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Tackling overprescribing

Long overdue with a lot to do

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The UK government recently published its long awaited review led by the chief pharmaceutical officer to evaluate overprescribing in England.[1] It revealed how NHS spending on medicines increased sharply from £13bn (€15bn; $18bn) in 2010-11 to £18.2bn in 2017-18. Over one billion prescription items were dispensed in primary care alone, with an estimated 10% being "overprescribed"—that is, not needed or wanted by the patient, potentially more harmful than beneficial, or having more appropriate alternatives.

The negative consequences for patients are clear: a fifth of hospital admissions among adults over 65 are the result of adverse effects of prescribed drugs. But overprescribing has substantial environmental impact too. Currently 25% of the NHS's carbon footprint comes from medicines, and reducing overprescribing will go some way to achieving a "net zero" NHS.[2]

A key recommendation of the report is cultural change to reduce reliance on medicines and to support prescribing practices based on shared decision making, reflecting patient values and preferences informed by the best available evidence and expertise.[3] We live in an era in which there is virtually "a pill for every ill": the *British National Formulary* contained around 250 drugs in 1949; today it comprises over 18 000. Thus it is more practical, convenient, and often cheaper to prescribe drugs (eg, opiates for chronic back pain) than explore non-pharmacological interventions such as physiotherapy.[4]

Furthermore, clinical "inertia" means that risk from passive continuation of unnecessary medicines seems to be more acceptable than that from active changes or harm from undertreatment.[5] Such attitudes are reinforced by time pressures on prescribers and limited awareness and availability of social prescribing, which improves health and wellbeing by connecting people to community services.[6]

Interestingly, the report places limited emphasis on educating and empowering patients to know more about their medications or to take ownership of their therapy. Such patient centred engagement may help inform shared decision making, manage expectations, and improve adherence, which is conspicuously absent from the report.[7-9]

Continuing medicines education for all healthcare professionals is critical to reducing overprescribing[10] but is also missing from the report. Treatment guidelines for most common medical conditions are based on high quality evidence. However, these recommendations are derived from large population based studies, which can be challenging for even the most experienced clinician to apply to individuals, particularly older adults, people with disabilities, and those with ethnic minority backgrounds, who are under-represented in trials.[11]

Teaching on prescribing has been taken seriously in undergraduate medical curriculums in the UK since the prescribing safety assessment was introduced in 2014.[12] But much more is required to raise awareness of overprescribing and to develop, evaluate, and implement effective interventions to tackle it. Equally pressing is the need for more evidence and guidance on how best to withdraw inappropriate medication (deprescribing).[13 14] Clinical trials have already shown that it is safe and even beneficial for patients to stop some long term drugs such as antidepressants and statins towards the end of life.[15 16]

The new overprescribing review rightly highlights system-wide changes needed to improve digital records, increase their accessibility to patients, and ensure interoperability between care systems. At a time when general practitioners are struggling to meet patient needs,[17] recommending 30 minute consultations for structured medication reviews and greater numbers of clinical pharmacists is welcome but will require substantial new funding.

The report's focus is very much on primary care and community pharmacists, encouraging them to "challenge" prescribing practice in secondary care. For example, patients are often prescribed more medicines on discharge than they were on admission, and an opportunity to rationalise treatment is missed.[18] This is partly reflected in the alarming cost of hospital prescribing, which has doubled to £11.7bn a year since 2014.[19] Hospital experts in medicines management and optimisation such as senior clinical pharmacists and pharmacologists have a pivotal role in reducing overprescribing, including leading deprescribing initiatives locally and regionally, and need to be better used .[20]

Other promising developments given insufficient attention in the report include point-of-care testing in the community—to help guide use of antibiotics, for example [21]; use of artificial intelligence to identify associations between drugs and outcomes and to develop predictive algorithms to guide individualised selection and management of medicines[22 23]; and the potential of pharmacogenomics in "personalised" and "precision prescribing" to maximise treatment benefits and minimise harms.[24 25]

In addition, legislative and regulatory changes are required to ensure that priority is given to new drugs that are clearly better than existing treatments rather than those that are simply "non-inferior." Similarly, a move away from target driven funding of primary care and towards incentives that encourage

comprehensive individual medication reviews is overdue.

Overall, this report is welcome and includes several commendable recommendations. But there remains much to do before high quality individualised prescribing becomes a reality. With a concerted and collaborative national effort, good leadership, and adequate funding, it need not be a bitter pill to swallow.

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