaboration.		ICK., Tomlin, S., Terry, DRP., Sinclair, A., Wilson, KA., Jani, Y. Medication discrepancies at transitions in paediatrics: a review of the literature. Pediatr Drugs. 2013;15(3):203-215.
42	SCM – 5	Self-management plans (pharmaceutical care plans)	A properly documented care plan (for selected patient groups) would improve communication between care providers and enable patients to more involved in decisions about their care.		http://www.gov.scot/Publications/2013/09/3025 http://www.pharmaceutical-journal.com/providing-pharmaceutical-care-using-a-systematic-approach/20003436.article?adfesuccess=0&adfesuccess=0&adfesuccess=1
43	Northern Devon NHS Healthcare Trust	Key area for quality improvement 4 Medicines-related communication systems when patients move from one care setting to another Medicines reconciliation Medication review Self-management plans Patient decision aids used in consultations involving medicines Clinical decision support		Northern Devon NHS Healthcare Trust	Key area for quality improvement 4 Medicines-related communication systems when patients move from one care setting to another Medicines reconciliation Medication review Self-management plans Patient decision aids used in consultations involving medicines Clinical decision support Medicines-related models of organisational

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		Medicines-related models of organisational and cross-sector working			and cross-sector working
44	National Rheumatoid Arthritis Society (NRAS)	3 Self-management plans	Going beyond simple concordance is the key step, to where the individual is more fully informed and `literate' about the role and importance of medication, but also the trade-offs in terms of efficacy, side effects and quality of life.	The `support' for self-management around medicines tends towards the more didactic and is directed at regularity and accuracy of dosage and consumption. This is important but does not really help people to see medicines in context of what should be a biopsychosocial approach to care and how `ownership' of their overall path to wellbeing is what self-management means. It also tends to reinforce silos rather than full MDT working, with one member giving meds `support' and others dealing with the psychosocial, CBT elements. "Greater understanding of the risk factors for non-adherence might allow for better support for those who are really struggling to take their DMARDs. The main factors associated with non-adherence are socioeconomic and healthcare factors (especially a poor doctor-patient relationship), condition and therapy-related (complexity of treatment and side-effects, both feared and real) and patient-related (beliefs and the presence of other psychological factors, particularly depression)."	Literature shows higher levels of health literacy and patient activation/motivation lead to better health outcomes and less reliance on all forms of medication and use of healthcare resources. J Catherine E Swales, NDORMS, Botnar Research Centre, Nuffield Orthopaedic Centre, Oxford and John D Isaacs, NIHR Newcastle Biomedical Research Centre, Institute of Cellular Medicine, Newcastle upon Tyne, Relevant to sections : 1.5.1, 1.5.2
45	British HIV Association (BHIVA) and	Key area for quality improvement 1	Standard around ensuring adherence is discussed in consultations and that there are		

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	HIV Pharmacy Association (HIVPA)		clear guidelines to help aid these discussions .And if there is an issue with adherence that the prescriber has some way of referring the patient for support		
46	British HIV Association (BHIVA) and HIV Pharmacy Association (HIVPA)	Key area for quality improvement 3	Supporting self-management. Putting patient at the centre of care so they are empowered to know about their medicines and can inform prescribers about the drugs they take for interactions etc.		
47	British HIV Association (BHIVA) and HIV Pharmacy Association (HIVPA)	Adherence check and support to be included in patient consultations	NICE and WHO state that 30-50% of patients do not take their medication correctly. To optimise medication for patients steps should be taken to engage with patients to improve levels of adherence	It is a key area as improving adherence will improve health outcomes for patients and reduce re admissions and reduce waste.	NICE have adherence guidelines that state that better engagement with patients is crucial to improving adherence HIV medicine has some of the highest rates of adherence in medicine with >80% of patients on medication taking their medicines correctly. The royal college of physicians have established a pre- working group on a strategy to improve national adherence which could be supported by NICE.
48	British HIV	Self management by	As polypharmacy increases it	The ageing population has many	

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	Association (BHIVA) and HIV Pharmacy Association (HIVPA)	patients	becomes more important that patients are knowledge about their medicines to ensure they optimise the benefits of them.	prescribers and it is key to ensure the patient is at the centre of that care. It is key that they are empowered to understand their medicines and be able to self manage their condition.	
49	Royal Pharmaceutical Society	Key area for quality improvement 3 Management of Long Term Conditions	If patients understand their condition, the 'red flags' and are better supported to self-manage then they are less likely to experience unplanned admissions and will feel empowered to manage themselves.	Good care and management of patients who have one or more long term conditions is cheaper in the long run as it can reduce medicines wastage and unplanned admissions. Investment in a patient pathway which supports patients to self-manage would lead to savings elsewhere in the system. Almost every patient who has a LTC will be taking at least one medicine.	Many of the vanguard sites (Five year Forward View) are exploring how to support patients with LTCs.
50	SCM – 4	Key area for quality improvement 4 Involving people in shared decisions about their medicines	Recommendation in NG5: Offer all people the opportunity to be involved in making decisions about their medicines.	There is good evidence that involving people in decisions about their care improves health outcomes. There is also good evidence that healthcare professionals think they involve people in decision making more than they actually do The GDG looked at evidence for patient decision aids and concluded it is just one element of shared decision making. The essential element is to engage the person in the decision making. The reality is that there is insufficient time in most consultations to enable this shared discussion to take place. It also may involve training for health & social care professionals in ensuring knowledge is up to date to inform the person of risks/benefits/options, and raising	GMC Consent Guidance NICE Quality Standard 6 Shared Decision Making

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				awareness among patients of their role in the process	
51	Northumbria Healthcare NHS Foundation Trust	Patient involvement in decision making about their medicines (shared decision making)	Many patients are burdened with too many medicines due to failure in regular clinical review and/or without involving patients in prescribing decisions e.g. discussing relative risk/benefits of any new medicine with patients, understanding and taking into consideration their values and views before initiation.	Polypharmacy is a common problem in the elderly population causing problems with adherence, unnecessary harm, waste, unnecessary medicines expenditure and patient dissatisfaction. There are significant opportunities in de-prescribing and/or rationalising treatment with the input and consent of more informed patients/carers.	http://qir.bmj.com/content/3/1/u203261.w2538
52	Association of the British Pharmaceutical Industry	Key area for quality improvement 2 Shared decision-making between patient and clinician	To address many of the problems associated with polypharmacy, poor adherence to medicines and associated waste, patients need to understand and feel in control of the medicines they are prescribed.	There is much evidence [1][2][3][4] to demonstrate that a motivated patient who has had the opportunity to discuss their treatment options, understands why they are taking the medicine and how to take it will adhere to the treatment regimen. Supporting patients to understand their medicines and adherence is a key factor in the quality of care provided by a clinician. Patients have the right, in accordance with the NHS Constitution, to drugs and treatments that have been recommended by NICE for use in the NHS, if their clinician considers it to be clinically appropriate. It is expected that the patient will have the opportunity to discuss the treatment options with their clinician so that an informed decision can be made. [1] People in control of their own health and care. The Kings	Association of the British Pharmaceutical Industry

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				Fund, November 2014 http://www.kingsfund.org.uk/publications/people-control-their-own-health-and-care?gclid=Cj0KEQjw-46sBRD7x6P0stibwbsBEiQAoMi4ZorHMVSrjXxI4QuGiS72sRaY0kTXvO62Tm-yx6BeegsaAjEK8P8HAQ [2] Patients' unvoiced agendas in general practice consultations: qualitative study. BMJ 2000;320 http://www.bmj.com/content/320/7244/1246 [3] Misunderstandings in prescribing decisions in general practice: qualitative study. BMJ 2000; 320 http://www.bmj.com/content/320/7233/484[4] Doctor-patient communication about drugs: the evidence for shared decision making. Soc Sci Med. 2000 Mar; 50(6):829-40. http://www.ncbi.nlm.nih.gov/pubmed/10695980	
53	Royal Pharmaceutical Society	Key area for quality improvement 1Patient engagement	If the patient is not engaged they are less likely to take their medicines in the intended way. This means medicines are wasted and the patient does not receive the health benefits from the medicines potentially leading to unplanned hospital admissions.	Evidence shows that up to 50% of patients do not take their medicines as intended. We would like to see an explicit standard on ensuring shared decision making is properly undertaken when discussions around medicines occur.	Evidence to support that engaging with patients improves adherence can be seen in a number of studies, for example, the Shine project demonstrated that patient engagement lead to better results. More information can be found at

