



Choosing Wisely

Learning from international experience

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Author
Angela Coulter

Contents

Choosing Wisely – Introduction	6
1 Background	7
1.1 Origins and context	7
1.2 Related initiatives	8
1.3 Design	9
1.4 Organisation and financing	10
2 Clinical Engagement	11
2.1 Reach and spread	11
2.2 Topic selection	14
2.3 Adapting the approach	16
2.4 Educating professionals	17
3 Patient and public engagement	19
3.1 Public expectations	19
3.2 Patient information	19
3.3 Public awareness campaigns	21
3.4 Direct involvement	22
3.5 Question prompts	23
3.6 Patient decision aids	23
4 Assessing impact	26
4.1 Engagement of stakeholders	26
4.2 Development of Top Five lists	27
4.3 Early trends	27
4.4 Support to do the right things	28

5 Recommendations for Choosing Wisely Germany	29
5.1 Engagement of clinicians	29
5.2 Engagement of patients	30
5.3 Scope	30
5.4 Transparency	30
5.5 Evidence	31
5.6 Support for implementation	31
5.7 Evaluation	31
References	33
Author	37
Imprint	38

Choosing Wisely – Introduction

Choosing Wisely began as an initiative of the American Board of Internal Medicine (ABIM) Foundation in the US. Launched in 2012, the aim was to advance a national dialogue on avoiding wasteful or unnecessary medical tests, treatments and procedures. The idea spread quickly to other countries and there are now Choosing Wisely initiatives in Australia, Brazil, Canada, England, Italy, Japan, Netherlands, New Zealand, South Korea, Switzerland, Wales, and USA. Between them these groups are gathering a considerable amount of valuable experience on how to change clinical practice to reduce overuse. This experience could provide a useful orientation for similar initiatives in Germany.

The purpose of this brief overview, restricted to articles and websites published in English only, is as follows:

- To describe the history, context and rationale for Choosing Wisely
- To provide an overview of how groups involved in Choosing Wisely are tackling the task
- To assess the overall approach and impact of Choosing Wisely
- To identify effective strategies, methods, facilitators and challenges that should be considered prior to launching Choosing Wisely in Germany.

1 Background

The ABIM's aims for Choosing Wisely were to promote better conversations between clinicians and patients, helping them to choose care that is:

- Supported by evidence
- Not duplicative of other tests or procedures already received
- Free from harm
- Truly necessary (www.choosingwisely.org/about-us).

Medical organisations that decided to participate in the campaign were asked to identify tests or procedures commonly used in their field or specialty whose necessity should be questioned and discussed. These lists were supported by user-friendly information designed to inform patients and empower them to ask questions about what tests and procedures are right for them. Educational modules and video resources were also provided to help health professionals engage in these conversations with their patients. Choosing Wisely recommendations were not intended to be used to establish coverage decisions or exclusions, but simply to spur conversations about appropriate and necessary treatment and to encourage patients and clinicians to work together to agree treatment plans.

1.1 Origins and context

The idea for the Choosing Wisely campaign grew out of work by three medical organisations – the ABIM Foundation, the American College of Physicians Foundation and the European Federation of Internal Medicine – to clarify physicians' professional responsibilities. In 2002 they published a Physicians Charter outlining core values for the medical profession that were felt to be under threat from changes to healthcare delivery systems throughout the industrialised world (1). The Charter underlined the importance of patient welfare, patient autonomy and social justice, and emphasised professionals' responsibilities to protect and promote these values. In the view of these organisations, doctors' responsibilities should include not only commitment to the welfare of patients, but also collective efforts to improve the healthcare system for the welfare of society. Amongst these, a commitment to 'a just distribution of finite resources' was emphasised. The Charter stated that physicians should be responsible for 'scrupulous avoidance of superfluous tests and procedures' so as to protect patients from harm and ensure appropriate stewardship of scarce resources for the benefit of all.

The backdrop to the publication of the Physicians Charter was concern about the spiralling cost of healthcare in the United States and growing awareness of unwarranted variations in medical practice. This fuelled concern about the affordability and sustainability of the healthcare system and raised questions about the extent to which healthcare

offered real value to patients. Influential studies by epidemiologists at Dartmouth Medical School revealed wide variations in rates of use of common medical treatments that could not be explained by differences in need or efficacy (2). Similar variations in use rates were observed within and between European countries that spent far less on healthcare than the US (3). Furthermore, patients living in US regions where intervention rates were relatively low tended to have better outcomes than those living in high rate areas, lending support to the thesis that ‘less is more’ in medical care (4). Over-use and mis-use of medical care began to be seen as a quality problem, just as much as under-use.

Internationally, professional societies and government agencies had developed and disseminated clinical guidelines. Evidence-based medicine techniques, including systematic reviews and meta-analysis were taught in medical schools and widely promoted. However, unwarranted variations in medical practice persisted despite numerous attempts to promote more rational, evidence-based care (<http://www.dartmouthatlas.org/>). It was becoming clear that diagnostic and treatment decisions were often influenced by factors other than objectively-determined needs and scientific evidence. These influences were likely to include financial incentives, commercial interests, legal considerations, political priorities, patients’ expectations, and clinical fashions (5). Possibly the biggest driver of over-use is unwarranted confidence in the efficacy of medical interventions. Dubbed ‘the therapeutic illusion’, it stems from the tendency of human beings to overestimate the effects of their actions (6). For example a systematic review of 48 individual studies found that clinicians overestimated benefits far more often than harms, which they tended to underestimate (7). Not surprisingly, this overconfidence was communicated to patients too, resulting in even more misleading perceptions (8).

1.2 Related initiatives

Choosing Wisely was not the first attempt to reduce waste and harm in medical care. For at least fifty years various writers had drawn attention to the risks and prevalence of over-diagnosis, over-medicalisation and over-treatment (9-17). Factors to do with the way healthcare is organised can also lead to waste and harm, including failures in care coordination, administrative complexity, pricing mechanisms, and fraud (18). Some authors have suggested that it would be possible to reduce US healthcare costs by up to a third without depriving any patient of beneficial care (19).

Costs in the US fee-for-service system are especially high, but while most other western countries spend less on healthcare per capita, the problem of waste in the early twenty-first century seemed ubiquitous and hard to eliminate. In the UK, a non-departmental public organisation, NICE (National Institute for Health and Care Excellence), initiated a search for ‘low value interventions’ (20). Their ‘do not do’ list now includes more than a thousand medical interventions (<https://www.nice.org.uk/news/article/cut-nhs-waste-through-nice%E2%80%99s-%E2%80%98do-not-do%E2%80%99-database>).

Similar initiatives that sprang up around the same time as Choosing Wisely included the Lown Institute’s Right Care campaign (<http://lowninstitute.org/home/vision-mission-history/>), the Slow Medicine movement in Italy (<http://www.slowmedicine.info/>), the annual Preventing Overdiagnosis conferences (<http://www.preventingoverdiagnosis.net/>) and journal series in the BMJ, JAMA Internal Medicine and the Lancet. The most recent international initiative was a report from the OECD entitled Tackling Wasteful Spending on

Health, published in January 2017 (21). This described three main sources of waste – wasteful clinical care, operational waste and governance-related waste.

