Choosing Wisely in the UK:

The Academy of Medical Royal Colleges Initiative to Reduce The Harms of Too Much Medicine.

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Introduction:

The idea that some medical procedures are unnecessary and can do more harm than good is as old as medicine itself. In Mesopotamia 38 centuries ago, Hammurabi proclaimed a law threatening over-zealous surgeons with the loss of a hand or an eye. In 1915, at the height of a surgical vogue for prophylactic appendicectomy, Ernest Codman offended his Boston colleagues with a cartoon (Fig 1 http://www.bmj.com/content/bmj/347/bmj.f7368/F2.large.jpg) mocking their indifference to outcomes and asking "*I wonder if Clinical Truth is incompatible with Medical Science? Could my clinical professors make a living without humbug?*" Looking at the rates of tonsillectomy in London boroughs in the 1930s, John Alison Glover discovered that they were entirely governed by the policy of school doctors and bore no relation to need or outcomes.[1] John (Jack) Wennberg established the science of outcomes research when in 1973 [2] he described patterns of gross variation in the use of medical and surgical procedures in the USA, which lacked any clinical rationale but bore close relation to supply.

Choosing Wisely in the NHS

Even before the inception of the NHS, the British tradition has generally been one of late adoption and cautious use of new medicines, procedures and technologies. However, this has not prevented the UK from showing patterns of variation in medical and surgical interventions that are similar to those in the USA, though less extreme in absolute terms.[3] The National institute for Clinical Excellence (now the National Institute for Health and Care Excellence) was set up in 1999 in part to address these unwarranted variations in clinical practice and has identified over 800 clinical interventions for potential disinvestment.[4] However, engaging clinicians with stopping familiar or ingrained practices requires a different approach to that of introducing new treatments.

An initiative recently developed in the USA and then Canada called *'Choosing Wisely'* (http://www.choosingwisely.org) aims to address this particular issue of changing doctors practice to align with best practice by attempting to *stop* the use of various interventions that are not supported by evidence, not duplicative of other tests or procedures already received, free from

harm and truly necessary. *'Choosing Wisely'* requests medical organisations, (such as Medical Royal Colleges in the UK) to identify tests or procedures commonly used in their specialty, whose necessity should be questioned and discussed. These are compiled into lists and the '*top five*' tests of procedures that the specialty suggest should either be stopped being used routinely or at all.[5] So far, more than 60 US specialists societies have joined in the Choosing Wisely initiative. It has also been adopted by several other countries including Australia, Germany, Italy, Japan, Netherlands and Switzerland; a clear sign that wasteful medical practices are a problem for all health systems.[6]

The Academy of Medical Royal Colleges, which represents all Medical Royal Colleges in the UK, is launching a UK "*Choosing Wisely*" programme in a coalition with other clinical, patient and healthcare organisations. Participating organisations will collaborate in the development of '*top five'* lists of tests or interventions whose value should be questioned. Dissemination of this information and promotion of "*Choosing Wisely*" conversations between clinicians and patients will be promoted throughout the campaign by the Academy, Royal Colleges and partners, including the BMJ.

Overdiagnosis & Overtreatment

Diagnosis drives treatment, and in recent years the term "overdiagnosis" has been used to describe various situations where diagnoses are made which lead to unnecessary treatment, wasting resources while increasing patient anxiety.

Over-diagnosis can be said to occur when "*individuals are diagnosed with conditions that will never cause symptoms or death*" often as a "*consequence of the enthusiasm of early diagnosis.*"[7] Over-treatment includes treatment of these 'over-diagnosed conditions' that will never cause symptoms or morbidity. It also encompasses treatment that has minimal evidence of benefit for the specific indications, or is excessive (in complexity, duration or cost) relative to alternative accepted standards.[8,9]A recent report by the Academy of Medical Royal Colleges argued that doctors have an ethical responsibility to reduce this wasted use of clinical resource as, in a health care system with finite resources, one doctor's waste is another patient's delay.[10]

Why does it happen?

A culture of 'more is better' and where an onus is on doctors to 'do something' at each consultation has bred unbalanced decision making where treatments with minor potential patient benefit with a minimal evidence base may be offered despite significant potential harm and financial expense. This culture threatens the sustainability of high quality health care and stems from cultural norms,

defensive medicine, patient pressures, biased reporting in medical journals, commercial conflicts of interest and a lack of understanding of health statistics and risk.[11]

The system has no incentive to restrict doctors' activity; the NHS in England has a system of 'payment by results', which in reality is often a 'payment by activity' model and incentivises providers to do more both in primary and secondary care. General practice is increasingly pressured to focus less on open dialogue with patients about treatment options and more on fulfilling the demands of the Quality and Outcomes Framework and adhering to local commissioning decisions.