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					http://www.health.org.uk/areas-of-work/programmes/shine-twelve/related-projects/northumbria-healthcare-nhs-foundation-trust/learning/ National hospital inpatient survey scores also show that patients do not have quality conversations with healthcare professionals about their medicines prior to discharge.
54	SCM – 3	Key area for quality improvement 3	Patient decision aids used in consultations involving medicines	Common use of patient decision aids would ensure a more uniform approach to patient consultations and would enable the patient many of whom want to be actively involved in their condition.	
55	Northumbria Healthcare NHS Foundation Trust	Quality communication with patients about their medicines	Patients are at risk following discharge from hospital if they do not understand the medicines that they take and the side effects to look out for.	Patients and carers want more information about their treatment. National inpatient survey data shows that communication with patients about their medicines is unsatisfactory. 30-50% of patients do not take their medicines as intended, leading to harm, waste and failure to benefit from the medicines prescribed.	National inpatient survey data (2014) demonstrates that there is huge potential scope for improvement in communicating with patients about their medicines whilst in hospital. This is almost certainly to be the case in primary care too.
56	National	4 Patient decision aids	Simple and consistent methods	In the MSK arena patient decision aids are	Right Care Decision Aids –

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	Rheumatoid Arthritis Society (NRAS)		and materials to assist people making crucial decisions about their treatment can lead to better decisions, better care and better outcomes. They can also address time constraints in the clinical setting (eg at home pre-use) and avoid elements of clinical preference or overly directive behaviours.	not new, but they are not really fit for purpose and need replacing. A more generic approach to PDAs for medicines and prescribing would have wide application. PDAs must use appropriate language and/or graphics/symbols, many current versions require A level English or beyond. Use, rationales and decisions reached should also be recorded in care plans (see above). HCPs should be actively assessed for their skills in supporting PDAs and training mandatory.	NRAS has surveyed and few if any consultants use these. We believe the current RA PDA is not fit for purpose.
57	Astellas Pharma Ltd	Providing patients with the information and tools to be partners in treatment decisions and reviews	Information provision and shared-decision-making are both critical to supporting patient engagement in their treatment and in helping to underpin safe and effective medicines use. Information and shared decision-making are also important precursors to patient choice and can support the development of care plans, which are recommended throughout NICE guidance and are endorsed by the National collaboration for integrated care and support .	The provision of appropriate and up-to-date information supports evidence-based choice of medicines, and has been identified as one of four principles of medicines optimisation by the Royal Pharmaceutical Society . It can support optimisation in two main ways: by ensuring that medicines are selected using the best available evidence by supporting patient engagement and increasing patient ownership and control over their treatment The quality standard is therefore an important opportunity to drive shared-decision making during medication reviews as well as the development and review of a care plan, which is a positive way to document and measure the extent to which patient-centred care and supported self-management are taking place in practice.	NICE guideline on medicines adherence recommends that all patients have the opportunity to be involved in decisions about their medicines Good practice in prescribing and managing medicines and devices (2013) published by the General Medical Council also emphasises the need to take account of the patient's needs, wishes and preferences The Royal Pharmaceutical Society produced a guide Medicines optimisation: helping patients make the

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					most of medicines (2013)
58	SCM – 6	Key area for quality improvement 1 – Local registration & management of apps used for drug related clinical decision support	It is recognised that prescribers use apps to support their choice of medication (e.g. formulary options) and dosage regimens (e.g. in children).	At present there is no national registration of medication related apps to support prescribers. It is unknown which are in use, how to report errors or concerns, and should there be problems how to alert other users. Local registration of apps in use could be made to the medication safety overseeing body within the organisation concerned (e.g. Drugs and Therapeutics Committee).	There is little published evidence concerning computer based clinical decision support tools related to medicine use as acknowledged in NG5.
59	Tower Hamlets CCG	Key area for quality improvement 1	Targets for HbA1c in people 65 years and over with T2 diabetes And hypoglycaemia	Because the current policies in NICE and the national diabetes audits are unsafe and no fit for purpose in this age-group	Both the American Geriatric Society and European Guidelines advocate more relaxed targets up to HbA1c 9%. In fact there is no evidence of CVD or mortality benefit from treating to target in this age group. Hypoglycaemia is the second commonest cause of admission to hospital from an adverse drug related event (after warfarin bleeds). There is clear evidence that this is almost entirely iatrogenic and for every one admission for hyperglycaemia there are 5 for hypoglycaemia. This

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					problem is largely but not entirely related to sulfonylureas and/or insulin use with a stronger association with the latter. There is no evidence these drugs reduce macro or microvascular events in this age group and the net harm to benefit ratio is one of net disbenefit. Furthermore both HbA1c AND renal function on average reduce in this age-group making the group as a whole more vulnerable and individuals are placed at high risk due to current policies. The national diabetes audit 6.5% target in particular needs urgent removal. There are high risk groups including almost a third of those Age 65 or more who have impaired renal function (and impaired renal excretion of these drugs) And in whom concomitant use of drugs that further exacerbate

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					hypoglycaemia is common. There is no substantive evidence base for low targets in this group, and HbA1c of below 12% might be advisable as an audit to inform the risk of hyperglycaemia.
60	Tower Hamlets CCG	Key area for quality improvement 2	NSAIDs in people with IHD, stroke/TIA, PAD, AF, Heart failure, CKD, hypertension	Avoidance of the use of this class in general and diclofenac in particular. Older people 75y and over have very high risks from these drugs	Massive evidence base supported by MHRA
61	Tower Hamlets CCG	Key area for quality improvement 3	High intensity statin use in people with CVD and high risk diabetes	Less than 25% of people with these conditions are on optimal dose of atorvastatin 80mg (or in people over 75 years atorvastatin 40mg or 80mg)	NICE guidance
62	Tower Hamlets CCG	Key area for quality improvement 4	Reduction of self-testing of blood glucose in people on diet and/or metformin alone and in those on stable non-insulin treatments at low risk of hypoglycaemia	Self-testing reduces quality of life, use of lancets and their disposal can be hazardous. They are the most expensive cost of prescribing apart from insulin.	Trial evidence of lack of benefit and evidence of harm. Not cost effective in people not on insulin at low hypoglycaemic risk.
63	Tower Hamlets CCG	Key area for quality improvement 6	Avoidance of antipsychotic use in dementia	Associated with increased harm	Lots
64	Tower Hamlets CCG	Additional developmental areas of emergent practice 1	Avoidance of sedative medications in older people	A number of commonly used medicines have little if any benefit but are associated with harms – falls/collapse/accidents etc. Existing STOP and other schemes not validated or adequately tested in RCTs of reduction and outcomes	Lots.