Driven by concern among payers and policymakers, the late twentieth century saw numerous attempts to stem the rising tide of costs through regulation, managed care, market competition and system reform. These efforts to achieve efficiencies by means of top-down interventions met with considerable resistance from both providers and the public. Physicians tended to see these as challenges to their professional autonomy and livelihoods, while the public was concerned that their access to needed care was under threat (22).

The ABIM Foundation felt that a new approach was needed. They called on the medical profession to seize the initiative to reduce inappropriate care. In this way they hoped they could avoid ceding control to external agencies focused on cost-cutting. They argued for a medically-led programme that was fully cognisant of the various influences on medical decision-making, with the aim of ensuring that incentives to practice appropriate high value care outweighed other factors.

1.3 Design

Prior research had indicated that physicians would respond favourably to recommendations that could be shown to enhance patient well-being, achieve personal and professional fulfilment and improve the quality of care. The ABIM Foundation therefore decided to frame the issue around encouraging better conversations between physicians and patients about what care is truly necessary (23). Mindful of the need to secure professional ownership of the initiative, the Foundation invited specialty societies to work in partnership with them, setting clear parameters but allowing scope for societies to make their own decisions about how best to tackle the task of identifying clinical topics that required critical examination (24).

Drawing on an idea originally floated by Howard Brody, an ethicist from the University of Texas, the plan was to identify a small number of priority topics that ‘providers and patients should question’. Brody had called on medical organisations to provide leadership in reducing waste by identifying the ‘top five’ inappropriately-used diagnostic tests or treatments in their specialty and working to reduce their use (19). In adopting this strategy, the ABIM Foundation’s intention was to help physicians accept responsibility for eliminating unnecessary care by focusing on constructive engagement and more informative physician/patient interactions (24). Tackling waste was to be promoted as a key component of professionalism. As Wolfson and Suchman put it:

“The social process by which recommendations are developed and implemented matters as much as the technical content of the recommendations. Reducing overuse is only one relevant outcome; another is the state of the practitioners as they reduce overuse: are they left feeling proud of their work, respected, and efficacious or are they feeling micromanaged and disrespected?” (24)

This approach was informed by complexity theory and self-determination theory. Building on complexity theory, the campaign emphasised the importance of emergent design (staying focused on a goal but avoiding over-specification) and simple rules (engaging participants in determining what actions to take while maintaining adherence to an agreed set of standards). Self-determination theory underlines the importance of autonomy (allowing

professional societies to determine for themselves how to formulate recommendations), mastery (developing competence in tackling what for many was the unfamiliar concept of overuse), and relational support (sharing information and support through the leadership of trusted messengers).

The ABIM Foundation was cognisant of the need to engage patients and public in the campaign, too. They therefore established an early partnership with Consumer Reports, a long-established not-for-profit organisation that aims to empower consumers by providing trusted knowledge to make more informed choices. Consumer Reports agreed to 'translate' Choosing Wisely recommendations into consumer-friendly briefs (23). The partnership was further extended to encompass a network of other large consumer-facing organisations that each committed to help disseminate Choosing Wisely materials to patients and public. It was hoped that this broad network of partners would demonstrate to providers and public alike that the campaign was about genuinely protecting patients' interests and not simply 'rationing' healthcare for cost-cutting purposes.

1.4 Organisation and financing

Each of the country-specific Choosing Wisely campaigns has a host organisation that has committed its own resources to developing and implementing the initiative. In many cases they have also identified partner organisations to take responsibility for specific aspects. In the short time available for producing this report, it has proven impossible to find any detailed information on funding sources and budgets for the various Choosing Wisely campaigns. These are likely to range from small to significant. The US, Canadian and Australian campaigns appear to have secured sufficient funds and staffing resources to mount effective multi-pronged campaigns, but many other Choosing Wisely initiatives would appear to rely on the host organisation's resources only and in some case show signs of being run on a shoestring.

Potential funding sources include governments, health agencies and foundations. Choosing Wisely US have reported that they secured funds for research and evaluation from the Robert Wood Johnson Foundation, a leading funder of healthcare-related research (25), but Choosing Wisely campaigns in most of the other countries give no indication of their funding sources on their websites.

2 Clinical Engagement

2.1 Reach and spread

Choosing Wisely was a product of increased willingness by the medical profession to question traditional practices and beliefs, combined with uncertainties about the effectiveness of many common treatments. This in turn was fuelled by new developments in comparative effectiveness research and a new emphasis on measuring value (26). The campaign's key features – physician leadership, a participatory approach, partnerships with patient organisations, and effective public communications – rapidly attracted attention among specialist societies and the idea spread quickly.

The first specialist societies to sign up to the US Choosing Wisely campaign published their Top Five lists in April 2012. Nine medical societies came on board in the first wave (23). They were free to develop their own method for determining recommendations but were encouraged to document how it was done and to make the lists publicly available. Campaigns were either led by existing quality and safety committees or by specially constituted steering groups. These consulted society members to solicit ideas and feedback. Between them the original nine societies reached 375,000 physicians around the US.

By 2016, only four years after its launch, the US Choosing Wisely campaign had expanded to include nearly 70 societies (Box 1).

Between them, these medical societies have published over 450 recommendations. Interest was sparked internationally too, with Choosing Wisely campaigns launched or planned in twelve countries worldwide by 2015 (27).

The original campaign strategy was adapted to fit local realities in each of the different countries. While some embraced the Choosing Wisely title, others chose different names. For example, in Italy the campaign, promoted by Slow Medicine Italy, goes by the name of 'Doing more does not mean doing better', while in Switzerland it is called Smarter Medicine and in Wales it is known as Prudent Healthcare. In the UK, where the campaign is led by the Academy of Medical Royal Colleges, it was decided to place a strong emphasis on direct patient and public involvement, so the colleges and specialty societies were asked to ensure that lay people were involved in the selection of topics and in oversight of the campaign. Box 2 shows the simple rules that the medical royal colleges involved in Choosing Wisely were asked to observe.

