PrescQIPP Community Interest Company

Polypharmacy and deprescribing II- a practical guide to deprescribing

This is the second of two PrescQIPP bulletins on polypharmacy and deprescribing and is a practical guide to support deprescribing. It covers agreeing treatment goals, shared decision making, patient decision aids and tools to support and prioritise medication review. In addition, there are algorithms to support the deprescribing of specific medicines.

The first bulletin considers national and international resources that help support the understanding of polypharmacy and safe deprescribing, the evidence base for deprescribing and the impact of frailty and multimorbidity on polypharmacy.

Background

A structured approach is necessary for prescribing, medication review and deprescribing. Traditional prescribing has been clinician led, often with little patient engagement in the decisions being taken. Prescribers can help avoid problematic polypharmacy from developing in the future by actively involving the patient in the prescribing decision by agreeing treatment goals, using shared decision making and tools such as patient decision aids.

Prescribers can also address existing problematic polypharmacy by undertaking medication reviews using validated tools, particularly in patients with frailty, with multimorbidity or those taking high risk medicines.

Agreeing treatment goals before prescribing

Agreeing treatment goals and discontinuation criteria before initiating a medicine will help to facilitate any future deprescribing decisions with the patient and/or their family or carer, if appropriate.

Every new medicine should be initiated in partnership with the patient, as a trial, with a medication review soon after initiation. If the expected outcome is achieved with acceptable side effects, the medicine can be continued. Withdraw the medicine if:

- The harm to benefit profile changes significantly.
- Therapeutic benefits reduce or cease.
- There are unacceptable side effects.
- The patient is continually non-adherent.
- There are physiology changes.
- The time to benefit exceeds life expectancy.

Alternative options may be available, or a non-pharmacological intervention chosen.

Following the principles in the PrescQIPP Ensuring Appropriate Polypharmacy flow chart will help this to become part of everyday practice.[1]

The community pharmacy New Medicine Service (NMS) provides support for people with long-term conditions newly prescribed a medicine to help improve medicines adherence.[2] The NMS can increase patient engagement with their condition and medicines, supporting patients in making decisions about their treatment and self-management.

The NMS covers asthma and COPD, type 2 diabetes, antiplatelet/anticoagulant therapy and hypertension.[2]

Shared decision making

Clinicians and patients (and/or their family or carer, if appropriate), should have a conversation and share the best available evidence before making decisions about treatments, to make an informed choice together.

Shared decision making (SDM) ensures that individuals are supported to make decisions that are right for them. It is a collaborative process through which a clinician supports a patient to reach a decision about their treatment.

The conversation brings together:

- The clinician's expertise, such as treatment options, evidence, risks and benefits.
- What the patient knows best: their preferences, personal circumstances, goals, values and beliefs.

Decision support, a three-step model, can help patients move towards shared decision making:[3]

1. Choice talk: refers to the step of making sure that patients know that reasonable options are available.
2. Option talk: refers to providing more detailed information about the options.
3. Decision talk: refers to supporting the work of considering preferences and deciding what is best for the individual.

SDM is relevant in any non-life-threatening situation when a health or care decision needs to be made and a range of options (including doing nothing) is available. SDM ensures that individuals are supported to make decisions based on their personal preferences and are, therefore, more likely to adhere to evidence-based treatment regimens, more likely to have improved outcomes and less likely to regret the decisions that are made.[4]

SDM can be used to discuss medicines that are already prescribed for a patient but with which they are non-adherent. Non-adherence can take many different forms. The patient may incorrectly time the medication or take the wrong dose because they misunderstood, or forgot, the health professional's instructions. Patients may also forget a dose completely or prematurely terminate the medication.[5]

There is evidence that patients make decisions about medicines based on their understanding of their condition and the possible treatments, their view of their own need for the medicine and their concerns about the medicine.[5] Patients may self-adjust or stop their regimen because of side-effects or personal beliefs. Deliberate non-adherence such as this may be referred to as 'intelligent' non-adherence, reflecting a reasoned choice.[6] A full SDM discussion in this scenario may provide the patient with 'permission' to stop their medicine(s).

A number of resources to support SDM are available from NHS England[7] and the National Institute for Health and Care Excellence (NICE).[8] These include resources for patients and training for healthcare professionals.

Patient Decision Aids (PDAs)

PDAs help patients and their family or carer, where appropriate, 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.