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65	Tower Hamlets CCG	Additional developmental areas of emergent practice 2	Avoidance of low blood pressure in people age 65 years or more on antihypertensive agents by avoiding treatment below systolic BP of 130mmHg.	Evidence of overtreatment in some people and use of doxazosin in particular which can cause collapse and has no trial evidence of benefit in this age group.	Some.
66	College of Mental Health Pharmacy	Improved medicines management for mental health patients being cared for by crisis / intensive home treatment teams by dedicated clinical pharmacy teams specialising in mental health.	There is good evidence that clinical pharmacy teams support in-patient units in mental health services in many ways including medicines reconciliation, medication reviews, choice of medication, prescription safety monitoring, appropriate supply systems, and discharge planning. ¶Although recommendations have been made for pharmacists and pharmacy technicians to be part of the service developments this has often not been born out in clinical practice and there is a deficit of clinical pharmacy in the crisis and intensive home treatment teams. Often organisations don't ensure funding as part of the service model for clinical pharmacists and medicines management technicians. Some of the newer non NHS organisations don't employ clinical pharmacist specialists in mental health.	The patients are amongst the most unwell and medicines may come from more than one source. Medicines reconciliation and communication between services of correct and appropriate medicines is of high importance. Although the follow up to the healthcare commission talking about medicines document recommended improvements in clinical pharmacy services and the follow up document getting the medicines right 2 outlines services required there has been limited development of clinical pharmacy services. Indeed in some NHS Trusts the cost improvement programme has led to decrease in the levels of pharmacy service reducing the service to a supply service.	See the document Getting the Medicines Right 2 Medicines Management in Mental Health Crisis Resolution and Home Treatment teams. National Mental Health Development Unit 2010 Which follows on from Getting the Medicines Right. Medicines Management in Adult and Older Adult Acute Mental Health Wards. 2009 and The Healthcare Commission. Talking about medicines The management of medicines in trusts providing mental health services. 2007. Lack of strong pharmacist leadership and clinical pharmacy team were criticised in the investigation by the care quality commission

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					investigation into West London Mental Health Trust July 2009
67	SCM – 5	Medicines-related models of organisational and cross-sector working	Medicines optimisation is a priority for the NHS in England and requires strategic workforce planning and the implementation of novel and innovative ways of working.	My experience of working with NHS trusts suggests that there is little forward planning undertaken to consider the workforce needs to deliver medicines optimisation. There needs to be much better interprofessional understanding of professional roles and collaboration. Each NHS care provider should be encouraged to develop medicines optimisation strategy that considers new models of organisational and cross-sector working.	http://www.lpet.nhs.uk/Portals/0/LondonPharmacyWorkforceVisionStrategy%20Dec%202014%20Refresh.pdf
68	SCM – 4	Key area for quality improvement 5 Use an MDT approach in the care of people with long-term conditions who take multiple medicines.	Recommendation in NG5: Organisations should consider a multidisciplinary team approach to improve outcomes for people who have long term conditions and take multiple medicines (polypharmacy)	SCM – Mary Weatherstone	Key area for quality improvement 5 Use an MDT approach in the care of people with long-term conditions who take multiple medicines.
69	Boots UK Ltd	Case finding and pharmacist-led support in chronic obstructive pulmonary disease (COPD)	Early identification of patients most at risk of COPD allows for the most cost-effective public health interventions (eg, smoking cessation) to reduce future impacts and health and social costs. Tailored pharmacist-led support for patients with COPD has been shown to improve	Smoking remains the key risk factor for COPD and helping patients to stop smoking is the most cost-effective intervention. Community pharmacies are well distributed and are over-represented in areas of higher deprivation where COPD is more prevalent. Smoking cessation services are not comprehensive across the country and commissioning from pharmacies is below	BMJ Awards Respiratory Medicine Team of the Year 2014 http://thebmjawards.bmj.com/38854 The Community Pharmacy Future COPD Case Finding and COPD Support services demonstrated clear

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			quality of life and reduces NHS and social resource use.	rates seen other parts of the UK. Delivering tailored support to patients in pharmacies at the time when they are collecting prescribed medicines allows pharmacists to identify and address other health and social issues. Support can be linked to other NHS services, including Medicines Use Reviews, New Medicines Service and flu vaccinations. Helping patients to obtain and, when necessary, use “rescue packs” of antibiotics and steroids is a cost-effective way of self-managing exacerbations that helps reduce unplanned admissions. Regular emphasis and support for inhaler technique improves outcomes for respiratory patients.	benefits for patients and savings for the NHS http://onlinelibrary.wiley.com/doi/10.1111/ijpp.12161/abstract http://onlinelibrary.wiley.com/doi/10.1111/ijpp.12165/abstract http://www.communitypharmacyfuture.org.uk/ There is a lack of good data collection on commissioned services from community pharmacies. This was exacerbated when public health commissioning was moved to local authorities and therefore outside NHS monitoring by Health and Social Care Information Centre (HSCIC). http://www.hscic.gov.uk/catalogue/PUB15933
70	British Thoracic Society	Key area for quality improvement 1 COPD inhaler technique	COPD remains the fifth most common cause of death in England and Wales, accounting for more than 28,000 deaths in 2005 and is the second largest cause of emergency admission in the UK, with one in eight (13,000)	Inhaled medications are recommended as first-line treatment for chronic obstructive pulmonary disease (COPD) and can reduce exacerbations and hospital admission.	NICE COPD quality standards and guideline https://www.nice.org.uk/guidance/cg101

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			emergency admissions to hospital as a result of COPD. One fifth (21%) of bed days used for respiratory disease treatment are due to chronic obstructive lung disease, such that COPD accounts for more than one million 'bed days' each year in hospitals in the UK.		
71	British Thoracic Society	Key area for quality improvement 2 COPD smoking cessation	As above		NICE COPD quality standards and guideline https://www.nice.org.uk/guidance/cg101
72	British Thoracic Society	Key area for quality improvement 3Asthma: inhaler use	Incorrect/under use of inhaler medication is associated with poor asthma control.	Asthma sufferers who are unable to use their inhaler correctly are at increased risk of poor asthma control, potentially resulting in an attack. The NRAD report found that there was evidence of widespread underuse of preventer medication. Overall compliance with preventer inhaled corticosteroid (ICS) was poor, with low repeat prescription fill rates both for patients treated with ICS alone and for those treated with ICS in combination with a long-acting beta agonist (LABA).	National Review of Asthma Deaths report "Why asthma still kills" https://www.rcplondon.ac.uk/sites/default/files/why-asthma-still-kills-full-report.pdf
73	British Thoracic Society	Key area for quality improvement 4 Management of tuberculosis	Drug therapy is the way of treating TB. Failure to adhere to drugs / wrong prescription dramatically increases the risk of multidrug resistant and extended	Appropriate monitoring, including directly observed therapy has opportunities for minimising such risks and reducing cost whilst having dramatic public health advantages	Collaborative tuberculosis strategy for England: 2015 -2020 https://www.gov.uk/government/publications/collabor

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			drug resistant organisms, with worse outcomes for patients, public health issues and costs, both for hospitalisation and for additional medication		ative-tuberculosis-strategy-for-england
74	International Glaucoma Association	Improve adherence to eye drop treatment for people with glaucoma.	Increased understanding about glaucoma as a progressive sight loss condition and the importance of ongoing, lifelong eye drop treatment improves adherence and decreases loss of vision.	Poor compliance leads to a greater likelihood of progressive optic nerve and visual field damage. Healthcare professionals should have responsibility for examining their role in relation to: Drug regimen Dispenser design Patient counselling and education Increased intervention improves poor adherence. Patient-centred care for people with glaucoma is patchy. There is an opportunity for holistic management involving eye clinic liaison officers, ophthalmic nurses and community pharmacists. Chronic eye drops can also be targeted for Medicine Utilisation Review by community pharmacists.	JTsai et al, Ophthalmology 2009: 116 (11 supplement) S30-36. A comprehensive perspective on patient adherence to topical glaucoma therapy. Compared with adherent participants, non-adherent participants are less likely to: Know the benefit of taking their medication regularly Believe their eye doctors spent sufficient time with them Ask their doctor if they had questions Have someone help administer their eye drops Have somebody to take them to their eye appointment Hahn et al, Opthalmology 2008: 115:1320-1327 Doctor-patient communication, health related beliefs and adherence to Glaucoma. Eight variables association

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					with lower medication progression rate: Not believing that reduced vision is a risk of not taking medication Hearing all of what you know about glaucoma from your doctor. Having a problem paying for medication Travelling away from home Not acknowledging stinging or burning Being non white Receiving samples Not receiving a reminder call Quigley et al Ophthalmology 2009:116 (12) 2286-2293. Interventions improve poor adherence with once daily glaucoma medications in electronically monitored patients In the intervention group of 35 patients, compliance increased from 54% to 73% (interventions included watching a short video, structured discussion, reminder calls every one or two weeks, activation of visible alarms on electronic dosing aid)

