PrescQIPP Community Interest Company

Ensuring appropriate polypharmacy

This bulletin focuses on both appropriate and inappropriate (problematic) polypharmacy, prescribing cascades and deprescribing. It offers advice and guidance to improve the quality and safety of patient care. To achieve this there are several areas to consider:

- Patient safety
- Medication review
- Tools to help with medication reviews
- Non-pharmalocological interventions
- Frailty
- End of life
- NHS financial challenges.

Recommendations

- Patients (and possibly their family/carers) should be partners in all prescribing decisions, unless the patient doesn't want this.
- Before prescribing any new medicine consider if the patient has: appropriate or inappropriate polypharmacy or has developed a negative prescribing cascade; their life expectancy; any change in their frailty (both increasing and decreasing); time to benefit; net benefit and magnitude of benefit; risk vs. benefit; non-pharmacological options.
- Discuss both starting and stopping criteria, there should be no surprises in the future if outcomes are not achieved or maintained.
- Regularly review the outcomes of both new and old treatments and alter therapy as needed.
- Use the tools available to identify patients suitable for a medication review.
- Ensure adequate, dedicated time is set aside to undertake a medication review. This may vary from patient to patient depending on the number of medicines they are taking and their co-morbidities.
- Reviews can be undertaken over several appointments tackling issues separately.
- Consider who can undertake an effective medication review, it does not always need to be the GP.
- Ask the patient what is the most important outcome for them to achieve and used shared decision making where appropriate.
- Use a tool to support medication review, e.g. OSAMU (to be known as PrescQIPP IMPACT from 2016), STOPP-START.
- One clinician should be responsible for a patient's care, especially for those patients attending multiple clinicians (for example different consultants in hospital). Ideally it should be the patient's GP.

Background

Medicines use can be complex and how people take their medicines safely and effectively has been a challenge for the health service for many years. Terms used to describe this process include compliance, concordance, adherence and more recently, shared decision making. Evidence demonstrates the need to explore a much broader picture than simply a health care professional telling their patient to take a medicine, assuming this happens and that their instructions are followed correctly. Effective medication review sessions offer an opportunity to do this and also understand and address not only patients' beliefs and behaviours, but also those of their healthcare professionals and their carers.

Medicines should be optimised to ensure therapy is as simple as possible, especially where there are multiple prescribers involved in a patient's care. It is recommended that one clinician is responsible for co-ordinating this, ideally the patient's GP.[1]

Polypharmacy has been recognised and discussed for decades, but little has changed. Patients are still prescribed many medicines on a continuing basis, often with insufficient or no review.[2] This is a complicated area, some polypharmacy is appropriate and of good quality, other polypharmacy may be problematic.[1,3] Action is needed for patients who have developed inappropriate polypharmacy to ensure safety, reduce waste and provide consequent savings for the NHS.

This set of resources will help achieve these changes, it is an evolving area and new opportunities will be continually added to the PrescQIPP polypharmacy and deprescribing webkit:[4] https://www.prescqipp.info/polypharmacy-deprescribing-webkit

Definitions

<table>
<tr><td rowspan="2">Polypharmacy
is now defined and recognised as two distinct types:</td><td>Appropriate polypharmacy</td><td>• Beneficial to a patient, e.g. the combination of medicines prescribed following a myocardial infarction.
• Benefits outweigh harm.</td></tr>
<tr><td>Inappropriate (problematic) polypharmacy</td><td>• The patient is taking multiple medicines on a long term basis without adequate review, often due to multiple prescribers across many organisations.
• Inappropriate polypharmacy is NOT just about taking multiple medications, it may also include the need to optimise medicines to ensure appropriate polypharmacy, e.g. titrating beta blockers in heart failure to the maximum tolerated dose.
• Harm outweighs benefits.</td></tr>
<tr><td>Prescribing cascade</td><td colspan="2">A prescribing cascade (which can be both positive and negative) occurs when a new medicine is added to treat a side effect of another medicine and can result in both appropriate and inappropriate polypharmacy; it may also lead to another iatrogenic problem.</td></tr>
<tr><td>Deprescribing</td><td colspan="2">Deprescribing is synonymous with inappropriate polypharmacy and is the process of tapering, withdrawing, discontinuing or stopping medications to reduce problematic polypharmacy, adverse drug effects and inappropriate or ineffective medication use by re-evaluating the ongoing reasons for, and effectiveness of medication therapy. This should be undertaken in partnership with the patient (and sometimes their carer), using alternative language such as 'helping you to take the right medicines for you' or consider a 'trial without', after discussion about risks and benefits can be beneficial to help understanding.
When deprescribing is performed by medical professionals it can be effective in reducing medication (pill) burden in patients to improve their quality of life, while maintaining control of chronic conditions. It must be done cautiously, with monitoring of the outcome, to avoid worsening of disease or causing withdrawal effects.[5]
This needs careful discussion on an individual basis to gain patient understanding and acceptance. Treatment and care should take into account individual needs and preferences. People who use health and social care services should have the opportunity to make informed decisions about their care and treatment, in partnership with their healthcare professionals and social care practitioners.
It is recognised that further research is needed in this area.</td></tr>
</table>