NICE has several PDAs in its guidance documents; examples include those for atrial fibrillation[9] and lipid modification.[10]

Types of treatment

Medicines can be grouped as:

1. Those that keep the patient well and improve day-to-day quality of life or medicines that provide symptomatic relief, e.g. analgesics, thyroxine. In some cases, if these medicines are stopped, the patient may become ill or unable to function. However, some medicines may be able to be stepped down, stopped or used on an as required basis, e.g. a proton pump inhibitor.
2. Those that are used for the prevention of illness in the future, e.g. statins, aspirin, antihypertensives or bisphosphonates. A decision about whether to stop medicines such as these should include consideration of the risks and benefits of treatment for that particular patient, the length of time required for benefit and the life expectancy of the patient.

Presentation of NNTs for a range of medicines is one tool that prescribers may use to aid discussions with patients about the likely benefit of preventative treatments. The NNT is the number of patients you need to treat to prevent one additional bad outcome (death, stroke, etc.). For example, if a drug has an NNT of 5, it means you have to treat 5 people with the drug to prevent one additional bad outcome.[11]

The NNH is the average number of people taking a medication for one to suffer an adverse event.[12] The overall benefit to risk ratio (NNT/ NNH) should be weighed up in the individual patient and may vary considerably in people with polypharmacy.[12]

The Scottish Polypharmacy Guidance includes a Drug Efficacy (NNT) table[12] which provides clinical trial population and duration information. The closer an individual is in terms of characteristics and duration of treatment to the trial, the more likely they will achieve the expected benefits.

Adults approaching end of life have an increased risk of many events, so each individual event has a higher absolute risk. This means that interventions may have a much lower NNT for that adult. This should be balanced against the shorter time they have in life to obtain a benefit and the increased risk that any harm may also have a higher impact.[12]

Medication review

Medication review has been described as, “a structured, critical examination of a person’s medicines with the objective of reaching an agreement with the person about their treatment, optimising the impact of medicines, minimising the number of medication-related problems and reducing waste”.[13] During these reviews, patients (or their family/carer, as appropriate) should be given appropriate information about the harms, benefits and goals of such treatment so that they can be actively involved in the decision-making process. The reviews should include:

- Identification of the patient’s priorities,
- Discussion of the acceptability of treatment and how it relates to the patient’s beliefs and expectations, and
- The option of stopping treatments.

Who to prioritise for review?

Patients at highest risk of inappropriate polypharmacy are those with the greatest frailty, on the most medicines and taking high risk medicines.[12] Further guidance is provided in the PrescQIPP Improving Medicines and Polypharmacy Appropriateness Clinical Tool (IMPACT) available at: https://www.prescqipp.info/our-resources/bulletins/bulletin-152-polypharmacy-impact/

The Scottish Government Polypharmacy Guidance offers the following case finding criteria to provide a high-level strategic classification:[12]

- Aged 50 years and older and resident in a care home, regardless of the number of medicines prescribed.
- Prescribed 10 or more medicines.
- On high-risk medication (see below), regardless of the number of medicines taken.
- Approaching the end of their lives: adults of any age, approaching the end of their life due to any cause, are likely to have different medication needs, and risk versus benefit discussions will often differ from healthy adults with longer expected life spans.

If it is not realistic to review all of these patients immediately, the above criteria can be further stratified by:

- Age (e.g. 75 years and over, then 65 years and over as resource allows).
- Frailty.
- Dominant condition (e.g. dementia) – certain conditions dominate patient care as they impact and inform decisions for all other conditions.

High risk medicines

Refer to the PrescQIPP IMPACT Tool available at https://www.prescqipp.info/our-resources/bulletins/bulletin-152-polypharmacy-impact/

A study in 2004,[14] into the burden of Adverse Drug Reactions (ADRs) on hospital admissions, identified a number of high-risk medicines.[12]

Medicines class	Examples
Positive inotropic medicines	Digoxin
Diuretics	Bendroflumethiazide, spironolactone, furosemide
Hypertension/heart failure	Ramipril, enalapril, losartan
Anticoagulants and protamine	Warfarin, rivaroxaban, edoxaban, apixaban, dabigatran
Antiplatelets	Clopidogrel, dipyridamole
Hypnotics and anxiolytics	Benzodiazepines, Z-drugs
Antipsychotic/antimanic drugs	Amisulpride, risperidone
Antidepressants	Amitriptyline, fluoxetine, paroxetine
Opioid analgesics	Tramadol, co-codamol, morphine, fentanyl
Rheumatic diseases and gout	NSAIDs, corticosteroids, methotrexate

The study concluded that while these drugs have proven benefit for patients, they still present a potential harm to the patient and measures should be put in place to reduce the burden of ADRs and further improve the benefit to harm ratio.