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75	International Glaucoma Association	Improvements in eye drop instillation for people with glaucoma.	There is evidence that poor eye drop instillation may be a severe limiting factor in the management of glaucoma and seems to be a neglected area of patient care.	Research consistently shows that difficulty in administering eye drops leads to poor compliance. As the condition progresses people are less likely to properly administer the medication as the condition leads to visual filed loss. Holistic patient care management will help to address difficulties in taking eye drops. As treatment is life-long, chronic eye drops could be a targeted MUR by community pharmacists.	AJ Winfield Aberdeen BJO 1990. 74 477-480 A Study of the causes of non-compliance by patients prescribed eye drops. (N=200): 57% of people admitted some difficulty in administering eye drops. 72% said that this was the first time that problems with administering eye drops had been raised with them. Only 30% could place a drop in 1.5cm of the centre of a target. Appears 25% to 50% of patients using eye drops have severe physical difficulties in administering them. Difficulty with eye drops increases with age. F Aptel Lyon France BJO 2009 Vol 93 No 5 700-701 The Influence of Disease Severity on Quality of Eye Drop administration in patients with glaucoma or ocular hypertension (N:138) When visually observed: 19.5% administered the drop

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					outside the orbit 19.6% contaminated the eye drop bottle by allowing it to touch the eye 12.4% performed nasolacrimal occlusion 33.3% suffered with epiphora and tear overflow immediately after instilling the drop.
76	Merck Sharp & Dohme Ltd	When discussing the available methods of fertility control, use the best available evidence, together with clinical expertise and the person's values and preferences	It is estimated that about 30% of pregnancies are unplanned. The effectiveness of the barrier method and oral contraceptive pills depends on their correct and consistent use. By contrast, the effectiveness of long-acting reversible contraceptive (LARC) methods does not depend on daily concordance. The uptake of LARC is low in Great Britain, at around 12% of women aged 16–49 in 2008–09, compared with 25% for the oral contraceptive pill and 25% for male condoms. Expert clinical opinion is that LARC methods may have a wider role in contraception and their increased uptake could help to reduce unintended pregnancy.	NICE proposes that the current limited use of LARC suggests that healthcare professionals need better guidance and training so that they can help women make an informed choice. Health providers and commissioners also need a clear understanding of the value of LARC compared with other methods of fertility control. Improving on education and access will enable women to make an informed choice about LARC and address their preferences, whilst minimising the risk of unintended pregnancies in women aged 16-49. The reduction in unwanted pregnancies could have a significant bearing on the reduction of socio-economic costs associated with unintended pregnancies. Proposed outcome: Increased uptake of appropriate contraception methods to reduce unintended pregnancy rates	Please refer to the NICE CG30 Guidelines which outlines the benefit of utilisation of LARC: https://www.nice.org.uk/guidance/cg30 Please refer to the publication by Connolly et.al., which outlines that an uptake in LARC is significantly correlated to a reduction in teenage pregnancies (attached)
77	National Rheumatoid	2 Medication Reviews	RA is a progressive, flaring condition, with possible remission,	Overall, consultant or nurse-led medicine reviews are regularly programmed for the	NICE RA quality standard 33 & NICE Guidelines on

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	Arthritis Society (NRAS)		and potential to cause serious co-morbidities like heart disease and interstitial lung disease. Personalised drug treatments are essential throughout a patient's (child and adult) life post-diagnosis	main therapeutic treatments, albeit without universal coverage. GP-led reviews of auxiliary prescribing and OTC use in areas like pain control are less well implemented. Polypharmacy is common in RA patients, rising in complexity with age and co-morbidities. Just as step-up to biologics will be vital for some, step-down might also be possible with lower rates of disease activity and patient self-management – poor meds review practice can miss both.	RA re: holistic annual reviews Relevant to sections: 1.4.1, 1.4.2
78	British HIV Association (BHIVA) and HIV Pharmacy Association (HIVPA)	Treatment as prevention for HIV=PrEP (pre exposure prophylaxis)	The new evidence shows a big reduction of 86% in HIV transmission when PrEP is given to non HIV partners.	The reduction in HIV transmission of 86% in the Proud and Ipergay studies show a substantial reduction in risk for non HIV partners. This should help reduce onward transmission and enable people to have choice in their risk. There are substantial savings from reduced number of new infections.	http://www.proud.mrc.ac.uk/ http://www.ipergaymtl.com/en/about-us.html Studies are being evaluated by NICE
79	AstraZeneca UKMC	Key area for quality improvement 1 Recognition and treatment of asthma: patients sub-optimally treated with ICS	Under use of preventer inhalers Preventer inhalers should be taken as prescribed to provide enough medicine needed to help reduce underlying inflammation and swelling in the airways. This stops the airways from being so sensitive and reduces the risk of potentially life-threatening asthma attacks which can lead to A&E attendances, hospital admissions and ambulance call outs which	Last year, the Royal College of Physicians published the National Review of Asthma Deaths,2 a UK wide investigation which found alarming safety concerns in the cases of those who died from asthma attacks. The Review identified prescribing errors in almost half of all asthma deaths in primary care and, overall, found that two-thirds of asthma deaths could be prevented with better routine care. The National Review identified that at least 5 out of 195 people who died from an asthma attack (3%) were	1. Suissa, S. (1994) A cohort analysis of excess mortality in asthma and the use of inhaled beta-agonists. American Journal of Respiratory and Critical Care Medicine, 149(3): 604-10. http://www.atsjournals.org/doi/abs/10.1164/ajrccm.149.3.8118625#.VQwMHtKsXTp 2. Royal College of

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			could have otherwise been prevented. Of particular convern are those patients on long-acting preventer medicines without concurrent ICS use which is contrary to safe practice. Excessive reliever prescribing Most asthma patients shouldn't need to use more than one reliever inhaler a month unless they are having serious problems with their asthma. If taken more frequently than this, their risk of asthma death "escalates drastically"1. These patients should be identified and monitored as a matter of urgency, until their symptoms have improved	being prescribed long-acting reliever medicines without inhaled steroids. When looking at a routinely collected sample of data on 94,955 people with asthma, as many as 402 people were revealed to have been prescribed long-acting reliever medicines without inhaled steroids. Applied across the population, this suggests that around 22,840 people with asthma may have been prescribed unlicensed medicine which puts them at a higher risk of death.1 Asthma UK sampled 94,955 people with asthma, taken from a number of GP databases from across the UK,: prescribing errors was revealed to be unacceptably common among the general asthma population. A total of 5,032 people had been prescribed more than 12 reliever inhalers over a 12 month period, 1,965 of them without being reviewed, almost 40%. For these people, the number of excessive reliever inhalers prescribed ranged from 13 up to 80 per person in 12 months. Given that 6 is a clear warning sign of poor asthma control, that's up to almost 13 times more medicine than they should need. When applied to the UK population, this indicates that around 106,742 people with asthma in the UK may have been prescribed excessive amounts of reliever medication without being reviewed.	Physicians (2014). Why Asthma Still Kills: The National Review of Asthma deaths

