B176 | April 2017 | 2.0

PrescQIPP Community Interest Company

Ensuring appropriate polypharmacy: A practical guide to deprescribing

Patients with complex multimorbidity and the related polypharmacy, which can become inappropriate over time, are usually managed in primary care.[1] NICE has issued multimorbidity guidelines to help clinicians manage these patients.[2] Optimising medicines through targeted deprescribing is a vital part of managing long term conditions, avoiding or reducing adverse effects and improving outcomes.[3]

Evidence-based tools are available that can be used in the medication review process to continually evaluate patient safety, particularly in older patients, or those with increasing frailty.[4]

A briefing and practical implementation tools, both general and for specific therapeutic areas are also available to support this bulletin at: www.prescqipp.info/polypharmacy-deprescribing-webkit

Recommendations

- Discuss deprescribing before initiating any new medicine, prescribe for an agreed trial period. Remember it is sometimes better not to start a medicine than to tackle deprescribing in the future, particularly in some therapeutic areas.
- It is important to deprescribe, reduce or substitute inappropriate medicines.
- Deprescribing should be a planned activity, offered as a trial for one medicine at a time,with doses gradually tapered and symptom monitoring.
- Deprescribing should be performed as a partnership between the patient and the prescribing team.
- Regular patient review with support by a healthcare professional may be required for successful deprescribing.
- Older people and those with increasing frailty are frequently prescribed unnecessary, or higher risk medicines, they should have more frequent medication reviews.

Background

The term 'deprescribing' was first described in 2003.[5] There is considerable evidence to support prescribers in the safe and effective initiation of new medicines; evidence supporting a structured approach to drug discontinuation (or deprescribing) is now slowly emerging. It has been proposed that much of what holds health professionals back from deprescribing is a fear of litigation, however, there is no legal difference between prescribing and deprescribing, only lack of an evidence base.[6] Most of the published literature on deprescribing focuses on older people, who can be more susceptible to:

- The adverse effects of medicines.
- Impaired physical and/or cognitive function.
- Hospital admission.

This patient cohort can have the most to gain from a reduction in potentially inappropriate medicines.[7] The same principles can be applied to people of all ages as polypharmacy itself can be perceived as a 'condition', possibly threatening health if inappropriate. Inappropriate polypharmacy occurs when the burden of medicines becomes greater than the burden of the diseases they are used to treat.

Deprescribing is part of good prescribing to ensure appropriate polypharmacy,[8] it is not about denying effective treatment to eligible patients.[9] It can involve tapering, withdrawing, discontinuing or stopping medications with the aim to reduce potentially problematic (inappropriate) polypharmacy (PIP), adverse drug effects and ineffective medicines.[4,8] Regular review of the ongoing reasons for each prescribed medicine and its effectiveness should be undertaken on an individual basis, in collaboration with the patient (and sometimes their family or carer). This should take into account personal needs and preferences, which may change over time and may conflict with those of the healthcare professional. Before initiation of any new medicine the risks and benefits should be discussed to help patients accept and understand the need to deprescribe when appropriate.[10]

Physiological changes increase the chance of harmful drug interactions or produce toxicity in a previously tolerant patient. This can be a particular problem in older people as a consequence of the ageing process, although individuals age at different rates.[11] In a UK-based, cross-sectional study the prevalence of PIP (and factors associated with it) among those aged ≥70 years following the application of 52 Screening Tool for Older People's potentially inappropriate Prescriptions (STOPP) indicators, was estimated at 29%.[12,13]

Factors to consider before deprescribing

As discussed earlier, PIP includes overprescribing (polypharmacy), underprescribing, prescribing of inappropriate medicines, incorrect dose (too low or too high), using medicines with questionable or no evidence of efficacy, unfavourable risk–benefit trade-offs, or a medicine the patient expresses a preference to avoid.[14,15] Deprescribing/reducing the number of currently prescribed drugs may be difficult in many individuals and may inadvertently increase the risk of morbid events or decrease quality of life unless performed with care and under close expert supervision.[16] When reviewing medicines and considering deprescribing in complicated cases, it may be wiser to focus on one treatment at a time, some considerations around patients/treatments that can be reviewed for a deprescribing intervention are discussed below.

Identifying cohorts of patients, which could include those who:

- Have medicines prescribed that are only intended for short-term use, e.g. NOACs for thromboprophylaxis following surgery; clopidogrel and ticagrelor in acute coronary syndromes (ACS).
- Have been taking medicines long .term that may now be inappropriate to continue, e.g. a proton pump inhibitor with no obvious current indication.
- Have participated in shared decision-making where their own personal goals have been considered and who will be aware that each medicine is initiated as a trial, understand the benefit to harm profile of each medicine they take and any stopping criteria.[17,18]

There are two types of treatment:[19]

Symptomatic treatments

These should meet a simple test: does this medicine's benefits outweigh its harms? A medicine which slightly reduces symptom scores in a population is only worthwhile to the individual if its effect improves the quality of that person's life. If this cannot be demonstrated by a short therapeutic trial, it should be stopped. All medicines can cause significant problems for some people, especially older patients with increasing frailty, symptomatic benefits should clearly outweigh the associated harms.