Polypharmacy prescribing comparators

Medicines optimisation polypharmacy prescribing comparators have been developed by the NHS Business Services Authority in conjunction with Wessex Academic Health Science Network.[15]

A series of indicators have been developed to inform safer prescribing practice to help pharmacists, clinicians and patients review prescribed medication and prevent harm. These include indicators about polypharmacy:

- Average number of unique medicines per patient.
- Percentage of patients prescribed 8/10/15/20 or more unique medicines.
- Percentage of patients with an anticholinergic burden score of 6/9/12 or greater.
- Multiple prescribing of anticoagulant and antiplatelet medicines.
- Percentage of patients prescribed two or more unique medicines likely to cause kidney injury (DAMN medicines).
- Percentage of patients prescribed two or more unique medicines likely to cause kidney injury (DAMN medicines), one of which is an NSAID.

The comparators can be used by commissioners in collaboration with local GP practices to help identify areas for review, with the relevant and appropriate education and training support in place. The comparators have been designed to be the stimulus for debate and change. This facilitates an approach of taking a population perspective to trigger the search for unwarranted variation in care.[15]

Medicines reconciliation

Medicines reconciliation is the process of identifying an accurate list of a person's current medicines and comparing them with the current list in use, recognising any discrepancies, and documenting any changes, thereby resulting in a complete list of medicines, accurately communicated.

The medicines reconciliation process will vary depending on the care setting that the person has just moved into – for example, from primary care into hospital, or from hospital to a care home - and has been demonstrated to be an effective strategy for preventing adverse drug events. The goal is providing correct medicines to the patient at all transition points within and between care settings.

NICE advise that in primary care, medicines reconciliation should be carried out 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 one week of the GP practice receiving the information.[13]

During a medication review it is important to check whether the patient is actually taking all of the medicines listed.

Who can undertake a medication review?

Multidisciplinary medication reviews may offer the best outcomes for the patient but can be difficult to organise. If the patient is under the care of a specialist (or more than one specialist) for their condition(s), their input may be needed before undertaking a medication review if a multidisciplinary review is not possible.

Traditionally, the patient's GP will have undertaken the review. However, most GPs offer 10 minute appointments which may not be long enough for a comprehensive, effective medication review, especially if the need to stop a medicine is to be discussed. However, the review and any consequent deprescribing, can be done in stages if necessary.

Clinical pharmacists working in Primary Care Networks are ideally placed to undertake medication reviews and will have a key role in supporting delivery of the new Network Contract Directed Enhanced Service specifications.[16-18] For the new Structured Medication Review and Optimisation requirements, this will include tackling over-medication of patients and withdrawing medicines no longer needed. For the Enhanced Health in Care Homes service, residents will benefit from regular clinical pharmacy led medicines reviews.[17]

Clinical pharmacists will work with and alongside the multi-disciplinary team and will undertake clinical medication reviews to proactively manage people with complex polypharmacy, especially the elderly, people in care homes, those with multiple long-term conditions and people with learning disabilities or autism.[17]

How to deprescribe

Clinicians are taught to prescribe but there has been limited training to help make decisions about stopping medicines and there is relatively little evidence to support such decisions, although evidence is emerging.[19] Prescribers may feel uncomfortable with stopping medicines, concerned by perceptions about denying people medicines. Some medicines are started by specialists and the prescriber may not wish to contradict 'expert' advice.

Legally deprescribing is no different to prescribing within the UK's legal system. Ongoing review and monitoring of all decisions based on patient and medication-specific factors is required for safe patient care and all decisions must be informed by full and frank informed patient consent.[20]

Reasons for withdrawing a medicine include ADRs and a lack of clinical response. A change in the circumstances of a patient or their disease state may change the risk-benefit profile of certain medicines unfavourably, and in people with frailty (whose condition can change rapidly) this should always be considered. A change in a patient's condition may mean that a medicine they have taken for many years can become problematic for them. New evidence and changing guidelines may also affect the desirability of using a particular medicine.

