

# A CHOOSING WISELY LITERATURE SYNOPSIS

(ARRANGED BY YEAR, 2014-2018, & ALPHABETICALLY BY AUTHOR)

## 2014

**Academy of Medical Royal Colleges. Protecting resources, promoting value: a doctor's guide to cutting waste in clinical care. London: Academy of Medical Royal Colleges; 2014.**

[www.aomrc.org.uk/wp-content/uploads/2016/05/Protecting\\_Resources\\_Promoting\\_Value\\_1114.pdf](http://www.aomrc.org.uk/wp-content/uploads/2016/05/Protecting_Resources_Promoting_Value_1114.pdf)

This report by the Academy of Medical Royal Colleges makes a number of recommendations about reducing wasted clinical resources, including that colleges identify areas of waste and give leadership in tackling them through use of tools such as the National Institute for Health and Care Excellence 'do not do' database and a Choosing Wisely list for their specialty. A cultural shift is needed – "don't do something because it can be done; do it if it is necessary." The report includes a waste reduction toolkit and gives examples of how health professionals can ensure that resources are used in the most effective way to provide the best possible quality and quantity of care for patients.

**Colla CH. Swimming against the current — what might work to reduce low-value care? N Engl J Med 2014; 371: 1280—3.**

The article discusses the pros and cons of policy tools aimed at patients (e.g. patient education) and healthcare providers (e.g. evidence-based guidelines) to reduce low-value care. Whilst the discussion focuses on the United States which has a fee-for-service system, the article includes a table summarising the various financial incentive and information policy tools that exist. More evidence of the effectiveness of these tools in reducing low-value care is needed.

**Hurley R. Can doctors reduce harmful medical overuse worldwide? BMJ 2014; 349:g4289. doi: 10.1136/bmj.g4289**

The article reports some of the views from an international Choosing Wisely meeting and what other countries are doing. It outlines the Choosing Wisely approach of engaging doctors to identify and reduce low-value care and communicating to patients that more care is not always better. Patients need to be encouraged to ask their doctor a series of questions about a proposed intervention. The key point is shared decision-making.

**Levinson W, Kallewaard M, Bhatia RS, Wolfson D, Shortt S, Kerr EA. 'Choosing Wisely': a growing international campaign. BMJ Qual Saf 2014; 0: 1—9. doi: 10.1136/bmjqs-2014-003821**

The article presents the experiences from 12 countries in planning or implementing Choosing Wisely. It identifies key elements of a Choosing Wisely campaign and five principles (physician led, patient focused, evidence based, multi-professional, transparent) essential to its success that should be incorporated in a Choosing Wisely campaign in any country. The goal of a Choosing Wisely campaign is to change the culture of medical care that has historically supported overuse of unnecessary interventions to provide high-quality care, prevent harm and decrease the use of unnecessary care.

**Morden NE, Colla CH, Sequist TD, Rosenthal MB. Choosing Wisely — The politics and economics of labelling low-value services. N Engl J Med 2014; 370: 589—92. doi: 10.1056/NEJMp1314965**

The article highlights the wide variation in the low-value interventions included on the US specialty societies' lists in terms of their potential impact on health and discusses possible mechanisms to accelerate translating the lists into practice change. Good communication, public education, and more high-impact recommendations are critical for success. The Choosing Wisely campaign invites doctors to own their role as stewards of limited health care resources.

**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. Acad Med 2014; 89: 990—995. doi: 10.1097/ACM.0000000000000270**

The leaders of the Choosing Wisely campaign, the American Board of Internal Medicine Foundation and Consumer Reports, outline the history and purpose of the campaign, its structure and approach, lessons learned and future plans. Professional values and doctor-patient conversations to reduce unnecessary care underpin the campaign. Medical specialty societies have developed more than 250 evidence-based recommendations, some of which have consumer-friendly resources produced by Consumer Reports. Evaluation of the campaign's impact is needed.