The Dutch Association of Medical Specialists (OMS) was an early adopter, working with various specialty groups to launch Choosing Wisely Netherlands in 2012, together with the Federation of Patients and Consumer Organizations in the Netherlands (NPCF). Their web-

Box 1: Societies involved in the US Choosing Wisely campaign

- American Academy of Allergy, Asthma & Immunology
- American Academy of Clinical Toxicology
- American Academy of Dermatology
- American Academy of Family Physicians
- American Academy of Hospice and Palliative Medicine
- American Academy of Neurology
- American Academy of Nursing
- American Academy of Ophthalmology
- American Academy of Orthopaedic Surgeons
- American Academy of Otolaryngology-Head and Neck Surgery
- American Academy of Pediatrics
- The American Academy of Physical Medicine and Rehabilitation
- American Association of Blood Banks
- American Association of Neurological Surgeons
- American Association of Neuromuscular & Electrodiagnostic Medicine
- American Association for Pediatric Ophthalmology and Strabismus
- American Association for the Study of Liver Diseases
- American College of Cardiology
- American College of Chest Physicians
- American College of Emergency Physicians
- American College of Medical Genetics and Genomics
- American College of Medical Toxicology
- American College of Obstetricians and Gynecologists
- American College of Occupational and Environmental Medicine
- American College of Physicians
- American College of Preventive Medicine
- American College of Radiology
- American College of Rheumatology
- American College of Surgeons
- American Dental Association
- American Epilepsy Society
- American Gastroenterological Association
- American Geriatrics Society
- American Headache Society
- AMDA – Dedicated to Long Term Care Medicine
- American Medical Society for Sports Medicine
- American Orthopaedic Foot & Ankle Society
- American Physical Therapy Association
- American Psychiatric Association
- American Society of Anesthesiologists
- American Society of Clinical Oncology
- American Society for Clinical Pathology
- American Society of Echocardiography
- American Society of Hematology
- American Society of Nephrology
- American Society of Nuclear Cardiology
- American Society of Plastic Surgeons
- American Society for Radiation Oncology
- American Society for Reproductive Medicine
- American Thoracic Society
- American Urogynecologic Society
- American Urological Association
- Commission on Cancer
- Endocrine Society
- Heart Rhythm Society
- Infectious Diseases Society of America
- North American Spine Society
- Society for Cardiovascular Angiography and Interventions
- Society of Cardiovascular Computed Tomography
- Society for Cardiovascular Magnetic Resonance
- Society of Critical Care Medicine
- Society of General Internal Medicine
- Society of Gynecologic Oncology
- Society for Healthcare Epidemiology of America
- Society of Hospital Medicine
- Society for Maternal-Fetal Medicine
- Society of Nuclear Medicine and Molecular Imaging
- Society of Thoracic Surgeons
- Society for Vascular Medicine
- Society for Vascular Surgery

Box 2: Guide for participating Colleges and Specialist Societies in the UK

Each participating college is asked to identify five treatments or tests which are of questionable value.

It is important that this work is done consistently across specialties and that it is of high standard and in accordance with the principles of Choosing Wisely, explained below. The chosen recommendations should:

Be relevant to the specialty: Each college or specialty society should focus on identifying interventions within their own clinical practice.

Have an impact on patients and/or the NHS: The unnecessary intervention should result in an unwanted effect on patients (side effects, psychological, etc) or a drain on NHS resources. Thus, limiting the intervention would have a positive impact on patients and the NHS as a whole. The participating colleges and specialty societies should prioritise in their recommendation, interventions that would have a big positive impact.

Be evidence based: The colleges or specialty societies should always choose recommendations that are supported by evidence. They should clearly state the strength of the evidence and based on that make a recommendation that the intervention should:

- Not be undertaken at all
- Only used on rare occasions
- Discussed with the patient and used according to patients' informed preferences

Actively involve patients and the public: The colleges or specialty societies should always involve patients and the public in the production of the recommendations.

Be measurable and implementable: Thought must be given by the Colleges and specialty societies into how the proposed recommendations could be implemented into clinical practice and how the effect could be measured.

All recommendations produced by Colleges and Specialist Societies will be proposals and will be reviewed by the Choosing Wisely Steering group to assure that they follow the set principles and process before being adopted as Choosing Wisely Recommendations.

site emphasises four main themes – wise choices, shared decisions, care evaluation and variations in practice (<http://www.kwaliteitskoepel.nl/verstandig-kiezen/english/>).

One of the most effective of the international efforts, Choosing Wisely Canada, launched in 2014 as a grassroots physician-led campaign and spread rapidly to encompass 45 Canadian specialty societies and all 13 Provincial and Territorial Medical Associations. By 2015 they had published 151 recommendations of tests, treatments or procedures that physicians and patients should question and many patient pamphlets (<http://www.choosingwiselycanada.org/>). They also succeeded in engaging medical students and other professional groups and they launched an imaginative public information campaign.

Choosing Wisely campaigns are often able to build on existing programmes in each of the countries. For example, Choosing Wisely Australia is facilitated by NPS MedicineWise, an independent, not-for-profit organisation dedicated to improving the way health technologies, medicines and medical tests are prescribed and used (<http://www.nps.org.au/about-us>). NPS MedicineWise do this by producing evidence-based information, behaviour change services, digital health and data insights and knowledge transfer products for professionals and public. They launched their Choosing Wisely campaign in May 2015 together with six specialist colleges and societies, in the process generating a great deal of media interest. Since then the initiative has grown significantly with 28 colleges, societies and associations becoming members, strong interest from consumer advocacy groups and support from the Consumers Health Forum of Australia, leading to the publication of more than 100 recommendations.

2.2 Topic selection

The simple rules adopted by the Choosing Wisely campaign were that the Top Five lists should:

- Pertain to tests and treatments that are costly and/or used frequently
- Be evidence-based
- Focus on decisions that are within the control of the specialty
- Be developed and approved using a transparent process (24).

Examples of the first sets of recommendations selected by Choosing Wisely in the US can be seen in Box 3.

Few societies had sufficient resources to conduct systematic reviews for all possible topics. Most began with some form of consensus method, often a Delphi¹ survey, to determine a shortlist. They then reviewed the evidence for these in more depth, prior to selecting a Top Five. The downside of this approach is that in the initial stages it relies on opinion rather than evidence. An alternative method that overcomes this problem was advocated by the Canadian Medical Association (CMA) (28). Their proposed starting point was a database of studies reporting POEMs (Patient-Oriented Evidence that Matters) that had been gathered and rated by physicians during continuing medical education sessions. The POEMs database contains studies that address relevant clinical problems, measure patient-oriented outcomes and have the potential to change practice (29). The CMA Choosing Wisely group selected those that had received the highest ratings from physicians for their potential to reduce over-diagnosis or over-treatment – a relatively straightforward way to generate a Top Five list that was both evidence-based and relevant to clinicians.

Several societies have used publications in medical journals to disseminate their recommendations and to describe the methods used to generate them. For example, the Society of General Internal Medicine (SGIM) established an ad hoc committee consisting of members of their existing Clinical Practice Committee and Evidence-Based Medicine Task Force (30). They began by internally soliciting topics for discussion, involving all committee members in selecting ten of these for further consideration. The evidence base for each of the ten topics was reviewed and a mechanism was devised for weighting the results. Scor-

1 The Delphi technique is a widely-used method for achieving consensus among groups of experts. It involves multiple rounds of surveys to obtain feedback on specific topics or statements, with the results of previous rounds fed back to participants for further consideration and response.