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80	AstraZeneca UKMC	Key area for quality improvement 2 Early control of HbA1c for type 2 diabetes	The management of type 2 diabetes mellitus is complex. It needs an individualised multifactorial approach addressing blood glucose, blood pressure, blood lipids and lifestyle issues. 24,000 people die from avoidable diabetes complications each year1 The incidence of microvascular and macrovascular complications is strongly correlated with extent and duration of hyperglycaemia 2, 3. There has been a worrying lack of progress with achieving the NICE-recommended treatment targets for HbA1c. Of particular concern is that substantial numbers of people have exceptionally high-risk glucose levels – 7% of type 2 patients had HbA1c equal to or above 86mmol/mol" and 35% of type 2 patients do not achieve recommended treatment targets4	Large-scale studies5 have demonstrated that, on average, reducing HbA1c by 1% cuts the risk of microvascular complications by ~20%. Other recent data also confirms the legacy effect of HbA1c control on long term cardiovascular outcomes6 The longer diabetes is uncontrolled, the less effective tight glycaemic control is at mitigating future diabetic progression7 so clinicians need to find treatment strategies to optimise glycaemic control at an early phase of the disease. Furthermore, the increase in HbA1c is greatest early after type 2 diabetes diagnosis8 Many clinicians also take a conservative approach to treatment of type 2 diabetes9, 10, 11. It has been shown that it may take 1.2 to 3 years for uncontrolled patients to receive additional treatment, despite guidelines recommend adding another agent if goals are not met within ~3 months12, These data serve to highlight that exposure to uncontrolled glycaemic may be unnecessarily prolonged for patients with type 2 diabetes, underscoring the need for a more proactive management approach.	1. Diabetes UK, Cost of Diabetes, 2014 2. Stratton IM, et al. BMJ 2000;321:405–12. 3. Stamler J, et al. Diabetes Care 1993;16:434–44 4. Diabetes State of the Nation 2014 5. UK Prospective Diabetes Study (UKPDS) and the Diabetes Control and Complications Trial (DCCT) 6. Hayward et al, N Engl J Med 2015 7. FPG, fasting plasma glucose; VADT, veteran affairs diabetes trial 8. Lind et al, Diabetologia 2013 9. Khunti K et al. Diabetes Care. 2013;36:3411-3417 10. Nichols GA et al. J Gen Intern Med. 2007;22:453-458; 11. Fu AZ et al. Diabetes Obes Metab. 2011;13:765-769. 12. Khunti K et al. Diabetes Care, 2013
81	AstraZeneca UKMC	Key area for quality improvement 3: Patient adherence to oral antiplatelet therapy	Patients who receive maximum therapeutic benefit of their post-MI medication (statins, beta blockers and NICE approved oral	There is huge variation in care across the UK and strategies should be implemented to patients receive optimal oral antiplatelet therapy to reduce unnecessary hospital	1. Rapsomaniki E et al. Eur Heart J 2014; 35(Suppl 1): 363 (Abstract P2077)

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			anti-platelet therapy) through optimal medication adherence will result in significantly improved patient outcomes for mortality, quality of life, hospital admissions and CV events.1	admissions, improve mortality and reduce the number of CV events for ACS patients	
82	Parkinson's UK	Key area for quality improvement 2: Medicines-related communication systems when patients move from one care setting to another	To ensure people with Parkinson's are cared for appropriately and are not at increased risk of medication errors, quality medicines-related communication systems must be in place so that information regarding alterations are not lost when patients move from one care setting to another.	We know from numerous patient surveys and independent research that people with Parkinson's do not get their medication on time in both hospitals and care homes, which has a negative impact on their health and on NHS finances. A Newsnight investigation revealed that the NHS is wasting millions of pounds every year because it is failing to properly care for people with Parkinson's when they are in hospital. People with Parkinson's are not being given their medication on time, which makes their condition uncontrolled and permanently worsens their health, meaning they become more reliant on the NHS and the state. The Newsnight investigation revealed: More than £20 million was wasted in 2012/13 on 128,513 excess bed days for people with Parkinson's in England as they stayed in hospital longer than they should. A person aged over 65 with Parkinson's costs the NHS three and a half times more in unplanned hospital admissions than someone who doesn't have Parkinson's. Of the 92,000 people with Parkinson's aged	Newsnight: Inadequate care for Parkinson's sufferers: http://www.bbc.co.uk/news/health-24493420 Aarsland D, Kurz MW J: The epidemiology of dementia associated with Parkinson disease. Neurol Sci. 2010; 289(1-2):18-22.

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				over 65 in England: 39 per cent went into hospital as an unplanned admission – two and half times more than an over-65 without Parkinson's Almost half were admitted to hospital more than once in a year – spending, on average, an extra three and a half days longer than expected This costs the NHS over £177 million each year – 83 per cent of the overall cost of admissions for people with Parkinson's. It is problematic trying to ascertain specific examples of where information has not been shared in a timely fashion leading to medication doses being missed or delayed. Nevertheless, considering the volume of medication needed to be taken every 24 hours, it stands to reason that if information is not shared efficiently and immediately between systems, people with Parkinson's will experience missed or delayed doses of medication. Therefore, ensuring point 1.2.2 of the optimisation guideline is being addressed is essential for people with Parkinson's. Parkinson's UK also places particular importance on point 1.2.3 and 1.2.4 of the optimisation guideline with reference to sharing information with informal carers such as family and other loved ones. Carers and family members of those with Parkinson's are very often the experts in their loved-ones condition	

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				regarding symptoms, fluctuations, medicines timing and many other aspects, but they feel their information and opinions are being ignored by health and social care professionals. Carers often provide the bulk of personal care and are an important source of continuity, as well as a resource with knowledge of the person's needs, wishes, values and preferences. We receive regular feedback that the carers and family members of people with Parkinson's are often not informed of medication safety incidents and/or changes in regime that have happened to someone with Parkinson's in a clinical setting. This has often led to inappropriate care on a return home and even resulted in readmission to hospital. A further complicating factor meaning that this information must be shared with carers and loved ones is that people with Parkinson's often experience mild memory loss, mild cognitive impairments and Lewy body dementia as part of their condition. In fact, at least three-quarters of people who have lived with Parkinson's 10 years or more may develop dementia. As such many of our members have shared experiences where carers only discover a change in medication or of a safety incident long after it has taken place. This can often be because, although the	

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				person with Parkinson's may have been informed, they have not remembered to pass on this information. This incomplete picture has led to inappropriate care being administered and even re-admission into hospital. Therefore, it is essential the quality standard focuses on this area for quality improvement.	
83	Parkinson's UK	Key area for quality improvement 3: Medicines reconciliation	Efficient medicines reconciliation is particularly important for people with Parkinson's because ensuring medication for the condition is taken on time is absolutely essential for the person to function in their daily life. This takes on even greater significance when considering the complexity of some drug regimens for people with Parkinson's, which can involve taking as many as 30 different tablets at specific times throughout the day. As a result, achieving a stable medication routine that is right for each individual can be a long and difficult process. All attempts need to be made to maintain this delicate situation including during hospital admissions. If a person with Parkinson's is unable to get their medication on time, it may,	In an audit within a hospital in north-west England, it was found that 72% of people with Parkinson's missed the first dose of Parkinson's medication and 58% of people did not have a medicine reconciliation. NICE has long-established guidance – recently updated through the medicines optimisation guideline - on medicines reconciliation, yet it is unclear how many hospitals are actually meeting the 24 hour target set. Considering how important medicines reconciliation is to ensure people received the correct mediation in a timely fashion for a number of long term condition, Parkinson's UK urge NICE to address this as a key area for quality improvement. Parkinson's UK believes NICE should prioritise the following aspects of care or service delivery, as documented in the NICE Medicines Optimisation guideline, to improve quality:1.3.1 1.3.2 1.3.3 1.3.5 1.3.6	Parkinson's UK: Get It On Time booklet, 2012.

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			and often does, lead to their condition becoming uncontrolled. This could mean the person is unable to walk or go to the toilet by themselves and this could prolong a person's stay in hospital if they have been admitted as an emergency. All of this combined often means an additional cost to the health service that could have been avoided.		
84	Parkinson's UK	Key area for quality improvement 4: Medication review	Because of the complexity associated with Parkinson's medication, ensuring an individual is able to maintain their prescribed medication routine in terms of the right preparation, dosage and timing is a challenge. It's also essential to consider issues around adherence as well as the possible adverse effects of medicines and drug interactions. Treatment is usually lifelong and adjustments will be necessary because the person's symptoms will change over time as the condition progresses. They will also have to be under continual review because of potential adverse effects and intolerance to the drugs. As Parkinson's is a	A 2008 Parkinson's UK survey found that across the UK, one in 12 people with Parkinson's has their medication reviewed less than once a year. Patients with Parkinson's in Salford, Greater Manchester, have benefited from a specialist medicines use review (MUR) service run by community pharmacists. The project saw 14 pharmacists from eight pharmacies within NHS Salford Primary Care Trust collaborate with GPs and a specialist Parkinson's disease service at Salford Royal NHS Foundation Trust. Patients were identified from their patient medication record and offered an MUR when presenting a prescription. The MUR was conducted in the usual way but an additional five questions relating to Parkinson's were asked. These five questions - known as "traffic light questions" - were devised by a Parkinson's	Parkinson's UK: Life with Parkinson's today, 2008: https://www.parkinsons.org.uk/sites/default/files/publications/download/english/memberssurvey_fullreport.pdf The Pharmaceutical Journal: Asking the right questions in Parkinson's, 2010: http://www.pharmaceutical-journal.com/news-and-analysis/news/asking-the-right-questions-in-parkinsons/11048365.article