What this resource will help you to achieve

Healthcare professionals often feel they don't have enough time to tackle the challenges of inappropriate

polypharmacy as they often have little time within a patient consultation and other work pressures, e.g. stressful preparation before an inspection, coping with a lack of beds on a ward, surgery is running behind time with too many patients to see, or scrutinising paperwork is becoming too much. The easy option is to prescribe or dispense yet another medicine without fully considering the options available or discussing it in partnership with the patient. Changing one thing at a time will ensure inappropriate polypharmacy starts to decrease, with the resulting benefits to patients, healthcare professionals and the NHS.

This resource focuses on opportunities to address inappropriate polypharmacy and the prescribing cascade, it is interactive and has quick links to areas of interest. There are templates, searches and resources provided from other organisations that can be adapted for local use. https://www.prescqipp.info/polypharmacy-deprescribing-webkit#other-polypharmacy-and-deprescribing-projects

A decision tree is available to help healthcare professionals to consider each step in the process to ensure appropriate polypharmacy (attachment 1). There are links to national and international documents that provide the evidence for change and to local documents that demonstrate innovation, effective change and often include resources that can be adapted for use locally.

Supporting evidence for reducing inappropriate polypharmacy

The current challenges facing the NHS are many and varied, they often overlap, and addressing one will often have a positive impact on another. Financial efficiencies can be achieved from reducing inappropriate polypharmacy, increasing adherence and reducing waste. This will require working across all the interfaces of care, initiatives can be discussed at Area Prescribing Committees to ensure engagement from all providers. The headings below address many parts of the complicated jigsaw that will help us to reduce inappropriate polypharmacy and prescribing cascades and to improve outcomes and patient safety.

Patient safety

There have been several reports published that look at safer care in the NHS. In 2000, *Organisation with a Memory*, a report from the Chief Medical Officer and a range of safety experts, defined the field of patient safety.[6] The report explains how adverse events are caused in healthcare organisations, why these events can never be entirely eliminated, but how organisations and healthcare systems as a whole can understand and learn from safety incidents and act to reduce risks and improve safety.

Berwick reported in 2013 that there are problems in all health care systems, not just the UK, and one of the conclusions he makes is: "*place the quality and safety of patient care above all other aims for the NHS (this is the safest and best route to lower cost)*".[7] This demonstrates the link between patient safety and reduction in cost.

In 2014 the Department of Health (DH) commissioned a report into safer care in the NHS which looked at avoidable costs.[8] It is estimated that the cost of preventable adverse drug reactions or events (ADRs or ADEs) could range between £1 billion and £2.5 billion annually to the NHS. ADRs often lead to a prescribing cascade and polypharmacy as another medicine is prescribed to counteract the effect caused.