Box 3: Sample recommendations

Don't do imaging for low back pain within the first six weeks, unless red flags are present (American Academy of Family Physicians)

Don't delay palliative care for a patient with serious illness who has physical, psychological, social or spiritual distress because they are pursuing disease-directed treatment (American Academy of Hospice and Palliative Medicine)

Antibiotics should not be used for apparent viral respiratory illnesses (sinusitis, pharyngitis, bronchitis) (American Academy of Pediatrics)

Don't schedule elective, nonmedically indicated inductions of labour or caesarean deliveries before 39 weeks 0 days gestational age (American College of Obstetricians and Gynecologists)

Don't obtain screening exercise electrocardiogram testing in individuals who are asymptomatic and at low risk for coronary heart disease (American College of Physicians)

Avoid admission or preoperative chest X-rays for ambulatory patients with unremarkable history and physical exam (American College of Surgeons)

Don't recommend percutaneous feeding tubes in patients with advanced dementia; instead, offer oral assisted feeding (American Geriatrics Society)

Don't use cancer-directed therapy for solid tumour patients with the following characteristics: low performance status (3 or 4), no benefit from prior evidence-based interventions, not eligible for a clinical trial, and no strong evidence supporting the clinical value of further anticancer treatment (American Society of Clinical Oncology)

Don't routinely recommend proton beam therapy for prostate cancer outside of a prospective clinical trial or registry (American Society for Radiation Oncology)

Don't perform routine general health checks for asymptomatic adults (Society of General Internal Medicine)

Source: Adapted from Wolfson D, Santa J, Slass L. Engaging physicians and consumers in conversations about treatment overuse and waste: a short history of the Choosing Wisely campaign. *Academic Medicine* 2014; 89(7): 990-5.

ing took account of the relative strength of the evidence base, the importance of the topic to general internists, the number of patients likely to be affected, the financial impact and relative cost-effectiveness of the intervention, and the likelihood of harm to patients. Once they had agreed on a Top Five list, each topic was assigned to two committee members who developed a single sentence summary statement and a three to four-line paragraph giving further details with accompanying references, for publication on the Choosing Wisely website. Longer summary statements, with expanded reference lists describing the rationale for the recommendation, were circulated to committee members for peer review prior to publication on the society's website.

While some societies delegated the development of Top Five lists to a small group of insiders, others made considerable efforts to achieve the widest possible consensus among their members on the choice of topics. So, for example, the Canadian Rheumatology Association came up with a list of 64 potential topics identified in the first round of a Delphi survey, whittling this down to 13 items after two more rounds (31). They then surveyed all society members, achieving a 35% response rate. This survey found a high level of agreement on the relevance of the 13 items. The committee then selected a Top Five short list and published their rationale for the selection.

Some societies produced an astonishing number of potential topics. For instance, the American Academy of Pediatrics Section on Perinatal Pediatrics surveyed 2,872 neonatologist members and 1,053 physicians, nurses and family members attending a conference (32). Between them these participants came up with 2,870 suggestions. An expert panel of 51 individuals then reviewed each of these and prioritised them using a modified Delphi approach, eventually reducing the number down to 12 for further literature review before producing their Top Five list. Other societies carried out extensive literature searches. For example, the Swiss Society of General Internal Medicine conducted a systematic review using the search terms low value, disinvestment, less is more, and avoidable care. This produced a list of 38 possibilities (33). A subsequent Delphi exercise achieved a clear consensus on a Top Five list.

2.3 Adapting the approach

Societies in countries that launched Choosing Wisely after the publication of the original US lists were in a position to learn from that experience, adapting the process to fit local realities (27). In some cases longer lists of recommendations were developed by societies that preferred not to confine themselves to just five. For example, the Australasian College for Emergency Medicine chose six topics for their first list (<http://choosingwisely.org.nz/professional-resource/anzan-2/>).

The initiatives in Germany “Gemeinsam klug entscheiden” (“Deciding wisely together”) by the Association of the Scientific Medical Societies (AWMF) and “Klug entscheiden” (“Deciding wisely”) by the German Association for Internal Medicine (DGIM) have suggested broadening the scope of Choosing Wisely to encompass under-use and mis-use in addition to over-use (34, 35). The wisdom of this intention to broaden the scope is hard to judge. On the face of it, there would seem to be a risk that any public communications about the campaign will have to be more complex and hence difficult for non-specialists to absorb.

Some societies reviewed the lists produced by sister organisations in the US and then consulted their members on whether they were applicable in their country. Others used

existing clinical guidelines as their starting point. In certain countries several relevant initiatives were available for Choosing Wisely groups to build upon.

In Switzerland, the Swiss Academy of Arts and Sciences (SAMS) encouraged all medical societies to review and where appropriate adopt the original US Choosing Wisely recommendations. Initially only the Swiss Society of Paediatrics did so (<http://www.samw.ch/en/Projects/Sustainable-health-care-system/Choosing-wisely.html>). In 2015 SAMS then re-contacted all 23 large medical societies, together with the Swiss Nursing Association, providing them with relevant recommendations from the US lists for review to see if they were appropriate for use in Switzerland. Fourteen societies replied. Of these, 10 adopted the US recommendations (partially modified), while four declined to adopt them.

The Italian Society of Internal Medicine (SIMI) screened recommendations arising from the US and Canadian campaigns to identify those that were relevant to their specialty – a total of 139 items (36). They then emailed their members asking for new suggestions, which elicited a further 90 potential topics. The committee then selected 30 of these, circulating the list to 2,306 delegates asking them to indicate their priorities. The resulting Top Five list included four items that had not been on the US and Canadian lists and only one that was. Choosing Wisely Japan also built on the US experience, with its initial launch focusing on a small set of recommendations translated from the US versions (<http://choosingwisely.jp/>).

In the UK, the Academy of Medical Royal Colleges launched the Choosing Wisely campaign in 2016 with Top Five recommendations from eleven medical colleges and faculties (<http://www.choosingwisely.co.uk/about-choosing-wisely-uk/>). The UK has had a long history of publicly-funded clinical guidelines, developed and/or accredited by NICE. Since 2005 NICE had also led a search for wasteful procedures and treatments, leading to the production of a list of more than 1,000 ‘do not do’ recommendations (20), (<https://www.nice.org.uk/savingsandproductivity/collection?page=1&pagesize=2000&type=do%20not%20do>). There is also an extensive body of quality assured patient information hosted on an NHS website, www.nhs.uk (37), The medical societies involved in Choosing Wisely UK therefore had a considerable amount of material to draw on in producing their recommendations. Strenuous efforts were made to ensure that their Top Five lists were in agreement with pre-existing NICE guidance and supported by reliable evidence.

Choosing Wisely New Zealand launched its first list of 90 recommendations in December 2016. The campaign is led by the New Zealand Council of Medical Colleges in partnership with the Health Quality Safety Commission and Consumer NZ (<http://choosingwisely.org.nz/>). The campaign, which has involved 17 specialty societies so far, is aiming for a multi-professional focus that will engage doctors, nurses, pharmacists, midwives and other health professionals. They are also developing implementation toolkits and patient information materials.