## 2015

**Bhatia S, Levinson W, Shortt S, Pendrith C, Fric-Shamji E, Kallewaard M, et al. Measuring the effect of Choosing Wisely: an integrated framework to assess campaign impact on low-value care. *BMJ Qual Saf* 2015; 0: 1–9. doi: 10.1136/bmjqs-2015-004070**

The article proposes an integrated measurement framework, using the example of low back pain imaging, which may be used to assess the effectiveness of a Choosing Wisely campaign. Unintended consequences (e.g. underuse of high-value care) as well as intended consequences are included. Measurement tools, including their pros and cons, are identified for assessing doctors' awareness, attitudes and behaviour, and patient engagement and acceptance.

**HealthPACT. Caring Wisely: Optimising patient care in Australia and New Zealand. Workshop report. 2015. [www.health.qld.gov.au/healthpact/docs/report-caring-wisely.pdf](http://www.health.qld.gov.au/healthpact/docs/report-caring-wisely.pdf)**

This report summarises a workshop to discuss what the Australian and New Zealand governments should do next in formulating effective policy around disinvestment in the public hospital system. Workshop sessions focused on identifying and prioritising interventions for disinvestment and the barriers in translating disinvestment policy into clinical practice. Key points of agreement included that identification of low-value care is important, information about current practice is a prerequisite, disinvestment information needs to be provided at a local level, and incentives for disinvestment may result in better adoption.

A pre-workshop discussion paper is attached to the report. The paper gives background information about past and current disinvestment activities, including the Choosing Wisely Australia campaign, and the challenges of disinvestment for doctors, funders and policy makers.

**Malhotra A, Maughan D, Ansell J, Lehman R, Henderson A, Gray M, et al. Choosing Wisely in the UK: the Academy of Medical Royal Colleges' initiative to reduce the harms of too much medicine. *BMJ* 2015; 350:h2308. doi: 10.1136/bmj.h2308**

The article outlines the Academy of Medical Royal Colleges' approach to introducing Choosing Wisely in the United Kingdom in collaboration with other clinical, patient and healthcare organisations. The authors suggest that guideline committees should produce decision-making tools that assist informed discussion with patients. Decisions should be made on the best match between evidence about the benefits and harms of each intervention and the goals and preferences of the patient.

**Rosenberg A, Agiro A, Gottlieb M, Barron J, Brady P, Liu Y, et al. Early trends among seven recommendations from the Choosing Wisely campaign. *JAMA Intern Med* 2015; 175: 1913–1920. doi:10.1001/jamainternmed.2015.5441**

This United States study, using an insurance company's national claims data, looked at changes in frequency of seven Choosing Wisely services over the first two to three years. There was a significant decrease in use of two services (imaging for uncomplicated headache and cardiac imaging without history of cardiac conditions). Use of two services increased significantly (human papillomavirus testing in women under 30 and non-steroidal anti-inflammatory drugs for patients with chronic conditions that can be worsened by these drugs). Use of three services was unchanged (preoperative chest X-ray without indication, antibiotics for acute sinusitis, imaging for uncomplicated low back pain). Additional interventions rather than just the provision of information may be required to affect change.

**Colla CH, Kinsella EA, Morden NE, Meyers DJ, Rosenthal MB, Sequist TD. Physician perceptions of Choosing Wisely and drivers of overuse. *Am J Manag Care* 2016; 22:337–343.**

This survey of doctors practising at a large United States ambulatory care provider assessed awareness of Choosing Wisely almost two years after its introduction and views on possible drivers of overuse. The response rate was 72%. Awareness of Choosing Wisely was significantly higher among primary care physicians (47%) than medical specialists or surgeons. Primary care physicians reported feeling significantly more pressure from patients for interventions than other doctors. Support for doctors in dealing with uncertainty associated with conservative management and that addresses drivers of overuse may be beneficial in reducing overuse.

**O'Donnell JL. Editorial. Evolve osteoporosis and other guidelines avoiding cognitive bias. *Intern Med J* 2016; 1129–1132. doi: 10.1111/imj.13212**

The editorial suggests that standardised critical appraisal of clinical guidelines is more likely to have an impact on low-value care than some of the Royal Australasian College of Physicians' current Evolve (Choosing Wisely) recommendations, which are directed to other specialties rather than the speciality that derived it. Cognitive bias in clinical guidelines is illustrated using the example of bone mineral density scans for monitoring the effectiveness of treatment for osteoporosis.