In a medicines safety news article published November 2014, David Branford, Chair of the English Pharmacy Board at the Royal Pharmaceutical Society, said: "*Whatever the financial cost of mistakes we must never forget the real and lasting impact that a serious patient safety incident has on all of those involved. No health professional goes to work wanting to harm a patient. Putting up posters that quantify the financial cost of safety incidents do not to my mind empower health professionals to make decisions about the resources available to them to make care safer. What is needed is a cultural change to allow an open and honest dialogue, encouraging learning from mistakes*".[9]

The recent inclusion of medication safety officers in large healthcare providers for healthcare comissioners will support effective networking and shared learning. The government has just published

a document, which has informed a change in legislation, as a response to three reports on patient safety, this again highlights learning, not blame, from incidents.[10]

The MHRA Yellow Card reporting scheme (https://yellowcard.mhra.gov.uk) also helps to share learning about adverse events helping to build up the national data base. A yellow card report should be submitted for all suspected adverse effects for black triangle drugs and severe or unusual adverse affects for an older medicine.[11] Patients are also encouraged to report side effects of medicines; instructions and advice are available to them on the NHS Choices website.[12] The yellow card scheme is also used for reporting on medical devices, defective medicines and counterfeit or fake medicines or devices.

Patient safety can be affected by inappropriate polypharmacy, e.g. direct harm from cumulative side effects of many medicines, non-adherence or partial adherence causing disease progression or worsening of symptoms, and doses that have not been increased to the maximum tolerated within the licensed indication, which may also mean the condition is not effectively managed.

Medication review

The GMC good practice guidance on prescribing and managing medicines and devices advises that whether medicines are prescribed as a repeat or on a one-off basis, suitable arrangements must be in place for monitoring, follow-up and review, taking account of the patient's needs and any risks arising from the medicines.[13] Reviewing medicines will be particularly important where:

- The patient may be at risk. For example, patient has frailty or multiple conditions.
- Medicines have potentially serious or common side effect.
- The patient is prescribed a controlled drug or other medicine that is commonly abused or misused.
- The BNF or other authoritative clinical guidance recommends blood tests or other monitoring at regular intervals.

In 2002, the DH published '*Room for Review*', which described three levels of medication review depending on the amount of information available to the reviewer and the presence, or not, of the patient at the review:[14]

Level 1: Is a technical **prescription review** looking at the list of medicines a patient is being prescribed.

Level 2: Is a **treatment review** looking at the patient's prescribed medicines with their full notes available to the reviewer.

Level 3: Is a **clinical medication review** face to face with the patient and with access to the full notes.

Level 3 is the gold standard and resources to achieve this level should be sought to keep patients safe, reduce inappropriate polypharmacy and prescribing cascades.

An effective medication review offers a real opportunity to have an informed discussion with the patient (and possibly carer/family) and address any inappropriate polypharmacy and concerns they may have about their medicines. A good medication review should include: medicines, dressings, oral nutritional supplements, over the counter (OTC) items, appliances, devices, blood testing equipment, tests. Access to the patient's full medical history is needed to undertake an effective review.

To reduce/avoid inappropriate polypharmacy, consider a full medication review:

- Following discharge from hospital.
- Following transfer from another practice or between prescribers in the same practice.
- At resolution of treatment, e.g. chemotherapy/radiotherapy; after surgery.
- After admission to a care home.
- Soon after a new treatment has been initiated.
- As frailty changes (both increasing and decreasing).
- Following referral from a community pharmacist after a Medication Use Review (MUR), Targeted Medication Review (t-MUR) or New Medicine Service (NMS) review has triggered concerns.[15]

- As a patient approaches end of life.

A full medication review also offers an opportunity to implement the NICE Guidance for Medicines Optimisation. Patients may have already accessed the patient information from this guideline and may challenge prescribers when any new treatment is suggested.[16]

There is a specific briefing accompanying this document aimed at supporting a medication review.

There is a new focus on reducing inappropriate polypharmacy in patients with mental health disorders. These patients often fall between the gaps of specialist services and the GP. GPs often feel they don't have the expertise to review and adjust medication that has been prescribed by the specialist. Over half of adults with learning disabilities prescribed antipsychotics do not have a recorded diagnosis of a condition that the drugs are designed to treat. A national call to action to address this has now been launched.[17]

Medicines reconcilliation is a type of medication review that is often undertaken as a patient is admitted to hospital, transferred within the hospital and at the point of discharge, but can also be useful as the patient transfers back to primary care. This has been demonstrated to be an effective strategy for preventing adverse drug events. Medicines reconcilliation is the process of creating the most accurate list possible of all medicines a patient is taking. The list includes: drug name, dosage, frequency, and route of administration. Medicines reconcilliation involves comparing that list against the physician's admission, transfer, and/or discharge orders. The goal is providing correct medicines to the patient at all transition points within the hospital and when they leave the hospital.[18]

It is not always possible to undertake a full medication review during a hospital visit as there may be limited access to a patient's complete medical record or the patient may not stay in the hospital setting for long enough. This should be remembered when a patient is transferred back to primary care, especially following an admission for surgery.