2.4 Educating professionals

Medical education has been a feature of several Choosing Wisely campaigns. Evidence suggests that three factors are particularly important in training physicians to provide high-value, cost-conscious care – specific knowledge transmission, reflective practice and a supportive environment (38). In Canada, the campaign has placed special emphasis on integrating Choosing Wisely principles into medical and nursing education, recognising

Box 4: Six Things Medical Students and Trainees Should Question

1. Don't suggest ordering the most invasive test or treatment before considering other less invasive options
2. Don't suggest a test, treatment, or procedure that will not change the patient's clinical course
3. Don't miss the opportunity to initiate conversations with patients about whether a test, treatment or procedure is necessary
4. Don't hesitate to ask for clarification on tests, treatments, or procedures that you believe are unnecessary
5. Don't suggest ordering tests or performing procedures for the sole purpose of gaining clinical experience
6. Don't suggest ordering tests or treatments pre-emptively for the sole purpose of anticipating what your supervisor would want

that trainees often feel under pressure to order unnecessary tests or procedures to demonstrate thoroughness (39). As part of their efforts to engage medical students, they launched STARS (Students and Trainees Advocating for Resource Stewardship) (<http://www.choosingwiselycanada.org/medical-education/>). Among the STARS products was a list of 'Six Things Medical Students and Trainees Should Question' (Box 4). This was developed by a student-led task force involving nearly 2,000 medical students.

3 Patient and public engagement

3.1 Public expectations

Patient and public expectations are often mentioned by doctors as a major cause of over-use of medical interventions, although the extent to which this is true is unclear (40, 41). Several studies have found that patients, like physicians, often have unrealistically high expectations of the benefits of treatments and tend to underestimate the likelihood of harm (7, 8). People's views are sometimes contradictory – a survey by Choosing Wisely Australia found that while most respondents agreed on the importance of avoiding unnecessary care, three-quarters indicated that they expect doctors to carry out all available medical tests related to their condition (<http://www.choosingwisely.org.au/news-and-media/media-centre/choosing-wisely-australia-report>).

The mass media plays a key role in shaping public expectations and these are often reinforced by social networks and political debates (5). It seems clear that any strategy to tackle waste in healthcare must engage patients and members of the public, both at the point of decision-making and at a more general level.

To be effective a Choosing Wisely campaign needs to include the following four elements:

- Patient information about benefits, harms and uncertainties of tests and treatments
- Social marketing to build public awareness of the issues
- Direct involvement in topic selection, design of materials, and campaign oversight
- Support to help patients engage in decisions about test and treatment options, including question prompts and decision aids.

3.2 Patient information

The ABIM Foundation's partnership with Consumer Reports grew out of a belief that the provision of public information and education should be a key plank in the plan to tackle the problem of over-use. The partnership drew on Consumer Reports' extensive experience of developing information for the public, including health information. They, in turn, recruited other like-minded consumer or patient organisations to join the campaign. This partnership now extends to around 50 organisations. Between them these groups have distributed more than 110 patient-friendly information packages to about 100 million people each year (<http://www.choosingwisely.org/about-us/facts-and-figures/>).



Ask Your Doctor Do I need this cancer test or treatment?

PET, CT, or bone scans to check the stage of breast or prostate cancer

You don't need the tests if cancer is found at an early stage, unless there are symptoms that worry your doctor.

PET scans after cancer treatment

These scans are not recommended for follow-up after cancer treatment. Ask your doctor about getting routine screenings. Ask about the signs of cancer coming back. If this happens, you may need scans.

PSA test for prostate cancer

You don't need this test if you do not have symptoms and your life expectancy is under 10 years. There is no benefit to early diagnosis. That's because the cancer is not likely to spread quickly enough to shorten your life.



Targeted therapy

These therapies treat certain kinds of cancer cells. They don't work if you don't have those kinds of cells.

Drugs to increase white blood cells

You don't need these unless you have a high risk of infection or your white blood cell count goes way down because of chemotherapy.

Combining chemotherapy drugs for breast cancer

In most situations, one drug at a time works just as well. Even if your cancer has spread, combining drugs usually won't help, unless you have specific symptoms or complications.

Drugs to prevent nausea during chemotherapy

There are many options. You should use the most effective and lowest-cost drugs available.

Stopping treatment for advanced cancer

You may want to stop treatment if it's not working, especially if it makes you feel sick. Ask your doctor about care to ease symptoms (palliative care).

Talk to your doctor

- Do I need these tests and treatments?
- Would other choices be better for me?

For more information, please visit:
ConsumerHealthChoices.org/Choosing

Figure 1: Sample leaflet for patients (Source: consumerhealthchoices.org/)

Consumer Reports and their partner organisations were asked to produce a variety of educational materials to explain the Choosing Wisely recommendations in clear language, see example (figure 1).

These materials were published on the Choosing Wisely website, made available in pdf form for downloading, and distributed by partner organisations in a variety of other ways. Similarly, Choosing Wisely Canada has published more than 30 patient leaflets on their website. Meanwhile, Choosing Wisely Australia and Choosing Wisely UK have included links to pre-existing patient information materials selected for their relevance to the Top Five lists.

Other educational materials developed for the US campaign included toolkits for employers to help them plan Choosing Wisely campaigns, and materials for distribution to employees, including short videos, and Tip Sheets covering topics such as those listed in Box 5.

3.3 Public awareness campaigns

The press and broadcast media are often interested in the issue of over-use of medical care and this has been ably exploited by Choosing Wisely campaigns in several countries to promote their messages. In addition to issuing press releases and responding to journalists' requests, Consumer Reports developed short public service announcements using cartoons and graphical images for broadcast on public service television.

Box 5: Educational materials for employees

Know what to say to your doctor

- Choosing Wisely: When to say "Whoa!" to doctors
- Tips on communicating with your doctor
- What you need to know about doctor-patient relationships

Use your prescription medication wisely

- Starting a new drug
- Know how to read a label
- Take the right dose
- Learn what to do when you experience side effects
- What to know about splitting pills

Be a smarter patient

- What doctors wish their patients knew
- Too much treatment?
- The real cost of care

Try this advice

- What may surprise you about preventive care
- Living life to the fullest: building healthy habits



Figure 2: Public information campaign by Choosing Wisely Canada (Source: Choosing Wisely Canada)

Choosing Wisely Canada has used humour to good effect in a public information campaign entitled 'More is not always better' (Figure 2). The campaign has the following aims:

- to promote the message that in medicine, as in life, “more is not always better”
- to educate patients about when they might need a particular test or treatment, and when they don't
- to encourage patients to talk with their doctor about unnecessary care

Most Choosing Wisely campaigns include press and media releases and direct contact with journalists to spread the word to the public and maximise impact. Several have also used social media to good effect. Choosing Wisely Australia collaborated with ABC TV on a programme entitled *Too Much Medicine* that helped to bring the campaign to the attention of a mass television audience. Together with this and other media programmes – TV, radio, press and online – they estimate that they have reached an audience of more than 18 million Australians (42).

3.4 Direct involvement

Despite the partnerships with consumer organisations, for the most part selection of Top Five lists was left to the professionals. Patient or lay involvement in topic selection has been notable for its absence in most medical societies' accounts of how they developed their lists. There have been a few exceptions to this rule, however: both the Canadian Rheumatology Association and the American Academy of Pediatrics have published reports detailing how they involved patients and parents in developing their recommendations (31, 32).

