Deprescribing: reducing inappropriate polypharmacy

ANGELA DOWDEN

Inappropriate prescribing and polypharmacy, particularly in elderly patients, is associated with increased risk of falls, hospital admissions and death. Deprescribing has the potential to reduce these risks and has been advocated in several recent guidelines. But how can this be achieved safely and effectively?

A new word is finding its way into the healthcare vocabulary of clinicians – ‘deprescribing’. Though there is no official consensus as to its meaning, the conveyed sentiment is that of rationalising and optimising a patient’s medications in order to achieve a better quality of life. Perhaps the most useful definition comes from The King’s Fund, which describes deprescribing as “the complex process required for the safe and effective cessation (withdrawal) of inappropriate medication, recognising that much of the evidence to support stopping medicines is empirical and based on the patient’s physical functioning, co-morbidities, preferences and lifestyle.”

Taking multiple drugs simultaneously (polypharmacy) is common and increasing among adults in developed countries worldwide. The PRACtICE Study, which examined the prescribing records of 1777 patients in English general practice found that 299 patients (17%) were receiving between five and nine medications, and an additional 172 (9.7%) were receiving more than 10 medications. In 2013, an audit of six GP practices in West Wales indicated that between 22% and 31% of patients over 74 years of age were on 10 or more medicines.

What is the likely scale of problems caused by taking multiple medications? In a large Scottish population, potentially serious drug-drug interactions were over twice as common in 2010 as in 1995, with 13.1% of adults in 2010 having at least one drug-drug interactions compared with 5.8% in 1995.

A 2004 study conducted in two large hospitals in Merseyside to determine the burden of adverse drug reactions (ADRs) in the NHS found that of 18,820 patients aged over 16 years admitted to hospital over a six-month period, there...
were 1225 admissions judged to be related to an ADR, giving a prevalence of 6.5%. The median bed stay was eight days, accounting for 4% of the hospital bed capacity and the projected annual cost of such admissions to the NHS was £466 million. Over 10 years on, the financial burden is likely to be even greater.

In many cases, polypharmacy will be entirely appropriate, but there are also many cases where it can become a problem, and some specific groups are especially likely to benefit from deprescribing. These include those who find the overall demands of medicine taking, or ‘pill burden’, unacceptable (particularly where medication adherence is poor as a result), patients who are being prescribed medicines to treat the side-effects of other medicines, and patients with indications of shortened life expectancy (a pertinent question for the clinician being “would I be surprised if this patient were to die in the next 6 to 12 months?”)

Life expectancy and frailty have an impact on the benefit of therapy especially for risk reduction treatment* Is there an evidence-based guideline/consensus for using the medicine:
• for the indication
• at the current dosage
• in this patient’s age group?
And does the benefit outweigh all the possible known adverse effects? (Risks versus benefit)

Is the medicine replacing a vital hormone? (eg levothyroxine)

Is the medicine important in preventing rapid symptomatic deterioration? (eg medications for Parkinson’s disease)

Is the medicine expected to give day-to-day symptomatic benefit? (eg pain killers)

Consider stopping the medicine** in conjunction with patient/carer

Should in almost all cases continue or only be discontinued following advice from the appropriate clinician

Can the dose be reduced with no significant risk? (ie use the lowest effective dose)

Is the medicine being given for a condition that has resolved or is no better despite using the medicine? (eg oedema, pain, dyspepsia, agitation)

Figure 1. Medication review process. From: Polypharmacy: guidance for prescribing. All Wales Medicines Strategy Group, July 2014,8 with permission

* This may be a prompt to consider inclusion on the palliative care register in certain patients
** Careful tapering of the dose may be required with some medication to prevent a withdrawal syndrome
A big problem in the elderly

Inappropriate prescribing and polypharmacy is at its most prevalent in the elderly, and is associated with increased risk of falls, hospital admissions and death in this group. “If polypharmacy contributes to increased frailty, deprescribing can slow the decline and improve resilience,” says Dr Vanessa Marvin, Department of Pharmacy, Chelsea and Westminster Hospital NHS Foundation Trust, adding that she and her colleagues found inappropriate prescriptions in 23% of over 70-year-olds.

Dr Marvin is also the lead author of a paper published in 2016 that found that 65% of those entering hospital following a fall were on one or more medicines associated with falls. “We need to improve education on this,” says Dr Marvin. “Many prescribers are not aware that anticholinergic medicines are linked with falls, and those that do know, aren’t aware of other categories of medicines that have anticholinergic side-effects and therefore increase falls risk.”