Length of consultation for a medication review

There is a paucity of evidence and little agreement on the ideal consultation length to provide a full medication review; this requires further research to fully understand patient engagement and partnership in the process.

Most GPs offer ten minutes for routine appointments, which is recognised in the GP contract as an indicator of quality. This may not be long enough for a comprehensive, effective medication review, especially if the need to stop a medicine is to be discussed. The quality and outcomes from the review are more important than the time taken to achieve these. If the patient comes prepared for the review the time can be used effectively. The NICE Information for the public: the safe and effective use of medicines will help a patient prepare for the consultation, it describes what they should expect from their medication review and suggests questions to ask to enable the best possible outcome.[19]

It is essential that all decisions about prescribing or any alternatives are fully discussed with the patient and possibly their family/carer, including the decision not to prescribe or to stop medicines. Patients should understand the process of prescribing: initiation, step up, step down and step off or stop and the reasons for the decision(s), including the alternatives to a prescription.[19]

Patient Information Leaflets (PILs) are provided as a legal requirement with each medicine dispensed. These can be complicated to understand and often alternatives are developed and provided, e.g. for children, in an easier to understand format. An example to offer patients describing the medicines review process is in attachment 2.

Patient Decision Aids (PDAs) help patients and their family/carer to understand benefits versus harm and can help the discussion about numbers needed to treat (NNTs) and harm (NNHs) with a patient in an easy to understand format.

Who can undertake a medication review?

A GP, as the practitioner responsible for the general care of the patient, should lead on the medication

review process, but can and should get help from a range of other healthcare professionals to support this process. Multidisciplinary medication reviews offer the best outcomes for the patient but may be difficult to organise. Remember one clinician, ideally the patient's GP should be responsible for their medicines.[1]

The GMC Good Practice Guide suggests that pharmacists can help improve safety, efficacy and adherence in medicines use, for example by advising patients about their medicines and undertaking medicine reviews. This does not relieve GPs of their duty to ensure that prescribing and medicines management is appropriate. GPs should consider and take appropriate action on information and advice received from pharmacists and other healthcare professionals who have reviewed patients' use of medicines, especially following changes to their medicines, or if they report problems with tolerance, side effects or with taking medicines as directed (adherence).[13]

Clinical Pharmacists employed within a practice can support a full medication review as they have access to all the information necessary in the patient records. It is increasingly recognised that clinical pharmacists employed in GP practices may have a valuable role to play in medicines review and optimisation, a pilot has been commissioned by NHS England.[20]

Community Pharmacists in the UK offer a Medication Use Review (MUR) to patients, which is part of their pharmacy contract. This is not a full clinical review, but is based on a specific clinical condition, e.g. respiratory disease. Issues patients highlight about their adherence and the understanding of their medicines can be used within the GP practice to support a full medication review.[15]

Specialist Nurses can offer medication reviews in their area of expertise, e.g. Parkinson's disease, diabetes, respiratory diseases. They may not be experts beyond their scope of practice, for patients with co-morbidities only part of the picture may be addressed.

Consultants and Specialists - if the patient is under the care of a specialist (or more than one specialist) for their condition(s), it is important to get their input into the patient's medicines before undertaking a medication review if a multidisciplinary review is not possible.

Tools to help with medication reviews

The tools discussed below help evaluate drug safety, particularly in older patients, and are intended for health providers who care for this population. They can also be used for patients with frailty and as part of a polypharmacy review. The criteria in each tool should not serve as a substitute for professional judgment, nor should it dictate prescribing for specific patients. The information presented in each tool should serve only as a guide, with care tailored to each individual patient's needs. There is no need to use all the tools highlighted in this document - clinicians should select the tool(s) that they find easiest to use to support the medication review process.