**Silverstein W, Lass E, Born K, Morinville A, Levinson W, Tannenbaum C. A survey of primary care patients' readiness to engage in the de-adoption practices recommended by Choosing Wisely Canada. BMC Res Notes 2016; 9: 301. doi: 10.1186/s13104-016-2103-6**

This Canadian study of primary care patients aged 50 or more years suggests provision of patient educational materials in waiting rooms can improve knowledge around the use of unnecessary care. The response rate was 53% -- participants were highly educated, mostly female (59%) and had a mean age of 63 years. Participants chose one topic from five common unnecessary interventions (annual electrocardiogram (ECG) testing, use of antipsychotic drugs for dementia, use of antibiotics for sinusitis, imaging for low back pain, and hypnotic use for insomnia) and rated their agreement to knowledge and behaviour statements in relation to the topic before and after reading a Choosing Wisely brochure on the topic.

A subset also later had a semi-structured interview. Knowledge improved significantly for all topics after reading the brochure, irrespective of age, sex or educational status. Forty-eight percent said that they would discuss the material with a health care provider and 45% intended to incorporate the brochure's recommendations into their future health behaviour. The majority of the (small subset of) interviewed patients already espoused or were ready to adopt the principles of Choosing Wisely.

**Stinnett-Donnelly JM, Stevens PG, Hood VL. Developing a high value care programme from the bottom up: a programme of faculty-resident improvement projects targeting harmful or unnecessary care. BMJ Qual Saf 2016; 25: 901–8. doi: 10.1136/bmjqs-2015-004546.**

The article reports the first two years' experience of reducing low-value care in a United States university medical department. Clinicians proposed projects to reduce low-value tests and procedures in their subspecialty, some of which were from Choosing Wisely lists. Opportunity for improvement was assessed from baseline data. Selected projects were implemented through education of the ordering clinicians and system-based change (e.g. electronic best practice alerts when ordering a test). Examples of success included a 90% reduction by two years in bone density scans of women under 65 years without risk factors for osteoporosis. The authors identified factors that affected project success and have developed a framework to assist future project selection based on complexity, value and controversy.

## 2016

### **Boyes B. Medical Groupthink: is that surgery, procedure or medication really necessary?**

**Real KM Evidence based. Practical results. 2016. [http://realkm.com/2016/03/17/medical-groupthink-is- that-surgery-procedure-or medicine-really -necessary/](http://realkm.com/2016/03/17/medical-groupthink-is-that-surgery-procedure-or-medicine-really-necessary/)**

This article gives a patient's voice to the experience of potentially undergoing unnecessary and potentially harm- causing investigations and treatments. Bruce Boyes is an Australian man in his fifties, who came close to undergoing a coronary angiogram to investigate Q wave inversion on his ECG. Dr Boyes was concerned enough at the prospect of developing complications from having this procedure, that he found and reviewed some of his earlier ECGs done some 25 years prior. These ECGs showed exactly the same Q wave inversion pattern, hence discounting the cardiologist's opinion that Dr Boyes had experienced "a silent myocardial infarction". Dr Boyes relates previous health encounters that have coloured his approach to medical consultations and advice. These include his chance-reading about the use of imiquimod for treatment for basal cell carcinomas (B.C.Cs). Bruce's facial B.C.C was successfully treated with imiquimod, despite being told by a surgeon there was no alternative to surgical excision and skin graft of his BCC. Dr Boyes's insights provide good examples of the importance of patients being comfortable questioning the advice they are given by their doctor.

### **Légaré F, Hébert J, Goh L, Lewis KB, Leiva Portocarrero ME, Robitaille H, Stacey D. Do choosing wisely tools meet criteria for patient decision aids? A descriptive analysis of patient materials. *BMJ Open*. 2016 Aug 26;6(8):e011918. doi: 10.1136/bmjopen-2016-011918.**

These researchers evaluated the patient materials developed by Choosing Wisely Canada to determine whether they meet the criteria for shared decision-making tools known as patient decision aids.