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			complex progressive condition, it is vitally important that people's medication regimes are regularly reviewed. As the condition progresses people may need to change or add drug groups, or amend the timing, dose or frequency of the medication they are taking. People can struggle with side effects, and some people can develop compulsive behaviours, such as gambling, compulsive shopping, compulsive eating, or hypersexuality. If people do not get the medication reviews they need, their condition will not be as effectively managed as it could be.	disease advanced nurse specialist and were designed to assess the level of control of the disease. Each question carried a value dependent on the response given, which was used to calculate a total that determined whether the patient should be referred to a specialist hospital unit. A copy of the MUR including the traffic light findings was sent to the patient's GP. Patients who did not visit the pharmacy to collect their prescriptions were sent a letter explaining the project and inviting them to make an appointment. Housebound patients were visited at home so the MUR could be conducted. Of the 74 patients identified, in total 53 MURs (16 domiciliary) were conducted, and 18 patients (7 of the domiciliary) were referred to the specialist hospital unit. A third of the patients reviewed were found to have poorly controlled Parkinson's. The project found that patient care was improved due to early referral and consequent resolution of problems leading to better management of the condition. Parkinson's UK believes NICE should prioritise the following aspects of care or service delivery, as documented in the NICE Medicines Optimisation guideline, to improve quality: 1.4.1 1.4.3	
85	Parkinson's UK	Key area for quality improvement 5: Self-	Self-management is crucial for a person to be able to feel in control	Parkinson's UK is particularly concerned with the people being given the right to self-	NICE, Clinical Guideline on Parkinson's, 2006.

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		management plans	of their condition. As laid out above, Parkinson's is extremely complex to manage, meaning that a person with the condition and/or their informal carer is likely to be as expert in their condition as a healthcare professional. Allowing a person to take control of their medication in numerous settings can have numerous benefits both mentally and physically for a person with Parkinson's.	administer their medication when in hospital. This is covered by 1.5.2 in the optimisation guideline. The NICE Clinical Guideline on Parkinson's includes a specific reference to the importance of getting medication on time and self-medication. The guideline, which is currently under review by NICE, specifically states medication should be 'given at the appropriate times, which in some cases may mean allowing self-medication.' A 2014 YouGov survey of over 3,600 people affected by Parkinson's showed the desire of people with Parkinson's to be allowed to administer their own medication in hospital. Almost two thirds (63 per cent) of those who were unable to do so as helpful in making sure that medication is taken on time. The practical impact of a patient being able to take their own Parkinson's medication is highlighted by the finding that 86 per cent of the overall sample said that the timing of when medication is taken is important in helping them manage their Parkinson's effectively. This should be viewed in conjunction with only 31 per cent who said that they always received their medication on time while in hospital, and the impact of not always being able to take medication on time resulting in a negative impact on patient health among 86 per cent of those who did not receive medication on time. A	Dissanayaka et al, The clinical spectrum of anxiety in Parkinson's disease, 2014. Hanna and Cronin-Golomb, Impact of Anxiety on Quality of Life in Parkinson's Disease, 2011. Case study: When PW went into hospital with pneumonia, the last bit of control he had over his Parkinson's was lost when his medication was locked away. "Even though I was told I had Parkinson's in 2004, I'm determined to do things the way I did before my diagnosis and, thanks to my medication, I'm normally able to. My symptoms include stiffness, balance issues, and freezing and, as long as I take my drugs at set times every day, I can keep them under control. But that all changed for a while when I got taken into hospital. I was admitted after developing a rare form of pneumonia. I

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				lack of opportunity for the patient to self-administer their own Parkinson's treatment while in hospital is that this situation also resulted in increased anxiety levels among 68 per cent (of those who could not self-administer). Thirty per cent said that anxiety was increased slightly and another 38 per cent stated that it increased their anxiety a lot. This is particularly concerning considering research has demonstrated that there is a link between anxiety and the exacerbation of Parkinson's symptoms. For example, the disabling motor symptoms such as tremor, rigidity, bradykinesia, and postural instability, which often occur intermittently, have been shown to increase when the person with Parkinson's is concentrating or feeling anxious. In order to gain an insight in to the current practice of self-administration, Parkinson's UK submitted a Freedom of Information request to 181 Trusts and health boards for information on the existence of an organisational self-administration policy and whether this was being actively utilised. Out of the 88% of trusts and boards that responded, 17% of hospital trusts/boards reported that they did not have a self-administration policy in place and even those that did could not ascertain the level and quality of implementation through the	signed a form when I got there that let me take my own medication but a few hours later they told me this was no longer allowed. My Parkinson's medication was then locked in a container by my bedside cabinet. It soon became obvious that getting my medication on time was going to be a problem. On the ward, meds were only given at certain time of day and I often waited an hour past the time my medication was due because the ward was busy. I felt myself starting to lose control and struggle with my symptoms – it was bad enough having the pneumonia but when my Parkinson's symptoms got worse it was the last thing I needed. If you haven't got your drugs inside you it's difficult to do even the most basic things and I couldn't even pour myself

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				requests.	a glass of water. Throughout my stay, I had to keep reminding busy nurses about my medication. I also needed to show them how to use my infusion pump and had to keep doing this whenever I moved to a different ward. I'm thankful for the care I received while I was in hospital, but if I'd been allowed to take my own medication I could have avoided the extra pain and stress, managed my Parkinson's, and saved the nurses time. My experience has made me nervous about going into hospital again as I wouldn't be able to go in knowing I'd be looked after properly – I'd have to educate the ward staff all over again, and that does make me worry. Every person with Parkinson's is different, with individual medication regimes. Raising awareness among staff

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					and having the right policies on self-administration of medication would help make staying in hospital easier and really put people with Parkinson's back in control."
86	NHS England	Ensuring the QS development group is mindful of potential for the safety risk of falls in older people related to multiple medications and use of specific medications.	For the QS to recognise the issues of safety aspect as well as the clinical effectiveness of routine medication review, modification, adjustment and in some cases withdrawal in older people at risk of or who are falling.	The QS development group will be aware that falls in older and frail person are a well-recognised adverse effect of medications. There is strong evidence for medications review as part of a multi factorial falls assessment to reduce risk of further falls (NICE CG 161 2013). The Kings Fund report identified that clinical guideline development often fails to recognise the potential problems associated with multiple medications use particularly for patients with multiple co-morbidities. Older people are 2-3 times more likely to fall in care homes and hospitals than in the community. Studies have highlighted significant problems in the use of medications in care homes (Barber, Szczepura and other studies have implicated medication use in the causation of increased risk of falls in hospitals(Lord, Hartikainen, Wooten, Milton,) Other studies have shown that adjustment of medications in long term care can reduce falls and prescribing costs (Zermansky, Haumschild)	https://www.nice.org.uk/Guidance/CG161 Polypharmacy and medicines optimisation: making it safe and sound Lord SR, Sherrington C, Menz HB. Falls in older people: risk factors and strategies¶for prevention. 2nd edition. Cambridge (UK): Cambridge University Press; 2007. Hartikainen S, Lonnroos E, Lohivouri K. Medication as a risk factor for falls: critical systematic review. J Gerontol A Biol Sci Med Sci 2007;62(10):1172–81. Wootton R, Bryson E, Elsasser U, et al. Risk factors for fractured neck of femur in the elderly. Age Ageing 1982;11(3):160.