Preventive treatments

These need regular review. If a patient has multiple or serious degenerative conditions expected to reduce longevity or diminish quality of life, long term preventive strategies may no longer be relevant. Preventive goals should always be explained and be understood by the individual and if appropriate their family or carer.

Factors to consider include:

- The wishes of the patient.
- Clinical indication and expected benefit of each medicine.
- Appropriateness, still in line with current guidelines or newer medicines available that may be superior and safer.
- Adherence.
- Co-morbidities.
- The development of a prescribing cascade.
- Consider the intended duration of use:
  - » Check if there was a clear understanding at the time of initiation about the expected duration of use, particularly if the medicine was started in a secondary care setting.
  - » If medicine is intended for short term use add a review date to the prescribing system and ensure the patient is aware that the intention is to discontinue prescribing at this time. The patient should be a partner in the process and can remind the prescriber of this intention to reduce risk of longer term use.

Ensure the deprescribed item is deleted from the repeat prescription system so that it cannot be inadvertently re-ordered again or appearing on a letter for secondary care information, resulting in it getting restarted in error during a future admission.

How to deprescribe

A five step process can be used when stopping medicines; this should be initially as a trial:[17]

- Gain a comprehensive medication history and check adherence, if a medicine is rarely or never taken this makes stopping easy (e.g. patient states in the consultation they are not taking a particular medicine or if the medicine is administered the patient may continually spit out doses without swallowing).
- Identify any potentially inappropriate polypharmacy (PIP).
- Determine whether the PIP can be stopped.
- 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.

Aims of deprescribing

Deprescribing should be supervised by medical professionals, include patients as full partners in the process, be undertaken cautiously and with monitoring of the outcome to:

- Be effective in reducing pill (medicine) burden.
- Improve quality of life.
- Maintain control of chronic conditions.
- Avoid worsening of disease or causing withdrawal effects.

Stopping medicines may result in one or more of the following outcomes:

1. No adverse consequence for the patient.
2. Withdrawal events/symptoms that have a pharmacological or physiological basis, including rebound symptoms, e.g. rebound hyperacidity can be mistaken for a return of the underlying condition resulting in the restarting of proton pump inhibitors (PPI) unnecessarily; withdrawal symptoms

similar to those of depression, which may make it difficult to determine whether the original depression has returned, or if the symptoms are a result of the abrupt discontinuation of an antidepressant.

3. Signs or symptoms of the pre-existing disease may re-appear, e.g. oesophagitis after stopping a PPI; increased blood pressure after stopping an antihypertensive.[20]

Tapering medicines

Gradually reducing the dose helps reduce the likelihood of withdrawal symptoms.[21]

A suggested regimen is to halve the dose, at the next scheduled visit, review progress, then either:

- Maintain (at half dose).
- Continue to taper (e.g. quarter the dose for the next reduction).
- Stop.
- Repeat the cycle until the medicine can be either stopped, or continued at the lowest effective dose if complete withdrawal is not possible.
- Remember to taper (if necessary), or stop, any medicines that were prescribed to treat side effects of a medicine that has now been stopped.

Time taken to taper may vary from days to weeks to months depending on the medicine. Benzodiazepines and opioid analgesics take far longer to reduce and some patients may need to continue a small dose.[20-22] Remember it is sometimes better not to start a medicine than to tackle deprescribing in the future, consider a non-pharmacological alternative, e.g. sleep hygiene instead of prescribing a hypnotic.[23]

Medication review

Opportunities to identify patients at high risk from inappropriate medicines and their need for specific medicines should be undertaken at every encounter with a healthcare professional in all settings. The patient's GP should take overall responsibility for their medication regimen.[24] Medicines that confer little or no benefit or an excessive risk of harm should be considered for discontinuation in partnership with the patient.

A medication review is an individualised assessment that considers the need for each medicine, can simplify treatment regimens and reduce potential for harm. All patients receiving long term drug treatment should have a regular benefit-harm assessment as their needs and circumstances change with age, increasing frailty, any other new medicines (multiple prescriber risk), a new comorbidity or as they move towards end of life. The patient's experience of therapy and their personal goals should be reviewed regularly.

Medicine withdrawal (deprescribing) may be the best clinical decision, resulting in significant benefits, including a reduction in falls, particularly in patients with increasing frailty. The key reasons for stopping medicines in older people include a decreased risk of adverse effects, a reduction in the potential for medicine interactions and to simplify their prescription regimen.[20]

Optimising medication through targeted deprescribing is a vital part of managing chronic conditions, avoiding adverse effects and improving outcomes.[2] There must be an understanding of the decision-making process for continuing or stopping a medicine.

