Editorials

Overdiagnosis and overtreatment:

generalists — it's time for a grassroots revolution

Ineffective and harmful medical practices have always been with us, but the scale and institutionalisation of overdiagnosis and overtreatment have expanded exponentially in the last few decades.

Modern concern has been articulated through worldwide movements such as the Preventing Overdiagnosis conferences, campaigns such as the *BMJ*'s 'Too Much Medicine', *JAMA*'s 'Less is More', Italy's 'Slow Medicine' movement, and the US (now international) 'Choosing Wisely' project. In 2014 the Royal College of General Practitioners (RCGP) established its Standing Group on Overdiagnosis (Supporting Shared Decisions in Health Care).

Overdiagnosis has been defined simply as *'... when people without symptoms are diagnosed with a disease that ultimately will not cause them symptoms or early death'* and is also used as an umbrella term to include *'... the related problems of overmedicalisation and subsequent overtreatment, diagnosis creep, shifting thresholds and disease mongering'*.[1] Some commentators use Too Much Medicine to embrace such wider issues.[2]

Drivers of overdiagnosis are well described. Advancing technology allows detection of disease at earlier stages or 'pre-disease' states. Well-intentioned enthusiasm and vested interests combine to lower treatment and intervention thresholds so that ever larger sections of the asymptomatic population acquire diagnoses, risk factors, or disease labels. This process is supported by medicolegal fear, and by payment and performance indicators that reward over-activity. It has led to a guideline culture that has unintentionally evolved to squeeze out nuanced, person-centred decision making. Underlying all this are little challenged, deeply intuitive narratives around the supposed benefits of early detection and intervention that are difficult to unpick for professionals and public alike.[1,3]

This leads to real harms. The psychological burden of acquiring a disease label may appear hard to quantify — partly because of under-research — for something like chronic kidney disease (CKD). However, it becomes more obvious when considering a false-positive diagnosis of dementia or a screening overdiagnosis of breast cancer. Patients are exposed to treatment harms, from the mild to the fatal, and waste of resources is inevitable on a grand scale. The critical issue of opportunity cost may be raised but disregarded in cost-effectiveness decisions.[4]

None of this is simple; overdiagnosis and overtreatment arise as consequences of activities that have a degree of benefit to some. Difficult questions arise about how harms and benefits are weighed or perceived, and how to offer real choice to patients rather than simply what the contract or guidelines direct.

We believe that generalists have specific expertise here. Drivers for clinical practice tend to originate from specialist research. Specialists dealing with single conditions may have disease-specific endpoints in mind, but these need to be prioritised by the patient in the context of their wider health issues and perception of risk and benefit. For the clinician, these endpoints need to be prioritised with the knowledge of consequences of interventions on the wider population or system. Generalists are handed the responsibility of enacting population-level interventions to achieve specialist goals but we treat individuals who may, rightly and entirely reasonably, take a different view.

PSEUDO-SOLUTIONS TO DIFFICULT PROBLEMS

Public health problems without easy solutions are fertile ground for large-scale over-activity in primary care. NHS Health Checks were introduced nationally with a financial incentive as an apparent solution to metabolic disease, despite four decades of evidence showing such programmes do not affect population morbidity or mortality.[5–7]

Dementia screening was not recommended by the UK National Screening Committee and carries significant risk of harm through potential false-positive diagnoses of dementia,[8] not to mention the opportunity cost created by inevitable 'consultation hijacking'.

This activity may feel sensible, but lacks evidence and distracts from the need for more challenging solutions such as addressing the obesogenic environment or improving social care for people with dementia.

CHANGING THRESHOLDS AND INDICATION CREEP

Thresholds for labels such as pre-diabetes or CKD are created based on the identification of risk rising above the average, hence target populations move ever closer to containing half of older adults. This tends to precede evidence of effect on endpoint outcomes for the new 'patients' at the mild end of the risk spectrum.[9,10]

Lower treatment thresholds always create an increase in the number of patients taking medication for no benefit in order that a few might. Announcing its most recent lipid guideline, the National Institute for Health and Care Excellence (NICE) estimated that, if everyone eligible took treatment, then we might prevent 28 000 heart attacks, 16 000 strokes, and 8000 deaths over 3 years. We would also give statins to 4 448 000 patients for no benefit.[11]

Wishing to reduce overdiagnosis and overtreatment does not imply therapeutic nihilism, nor a desire to abandon preventive medicine. Rather, it forces us to aim for an understanding of the evidence base that assists patients to make choices in a useful way, cognizant of benefits and harms.

GPs not only see the consequences of overmedicalisation but also carry the extra workload caused by it. Iatrogenic multimorbidity creates a burden of complex and harmful polypharmacy for patients and their carers. Doctors with responsibility for one condition may not have the generalist, holistic overview needed to help the patient sort valuable interventions from low-value

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ones. Defending our patients from the harms of Too Much Medicine needs to happen not just in the consulting room, but also at local and national policymaking level.

The RCGP has many potential mechanisms at its disposal, including the development of evidence resources and priming our existing relationships with specialist colleagues and external bodies. In 2015 the RCGP Council passed a policy paper on overdiagnosis[12] with a recommendation for five 'tests' to be applied to College output to reduce the risk of overmedicalisation:

- present evidence in a way that allows shared decision making and patient involvement (absolute risk, numbers needed to treat);
- clarity about which populations evidence can reasonably be applied to;
- openness about uncertainty of the evidence;
- stating whether proposals for screening have been approved by the National Screening Committee; and
- finally, that declarations of interests be made public.

However, the most valuable resource is our time, and we hope that, by redistributing our time away from low-value interventions and towards high-value interventions, we ourselves will enjoy more fulfilling work, sharing decisions with our patients and reclaiming our role as expert generalists.

To this end, we should be clear about opportunity costs. Every new innovation or intervention that is suggested for GPs should be accompanied by opportunity costing and, unless there is new resource, current tasks should be identified to be stopped in order to fit new work in. This may require a more assertive generalism than perhaps we are used to. We need to stand up and shape the clinical agenda from our unique perspective, drawing on the work and resources of academic primary care and the evidence-based medicine world. Our role as passive enactors of specialist and public health ideas needs to be updated. To do this we need a stronger part in the creative process of evidence synthesis and policymaking. We need to ensure the 'common voice' is represented.

We call on the makers of guidelines to ensure that grassroots GPs, with such a valuable, broad perspective, are enabled to have a greater influence in their production.

'Ordinary' GPs are valuable GPs, and we call on those who might think that their voice is not important to get involved in shaping the future of our clinical practice for our patients and for ourselves.

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