A five step process can be used when stopping medicines; this should be initially as a trial:[19]

- Gain a comprehensive medication history and check adherence. 'Intelligent' non-adherence, including a shared decision-making discussion, makes stopping more straightforward.
- Identify any potentially inappropriate polypharmacy (PIP).
- Following discussion with the patient, determine whether the PIP can be stopped; see how the patient feels about stopping their medicine(s).
- Plan the withdrawal regimen: reduce or stop one medicine at a time, if problems develop it makes it easier to identify the likely cause. Consider if the medicine can be stopped abruptly, e.g. if toxicity has developed, or needs to be tapered, this is usually the best option; sometimes a smaller dose may need to be continued long term.
- Check for benefit or harm after each medicine has been reduced or stopped (provide contact details to the patient for support in case of problems), this may include monitoring tests.
- If the medicine is stopped, or the dose is reduced, ensure this is documented (including if it was not ceased/reduced and why) as well as the process that was undertaken that led to this result to reduce the possibility of medication errors and reinitiation of previously ceased medications.

Deprescribing requires careful counselling, and a shared decision needs to be reached with the patient and carers. This requires a similar level of skill to that needed to prescribe a drug in the first place. Deprescribing should be considered as part of routine clinical care.[21]

Algorithms to support deprescribing of the following drugs can be found as attachments https://www.prescqipp.info/our-resources/bulletins/bulletin-254-polypharmacy-and-deprescribing/:

- Attachment 1. Allopurinol deprescribing algorithm
- Attachment 2. Antidepressants deprescribing algorithm
- Attachment 3. Antihyperglycaemics deprescribing algorithm
- Attachment 4. Antihypertensives deprescribing algorithm
- Attachment 5. Antipsychotics deprescribing algorithm
- Attachment 6. Benzodiazepines or Z-drugs deprescribing algorithm
- Attachment 7. NSAIDs deprescribing algorithm
- Attachment 8. Statins deprescribing algorithm

Tools to help with medication reviews

The tools discussed below help evaluate drug safety, particularly in older patients, and 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.

NO TEARS, the Specialist Pharmacy Service (SPS) 'A patient centred approach to polypharmacy', and NHS Scotland's 7-Steps medication review are all 'patient-centred' tools which help guide the healthcare professional in a stepwise manner to ensure that all the key areas of a medication review are covered.

IMPACT, the Beers criteria and STOPP/START are all 'medicine-centred' tools which focus on individual therapeutic areas and provide detailed advice on the suitability of different medicines in older people.

Healthcare professionals involved in medication review and deprescribing may find it useful to use one of the 'patient-centred' tools in conjunction with one of the 'medicine-centred' tools.

IMPACT

The IMPACT bulletin provides suggestions for considerations to optimise medicines use, and practical advice (where it is available) about how to stop/discontinue/withdraw a medicine. The bulletin can be found at: https://www.prescqipp.info/our-resources/bulletins/bulletin-152-polypharmacy-impact/[22]

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.[23]

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, 2015 and 2019 in the Journal of the American Geriatrics Society.

Each of the five types of criteria in the 2015 update were retained in the 2019 update:

- Medications that are potentially inappropriate in most older adults
- Those that should typically be avoided in older adults with certain conditions
- Drugs to use with caution
- Drug-drug interactions
- Drug dose adjustment based on kidney function

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.[24]

A useful toolkit to facilitate the implementation of the STOPP/START criteria in practice has been produced by the North of England Commissioning Support Unit (NECS).[25]

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.[26]

- Need and indication
- Open questions
- Tests and monitoring
- Evidence and guidelines
- Adverse events
- Risk reduction or prevention
- Simplification and switches

An adapted version for local use is also available in attachment 11 https://www.prescqipp.info/our-resources/bulletins/bulletin-254-polypharmacy-and-deprescribing/

Specialist Pharmacy Service: A patient centred approach to polypharmacy

Developed and updated in 2017 by Nina Barnett and Lelly Oboh, Consultant Pharmacists working with Older People, Medicines Use and Safety Team, NHS Specialist Pharmacy service, and Katie Smith, Regional Medicines Information Director, East Anglia Medicines Information Service, NHS Specialist Pharmacy Service, it is based on published evidence and current practice and has been reviewed by clinicians who work directly with patients.

It is designed to assist with collaborative medication review and decisions around deprescribing in the context of polypharmacy and aims to address polypharmacy as part of overall medicines optimisation strategies.[27]

The 7-Steps medication review

This forms part of NHS Scotland's "7-Steps to appropriate polypharmacy" tool which demonstrates that the patient review process is not in fact a linear one off event, but cyclical, requiring regular repeat and review. The 7-Steps is a clear structure for both the initiation of new and the review of existing treatments, which has been updated to place a greater emphasis on 'what matters to the patient'?