Reviewing all Choosing Wisely Canada patient materials available on the website, they used the International Patient Decision Aid Standards (IPDAS) modified 16-item minimum criteria for qualifying and certifying patient decision aids. Of the 24 patient materials assessed, 12 were about treatments, 11 were about screening and 1 was about prevention. The median score for patient materials using IPDAS criteria was 10/16 (range: 8-11) for screening topics and 6/12 (range: 6-9) for prevention and treatment topics.

Commonly missed criteria were stating the decision (21/24 did not), providing balanced information on option benefits/harms (24/24 did not), citing evidence (24/24 did not) and updating policy (24/24 did not). Out of 24 patient materials, only 2 met the 6 IPDAS criteria to qualify as patient decision aids, and neither of these 2 met the 6 certifying criteria.

This article concludes that in their current form, the patient materials developed by Choosing Wisely Canada do not meet the IPDAS minimal qualifying or certifying criteria for patient decision aids. Modifications to the Choosing Wisely Canada patient materials would help to ensure that they qualify as patient decision aids and thus as more effective shared decision-making tools. This is relevant feedback for Choosing Wisely New Zealand, as many of the patient resources in New Zealand were adapted from Choosing Wisely Canada resources.

### **Willmott L, White B. Stopping Futile Treatment- the Challenge for Doctors Health Services Research Association Australia NZ. Australian Centre for Health Law Research: 2016**

A team of interdisciplinary researchers from the Australian Centre for Health Law Research, have undertaken a study, in which 96 doctors, at 3 Queensland hospitals were interviewed regarding their perceptions of provision of futile treatment to adult patients who are dying. These doctors were taken from a wide range of specialties including internal medicine, cardiology, geriatrics, surgery and emergency departments. The doctors reported their reasons for providing futile treatment fell into one of three categories; doctor related, patient related and relating to the institutional nature of hospitals. Of these, it was found that doctor-related reasons were just as, if not more important in the provision of futile end of life care. These include a medical cultural "aversion to death" and view of it as a failure to provide adequate care, wanting to satisfy patients, avoidance of difficult conversations with the dying patient and their family, and fear of legal consequences.

The authors of this study stress the critical role of, and opportunity for individual doctors and the medical profession as a whole, to bring about change. They do not see that change will occur unless doctors are prepared to lead and act. The authors recommend doctors prioritize good communication with patients and family members, and undertake those difficult conversations, including patients' and families' values and goals of treatment. The importance of institutional support for doctors to do this was also acknowledged.

### **Zikmund-Fisher BJ, Kullgren JT, Fagerlin A, Klamerus ML, Bernstein SJ, Kerr EA. Perceived barriers to implementing individual Choosing Wisely recommendations in two national surveys of primary care providers. *J Gen Int Med* 2016 doi: 10.1007/s11606-016-3853-5**

This United States study examined primary care providers' perceptions regarding which Choosing Wisely adult primary care recommendations were difficult for them to follow, difficult for patients to accept, or both, and particular barriers to reducing overuse. national surveys of private sector primary care physicians and federally funded primary care providers were carried out with response rates of 34% and 48%, respectively. there was variation in reported difficulty to follow and a high level (36 to 87 %) of reported difficulty for most patients to accept for recommendations related to medication use (sinusitis, insomnia/agitation/delirium)



and imaging (syncope, low back pain). for symptomatic conditions. Malpractice concerns, patient requests, the number of interventions recommended by specialists, and lack of time for shared decision-making with patients were most frequently rated as major barriers to reducing overuse. Findings were largely consistent between the two groups which suggest that such concerns are not predominantly driven by reimbursement issues. Variations in attitudes across recommendations suggest implementation efforts will need to be adapted to the specific barriers in implementing each Choosing Wisely recommendation.