Moreover, clinical trials generally recruit fit middle-aged patients; frail patients, particularly if multimorbid, are excluded in most. So guidelines that advocate fairly aggressive therapy in areas such as cholesterol, blood pressure and blood glucose management may simply not be as applicable in elderly, unwell people as in younger, fitter individuals. For example, in the Action to Control Cardiovascular Risk in Diabetes (ACCORD) trial, intensive therapy was in fact associated with slightly increased mortality, and the 2015 NICE guideline on the management of type 2 diabetes in adults reflects these findings by suggesting that the clinician should consider relaxing the target HbA1c level for older people with limited life expectancy.

In frailty, adds Dr Marvin, quality-adjusted life years (QALYs), which are a measure of the state of health, in terms of length of life adjusted to reflect the quality of life, are important, but seldom measured.

Guidelines for optimising medication

A number of national guidelines do now recognise the growing problems associated with polypharmacy and offer guidelines on how to review medication need and effectiveness. Of particular note are the aforementioned King’s Fund report, the Scottish polypharmacy guidelines, and the All Wales polypharmacy guidance. The final of these three focuses on prescribing in frail adults and includes the useful drug review process flowchart shown in Figure 1.

The recently published NICE guideline on multimorbidity and the NICE guideline on medicines optimisation also both acknowledge that a goal in reviewing a patient’s medicines and treatments may be, with the patient’s consent, to reduce the amount of pills taken for multiple conditions.

A nationally recognised and recommended tool that helps clinicians negotiate their way around inappropriate polypharmacy is STOPP/START, developed by consensus methods in Ireland and validated extensively in the UK setting. STOPP (Screening Tool of Older People’s Prescriptions) lists all the drug prescriptions that are potentially inappropriate for people aged 65 years plus, while START (Screening Tool to Alert to Right Treatment) lists the medications that should be considered for people over 65 years where no contraindication to prescription exists.

But while all of these tools and guidelines deal well with optimising medicines and deprescribing from the clinician’s perspective, the patient perspective has been less well represented according to Nina Barnett, consultant pharmacist, older people, Medicines Use and Safety Division, NHS Specialist Pharmacy Service. Together with colleagues Lelly Oboh and Katie Smith, Nina Barnett has produced the patient-centred approach to polypharmacy, which aims to provide practical support for clinicians in embedding medicines optimisation into everyday practice while prioritising issues of most importance to the patient and involving effective communication with family/carers. “We looked around at the polypharmacy guidelines and they were excellent for telling us – from a clinician’s point of view, that is – everything we needed to weigh up and think about, but they didn’t put the patient front of house, which is what we wanted to do here,” she explains.

The seven-step approach Ms Barnett and her colleagues devised (outlined in Figure 2) gives points to consider,
actions to take and questions to ask to reduce polypharmacy, while prioritising issues of most importance to the patient, and involving effective communication with family/carers and other healthcare professionals.

Deprescribing in practice
So on a practical level, who does the deprescribing and how is it carried out? In primary care, GPs will usually be responsible, and in relatively straightforward cases, the unwikkling of medications that are deemed to no longer be working or appropriate for the patient will happen organically as part of normal follow-up consultations. In more complex cases, doctors’ surgeries may invite patients in for specific medication review appointments, with more time to focus on the patient’s overall medicines needs.

Pharmacists are also routinely involved in medication reviews, via the Medicines Use Review (MUR) and Prescription Intervention Service, which are structured adherence-centred reviews for patients in nationally agreed targets that are taking multiple medicines. While the traditional remit of the MUR would only be to check the patient’s use of medication and ensure the patient understands why their medicines have been prescribed, there is evidence that a pharmacist working in tandem with a receptive prescriber can be a powerful deprescribing tool.

In particular, a recent document from the Royal Pharmaceutical Society15 discusses the results of three local pilots measuring the impact of a pharmacist in a care home setting. Scaling up from the pilots could lead to an estimated £135 million a year saved through pharmacist-led interventions and medical reviews in care homes across the UK – £60 million through improved medicines use in care homes and £75 million per year in avoidable hospital admissions.

Optimising medication in care homes
Care homes for the elderly have been recognised as an area where some of the most significant improvements in inappropriate polypharmacy can be made. In 2009, the Department of Health-funded Care Homes Use of Medicines (CHUMS)14 report found that two-thirds of 256 care home residents had been exposed to one or more medication errors. In 2015, the Care Quality Commission reported that 33% of inspected care and nursing homes and home care services, required improvement.15

The Royal Pharmaceutical Society claims that by giving pharmacists an embedded role in care homes, with overall responsibility and accountability for medicines and their use, it would improve care, reduce NHS medicines waste and reduce the serious harm that can be caused by inappropriate use of medicines.16

Katy Jackson, head of prescribing and medicines commissioning at Brighton and Hove CCG, has seen benefits first hand since she began commissioning pharmacist-led medication reviews in care homes within the local area (Brighton and Hove is one of the pilot schemes in the Royal Pharmaceutical Society report). In 2013–2014, the service cost £100,000 per year to run but has already made annual savings of £260,000 from reduced drug costs and £330,000 from reduced hospital admissions.