The UK has a long tradition of patient and public involvement in healthcare governance, so the Academic of Medical Royal Colleges was keen to ensure that lay people were involved

at all levels of its Choosing Wisely campaign. Most of the UK Royal Colleges have patient or lay advisory committees, so it was expected that representatives from these groups would be invited to contribute to topic selection and identification of patient information materials. The Academy invited representatives of patient organisations to join the steering committee and its sub-groups and they asked all medical societies submitting Top Five lists to state whether and how patients had been involved in the selection. This did occur in several cases, but by no means all societies managed to involve patients in the first phase of the project. It is not clear why some societies were unable to achieve this. It may indicate a tendency to underestimate the willingness of lay people to get involved in discussions about clinical issues.

Some have questioned the extent to which lay members of medical societies are representative of patients or members of the public. A survey of 20 professional bodies in the UK gave cause for some concern on this point (43). A surprisingly high proportion of so-called lay members (41%) had worked as health care professionals in the past, and only five of the organisations were able to describe their criteria for recruiting and selecting lay representatives. This appears to be a feature of lay participants in other countries too. Lack of transparency about selection procedures and potential lack of a truly independent perspective could inhibit true public representation in Choosing Wisely processes.

3.5 Question prompts

While well-designed information for patients and public is undoubtedly an important feature of Choosing Wisely campaigns, information alone is unlikely to be sufficient. Very few patients go directly to the websites of professional societies to learn about appropriate treatment. Achieving better conversations between patients and providers will require a multi-pronged approach to tackle the common misperception that 'more is better'.

There is some evidence to suggest that encouraging people to ask questions of health professionals can lead to improvements in consultations (44). Choosing Wisely campaigns in several countries have published brief sets of questions that patients could ask in medical consultations. For instance, the website of several of the Choosing Wisely campaigns includes a variant on the following five questions that patients are encouraged to ask of doctors and nurses:

1. Do I really need this test, treatment or procedure?
2. What are the risks or downsides?
3. What are the possible side effects?
4. Are there simpler, safer options?
5. What will happen if I do nothing?

3.6 Patient decision aids

A more direct way to deal with the issue is to ensure that people receive clear, unbiased, evidence-based information at the point of decision-making. Choosing Wisely UK has emphasised this by suggesting that 'decisions should be consistent with patients' values'. This underscores the need for a collaborative approach to decision-making and provision of reliable, accessible, evidence-based information in the form of patient decision aids.

Patient decision aids are different from traditional educational materials because they do not tell people what to do. Instead they set out the facts and help patients deliberate about the options. They usually contain:

- A description of the condition and symptoms
- The likely prognosis with and without treatment
- Test, treatment and self-management options and outcome probabilities
- What's known from the evidence and what's not known (uncertainties)
- Illustrations to help people understand what it would be like to experience some of the most frequent side-effects or treatment complications (often using patient interviews)
- A means of helping people clarify their preferences
- References and further sources of information
- Authors' funding source and declarations of interest
- Date of production and due date of next update (45).

A Cochrane review found that use of patient decision aids led to significant improvements in people's understanding of their options and more informed decisions (46). There is plenty of evidence that patients want this type of information, but many don't receive it (45).

Choosing Wisely UK is therefore promoting the use of patient decision aids wherever possible alongside its recommendations (<http://www.choosingwisely.co.uk/i-am-a-clinician/>

Box 6: Shared decision making and Choosing Wisely

Shared Decision Making (SDM) is a collaborative process in which doctors and patients work together to select tests, treatments and care management or support packages, based on clinical evidence and patients' informed preferences and values. It explicitly acknowledges the fact that there is usually more than one way to treat a problem, including 'no treatment' and patients may require help to weigh up the benefits and harms of the options in order to determine the best choice for them.

There is good evidence that SDM benefits patients, improving the quality and appropriateness of clinical decision making. A Cochrane Review of 115 randomised control trials found that use of patient decision aids leads to improved knowledge and more accurate risk perceptions among patients, greater participation in decision-making, and more appropriate treatment decisions. This will include reduced demand for some screening procedures, such as PSA tests and surgical procedures, such as hysterectomies and knee replacement operations.

It is also an effective strategy for tackling overdiagnosis and overtreatment. For example, interventions to promote SDM, including SDM skills training, have been shown to lead to reductions in inappropriate antibiotic use in acute respiratory infections and better understanding of the risk of over-detection in breast screening.

A fundamental aim of Choosing Wisely is to use the shared decision making approach to reduce unnecessary tests and treatments. Therefore, many of the recommendations have links to decision aids, which will support you to have the necessary conversations with your patients.

shared-decision-making/). They are fortunate in that a number of patient decision aids have been developed and made freely available for use in the NHS. Their reasons for making this connection with shared decision making are outlined in Box 6.

A set of quality standards, the International Patient Decision Aid Standards (IPDAS), has been developed to assess the quality of decision aids (47). A recent paper evaluated the patient materials produced by Choosing Wisely Canada to see whether they matched up to the IPDAS standards, but the authors concluded that none of the materials met the standard for effective shared decision-making tools (48). To be fair, Choosing Wisely Canada never claimed that they were producing patient decision aids. The production of decision aids is a time-consuming and expensive business, requiring resources that may not be available to individual Choosing Wisely campaigns (49). Nevertheless, this review does point to ways in which the quality of patient information materials might be improved and strengthened to support better conversations.

While patient decision aids can be a useful tool for promoting better conversations, they are not sufficient on their own. They need to be accompanied by training for clinicians, preparation for patients and a systematic approach to quality improvement (46). Even the best quality information materials are unlikely to make an impact if clinicians are not committed to making decisions in partnership with patients. Various demonstration projects have underscored the need to challenge assumptions among practitioners that they already do share decisions with their patients, when in fact this is not the norm (<http://personcentredcare.health.org.uk/overview-of-person-centred-care/overview-of-person-centred-care/overview-of-person-centred-care-0>). Implementation requires a significant change in clinicians' attitudes and behaviour towards patient involvement. Careful attention must also focus on systems and processes to support these changes, together with monitoring and feedback to secure the necessary culture change.

4 Assessing impact

As we have seen, Choosing Wisely has succeeded in securing enthusiastic uptake among medical societies around the world, but a true judge of its worth is the extent to which it achieves the desired impact on clinical practice. The initiative is still relatively young, so it is too early to make definitive judgements. Nevertheless, there is much to be learnt from descriptive accounts and critiques of its performance to date.

4.1 Engagement of stakeholders

Choosing Wisely leaders need a good understanding of their audiences to inform their campaign strategies. To this end a number of surveys have been carried out to learn more about awareness of the issues and acceptability of the recommendations. For instance, surveys of US-based primary care providers explored reactions to 12 Choosing Wisely recommendations (50). While most respondents found the recommendations concerning screening or testing comparatively easy to follow and likely to be acceptable to their patients, they anticipated greater difficulty in implementing those for symptomatic conditions. Demand from patients and specialists, concerns about the malpractice system, and lack of time for shared decision making were cited as key barriers to compliance with Choosing Wisely recommendations.