## 2017

### **Matulis J, Liu S, Mecchella J, North F, Holmes A. Choosing Wisely: A Quality Improvement Initiative to Decrease Unnecessary Preoperative Testing. *BMJ Qual Improv Report* 2017 6 doi:10.1136/bmjquality.u21681.w6691**

This article from the United States details a quality improvement study, which aimed to reduce rates of unnecessary pre-operative testing and reduce the average time taken for pre-operative appointments. It was undertaken within the pre-operative service of a General Internal Medicine (GIM) Clinic at a rural, academic medical center over a 9-month period. Only patients undergoing low and intermediate cardiac risk surgeries were included. Of note, seven specialties participating in the American Choosing Wisely initiative recommend against performing routine pre-operative testing prior to low-risk surgery.

Baseline data was extracted from the files of patients undergoing pre-operative evaluation identified that 36% of all patients received unnecessary testing. Prior to the intervention, researchers found no standardized process for either performing the pre-operative evaluation nor for the ordering of pre-operative tests. Important contributory factors leading to unnecessary testing were identifiable.

These included; practice tradition, lack of familiarity with current guidelines, institutional pre-operative requirements and time constraints.

The researchers developed a templated Electronic Health Record (EHR) Tool to guide clinicians through recommended documentation format, orders, patient instructions and billing. It was hoped this tool would also be adopted by physicians outside of the pre-operative clinic and drive wider improved rates of appropriate testing. The researchers employed Nurse Practitioners and Physician Assistants to run the pre-operative clinics and used standardized processes. Clinical access and scheduling flexibility for these clinics was noted to be improved compared to primary care physician (PCP) run pre-operative clinics.

Results: a statistically significant reduction in unnecessary pre-operative testing was found between the group of patients seen in the intervention group (4%), and the patients receiving usual care (23%). Mean scheduled appointment duration was also significantly lower (40 minutes versus 48 minutes).

### **Organisation for Economic Co-operation and Development (OECD) “Tackling Wasteful Spending on Health” (2017) [http://www.oecd-ilibrary.org/social-issues-migration-health/tackling-wasteful-spending-on-health\\_9789264266414-en](http://www.oecd-ilibrary.org/social-issues-migration-health/tackling-wasteful-spending-on-health_9789264266414-en)**

The international Choosing Wisely initiative has been recognised by the Organisation for Economic Co-operation and Development (OECD) as an approach with significant potential to address low-value healthcare.

A considerable part of health expenditure makes little or no contribution to improving people's health. In some cases, it even results in worse health outcomes. This OECD report describes the extent of wasteful care and explores its drivers. It systematically reviews strategies put in place by countries to limit ineffective spending and waste.

Chapter 2, authored by Ian Forde and Carol Nader, is on “Producing the right health care: Reducing low-value care and adverse events”. Persistent challenges include a lack of metrics to quantify wasteful care and the need to sustainably engage both clinicians and patients to change practices.

Recognising that the drivers of unnecessary healthcare are complex and varied, the report states that sustainable change is achievable if patients and clinicians are persuaded the better option is the less harmful or least wasteful one.

To this end, Choosing Wisely is highlighted as promising example of bringing together evidence with leadership from clinician groups. Promising progress from the USA's Choosing Wisely campaign is described, but the report notes that Choosing Wisely initiatives should be fully evaluated in every country, including for any unintended harmful consequences. To support this, the OECD is working with the Choosing Wisely campaign to develop 3 internationally comparable indicators on wasteful care, on: CT and MRI for low back pain; antibiotics for upper respiratory tract infections; and on sedatives for the elderly.

### **Referring Wisely. The Royal College of Physicians. 2017**

The Royal College of Physicians (RCP) noted a great deal of variability in the pattern of referrals between generalist and specialist physicians, and so it invited all Medical Specialties to contribute to their work on “Referring Wisely”.

The aim was to gain a better understanding of the referral processes between General Medical Services (GMS) and Subspecialty areas and identify areas of less appropriate referrals. It was hoped this could reduce unnecessary referrals, reduce fragmentation of care, reduce duplication of tests, and lead to more appropriate use of services and better use of limited resources. In doing this work, RCP expected that disagreements of opinion may occur, but hoped this could fuel further discussion.