These quality measures in both primary and secondary care are based on guidelines produced by NICE, but they should not be taken to be tramlines as doctors need to make decisions with reference to individual patient circumstances, the wishes of the patient, clinical expertise and available resources. Some people would choose to take a hypothetical pill with no side effects daily, even for a modest gain to life expectancy of a few weeks, whereas others would prefer not to, even if they were explicitly told it would add ten years to their lifespan. [12] It's instructive to note that a large and comprehensive longitudinal study recently concluded that higher reported achievement incentivised under QOF has not reduced premature death in the population.[13]

We would suggest that guideline committees should increasingly turn their efforts towards the production of tools that help clinicians to understand and share decisions on the basis of best evidence. Rather than prespecifying the outcome of such dialogue, and to get medicine "just right" they should try to ensure that decisions are based on the best match between what is known about the benefits and harms of each intervention and the goals and preferences of each individual patient.[14]

More informed decision making can also alleviate, perhaps disproportionate, fears for those patients who may not want treatment.[15] A recent study revealed that when patients were told the lack of prognostic benefit for angioplasty, only 46% elected to go ahead with the procedure versus 69% who were not explicitly given this information.[16] Responding to similar concerns when consenting patients for elective coronary angioplasty in the UK, NHS England's Cardiology lead, Huon Gray stated "*it is important that doctors are clear with their patients about this*."

It is easy to misunderstand health statistics and doctors can find themselves needing to manage unrealistic expectations of patients who may find it difficult to find reliable information. Communicating relative risks as opposed to absolute risk or NNT (numbers needed to treat) can often unintentionally mislead the public. As Gerd Gigerenzer, Director of Harding Centre for Risk

Literacy in Berlin, summarised in a bulletin from the World Health Organisation in 2009 "*it is an ethical imperative that every doctor and patient understand the difference between absolute and relative risks, to protect patients against unnecessary anxiety and manipulation.*" [17]

There is extensive literature on doctors own health illiteracy with misunderstanding of statistics often leading to a belief that screening is more beneficial than it actually is, whilst in some cases having no acknowledgement of its potential harms. In a study of 150 gynaecologists, one-third did not understand the meaning of a 25% risk reduction created by mammography screening. Many of them believed that, if all women were screened, 25% or 250 fewer women out of every 1000 would die of breast cancer, when actually the best evidence-based estimate is actually only 1 in 2000 fewer (from Cochrane's analysis of randomised studies involving 500,000 women).

It is clear that both medical and surgical overtreatment can place patients at high risk of adverse events.[18] Shared decision making can help to reduce this overtreatment,[19] and may be particularly beneficial to disadvantaged groups, significantly improving health outcomes and reducing health inequalities.[20]

Limitations to the Choosing Wisely campaign

One of the major concerns about the development of top 5 lists in the USA is the potential for individual societies to choose low hanging fruit. For example the American Academy of Orthopaedic surgeons included the use of an over the counter supplement, however no major procedures were included in their list , despite evidence of wide variation in elective knee replacement and arthroscopy amongst Medicare beneficiaries.[21] Currently, there is also no evidence available that demonstrates the ability of these lists to reduce low value medical practices.[22] One crucial and relevant marker of success would be universal awareness of the Choosing Wisely programme amongst doctors and patients. However, despite much publicity in the medical literature, a random telephone survey of 600 US doctors recently conducted by the American Board of Internal Medicine revealed that only 21% had heard of Choosing Wisely. [23] There is also no available evidence on the level of patient or public awareness of the campaign which is a fundamental component to its progress.

Reducing wasteful and harmful health care will require commitment from both doctors and patients, in addition to objective evidence of effectiveness. The NHS already has good systems for evidence appraisal and health technology assessment, but there is a need for better and simpler tools to facilitate informed discussion in clinical settings. Without such robust and easily shared decision

aids, systematically updated without bias, there is a danger that patients may be swayed by potential exaggerated claims made by the media when new drugs or procedures are introduced. Lastly, shared decision making does not guarantee lower resource use, [24] greater involvement of patients in deciding their care will require a new set of consultation skills as well as a better range of decision aids.

A Call To Action and Next Steps

To ensure the development of a 'Choosing Wisely' culture in clinical practice, the Academy suggests that

- Doctors should provide patients with resources that increase their understanding about potential harms of interventions and should encourage patients to embrace an awareness that doing nothing can often be the best approach.
- Patients should be encouraged to ask questions such as; 'Do I really need this test or procedure?' 'What are the risks?' 'Are there simpler safer options?' 'What happens if I do nothing?'
- Medical schools should ensure that students develop a good understanding of risk alongside critical evaluation of the literature and transparent communication. Students should be taught about overuse of tests and interventions. Organisations responsible for post-graduate and continuing medical education should ensure that practising doctors receive the same education.
- Commissioners should consider a different payment incentive for doctors and hospitals.
- The media and medical publications should support the Choosing Wisely program as the public education campaign is crucial to the program's success.

The Academy will ensure that there is both thoughtful implementation in addition to rigorous evaluation of wasteful practices; and this will require a demonstration of a reduction in wasteful practices within a fixed time scale.

The process will begin with approaching speciality organisations calling on them to compile '*top five'* lists, and the BMJ will be commissioning a series of articles that will present the conclusions that each major speciality has arrived at. All '*top five'* lists will be accompanied by an implementation plan and will be evaluated and monitored to assess their effect on reducing low-value health care.

The Academy has set up a steering group to provide policy advice and direction for the project. The group will comprise of individual experts, patient groups, college representatives and key stakeholders necessary to carry out the work. Adopting this approach to health care resources aims to provide the best quality and the highest value healthcare. It is time for action to translate the evidence into clinical practice and truly wind back the harms of 'too much medicine'.

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