

Low value care is a health hazard that calls for patient empowerment

To protect themselves from the potential harms of low value care, patients must take an active role in clinical decision making

Low value care is care that is ineffective, harmful or confers marginal benefit at disproportionately high cost.¹ Professionally-led campaigns such as Choosing Wisely Australia and the Royal Australasian College of Physicians' EVOLVE program aim to reduce the prevalence of such care. However, similar overseas campaigns have been marred by selective focus on infrequent, low impact, or less financially lucrative practices;² uncertainty about the most effective de-adoption strategies;³ and limited success to date in reducing overuse.⁴ While clinician-targeted education programs, audit and feedback, and decision support feature prominently, evidence appears stronger and impact seems greater for strategies directed to, or mediated by, patients.⁵

Framing low value care as a health hazard for patients

Although clinicians accept responsibility for resource stewardship, they also believe their primary care obligation is to the individual patient, with costs being a secondary consideration.⁶ Most patients hold similar views, until out-of-pocket expenses become unaffordable.⁷

Reframing low value care as having negative consequences, not just “worth a go” or “better safe than sorry”, may incentivise patients, clinicians and policymakers to engage more in mitigation efforts.⁸ Negative consequences can arise directly from an episode of low value care, or indirectly from subsequent downstream care cascades, such as invasively investigating incidental but benign findings from a previous unnecessary investigation. Harms can be physical, psychological, social, financial and relational (mistrust). Even providing potentially beneficial care to patients who do not want it can cause harm, at least psychologically. Moreover, giving low value care to one individual may result in delayed delivery of high value care to another individual, who may then suffer preventable harm.

The burden of negative consequences

Recent studies have begun to quantify the negative consequences of different forms of low value care. A review of 54 case descriptions of 63 overused services revealed an average of 3.2 negative consequences per case, most (33/54, 61%) featuring an overuse cascade feedback loop.⁹ Reported harms (91 in total) comprised injury (69%), psychological harm (16%), treatment burden (9%), financial loss (3%), and dissatisfaction (2%).⁹

Recent care cascades were reported by 374 internists in the United States following incidental findings from



tests that a third deemed clinically inappropriate but which led to a new invasive test (77.2% of instances), an emergency department visit (54.8%), or hospitalisation (50.6%).¹⁰ These caused patients physical (15.6%) or psychological harm (68.4%), financial loss (57.5%), social disruptions (8.7%), and dissatisfaction (27.6%).¹⁰

Seven low value procedures characterised 9330 admissions to 225 Australian hospitals, including endoscopy for dyspepsia or colonoscopy for constipation in young people, knee arthroscopy for osteoarthritis or meniscal tears, and spinal fusion for uncomplicated low back pain.¹¹ Between 0.2% and 15.0% of patients, depending on the procedure, developed one or more hospital-acquired complications, most commonly infection (26.3% of instances), with a twofold or more increase in the median length of stay.¹¹ Among 72 unnecessary admissions to one US hospital of low risk syncope patients, one in eight had an adverse event from tests and treatments.¹²

In a study of 405 695 individuals with new onset, non-specific low back pain, those receiving lumbar spine magnetic resonance imaging (MRI) within 6 weeks, compared with matched controls without an early MRI, incurred significantly more surgery (1.48% *v* 0.12%), greater opioid use (35.1% *v* 28.6%), and worse pain scores (3.99 *v* 3.87).¹³ Among 5057 individuals with incidentally detected lung nodules on chest x-rays, those receiving intense diagnostic investigation versus guideline-concordant care had more procedure-related adverse events (8.1% absolute increase) and more radiation exposure, with no higher incidence of advanced cancer at 2 years' follow-up.¹⁴

In a study of 1488 hospitalised patients who received antibiotics for at least 24 hours, 287 (19%) of the antibiotic regimens were not indicated (eg, asymptomatic bacteriuria, aspiration pneumonitis, congestive heart failure), with 56 (20%) being associated with an adverse drug event, including seven cases of *Clostridium difficile* infection.¹⁵ Adding aspirin with no clear

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indication to 1107 of 3280 patients (33.8%) prescribed direct oral anticoagulants (DOACs) for confirmed indications was associated with more bleeding events (31.6 *v* 26.0 bleeding events per 100 patient years) and hospitalisations (9.1 *v* 6.5) than matched controls receiving direct oral anticoagulants only.¹⁶

The role of patients in reducing low value care

While clinicians often complain of patients demanding inappropriate care,⁷ many patients perceive the negative consequences of overuse,¹⁷ and interventions that empower patients to challenge such overuse are effective in decreasing it by 25–40%.¹⁸ In a review of 22 studies, 19 (86%) reported significant reductions in unnecessary use of antibiotics and benzodiazepines, Caesarean deliveries, elective labour inductions, surgery for knee and hip osteoarthritis, non-beneficial intensive care treatments, computed tomography scans for mild head injury in children, cardiac stress testing in low risk adults, and routine screening tests (full blood counts, electrocardiograms).¹⁸ These empowerment interventions comprised patient-oriented educational materials and shared decision-making protocols, the latter having greater effect. In another study, encouraging patients to identify their health concerns before a clinical encounter, and increasing their knowledge about their condition and care options, also rendered clinician advice more concordant with best practice by 33–60%.¹⁹