Clinicians are often reluctant to stop medicines, one study showed more than 90% of people indicated a willingness to undertake a trial of deprescribing if their doctor thought it appropriate. Age did not influence the decision, but therapeutic class and the propensity for withdrawal reactions did, with less success for benzodiazepines or opioids.[7]

Shared decision-making

Modern clinical practice involves shared decision-making where therapy is only initiated following an honest conversation with patients where goals and follow-up have been defined leading to a concordant therapeutic plan. This approach is especially important for the management of long term conditions, where outcomes can be less patient-centred and where treatment options require frequent monitoring. Two recent reviews of the literature on deprescribing stress the importance of patient involvement and shared decision-making.[17,18]

Language is important in engaging patients in deprescribing, terms such as '*helping you to take the right medicines for you*' or '*let's consider a trial without*'. Also, when initiating medicines, saying things like '*this will stop you having a heart attack*' may make stopping the medicines more difficult or prove impossible in the future, even if indicated. By following the principles in the 'Ensuring Appropriate Polypharmacy' flowchart https://www.prescqipp.info/resources/send/275-polypharmacy-ensuring-appropriate-polypharmacy/2555-attachment-1-ensuring-appropriate-polypharmacy-tool, any future surprises should be avoided and help patients, their carers and families to understand deprescribing will be needed if severe adverse reactions are experienced, the outcome expected is not achieved, or decreases over time, and harm outweighs the benefits.[10]

Real shared decision-making involves finding out what matters to the patient, what is at stake for them, making judicious use of professional knowledge, understanding to what extent, and in what ways the person wants to be empowered and introducing research evidence in a way that informs a dialogue about what best to do, how, and why. This is a simple concept but by no means easy to deliver.[24]

Research findings need to be expressed in ways that most people will understand, such as the number needed to treat, number needed to harm, and number needed to screen. Patient decision aids help this process but should not be a substitute for informed discussions.[25,26] Patient decision aids are available in many different formats and are not a "one size fits all" solution. Healthcare professionals, together with their patients, need to make appropriate care decisions that may not match what the best (available) evidence seems to suggest.[24]

Prescribing responsibility across the interfaces of care

As patients move across the interfaces of care there is a risk of introducing PIP. There is limited UK evidence that evaluates the quality of information received into primary care when patients are discharged from secondary care. There are standards focussed on what (and how) medicines related information should be communicated on the discharge summary when patients are transferred.[27,28] Between 28-40% of medicines are discontinued during hospitalisation and 45% of medicines prescribed at discharge are new medicines. Evidence also suggests that almost 60% of patients have three or more medicines changed during their hospital stay.[27] The wording of hospital correspondence should be clear and accurate with any medication changes and stop dates of any treatment initiated should be clearly highlighted. An audit showed documentation for medicines for short courses that do not require the GP to continue them, e.g. analgesics, laxatives, short antibiotic courses etc., was poor.[29] 34% of patients had medicines commenced that the GP was not required to incorporate into the GP prescribing system for continuation, but this was not always obvious on the documentation and risks the development of PIP.

Most discharge summaries will be clinically reviewed by a pharmacist, whose details may appear on the document. Specialist pharmacists in acute hospitals, mental health services or community health services can be useful contacts to answer queries from the primary care team. To keep patients safe, their GP, as leader of the primary care team, should ideally take overall responsibility for the patient's medicines and should query anomalies or take advice from the specialist team if they feel PIP is developing, or be willing to deprescribe when appropriate.[1,30,31]

Summary

- Multimorbidity, single disease guidelines, national targets and the possibility of many prescribers across a variety of settings contribute to patients receiving many medicines (polypharmacy).[1]
- Appropriate polypharmacy keeps patients healthy, but this can change over time, for a variety of reasons, and can lead to potentially problematic (inappropriate) polypharmacy that needs addressing by stopping, reducing the dose or switching medicines.
- Patients with complex multimorbidity and the related polypharmacy are usually managed in primary care.[1] The NICE has issued multimorbidity guidelines to help clinicians deal with these patients.[2]
- There are opportunities to use the skills of clinical pharmacists and pharmacy technicians to review these patients with complex medication histories.
- Deprescribing is an integral part of appropriate polypharmacy, but is not an easy process.[8] Applying the principles of shared decision-making and including patients in discussions about all treatment options before initiating any new medicine, and at each review with a healthcare professional, will help keep patients safe.

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Additional PrescQIPP resources

 Briefing  Algorithms and aide memoire

Available here: https://www.prescqipp.info/resources/category/356-polypharmacy-practical-guide-to-deprescribing

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Non-subscriber publication August 2017.

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This document represents the view of PrescQIPP CIC at the time of publication, which was arrived at after careful consideration of the referenced evidence, and in accordance with PrescQIPP's quality assurance framework.

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