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					Milton J, Jackson S. Inappropriate polypharmacy. Reducing the burden of inappropriate medication. Clin Med 2007;7:514–7. Zermansky A, Alldred D, Petty D, et al. Clinical medication review by a pharmacist of elderly people living in care homes: randomised controlled trial. Age Ageing 2006;35:586–91. Zermansky A, Alldred D, Petty D, et al. Clinical medication review by a pharmacist of elderly people living in care homes: randomised controlled trial. Age Ageing 2006;35:586–91. Haumschild M, Karfonta TL, Haumschild MS, et al. Clinical and economic outcomes of a fall-focussed pharmaceutical intervention programme. Am J Health Syst Pharm 2003;60:1029–32.
87	Tower Hamlets	Key area for quality	Reduction in antibiotic use and	Already a major initiative	Lots

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	CCG	improvement 5	more appropriate use		
88	Boots UK Ltd	Reducing antimicrobial resistance through public education, point-of-care testing and promoting vaccinations	Reducing antimicrobial resistance has been identified as a key national priority by the Prime Minister. Raising awareness among the public as to when antibiotics are (or are not) an appropriate treatment is part of the national strategy. Within this, there is a clear role for point-of-care testing to be used to identify patients for whom antibiotic treatment is most appropriate and for others to be referred to a GP (if necessary) or supported with self-care.	Community pharmacists can play a key part in three areas relating to antimicrobial resistance: Increasing public and professional understanding (RCGP TARGET guidance and Antibiotic Guardian status) Using validated point-of-care tests to identify patients with sore throats caused by Strep A and to prescribe antibiotics only where indicated. To refer patients to GPs (where necessary) and to support others to care for themselves using non-prescription medicines. To promote and administer health vaccinations (including flu and travel vaccinations) that reduce the risk of contracting infections that might subsequently require antibiotic treatment.	UK antimicrobial resistance strategy (2013-18) https://www.gov.uk/government/publications/uk-5-year-antimicrobial-resistance-strategy-2013-to-2018 TARGET (Treat Antibiotics Responsibly: Guidance, Education, Tools) antibiotic toolkit http://www.rcgp.org.uk/clinical-and-research/target-antibiotics-toolkit.aspx Pharmacy flu vaccinations http://www.biomedcentral.com/1472-6963/14/35
89	The Royal College of Paediatrics and Child Health	Key area for quality improvement 2	Standardise UK in patient children's medication chart	For those using paper prescribing a standard NHS childrens inpatient chart could be used. This would improve familiarity with it and decrease costs.	Wales has this. RCPCH guest lecture 2015 on meds safety from Australia recommended this.
90	The Royal College of Paediatrics and Child Health	Key area for quality improvement 3	Continue to improve under and post graduate training and evaluation for prescribing.	Reduce errors. Support staff.	Prescribing competence of junior doctors does it add up? Kidd L, Shand E, Beavis R, Tuthill DP. Archives of Disease in Childhood Arch Dis Child 2010: 95: 219-21
91	The Royal	Key area for quality	National database to be used eg	Standardise and optimise each medicine.	

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	College of Paediatrics and Child Health	improvement 4	standard way of prescribing and checking opiates for neonates.	Hyper link to BNFc.?	
92	Northumbria Healthcare NHS Foundation Trust	Value/extent that non-medical prescribers can optimise the use of medicines	Alternative methods of prescribing exist to the traditional medical model of practice but the potential scale and scope is not fully exploited. There are substantial potential gains in quality and safety by developing these new models.	EQUIP and PROTECT studies have shown that medicines prescribing errors are common. There is significant scope to enhance prescribing practice to improve outcomes, reduce patient exposure to harm, reduce risk, improve patient experience and reduce cost. See supporting information for a couple of relevant references.	http://qir.bmj.com/content/3/1/u203261.w2538 http://ejhp.bmj.com/content/22/2/79.full
93	Royal Pharmaceutical Society	Key area for quality improvement 4 Use of non-medical prescribers in addition to medical prescribers	It is important that the whole of the NHS workforce is utilised and supported to implement medicines optimisation. As there is a current lack of GP prescribers in primary care, other members of the primary care workforce who have prescribing abilities need to take on this role and support patients to get the most from their medicines.	Key area for quality improvement 4 Use of non-medical prescribers in addition to medical prescribers	It is important that the whole of the NHS workforce is utilised and supported to implement medicines optimisation. As there is a current lack of GP prescribers in primary care, other members of the primary care workforce who have prescribing abilities need to take on this role and support patients to get the most from their medicines.
94	Pfizer Ltd	Population and Topic to be Covered	This section currently states: “This quality standard will cover the safe and effective use of medicines in NHS/healthcare settings for all people who use	The current draft suggests this Quality Standard will cover aspects of medicines use, but wouldn’t include how initial decisions are made around choosing a medicine. The NICE guideline on Medicines	Medicines optimisation¶Medicines optimisation: the safe and effective use of medicines to enable the best possible

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			medicines, and people who are receiving suboptimal benefit from medicines." The term "safe and effective use of medicines" does not appear to include how decisions on which medicines are chosen and prescribed will be made, which is inconsistent with the Medicines Optimisation Clinical Guideline. Pfizer believe this should be reflected in the Topic Overview (scope) such that this sentence reads: "This quality standard will cover how medicines are chosen, prescribed and used in a safe and effective manner in NHS/healthcare settings for all people who use medicines, and people who are receiving suboptimal benefit from medicines."	Optimisation (NG5) highlights how medicines are chosen, including the importance of shared decision making between the patient and the healthcare professional, taking into account their needs, values and preferences. As the key evidence source against which this Quality Standard is being developed, we believe this should be included. Including the patient in the decision about which medicines are right for them is an important aspect of helping engage patients in the management of their conditions. This would be expected to have a positive effect on adherence, their overall experience and outcomes.	outcomes NG5 Methods, evidence and recommendations February 2015 http://www.nice.org.uk/guidance/ng5
95	Boots UK Ltd	Increasing the update of repeat dispensing and Electronic Prescription Service (EPS)	The use of Repeat Dispensing and the Electronic Prescription Service are part of both the pharmacy and GP contractual frameworks but there has been low uptake of both (until very recently).	Use of the full NHS Repeat Dispensing scheme, with repeatable prescriptions held by pharmacies, linked to EPS, reduces workloads for GP surgeries and pharmacies (once established) and allows more medicines-related problems to be identified by pharmacists. Savings can be made by eliminating medicines that are not required by patients. Expanding the use of Repeat Dispensing and EPS allows pharmacy	Bond C et al. Repeat prescribing study: an evaluation of the role of community pharmacists in controlling and monitoring prescribing, following protocols agreed with the GP. Aberdeen: department of General Practice and Primary Care, University of

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				teams to balance workloads and ensures patients' medication is ready for collection as and when required.	Aberdeen 1997 Strath A. Repeat prescribing and dispensing systems: an option appraisal. A report for the primary care unit, Scottish Executive. Edinburgh: Scottish Executive; 2001
96	Boots UK Ltd	Anticoagulation monitoring (point-of-care INR testing)	Through collaborations between community pharmacies and the acute sector, anticoagulant services can be moved to community locations that improve access, convenience and speed for patients, while reducing costs to the NHS and achieving or exceeding national standards through validated point-of-care INR monitoring.	Using community pharmacies as the location for point-of-care INR monitoring allows patients to have their anticoagulation doses assessed and, where necessary, adjusted at a time and place convenient to them. This avoids unnecessary journeys and expense of hospital clinic visits. Delivering tailored support to patients in pharmacies at the time when they are collecting prescribed medicines allows pharmacists to identify and address other health and social issues. Support can be linked to other NHS services, including Medicines Use Reviews, New Medicines Service and flu vaccinations. Despite winning national awards and having been expanded to meet patient demand in Brighton and Hove, pharmacy-based anticoagulation monitoring services are not being widely commissioned.	C&D Awards Clinical Service of the Year 2012 http://www.chemistanddruggist.co.uk/feature/clinical-service-year-2012