The 7-steps suggested for an effective medication review are:

- Step 1: (Aim) What matters to the patient?
- Step 2: (Need) Identify essential drug therapy.
- Step 3: (Need) Does the patient take unnecessary drug therapy?
- Step 4: (Effectiveness) Are therapeutic objectives being achieved?
- Step 5: (Safety) Is the patient at risk of ADRs or suffers actual ADRs?
- Step 6: (Efficiency) Is drug therapy cost-effective?
- Step 7: (Patient-centred) Is the patient willing and able to take drug therapy as intended?

Further details can be found in the Scottish Government Polypharmacy Guidance, Realistic Prescribing 3rd Edition, 2018.[12]

Monitoring the effect of polypharmacy medication review

The ultimate aims of polypharmacy medication reviews are to reduce drug-related harm and to achieve therapeutic objectives in line with patients' preferences, rather than simply reducing the numbers of medicines patients are taking. However, establishing whether clinical outcomes are attributable to drug therapy or other underlying causes is not realistically possible at scale, and monitoring of the effect of polypharmacy medication reviews may therefore require the use of proxy outcome measures that can be implemented in routine data sources available at national level, e.g. monitoring of the NHS BSA polypharmacy prescribing comparators.[15]

Patient Information Leaflet

A patient leaflet explaining medication review and deprescribing can be found at attachment 9.

Summary

- Prescribers can help avoid problematic polypharmacy from developing in the future by actively involving the patient in the prescribing decision by agreeing treatment goals, using shared decision making and tools such as patient decision aids.
- The NHS BSA Polypharmacy prescribing comparators can be used by commissioners in collaboration with local GP practices to help identify areas for review, with the relevant and appropriate education and training support in place.
- Individual patients can be prioritised for review by criteria such as number of medicines, age, frailty, multimorbidity and care home residency.
- Clinical pharmacists working in Primary Care Networks are ideally placed to undertake medication reviews to proactively manage people with complex polypharmacy.
- A number of validated tools can be used to facilitate and guide the medication review process.

References

1. PrescQIPP. Ensuring appropriate polypharmacy tool. March 2016. Available at: https://www.prescqipp.info/our-resources/bulletins/bulletin-136-polypharmacy-ensuring-appropriate-polypharmacy/
2. Pharmaceutical Services Negotiating Committee. New Medicines Service. Available at https://psnc.org.uk/services-commissioning/advanced-services/nms/ Accessed 16/09/19