Improving Medicines and Polypharmacy Appropriateness Clinical Tool (IMPACT)

https://www.prescqipp.info/resources/viewcategory/455-polypharmacy-impact

The information in the tool should be used as a pragmatic decision aid, in conjunction with other relevant, patient specific data. If therapy is considered appropriate, it should be continued. Medicines with medium or high clinical and/or cost risk are highlighted and may be considered as a priority to focus on. The clinical risk classifies the risk of continuing therapy based on maintenance doses. The cost risk identifies areas where total spend in primary care is high (high volume of low cost medicines or low volume of high cost medicines).[21]

When speaking to patients about their medicines, health care professionals should review whether therapy is appropriate and still being adhered to. Pharmacy based services such as Medicines Use Reviews are adherence-centred reviews with patients on multiple medicines, particularly those receiving medicines for long term conditions. Clinical medication reviews are a critical examination of a patient's medicines with the objective of reaching an agreement with the patient about treatment, optimising the

impact of medicines, minimising the number of medication-related problems and reducing waste.

Medicines optimisation may include stopping a treatment. Medicines should be stopped on an individual basis if:

- There is no valid or relevant indication for prescribing as assessed by changes in symptoms, signs, and laboratory and diagnostic test results.
- The known possible adverse drug reactions or other harms outweigh the possible benefits.
- There is a risk of cumulative toxicity if particular medicines are taken together.
- The patient is choosing to not take/use the medication as prescribed or intended.
- Unlicensed medicines ('specials') are being prescribed when an alternative licensed medicine or formulation will provide the same therapeutic benefit.
- Non-pharmacological options can sometimes provide benefit, without adverse effects.

If a medicine is no longer considered appropriate and is to be stopped, this should be discussed and a decision agreed between the prescriber and patient (and in some circumstances their carer/family). Good communication is essential for successful withdrawal of therapy that is no longer considered appropriate. If the principles in the PrescQIPP Ensuring Appropriate Polypharmacy tool (see attachment 1) are followed, then stopping a medicine should not be a surprise, as before initiation of treatment the patient will have had an informed discussion about the process.

PrescQIPP Drugs to Review for Optimised Prescribing list (DROP-List)

https://www.prescqipp.info/droplist

The DROP-List is an accumulation of medicines that are regarded as low priority, poor value for money or medicines for which there are safer alternatives.[22] Some of the NICE 'do not do' recommendations have been incorporated into the DROP-List.[23] The list also includes medicines that could be considered for self care, with the support of the community pharmacist.

Reviewing medicines on the DROP-List will support the reduction of inappropriate polypharmacy.[24]

The Beers criteria

The Beers criteria is an American document so comes with the warning that some of the medicines may not be available in the UK, or may be known by different names.[25]

It catalogues medicines that can cause increased adverse events in older people because of altered pharmacokinetics, increased exposure to multiple concomitant medications due to comorbid conditions or due to the physiologic changes associated with ageing.

The Beers List is intended to be used to inform the appropriate and safe use of medicines by physicians and healthcare providers who treat older adults with polypharmacy. Not all uses of listed medicines are inappropriate, it is designed to support good clinical judgement for an individual patient. It is applicable to all older adults with the exclusion of those in palliative and hospice care.

Since original publication in 1991, updates to the criteria have been published in 1997, 2003, 2012 and 2015 in the Journal of the American Geriatrics Society.

The 2015 Beers criteria update is now available on the Journal of the American Geriatrics Society website.[25] It recognises that care is improved when patients are actively involved in their care. Any symptom in an older adult should be treated as an adverse drug reaction unless proved otherwise.

New to the criteria in 2015 are:

- A list of medicines that should be avoided, or may need to have their dose adjusted, based on the individual's kidney function.
- A list of selected drug–drug interactions documented to be associated with increased harms in older adults.

- Nitrofurantoin is now safe to use where creatinine clearance is 30ml/min or greater, but avoiding long term use.
- PPIs should not be used longer than eight weeks without justification to reduce risk of *C difficile* infection, bone loss and increased fractures.

Careful application of the criteria by health professionals, consumers, commissioners and health systems should lead to closer monitoring of drug use in older adults. This tool should be used to complement others, such as:

STOPP/START

STOPP/START is a screening tool of older people's prescriptions (STOPP) and a screening tool to alert to right treatment (START); the criteria were first published in 2008. Due to an expanding therapeutics evidence base, updating of the criteria was completed in 2015, see full details:[26] http://ageing.oxfordjournals.org/content/44/2/213.full

The STOPP/START criteria have been used to review the medication profiles of community-dwelling, acute care and long-term care older patients in Europe, Asia and North America. Observational studies have reported the prevalence and predictors of potentially inappropriate prescribing.