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97	Royal College of Physicians (RCP)	The RCP is grateful for the opportunity to respond to this QS topic engagement consultation. In doing so, we have liaised with our experts in clinical pharmacology and therapeutics who feel that great care must be taken not to replicate certain deficiencies of the Primary key development source - Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes (2015) NICE guideline NG5 – within the QS. Our experts are concerned that, as stands, the guideline is unlikely to improve patient safety or clarify the roles of commissioners, providers, or health-care professionals in ensuring that patients get optimum treatment. 1. Running to 220 pages and with 48 recommendations it is not readily digestible and does not act as suitable guide to commissioners on what is required. 2. It is repetitious in places eg para 12: 'the current provider shares complete and accurate information…'; section 13: : 'the current provider shares complete and accurate information…'; section 18: 'In an acute setting, accurately list all of the person's medications… and carry out medicines reconciliation… when a person moves from one care setting to another.' 3. It is sometimes contradictory eg the footnote warning about confidentiality in para 12 and the exhortation to share information in para 14. We note the recommendation in paragraph 1 that organisations should support 'a person-centred "fair blame" culture…' This is at best ambiguous, since it implies that organisations should blame individuals (fairly) for harms to patients, in direct opposition to the view that most errors in healthcare are due to failures in the system. 4. Some of the advice is considered too obvious : 'Use the best available evidence when making decisions' (para 33) ; 'record relevant information on an electronic or paper-based form' (para 24) 5. For the most part, the guideline is based on poor or at best moderate evidence of benefit, yet is very prescriptive. 6. The recommendations could be much clearer and at present appear somewhat disordered. eg the recommendations start with what to do when someone comes to harm from a medicine, and then deal successively with communications between care settings, reconciliation, medication review, self-management plans, and decision aids for patients before dealing with clinical decision support, and finally cross-sector working. A more sensible order that should be emphasised within the QS would be: Making the prescribing decision Decision support for professional Decision aids for patient Planning continuing therapy Self-management plans Communicating prescribing decisions Communication within and between care settings Cross-sector working Ensure communication is accurate Medicines reconciliation Act appropriately if things go wrong Safety Reporting of harms 7. The guideline fails to differentiate between high-level requirements and very detailed low level desiderata (see, for example, para 46). Any QS advice should not repeat this.			
98	Royal College of Nursing	This is just to inform you that the Royal College of Nursing have no comments to submit to inform on the above topic engagement at this time.			

Appendix 3: Suggestions from stakeholder engagement exercise – non-registered stakeholders

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
01	Individual	Key area for quality improvement 1	Reduce high-risk prescribing by targeted review of patients receiving it. 6.5% of hospital admissions are caused by adverse drug effects (ADEs) and half of these are judged preventable (1). Most harm is caused by commonly prescribed drugs with low to moderate risk (such as aspirin, antihypertensives, hypoglycaemics, NSAIDs) rather than 'never event' prescribing or drugs with perceived high risk (eg methotrexate; note that oral anticoagulants are the exception in that perceived high risk and cause a lot of harm) (2). There are several consensus derived lists of potentially inappropriate or high-risk prescribing including the Beers Criteria (easy to apply but not actually that risky) and two UK based examples (3, 4). Based on one of these, it has been shown that high-risk prescribing is both common and highly variable between practices (four-fold in the study cited), consistent with it being improvable (5).	The PINCER study has shown that a pharmacist-led intervention to review patients with high-risk prescribing leads to a reduction in such prescribing at 12 months (6). We have recently completed two cluster-randomised trials in this field, involving ~300 general practices, evaluating the effect of a simple feedback intervention and a more complex GP-led intervention, which are about to be submitted for publication and I would be happy to share the findings of these in confidence if that would be helpful (the protocols are published (7, 8)). Of note is that all three trials acknowledge that although the targeted prescribing is high-risk, it is not always inappropriate because in some patients it is the least bad option (or put another way, the benefits outweigh the risks). The correct rate of high-risk prescribing as measured by indicators is therefore not zero. All three trials therefore seek to prompt regular review and the application of professional judgement and patient preferences to the decision to continue or stop a high-risk drug. When this is done, then a significant proportion of the targeted prescribing is immediately stopped, indicating that explicit review reduces prescribing risk (6,7,8,9).	1) Pirmohamed M, James S, Meakin S, et al. Adverse drug reactions as cause of admission to hospital: prospective analysis of 18 820 patients. BMJ 2004; 329(7456): 15-9. (2) Howard R, Avery A, Slavenburg S, et al. Which drugs cause preventable admissions to hospital? A systematic review. British Journal of Clinical Pharmacology 2007; 63(2): 136-47. (3) Guthrie B, McCowan C, Davey P, Simpson CR, Dreischulte T, Barnett K. High risk prescribing in primary care patients particularly vulnerable to adverse drug events: cross sectional population database analysis in Scottish general practice. BMJ 2011; 342: d3514. (4) Spencer R, Bell B, Avery AJ, Gookey G, Campbell SM. Identification of an updated set of prescribing-

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					safety indicators for GPs. British Journal of General Practice 2014; 64(621): e181-e90. (5) Dreischulte T, Grant A, McCowan C, McAnaw J, Guthrie B. Quality and safety of medication use in primary care: consensus validation of a new set of explicit medication assessment criteria and prioritisation of topics for improvement. BMC Clinical Pharmacology 2012; 12(1): 5. (6) Avery AJ, Rodgers S, Cantrill JA, et al. A pharmacist-led information technology intervention for medication errors (PINCER): a multicentre, cluster randomised, controlled trial and cost-effectiveness analysis. The Lancet 2012; 379(9823): 1310-9. (7) Dreischulte T, Grant A, Donnan P, et al. A cluster randomised stepped wedge trial to evaluate the effectiveness of a

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					multifaceted information technology-based intervention in reducing high-risk prescribing of non-steroidal anti-inflammatory drugs and antiplatelets in primary medical care: The DQIP study protocol. Implementation Science 2012; 7(1): 24. (8) Guthrie B, Treweek S, Petrie D, et al. Protocol for the Effective Feedback to Improve Primary Care Prescribing Safety (EFIPPS) study: a cluster randomised controlled trial using ePrescribing data. BMJ Open 2012; 2(6). (9) Grant AM, Guthrie B, Dreischulte T. Developing a complex intervention to improve prescribing safety in primary care: mixed methods feasibility and optimisation pilot study. BMJ Open 2014; 4(1).
02	Individual	Key area for quality improvement 2	Medicines optimisation in people with polypharmacy through face	Polypharmacy can be appropriate or inappropriate depending on individual	(1) Guthrie B, Makubate B, Hernandez-Santiago V,

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			to face structured review. Over the last 15 years there have been large increases in the prevalence of polypharmacy and the prevalence of “potentially serious” drug-drug interactions (as defined by the BNF) (1). In one UK geographical area with ~310,000 adult residents, the proportion of adults dispensed ≥5 drugs doubled to 20.8% between 1995 and 2010, and the proportion dispensed ≥10 tripled to 5.8%. Receipt of ≥10 drugs was strongly associated with increasing age (20–29 years, 0.3%; ≥80 years, 24.0%) but was also independently more common in people living in more deprived areas and in people resident in care homes. The proportion with potentially serious drug-drug interactions more than doubled to 13% of adults in 2010, and the number of drugs dispensed was the characteristic most strongly associated with this (10.9% if dispensed 2–4 drugs vs. 80.8% if dispensed ≥15 drugs) (1). Polypharmacy is also the patient	circumstances, so it is not possible to define definitive indicators of quality. However, polypharmacy is commonly problematic and people taking multiple drugs require regular review beyond a records based medication review (since balancing benefits and harms requires a conversation with the patient about adverse effects which are not usually recorded in the medical record and about their preferences). Given the very large numbers of people who now have ‘conventional’ levels of polypharmacy (5 or more drugs) (1), then it would be appropriate to initially focus more detailed face to face review on people with higher levels of polypharmacy (eg 10 or more drugs) since these will also be the people at highest risk of harm.	Dreischulte T. The rising tide of polypharmacy and drug-drug interactions: population database analysis 1995-2010. BMC Medicine 2015; (13): 74. (2) Guthrie B, McCowan C, Davey P, Simpson CR, Dreischulte T, Barnett K. High risk prescribing in primary care patients particularly vulnerable to adverse drug events: cross sectional population database analysis in Scottish general practice. BMJ 2011; 342: d3514.

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			characteristic most strongly associated with receipt of a high-risk prescription (with age a weaker independent association), meaning that high-risk prescribing is more common in sicker, older people who are more likely to be harmed (2).		