Polypharmacy: tackling the reality of multiple morbidities

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Steve Chaplin discusses the findings of a recent report on polypharmacy that addresses the difficulty of implementing evidence-based practice in patients with multiple morbidities.

Figure 1. Polypharmacy used to mean taking more than four medicines, a figure that is now more the norm: the report suggests a new threshold of 10 medicines

We used to say polypharmacy meant prescribing more than four medicines for one person. Nowadays such a figure is not exceptional: we should raise the threshold to 10, according to a report by leading GP academics, and that has implications for treatment choice and patient safety.

Polypharmacy and Medicines Optimisation. Making it Safe and Sound presents a thorough review of evidence quantifying the problem and proposes a comprehensive range of solutions. It points out that, in 1995, the proportion of patients in Scotland taking five or more medicines was 12 per cent; in 2010 this had risen to 22 per cent. The proportion taking at least 10 medicines rose from 1.9 to 5.8 per cent over the same period. In England, the mean number of items prescribed per head rose from 11.9 in 2001 to 18.3 in 2011.

This is not a problem confined to primary care – patients typically leave hospital taking more medicines than they went in with. Nor is it confined to the UK, because it has been reported in several developed countries.

Polypharmacy and multiple morbidity

We also used to say that polypharmacy was a bad thing. Now it need not be: the report defines ‘problematic polypharmacy’ as multiple drug use that is unsupported by evidence or is not delivering the anticipated benefit. But there is also ‘appropriate polypharmacy’: GPs who follow management guidelines can find themselves prescribing four or five drugs to control blood glucose, a similar number to reduce cardiovascular risk and two or three more for a respiratory disorder before they think about treating acute problems.

Even appropriate polypharmacy is open to question because the management guidelines that recommend using so many drugs do so on an evidence base that is compromised. Multiple morbidity is the rule rather than the exception in everyday practice, but clinical trials have such strict recruitment criteria that study populations bear little resemblance to the people in the average waiting room.

And these low-risk populations are taking such a narrow range of other medicines that trials tell us little about the possible effects of polypharmacy on the scale that occurs in real life.

The consequence for people who take so many medicines is to underestimate their risk from adverse effects and drug interactions – a particular concern for older people. The report cites the PRACtICe Study, which found errors of...
clinics
• strengthen the gatekeeper role of generalist physicians
• generalist clinicians oversee and co-ordinate hospital care
• greater involvement of clinical pharmacologists and doctors specialising in complex co-morbidity
• greater involvement of care of the elderly specialists at the interface between community and specialist care

Table 1. Proposed practical measures

Prescribing or monitoring for 30 per cent of patients receiving five or more medications and 47 per cent taking 10 or more. Each additional medicine increased the odds of an error by 16 per cent.

A study in UK care homes found that residents were taking an average of eight medicines; 69 per cent had at least one medication error and 57 of the 256 residents were given a wrong drug or not given a drug at all.3

Strategies to tackle polypharmacy

The solution is to reduce the risk by stopping drugs creating problematic polypharmacy and to manage the risk for appropriate polypharmacy. The strategy is medicines optimisation, defined as ‘the entire way medicines are selected, procured, delivered, prescribed, administered and reviewed to optimise the contribution that medicines make to enabling informed patient choice and delivering desired outcomes for patients’.4

There is evidence that it works: the PINCER trial showed that pharmacist-led interventions using information technology was better than simple feedback for reducing medication error rates in general practice.4

Medication review is a natural answer though there is no evidence to show that it is effective, whether carried out by pharmacists or GPs.

Discharge from hospital is associated with an increased risk of prescribing errors as the number of medicines rises and, the Care Quality Commission found, there is room to improve medicines reconciliation.

Practical measures

Logistics and reorganisation offer some solutions (see Table 1). Prescribing for patients with multiple morbidities needs oversight and co-ordination by a generalist clinician. Different specialists should be brought to the patient in a single visit rather than have the patient attend separate clinics that may communicate poorly.

Medicines management should be introduced in care homes, each of which should have a lead GP and a single pharmacist responsible for all medicines use; training, monitoring and audit should aim to improve staff performance.