3. Elwyn G, Frosch D, Thomson R et al. Shared decision making – a model for clinical practice. J Gen Intern Med 2012; 27 (10):1361–7. Available at: www.ncbi.nlm.nih.gov/pmc/articles/PMC3445676/ Accessed 29/05/19
4. NHS England. Shared Decision Making: Summary Guide. Last updated February 2019. Available at: https://www.england.nhs.uk/wp-content/uploads/2019/01/shared-decision-making-summary-guide-v1.pdf Accessed 28/05/19
5. The National Institute for Health and Care Excellence. Medicines adherence: involving patients in decisions about prescribed medicines and supporting adherence. Clinical guideline [CG76]. January 2009. Available at: https://www.nice.org.uk/guidance/cg76 Accessed 17/06/19
6. World Health Organisation 2003. Adherence to Long-Term Therapies - Evidence for Action. Available at: https://apps.who.int/medicinedocs/en/d/Js4883e/ Accessed 17/06/19
7. NHS England. Shared Decision Making. Guidance and resources. Available at: https://www.england.nhs.uk/shared-decision-making/guidance-and-resources/ Accessed 29/05/19
8. The National Institute for Health and Care Excellence. Shared decision making. Updated 2017. Available at: https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/shared-decision-making Accessed 29/05/19
9. The National Institute for Health and Care Excellence. Patient Decision Aid. Atrial fibrillation: medicines to help reduce your risk of a stroke – what are the options? June 2014. Available at: www.nice.org.uk/guidance/cg180/resources/patient-decision-aid-243734797 Accessed 28/05/19
10. The National Institute for Health and Care Excellence. Patient Decision Aid. Taking a statin to reduce the risk of coronary heart disease and stroke. November 2014. Available at: www.nice.org.uk/guidance/cg181/resources/patient-decision-aid-243780157 Accessed 28/05/19
11. The Centre for Evidence Based Medicine. Number needed to treat (NNT) definition. Available at: https://www.cebm.net/2014/03/number-needed-to-treat-nnt/ Accessed 29/05/19
12. Scottish Government Polypharmacy Model of Care Group. Polypharmacy Guidance, Realistic Prescribing 3rd Edition, 2018. Scottish Government. Available at: https://www.therapeutics.scot.nhs.uk/wp-content/uploads/2018/04/Polypharmacy-Guidance-2018.pdf Accessed 21/05/19
13. The National Institute for Health and Care Excellence. Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes. NICE guideline [NG5]. March 2015. Available at: https://www.nice.org.uk/guidance/ng5 Accessed 29/05/19
14. 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; 329:15-19. Available at: https://www.bmj.com/content/329/7456/15 Accessed 29/05/19
15. NHS Business Services Authority. Polypharmacy Prescribing Comparators. July 2017. Available at: https://www.nhsbsa.nhs.uk/sites/default/files/2018-02/PolyPharmacy%20Specification%20v1%200%20July%202017_0.pdf Accessed 29/05/19
16. NHS England and BMA. Network Contract Directed Enhanced Service. Contract specification 2019/20, April 2019. Available at: https://www.england.nhs.uk/wp-content/uploads/2019/03/network-contract-des-specification-2019-20-v1.pdf Accessed 21/05/19
17. NHS England and BMA. Investment and evolution: A five-year framework for GP contract reform to implement The NHS Long Term Plan, 31 January 2019. Available at: https://www.england.nhs.uk/wp-content/uploads/2019/01/gp-contract-2019.pdf Accessed 21/05/19
18. NHS England and BMA. Update to the GP contract agreement 2020/21 - 2023/24. 6 February 2020. Available at https://www.bma.org.uk/collective-voice/committees/general-practitioners-committee/gpc-england/gp-contract-agreement-england-2020-2021 Accessed 07/02/20.
19. Reeve E, Shakib S, Hendrix I et al. Review of deprescribing processes and development of an evidence-based, patient-centred deprescribing process. Br J Clin Pharmacol 2014; 78: 738-47. Available at: https://doi.org/10.1111/bcp.12386

20. Barnett N, Kelly O. Deprescribing: is the law on your side? European Journal of Hospital Pharmacy 2017; 24: 21-25. Available at: http://dx.doi.org/10.1136/ejhpharm-2016-000949
21. Frailty, polypharmacy and deprescribing. Drugs and Therapeutics Bulletin 2016; 54: 69-72. Available at: http://dx.doi.org/10.1136/dtb.2016.6.0408
22. PrescQIPP Bulletin 152. IMPACT - Improving Medicines and Polypharmacy Appropriateness Clinical Tool. March 2016. Available at: https://www.prescqipp.info/our-resources/bulletins/bulletin-152-polypharmacy-impact/ Accessed 28/11/19
23. 2019 American Geriatrics Society Beers Criteria® Update Expert Panel. American Geriatrics Society 2019 Updated AGS Beers Criteria® for Potentially Inappropriate Medication Use in Older Adults. J Am Geriatr Soc 2019; 67 (4):674–694. Available at: https://doi.org/10.1111/jgs.15767
24. O'Mahoney D, O'Sullivan D, Byrne S, et al. STOPP/START criteria for potentially inappropriate prescribing in older people: version 2. Age and Ageing 2015; 44: 213–18. Available at: http://ageing.oxfordjournals.org/content/44/2/213.full Accessed 22/05/19
25. North of England Commissioning Support STOPP/START Toolkit. Version 2, June 2016. Available at: http://old.ahsn-nenc.org.uk/wp-content/uploads/2017/03/15.-Helena-Gregory-STOPP-Start-Toolkit.pdf Accessed 22/05/19
26. Lewis T. Using the NO TEARS tool for medication review. BMJ 2004; 329:434. Available at: http://www.bmj.com/content/329/7463/434 Accessed 22/05/19
27. Specialist Pharmacy Service. A patient centred approach to polypharmacy. V10. July 2015. Available at: https://www.sps.nhs.uk/wp-content/uploads/2014/12/Patient20Centred20Approach20to20Polypharmacy20summary20formerly20seven20steps.pdf Accessed 22/05/19

Additional PrescQIPP resources

 Briefing	https://www.prescqipp.info/our-resources/bulletins/bulletin-254-polypharmacy-and-deprescribing/
 Implementation tools	

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