However, successful engagement depends on several factors: motivation and ability of clinicians to engage patients in decision making; clinician knowledge of, and agreement with, what constitutes low value care; the clinical context; and availability of decision support resources for both parties within clinical workflows. Clinicians do not always attempt to facilitate patient involvement and may not adjust care to patient preferences.²⁰ Such engagement is time-consuming for clinicians and inadequately remunerated, impractical in emergency situations or for patients unable or unwilling to engage, and may incite patient anxiety or dissuade them from further consultations.

In response, evidence-based strategies can overcome these barriers²¹ and reinforce patient perceptions of receiving optimal care and their desire to reconsult. More research needs to define the most effective mix of techniques for supporting patient engagement (eg, educating clinicians on communication techniques, deploying multidisciplinary teams, using trained decision coaches and patient decision aids), and their effects on consultation time and costs.²² Whether such engagement, by specifically reducing low value care, actually improves patient health remains uncertain, although its absence predisposes to worse clinical outcomes, lower quality care and increased health care utilisation.²³

Empowering patients to engage in reducing low value care

Many patients refrain from participating in discussions aimed at avoiding overuse because of a power asymmetry wherein they sense the

need to seek clinician permission to discuss their options, feel they have insufficient knowledge to ask pertinent questions or understand the jargon (“doctor knows best”), and fear repercussions from being seen to challenge clinician credibility (desire to be a good patient). Alternatively, patients may want to avoid responsibility for making a wrong decision they will later regret, or feel unable to participate because of illness symptoms, cognitive impairment, language or cultural barriers, or need for emergency or intensive care.¹⁷

Nevertheless, clinicians must avoid making false assumptions about how much a patient desires involvement in decision making. Methods are needed for identifying which patients, encounters and clinicians need more support to enact the most appropriate form of shared decision making. Patients usually desire a more active role when the matter is serious, invasive interventions are being considered, or if significant out-of-pocket costs, lengthy time off work, or interruptions to social activities may be incurred. Younger patients, women and those with higher educational and socio-economic status are more likely to participate.²⁴ Greater engagement and less overuse are seen within long term clinician–patient relationships characterised by mutual trust and continuity of care,²⁵ and where public messaging within practice environments encourages and legitimates engagement.²⁶

Patients can be trained to ask questions, and adult learning programs can assist those with low health literacy.²⁷ Choosing Wisely Australia (www.choosingwisely.org.au) and other organisations²⁸ provide conversation starter patient resources; other sources provide topic-specific lists of questions (eg, www.prosdex.com for prostate-specific cancer antigen testing, and www.bresdex.com for breast cancer surgery). Decision aids, option grids and fact boxes can also assist.

As a minimum, patients should be encouraged to ask these questions:

- Is there a decision we need to make? In urgent situations, clinicians may need to reach out and not wait for patients to ask.
- What are my options? All clinically viable options should be presented, including doing nothing.
- What are potential benefits and harms of each option? Where possible, these should be expressed using natural numbers (eg, four out of 100 people like you will experience a stroke every year; this treatment will reduce that to two out of 100, although one person of 100 will have a significant bleeding event).
- How will each option affect me in terms of what I consider important? Patients may want to know costs involved, duration of inability to work or perform social activities, skill and place of those performing a procedure.

Consumer organisations should be resourced to run community education campaigns focused on

engagement, while clinicians must be educated about the benefits of patient engagement and receive the tools, time and remuneration to support it within busy work schedules.

Conclusion

Efforts to increase patient empowerment in decision making should be seen as foundational for reducing low value care, and should underpin all other strategies targeting clinicians, payers and policymakers.

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References are available online.