PINCER

PINCER is a Pharmacist-led IT-based intervention which gives GPs feedback, education and support to reduce rates of clinically important medication errors.[27]

The aim of the PINCER audit tool is to identify at-risk patients who are being prescribed medicines that are commonly and consistently associated with medication errors so that corrective action can be taken to reduce the risk of occurrence of these errors. Full details can be found at: http://www.nottingham.ac.uk/primis/tools-audits/list-of-audit-tools/pincer.aspx

The PINCER audit tool also includes the addition of CHART Online functionality, information about the benefits of **CHART online functionality can be found on the PRIMIS website.**[28] This will enable practices to benchmark and compare results and progress with peers locally, regionally and nationally.

From 1st August 2015 the PINCER audit tool has to be purchased.

The PINCER audit tool is an indicator on the NHS England medicines optimisation dashboard, available at: http://www.england.nhs.uk/ourwork/pe/mo-dash/

Scottish Patients At Risk of Readmission and Admission (SPARRA)

SPARRA is a risk prediction tool which forecasts an individual's risk of being admitted to hospital as an emergency inpatient within the next year and gives a SPARRA score for this risk.[29] Although developed in Scotland, the principles could be applied to patients in other UK countries. Information Services Division (ISD) Scotland have developed SPARRA Version 3 from a patient-level dataset which combines information on an individual's:

- Hospital inpatient admissions
- Community dispensed prescriptions
- Emergency Department (ED) attendances
- New outpatient attendances
- Psychiatric inpatient admissions.

A key feature of Version 3 is the division of the SPARRA cohort into three sub-cohorts: Frail Elderly, Long Term Conditions, and Younger Emergency Department. These sub-cohorts each have their own specific set of risk factors tailored to the characteristics of these particular populations.

See full details at: http://www.isdscotland.org/Health-Topics/Health-and-Social-Community-Care/SPARRA/SPARRA-Model/

NO-TEARS

The NO-TEARS Tool was devised by a GP in Wales in 2004 to help get the most from discussions with patients in their Medication Reviews.[30]

Need and indication

Open questions

Tests and monitoring

Evidence and guidelines

Adverse events

Risk reduction or prevention

Simplification and switches

Further details for using this in a medication review can be found at: http://www.bmj.com/content/329/7463/434

An adapted version for local use is also available in attachment 3.

Seven Steps to Managing Polypharmacy

http://www.nhsiq.nhs.uk/media/2612222/polypharmacy_and_medication_review_-_seven_steps_-_vs2_jan_2015__nb_.pdf

Seven Steps to Managing Polypharmacy has been developed by the Medicines Use and Safety Division of the Specialist Pharmacy Service. This process has been created to assist with medication review and decisions around deprescribing in the context of polypharmacy and aims to address polypharmacy as part of overall medicines optimisation strategies. It can be used in successive consultations to address one or a small number of polypharmacy issues at a time. It is most likely applicable in community settings, the principles can be applied to all patient care settings. It is based on published evidence and current practice and has been reviewed by clinicians who work directly with patients. A list of key reference documents with content summary is provided following the process together with references for further reading.[31]

Scottish Polypharmacy Guidance

http://www.central.knowledge.scot.nhs.uk/upload/Polypharmacy%20full%20guidance%20v2.pdf

Polypharmacy Guidance was first produced by NHS Scotland in 2012. This document provided national approach to address the issues resulting from the use of multiple medicines in the frail and elderly population in Scotland, although the principles can be applied elsewhere. The aim was to improve therapeutic care by reducing the risk of adverse drug reactions associated with polypharmacy. It contains both management information, with evidence based rationale, and guidance information with a set of tools for clinicians to undertake the review and implement change.[32] An updated version was produced in 2015.[33]

Non-pharmacological interventions

It may not always be necessary to prescribe a medicine (but this is often the easiest option): self care, lifestyle changes or referral to another practitioner may all be appropriate and available.[24] Patients may now start to challenge prescribing decisions.[19] Non-pharmacological interventions may be appropriate or patients may be guided to self care.