A survey of US physicians' views carried out early in 2014 found greater levels of awareness of Choosing Wisely among primary care physicians (47%) than among medical specialists (37%) and surgeons (27%) (51). A majority (62%) of respondents indicated that they were uncomfortable dealing with uncertainties involved in care delivery, and around a third were unhappy about the need for cost-consciousness. Primary care physicians reported feeling significantly more pressure from patients to provide tests and treatments than the other two groups. These findings highlight the need to address these issues at an early stage when developing recommendations to increase the likelihood that they will be followed.

A Canadian survey of 344 primary care patients explored reactions to a Choosing Wisely educational brochure on low value tests, treatments and procedures (52). Most respondents (85%) were sympathetic to the aims of Choosing Wisely and understood the rationale for reducing over-use. The brochure had a measurable effect on respondents' knowledge of, and willingness to discuss, low value care with health professionals. In this case the authors concluded that reducing use of medications might prove easier than reducing low-value screening services, because those respondents who expressed greater reluctance to change behaviour were those who were convinced of the value of regular screening tests.

4.2 Development of Top Five lists

In 2014, the ABIM Foundation, with support from the Robert Wood Johnson Foundation, provided funding to the Institute for Clinical and Economic Review (ICER) to provide brief analyses on several specialty societies' Choosing Wisely recommendations. These described the level of practice variation and costs, and examined the drivers of over-use and the potential for change (<http://www.choosingwisely.org/resources/icer-baseline-reports/>). The majority (76%) of the early recommendations appropriately focused on interventions that offered no additional benefit over alternatives but were higher risk, higher cost, or both (53). However, there was a tendency to avoid making judgements about interventions that did offer a small additional benefit but at high cost.

Recommendations that are not carefully rooted in evidence are likely to be ignored or forever debated, so the evidentiary rationale for the Top Five lists needs to be carefully researched and fully transparent. An assessment of the relative trustworthiness of items in the Top Five lists produced by groups involved in the US Choosing Wisely campaign found only 131 out of a total of 412 recommendations to be 'sufficiently trustworthy', meaning they were based on good evidence and the development process for selecting the recommendation was methodologically sound (54). The remaining 281 recommendations were deemed to be of 'unclear trustworthiness'. This lack of clear supporting evidence and transparency is not just a failing of Choosing Wisely – the same is true of many clinical practice guidelines – and it may reflect limitations of the evidence base and the types of research carried out, as much as shortcomings in the development of Top Five lists.

Some of the early lists produced by medical societies in the US were criticised for an apparent tendency to avoid topics that were significant revenue generators for their members (55). Low cost, low impact items predominated on the lists of some societies, while others selected items that were the province of specialties other than their own. This was not universally true, however, and several societies bravely listed topics that would have significant financial consequences for their members if the recommendations were followed.

4.3 Early trends

Measurement of over-use within a population usually requires direct analysis of specific patient registries or audits of clinical records, together with clear definitions of appropriate and inappropriate care (17). As we have seen, defining inappropriate care is a core feature of Choosing Wisely, but measurement of the prevalence of over-use and trends over time can prove problematic (56). A study of early trends among seven recommendations from the Choosing Wisely campaign in the US found that only two of the seven achieved the intended declines in use (57). There were several important limitations to this study, including the fact that it was carried out at an early stage in the campaign. This should not be taken as evidence that the Choosing Wisely approach cannot work, but it does highlight the need for careful monitoring of its impact on utilisation rates.

Reports of specific initiatives present a more encouraging picture. For example, the American Society of Hematology resolved to reduce use of thrombophilia tests in adult patients with venous thromboembolism (58). Twenty-two months after this recommendation was made, the rate of ordered tests fell by 84%. Clearly there was considerable scope in this case for changes to be made. At the other extreme, as study of clinical decisions at three US primary care clinics before and after publication of relevant Choosing Wisely recom-

mendations found a high rate of adherence before the publication of the lists, leaving very little scope for measurable improvements (59). This points to the need to measure prevalence of over-use in advance of producing the lists to avoid wasting time on low priority issues.

Making progress will require the development and implementation of a research strategy aimed at better understanding the drivers of over-use, its frequency, and how to mitigate it (41). Various measurement tools will be required, including surveys of providers, patients and public, in-depth interviews, administrative databases, patient-based registries, chart reviews, and patient-reported outcome measures (60). Standard data definitions that make it easier to monitor the frequency of overuse would be enormously helpful (61), and adequate funding will be required to facilitate the development of robust methods.

4.4 Support to do the right things

Publication of Top Five lists on their own, even with clear supporting rationales, is unlikely to be sufficient to stimulate change. The lists are an important first step because they provide clear goals, legitimise the case for change and are generated by the medical societies themselves, but clinicians also need support to do the right things. This might include interventions at the macro policy level, for example modifying financial incentives, encouraging audit and feedback, building prompts into electronic health records, or providing training programmes on how to share decisions with patients (62).

Multi-faceted tactics may be required. For example, building broader awareness of the harms and costs associated with over-use, coupled with changes to financial incentives, may help (63); implementing criterion-based thresholds for appropriate test ordering can be very effective (64-66); and direct patient education and shared decision making has been shown to lead to reductions in inappropriate use of certain medications (67). Local experimentation may be needed to find the most appropriate levers for change in specific contexts, evaluating their effects and modifying them when necessary (27).

Choosing Wisely groups will need to familiarise themselves with lessons arising from implementation science and quality improvement techniques in order to maximise impact. They can also learn from each other. Choosing Wisely Canada has published a set of implementation toolkits giving useful examples and helpful advice (<http://www.choosingwiselycanada.org/in-action/toolkits/>). Meanwhile Choosing Wisely US has launched a series of videos documenting the experiences of implementation sites around the country (<http://www.choosingwisely.org/gallery/videos/>).

5 Recommendations for Choosing Wisely Germany

The following ten recommendations are made without personal knowledge of the situation in Germany, nor of what groups involved in Choosing Wisely Germany are planning. They are presented merely as a summary of key points noted during the production of this brief overview in the hope that they may help with planning a strategy for this, or any other, new Choosing Wisely campaign.

5.1 Engagement of clinicians

The early achievements of Choosing Wisely owe a great deal to the fact that it is medically-led and professionally-owned. It seems unlikely that it would have spread so quickly if it had been imposed on the medical societies or heavily controlled. Professional ownership of the initiative was achieved through a light-touch approach that allowed scope for individual medical societies to shape it to their own local circumstances. This inevitably led to variations in methodological quality, both of the processes used to develop the lists, and of the lists themselves. This may be a case where the best can be the enemy of the good. An overly-controlling approach might have alarmed some of the societies, inhibiting their sense of ownership of the initiative. It makes sense to nudge societies in the direction of robust methods and, where possible, to help them achieve this with appropriate prompts and tool-kits, allowing for flexibility and innovation. Choosing Wisely stands or falls by the extent to which it secures enthusiastic adoption among professionals.

Recommendation: Encourage medical societies to adopt robust methods for developing their Top Five lists and provide support for them to do this, but acknowledge the importance of clinician buy-in, avoiding an overly-controlling approach that might inhibit this.