Subspecialty committees were asked to provide two lists. Firstly; a list of the 5 most common referrals from other medical specialty physicians. Secondly; a list of 5 commonly referred conditions from other physicians, where it was expected that the management required was within the knowledge domain of any physician, hence the referral was not needed.

Twenty-three medical subspecialties responded with providing these two lists, and they are available for review in the full article. The lists show that many of the referrals made to subspecialties are for issues, which subspecialist consider, should be able to be managed by any physician. Why does this discrepancy in opinion occur? Suggestions include; lack of clear referral guidelines, lack of appropriate generalist resource, inadequate training for general physicians on specific conditions, patients' expectations of medical health care provision i.e. generalist versus subspecialist. Of interest for Geriatricians, the greater problem is other specialties do not

always recognize the potential benefits of geriatric assessment and don't refer, rather than over-refer.

It is hoped that formation of these lists may help streamline services and improve the appropriateness and quality of referrals, address areas needed for further education and target knowledge gaps for general physicians and promote conversations regarding conditions requiring generalist versus subspecialist care. The RCP takes care to note that these lists are not to be used didactically, nor to discourage discussion between generalist and subspecialty physicians.

## 2018

**Atkinson P, Lang E, Mackenzie M, Hirandani R, Lys R, Laupacis M, Murray H. CJEM Debate Series: #ChoosingWisely - The Choosing Wisely campaign will not impact physician behaviour and choices. CJEM. 2018 Mar;20(2):170-175.**

This editorial of the Canadian Journal of Emergency Medicine debates the claim that the Choosing Wisely campaign will not impact physician behaviour and choices. Is the CW campaign simply a re-branding of common sense? Or is it a novel evidence-based program that will both save money and improve the quality of care that we deliver? Is it an attempt to remove clinical judgment, replacing it with simplistic rules that do not recognize variability in populations? Or is the aim of the campaign to empower patients to facilitate improved communication with care providers and ultimately better choices? The affirmative team make the argument that the CW campaign is well intentioned; however, without significant changes to the implementation strategies, it will not impact physician behaviour and choices. The rebutting team argue that the CW campaign is the most powerful approach we have for combatting unnecessary care, and that ultimately CW will change practice because of its broad engagement and supportive tools.

The debate makes for impassioned reading, but this type of healthy debate is crucial for the CW campaign to improve. A number of issues in the critique, such as the need for better data to measure over-treatment, the importance of a rigorous evidence base behind CW recommendations, the need to better educate clinicians working in a public health system about costs of care, and the need to ensure broad engagement within Colleges to include frontline staff in the development of CW recommendations, serve as useful reflection points for how the CW campaign could be further strengthened.

**Chalmers K, Badgery-Parker T, Pearson SA, Brett J, Scott IA, Elshaug AG. Developing indicators for measuring low-value care: mapping Choosing Wisely recommendations to hospital data. BMC Res Notes. 2018 Mar 5;11(1):163.**

Having indicators for low-value care is critical to be able to measure the baseline of low-value care and to evaluate the impact of the Choosing Wisely Campaign. These Australian researchers sought to develop indicators of low-value care, based on selected Choosing Wisely (CW) recommendations, applicable to routinely collected hospital data.

They assessed 824 recommendations from the United States, Canada, Australia and the United Kingdom CW lists regarding their capacity to be measured in administrative hospital admissions datasets. They selected recommendations if they met the following criteria: the service occurred in the hospital setting (observable in setting); a claim recorded the use of the service (record of service); the appropriate/inappropriate use of the service could be mapped to information within the hospital claim (indication); and the service is consistently recorded in the claims (consistent documentation).

The authors identified 17 recommendations (15 services) as measurable, and developed an operational indicator for each, based on routinely available hospital datasets. It is concerning that only 17 of the 824 original recommendations were measurable in routine public hospital datasets, although this is consistent with previous research. Unfortunately, only one of these is a CW New Zealand recommendation (don't use epidural steroid injections for patients with axial low back pain who do not have leg dominant symptoms originating in the nerve roots). This means further work is needed to develop practical measures of low-value care in New Zealand, in order to assess the problem of low-value care and to evaluate the CW campaign.

*Updated in April 2018*