- 1 Scott IA, Duckett S. In search of professional consensus around defining and reducing low value care. *Med J Aust* 2015; 203: 179–181. <https://www.mja.com.au/journal/2015/203/4/search-professional-consensus-defining-and-reducing-low-value-care>
- 2 Zadro JR, Farey J, Harris IA, Maher CG. Do Choosing Wisely recommendations about low-value care target income generating treatments provided by members? A content analysis of 1293 recommendations. *BMC Health Serv Res* 2019; 19: 707.
- 3 Colla CH, Mainor AJ, Hargreaves C, et al. Interventions aimed at reducing use of low-value health services: a systematic review. *Med Care Res Rev* 2017; 74: 507–550.
- 4 Henderson J, Bouck Z, Holleman R, et al. Comparison of payment changes and Choosing Wisely recommendations for use of low-value laboratory tests in the United States and Canada. *JAMA Intern Med* 2020; 180: 524–531.
- 5 Morgan DJ, Leppin AL, Smith CD, Korenstein D. A practical framework for understanding and reducing medical overuse: Conceptualizing overuse through the patient-clinician interaction. *J Hosp Med* 2017; 12: 346–351.
- 6 Tilburt JC, Wynia MK, Sheeler RD, et al. Views of US physicians about controlling health care costs. *JAMA* 2013; 310: 380–388.
- 7 Schleifer D, Rothman DJ. “The ultimate decision is yours”: exploring patients’ attitudes about the overuse of medical interventions. *PLoS One* 2012; 7: e52552.
- 8 Liao JM, Schapira MS, Navathe AS, et al. The effect of emphasizing patient, societal, and institutional harms of inappropriate antibiotic prescribing on physician support of financial penalties: a randomized trial. *Ann Intern Med* 2017; 167: 215–216.
- 9 Korenstein D, Chimonas S, Barrow B, et al. Development of a conceptual map of negative consequences for patients of overuse of medical tests and treatments. *JAMA Intern Med* 2018; 178: 1401–1407.
- 10 Ganguli I, Simpkin A, Lupo C, et al. Cascades of care after incidental findings in a US national survey of physicians. *JAMA Netw Open* 2019; 2: e1913325.
- 11 Badgery-Parker T, Pearson SA, Dunn S, Elshaug AG. Measuring hospital-acquired complications associated with low-value care. *JAMA Intern Med* 2019; 179: 499–505.
- 12 Canzoniero JV, Afshar E, Hedian H, et al. Unnecessary hospitalisation and related harm for patients with low risk syncope. *JAMA Intern Med* 2015; 175: 1065–1067.
- 13 Jacobs JC, Jarvik JG, Chou R, et al. Observational study of the downstream consequences of inappropriate MRI of the lumbar spine. *J Gen Intern Med* 2020; 35: 3605–3612.
- 14 Farjah F, Monsell SE, Gould MK, et al. Association of the intensity of diagnostic evaluation with outcomes in incidentally detected lung nodules. *JAMA Intern Med* 2021; 181: 480–489.
- 15 Tamma PD, Avdic E, Li DX, et al. Association of adverse events with antibiotic use in hospitalized patients. *JAMA Intern Med* 2017; 177: 1308–1315.
- 16 Schaefer JK, Errickson J, Li Y, et al. Adverse events associated with the addition of aspirin to direct oral anticoagulant therapy without a clear indication. *JAMA Intern Med* 2021; 181: 817–824.
- 17 Green AR, Tung M, Segal JB. Older adults’ perceptions of the causes and consequences of healthcare overuse: a qualitative study. *J Gen Intern Med* 2018; 33: 892–897.
- 18 Sypes EE, de Grood C, Whalen-Browne L, et al. Engaging patients in de-implementation interventions to reduce low-value clinical care: a systematic review and meta-analysis. *BMC Med* 2020; 18: 116.
- 19 Couet N, Desroches S, Robitaille H, et al. Assessments of the extent to which health-care providers involve patients in decision making: a systematic review of studies using the OPTION instrument. *Health Expect* 2015; 18: 542–561.
- 20 Fonhus MS, Dalsbø TK, Johansen M, et al. Patient-mediated interventions to improve professional practice. *Cochrane Database Syst Rev* 2018; (9): CD012472.
- 21 Hoffmann TC, Légaré F, Simmons MB, et al. Shared decision making: what do clinicians need to know and why should they bother? *Med J Aust* 2014; 201: 35–39. <https://www.mja.com.au/journal/2014/201/1/shared-decision-making-what-do-clinicians-need-know-and-why-should-they-bother>
- 22 Légaré F, Adekpedjou R, Stacey D, et al. Interventions for increasing the use of shared decision making by healthcare professionals. *Cochrane Database Syst Rev* 2018; (7): CD006732.
- 23 Hughes TM, Merath K, Chen O, et al. Association of shared decision-making on patient-reported health outcomes and healthcare utilization. *Am J Surg* 2018; 216: 7–12.
- 24 Joseph-Williams N, Elwyn G, Edwards A. Knowledge is not power for patients: a systematic review and thematic synthesis of patient-reported barriers and facilitators to shared decision making. *Patient Educ Couns* 2014; 94: 291–309.
- 25 Romano MJ, Segal JB, Pollack CE. The association between continuity of care and the overuse of medical procedures. *JAMA Intern Med* 2015; 175: 1148–1154.
- 26 Santa JS. Communicating information about “what not to do” to consumers. *BMC Med Inform Decis Mak* 2013; 13 (Suppl): S2.
- 27 Shepherd HL, Barratt A, Jones A, et al. Can consumers learn to ask three questions to improve shared decision making? A feasibility study of the ASK (AskShareKnow) patient-clinician communication model intervention in a primary health-care setting. *Health Expect* 2016; 19: 1160–1168.
- 28 Health Education England. Person-centred approaches: empowering people in their lives and communities to enable an upgrade in prevention, wellbeing, health, care and support. Health Education England. Skills for Health, Skills for Care; 2017. <https://skill sforhealth.org.uk/wp-content/uploads/2021/01/Person-Centred-Approaches-Framework.pdf> (viewed June 2021). ■