Top Five lists that are produced by small groups of ‘insiders’ are much less likely to achieve traction among wider members of a professional group.

Recommendation: Encourage medical societies to consult as widely as possible among their members before producing their Top Five lists.

In certain cases, medical society’s lists focused on tests, treatments or procedures usually carried out by other specialties, ignoring or deflecting the host specialty’s responsibilities for tackling waste. This can be particularly annoying for members of those other specialties, undermining the collective effort. In addition, some Top Five lists focused on relatively trivial topics, ignoring more important issues of relevance to the specialty. This is especially worrying if it arises from attempts to protect the status or earning power of the specialists concerned.

Recommendation: Actively discourage societies from making recommendations on topics that are not their responsibility, encouraging them to focus on topics that are of demonstrable importance and relevance to members of their specialty and their patients.

5.2 Engagement of patients

Leaders of Choosing Wisely campaigns have placed welcome emphasis on the importance of patient engagement. They have encouraged the development of plain language materials and some are developing effective public campaigns, but the lack of involvement of lay people in topic selection has been a weakness. It will be hard to engage patients and members of public in the campaign if topic selection does not take sufficient account of their values and priorities.

Recommendation: Encourage medical societies to involve patient representatives in topic selection and all other aspects of the campaign, in the knowledge that this is both desirable and feasible.

Achieving the overarching goal of better conversations between patients and clinicians demands attention to ways in which both parties can be supported. Achieving better conversations implies promoting stronger partnerships, more sharing of information, enhanced listening skills, enabling people to express their values, preferences and goals, and wherever possible acting on them.

Recommendation: Consider the various ways in which better conversations can be promoted, including the provision of support and training for shared decision making.

5.3 Scope

While there may be a case for including under-use as well as over-use and mis-use in a Choosing Wisely campaign, there is a risk that the messaging will become too complex. For example, it will not be possible to use simple slogans like 'less is more' that have proven useful in other Choosing Wisely campaigns. The same could be true if Top Five lists expand to become Top Ten lists or some other number. Any broadening of the scope of the initiative should only be done after careful consideration of how the priorities will be communicated to stakeholders.

Recommendation: Be cautious about expanding the scope of the campaign without first considering implications for communication strategies.

5.4 Transparency

While some societies have published the rationale underpinning their Top Five lists and the methods used to produce them, not all did so. This lack of transparency undermines the initiative and the likelihood that it will lead to the desired results.

Recommendation: Encourage societies to publish their lists, the rationale for prioritising particular topic, and the methods by which they were arrived at, on websites or in journals accessible to professionals and patients.

5.5 Evidence

In some cases, Top Five lists lacked supporting evidence or were based on an insufficiently robust interpretation of the evidence. It is better to take time to ensure the reliability of the recommendations than to rush them out.

Recommendation: Ensure that the evidence underpinning each recommendation is carefully checked prior to inclusion in a Top Five list.

5.6 Support for implementation

Due consideration must be given to how reductions in the use of low value procedures will be achieved. Ideally implementation planning should begin at an early stage in the process, including identifying all relevant stakeholders, finding out what matters to them and exploring any concerns they may have.

Recommendation: Encourage societies to develop robust implementation plans based on an understanding of the roles and concerns of all relevant stakeholders.

5.7 Evaluation

Measurement and monitoring is a crucial feature of any quality improvement programme and Choosing Wisely is no exception. This is difficult to do if information about the frequency of over-use is missing. Baseline measurements and ongoing monitoring are essential. It is also worth considering the issue of attribution, in which changes are observed but these may have been triggered by external factors unassociated with Choosing Wisely. This may not matter if the desired objective is achieved, but it is worth trying to measure the direct impact of local campaigns. This will help to identify opportunities for improvements in the design of the programme, where these are indicated.

Recommendation: Encourage societies to monitor the prevalence of over-use and trends over time, and to assess progress towards achieving campaign objectives.

Box 7: **Recommendations for a successful Choosing Wisely campaign**

- 1.** Encourage medical societies to adopt robust methods for developing their Top Five lists and provide support for them to do this, but acknowledge the importance of clinician buy-in, avoiding an overly-controlling approach that might inhibit this.
- 2.** Encourage medical societies to consult as widely as possible among their members before producing their Top Five lists.
- 3.** Actively discourage societies from making recommendations on topics that are not their responsibility, encouraging them to focus on topics that are of demonstrable importance and relevance to members of their specialty and their patients.
- 4.** Encourage medical societies to involve patient representatives in topic selection and all other aspects of the campaign, in the knowledge that this is both desirable and feasible.
- 5.** Consider the various ways in which better conversations can be promoted, including the provision of support and training for shared decision making.
- 6.** Be cautious about expanding the scope of the campaign without first considering implications for communication strategies.
- 7.** Encourage societies to publish their lists, the rationale for prioritising particular topic, and the methods by which they were arrived at, on websites or in journals accessible to professionals and patients.
- 8.** Ensure that the evidence underpinning each recommendation is carefully checked prior to inclusion in a Top Five list.
- 9.** Encourage societies to develop robust implementation plans based on an understanding of the roles and concerns of all relevant stakeholders.
- 10.** Encourage societies to monitor the prevalence of over-use and trends over time, and to assess progress towards achieving campaign objectives.

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Author



Angela Coulter, PhD, Hon FRCGP

Angela Coulter is a UK-based health policy analyst and researcher, with special interests in patient and public involvement. A social scientist by training, she has higher degrees in health services research from the University of London and the University of Oxford. Now freelance and still involved in research, her previous roles include Chief Executive of Picker Institute Europe, Director of Policy and Development at the King's Fund, Director of the Health Services Research Unit at the University of Oxford and Director of Global Initiatives at the Informed Medical Decisions Foundation. She is an Honorary Professor at the University of Southern Denmark, an Honorary Fellow of the Royal College of General Practitioners and a Non-Executive Director of the National Institute for Health and Care Excellence (NICE).

Angela Coulter has published more than 300 research papers and reports and several books including *The Autonomous Patient*, *The European Patient of the Future* (winner of the 2004 Baxter Award), *The Global Challenge of Healthcare Rationing*, *Hospital Referrals*, *Engaging Patients in Healthcare and Understanding and Using Health Experiences*. She was the founding editor of *Health Expectations*, an international peer-reviewed journal on patient and public involvement in health care and health policy. She has won awards for her work from the Donabedian Foundation of Barcelona in 2012 and the International Shared Decision Making Conference in 2013.

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Bertelsmann Stiftung
Carl-Bertelsmann-Straße 256
33311 Gütersloh
Phone +49 5241 81-0
www.bertelsmann-stiftung.de

Responsible

Marion Grote Westrick

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Choosing Wisely US

Design

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Address | Contact

Bertelsmann Stiftung
Carl-Bertelsmann-Straße 256
33311 Gütersloh
Phone +49 5241 81-0

Marion Grote-Westrick
Senior Project Manager
Programm Improving Healthcare – Informing Patients
Phone +49 5241 81-81271
Fax +49 5241 81-681271
marion.grotewestrick@bertelsmann-stiftung.de

www.bertelsmann-stiftung.de