Management guidelines excel at getting people to start medicines but are less good at helping them to stop. Most medication need not be lifelong, the report says, citing the stop criteria proposed by the Welsh Medicines Support Centre (see Table 2).5

Clinicians should also recognise when end-of-life considerations mean that prescribing should be cut back.

Priorities

It is an exceptional person who takes 10 or more medicines exactly as prescribed. Most people will omit doses or not take one or more medicines, and experience shows that health professionals are often the last to know. So, if evidence-based appropriate polypharmacy cannot be achieved, what is the next best thing?

The most telling section in the report is also the shortest. ‘Polypharmacy and the Patient Experience’ acknowledges that some people find the demands of their treatment are detrimental to their quality of life. It states: ‘...the patient perspective on medication-taking needs to be determined and recorded. Compromises may often need to be reached between the view of the prescriber in delivering interventions intended to improve outcome, and the choice made by the patient, based on the demands of the medication regimen.’

That compromise needs to be rational. The report points out that there is a law of diminishing returns for polypharmacy: the incremental gain gets smaller with every additional drug.

Table 2. Criteria for stopping medication5

• Is the drug still needed?
• Has the condition changed?
• Can the patient continue to benefit?
• Has the evidence changed?
• Have the guidelines changed?
• Is the drug being used to treat an iatrogenic problem?
• What are the ethical issues about withholding care?
• Would discontinuation cause problems? Some therapies should not be stopped abruptly following long-term use.
Therefore the most important interventions should be prioritised to provide greatest benefit with least harm.

Lifestyle change gets an occasional mention in the report: it is one way that the burden of medication could be reduced in some disorders, though adherence may be no better than with medication.

Summary

We have overlooked the difficult question of how to implement evidence-based practice in a population with multiple morbidities and multiple drug therapies. This report shows there is work to be done and – with its detailed review supplemented by assessment tools, case studies and a list of resources – provides both theoretical and practical support.

The patient’s role in optimising treatment is covered sparingly but not missed, and the report concludes that ‘another important challenge in the area of polypharmacy is that of working alongside patients to empower them to make informed choices about treatments and the burden of pills they are expected to consume’.

References


Declaration of interests

None to declare.

Steve Chaplin is a pharmacist who specialises in writing on therapeutics

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**I was young and keen**

Dr Margaret Ferguson recalls learning why drugs sometimes don’t appear to be working

I met him during my first week as a new partner when the call came in for a ‘cough’. I was confident that I’d be able to sort him out – after all I had recently worked in a chest unit. I knew what I was doing.

Looking through the murky fog of his house, and peeling back the layers of clothes to examine his bony form, I regaled him with smoking cessation and exercise advice and the benefits of using a spacer, changed his inhalers, and felt fairly smug that I had sorted him out.

But the following months brought increasing demands for house calls. I continually tweaked his medication and cajoled him to improve his self-care and activity.

He was a nice chap and we always had a bit of banter. I just never seemed to make any improvement to his symptoms and had an increasingly guilty feeling that I was failing him.

I began to despair and arranged CXR and referral to a respiratory unit. He did not attend – he didn’t ‘want any fuss’.

The repeated visits eventually became an accepted part of my working week and we both just became resigned to his lack of improvement. It became clear that no matter what I did, his symptoms remained the same, although interestingly he never really came to a major crisis and always told me that he was worse than he actually looked.

I was sad to hear of his death from a stroke on my return from holiday. His son came in to see me, carrying two black bags full of inhalers. There were hundreds.

None had been opened.

I struggled to understand.

The son gently smiled. ‘He was a stubborn old mule, but he was lonely and so enjoyed your visits. He used to phone and tell me you had been and brightened his day – no-one else visited him. Don’t be angry with him.’

So what did I learn? Clearly the ways and wiles of lonely old men – but also that when drugs don’t work, consider that they’re not being used.

Did I fail him by not understanding his needs? Perhaps. Or maybe the drug ‘Doctor’ was what was needed all along.

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