More to the point, says Ms Jackson, reduced consumption of unnecessary medicine has led to fewer side-effects and interactions, less administration and time saving for carers. “Less medicine means less monitoring,” she explains.

Key to such a project’s success is having the support of the prescribing GP who must agree the action. Thereafter, though, there is no further input needed by the GP. “The beauty of our project is that it causes minimal extra workload for doctors,” says Ms Jackson. “The pharmacist or technician makes the changes in the patients notes in the surgery so that when the next prescription is generated, it is up to date.”

In the NHS Leeds West CCG, where a similar scheme has been running, GPs accepted 93% of the recommendations that clinical pharmacists made after reviewing care home patients’ meds, and also accepted 92% of test requests.

Barriers to deprescribing
Overall, however, Dr Marvin notes that many doctors are uncomfortable about deprescribing, particularly if it means stopping a drug that was started by another clinician: “We surveyed junior doctors and found that 90% would not stop a medicine that had been started by another doctor. Anecdotally, we are aware of GPs and senior specialists who also express this view – they think it is not their role.”

Sometimes the resistance to deprescribing comes from the patient. Media headlines highlighting perceived or actual inequality of treatment between older and younger groups may also create the feeling for elderly patients and their relatives that life-saving treatments are being denied.

“The message that deprescribing is for the benefit of the hospital, the pharmacy or the drugs budget is not acceptable,” stresses Dr Marvin. “The focus is what the patient wants and can expect from their medicines.”

Nina Barnett agrees: “We come back to the importance of it being patient focused,” she says. “It’s about working collaboratively, sitting down with the patient to hear what matters to them, and taking into account the fact that the person in front of you actually has a life. In my experience, patients nearly always come up with something important that matters to them about their medications that you will not have thought of, as you are looking at it purely from a clinician’s perspective.”

It seems that where deprescribing is seen by patients not as an act of abandonment but one of affirmation of highest quality care and shared decision making, it is a success. What constitutes ‘too many’ drugs, and choosing which are the best interventions, is as much an art as a science and an ongoing challenge for all prescribing professionals.

References
10. NICE. Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes. NG5. March 2015. www.nice.org.uk/guidance/ng5

Declaration of interests
None to declare.

Angela Dowden is a freelance journalist and registered nutritionist

Forthcoming events

The forthcoming events section highlights some of the many courses, meetings and conferences of interest to prescribers planned over the coming months

Sepsis workshop
Date: 2 March 2017
Venue: Cedar Court Hotel, Wakefield
Telephone: 020 3188 7785
Email: whiterose@rcgp.org.uk
Website: www.rcgp.org.uk

Funded by NHS England and Health Education England and chaired by Dr Simon Stockley, the RCGP clinical lead for sepsis, this workshop aims to improve understanding of sepsis and the opportunities that may exist to improve its recognition and treatment by GPs and providers of unscheduled care within a primary care setting.

Electronic prescribing in mental health
Date: 10 March 2017
Venue: De Vere West One, London
Telephone: 01932 429933
Email: www.healthcareconferencesuk.co.uk/contact/
Website: www.healthcareconferencesuk.co.uk

This conference, which has been developed as a result of feedback at our electronic prescribing in hospitals annual conference, will focus on planning, developing and implementing clinically led electronic prescribing systems in a mental health setting – both inpatient and community.

Educating GPs for modern sexual health care
Date: 10 March 2017
Venue: 30 Euston Square, London
Telephone: 020 3188 7658
Email: rgpcourses@rcgp.org.uk
Website: www.rcgp.org.uk

General practice is the largest provider of sexual and reproductive healthcare in the UK. Commissioners are seeking innovative ways to work with practices and strengthen delivery of care. GPs and practice nurses may be unaware of the extent of their lack of knowledge in what is a very rapidly changing field. The RCGP Spotlight Programme for Sexual and Reproductive Health is seeking your help in an interactive workshop to explore what we know, what we don’t know, and how to achieve change of practice.

Travel medicine symposium
Date: 18 March 2017
Venue: Royal Pharmaceutical Company, London
Telephone: 020 3075 1649
Email: www.rcplondon.ac.uk/contact
Website: www.rpharms.com

With world travel more accessible than ever to the general public, pharmacists and other healthcare professionals are seeing an increasing demand for travel health advice. This one-day conference is hosted by the Royal Pharmaceutical Society in partnership with the Faculty of Travel Medicine, part of the Royal College of Physicians and Surgeons of Glasgow. It has been designed to address the knowledge and skills frontline professionals need to provide up-to-date, quality travel advice.