Frailty

There is an increasing recognition that older age itself should not be a specific focus for holistic medication review. Instead, a more functional individualised approach is recommended as many older patients may be very fit, whilst some younger patients can have multiple pathologies that lead to frailty, increases in hospital admissions and polypharmacy. The term 'frailty' is becoming the preferred term.

A recent best practice statement from the British Geriatrics Society notes that:
Frailty is a clinically recognised state of increased vulnerability. It results from ageing associated with a decline in the body's physical and psychological reserves. Frailty varies in its severity and individuals should not be labelled as being ***frail*** *or* ***not frail*** *but simply that they have frailty.*[34]

The degree of frailty of an individual is not static; it naturally varies over time and can become better or worse, this may lead to the need for end of life care.

Adults who have frailty lack the reserve to deal with adverse events. Even minor physical and mental stresses can have a big impact on their health. Prescribing in this group needs particular attention as guidelines are unlikely to take the presence or absence of frailty into account when making recommendations and often only consider single pathologies. This puts adults with frailty at particular risk of:

- Adverse drug reactions
- Drug to drug interactions
- Rapid deterioration if necessary medication is not optimised, e.g. for treatment of heart failure

Drugs likely to cause adverse drug reactions in adults with frailty:[35,36]	• Non-steroidal anti-inflammatory drugs (NSAIDs) • Diuretics • Angiotensin-converting enzyme (ACE) inhibitors (but these may be appropriate in heart failure[34]) • Angiotensin II receptor blockers (ARBs) • Beta blockers • Medicines that affect the central nervous system, e.g. antidepressants (particularly tricyclic antidepressants), antipsychotics, benzodiazepines, opioids and other analgesics • Dihydropyridines, e.g. nifedipine • Digoxin in doses over 125 micrograms daily • Anticholinergics • Phenothiazines, e.g. prochlorperazine.

How to identify frailty	The Gold Standards Framework defines this as:[37] • Individuals who present with multiple co morbidities with significant impairment in day to day living and: • Deteriorating functional score, e.g. performance status – Barthel/ECOG/ Karnofksy • Combination of at least three of the following symptoms: » Weakness » Slow walking speed » Significant weight loss » Exhaustion » Low physical activity » Depression.
What must be considered in patients with frailty?	• Decreasing the dose of medicines. • Deprescribing - reducing any inappropriate polypharmacy. • Monitoring renal function carefully and adjusting doses. • Monitoring hepatic function carefully and adjusting doses.

End of life

Consider the harm to benefit ratio of any new medicine, or those the patient is currently taking as the patient moves towards end of life care. If the Ensuring Appropriate Polypharmacy flow chart (see attachment 1) has been followed, patients and their carers will start to understand the reasoning behind the joint decision that may involve stopping a medicine at this time. This should not just be for patients with cancer but for many with chronic long term conditions.

Ask yourself, "Would I be surprised if this person were to die in the next 12 months?" This simple (the surprise) question is accurate seven times out of ten. The British Geriatric Society documents that describe this are included in the further reading section of the polypharmacy and deprescribing webkit,[4] https://www.prescqipp.info/polypharmacy-deprescribing-webkit

NHS financial challenges

Patients are living longer, often with multiple co-morbidities, this is due to the success of the NHS; but this comes at a cost. A very wide range of measures will be required to increase the efficiency of the whole NHS in order to meet future challenges. An additional £8 billion is needed by 2020 to sustain the NHS; The Five Year Forward View estimates efficiencies of 3% year on year are needed just to maintain the current status quo, the review also recognises that a radical change in Public Health and prevention are needed and that patients need to be fully engaged in this change.[38]

The National Institute for Health and Care Excellence (NICE) has a suite of opportunities in its savings and productivity section, including 'do not dos' that can help the NHS identify cost savings and productivity gains.[23]

However, ensuring patients are taking their medicines as expected and repeat prescribing and dispensing processes are robust so that waste is kept to a minimum, will help considerably.

Education and knowledge sharing

Resources, including e-learning and slide packages, are in development to help with training in this important area to really change practice.

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Additional PrescQIPP resources

 Briefing

 Implementation materials and tools

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Contact help@prescqipp.info with any queries or comments related to the content of this document.

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