



Special Commission of Inquiry into Healthcare Funding

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RESPONSE TO THE SPECIAL COMMISSION OF INQUIRY INTO HEALTHCARE FUNDING

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ISSUE: We welcome the opportunity to respond to the NSW *Special Commission Of Inquiry Into Healthcare Funding*. In our response we directly address item D (as below):

‘Strategies available to NSW Health to address escalating costs, limit wastage, minimise overservicing and identify gaps or areas of improvement in financial management and proposed recommendations to enhance accountability and efficiency’

Wiser Healthcare: addressing the problem of healthcare overuse and waste in Australia

The Wiser Healthcare collaboration was established in 2016 to understand and respond to the growing problem of low value care including overdiagnosis and overtreatment. Wiser Healthcare is an interdisciplinary collaboration of researchers (>130) across five institutions: Universities of Sydney, Bond, Monash, Wollongong and Melbourne. From 2016-2020 we focused on understanding the extent and cause of the problem of low value care. We showed that unnecessary care arose from four core drivers (1): 1.) inadequate patient, public and professional health literacy, 2.) changing screening and diagnostic technology, 3.) health care financing and conflicts of interest, and 4.) established clinical practices and routines which encourage overuse. Since 2021 our work has focused on developing and testing solutions to reduce low value care, overdiagnosis and overtreatment, as well as expanding to the carbon costs of healthcare.

As reflected in the framing of the NSW Special Commission of Inquiry Into Healthcare Funding, health system costs are escalating in Australia and worldwide and are unsustainable. We note that on some estimates, **30% of all healthcare costs are due to overuse** (2), or low value care. An estimated 11-19% of procedures in Australian public hospitals (3) and 20-30% in private hospitals (4), leading to millions of wasted dollars annually by government and patients. In addition, Australian healthcare contributes 7% of Australia’s total CO₂e emissions (5), equivalent to the annual emissions of South Australia, thus inadvertently contributing to changes in the environment and climate which are increasingly threatening human health (6).

We note a critical point of focus for the work of the Special Commission of Inquiry. Reducing costs, limiting waste and minimising overservicing requires consideration of the everyday routine care that patients receive in hospitals and health services. Often the routines of those hospitals and health services are set, by policy or practice guidelines, to provide low value care or medical overuse as a matter of course. Although the work of the Special Commission of Inquiry must include strategies to change the practice of those clinicians who are outliers (i.e., providing more unnecessary care than their peers), it must *also* include strategies to change health services policies, guidelines and routines that drive routinised low value care and medical overuse across the whole NSW health service.

Low value care and medical overuse are common even in areas that seem counterintuitive. For example:

- Glasziou, Barratt and Bell showed that 18% of all cancers in Australian women and 24% of all cancers in Australian men are overdiagnosed and overtreated, mostly through screening or opportunistic detection of very early stage cancers that would never have caused harm if not detected (7);
- Musculoskeletal imaging has also sharply increased, this is often low value care and represents high cost to health systems. Although guidelines discourage routine imaging for low back pain, non-indicated imaging is still requested in ~25% of all consultations in Australia (2, 8, 9).
- Knee Magnetic Resonance Imaging (MRI) rates increased 7-fold in Australia (from 216/100,000 to 1,509/100,000) between 2013 to 2017 despite consistent recommendations against its use and knee replacement surgery increased by 57% over the same period (9).
- MBS data show use (and costs) of spinal MRI has doubled over 10 years from 54,221 (\$18 million) to 110,316 (\$40 million), despite little evidence of benefit and this trend is continuing across MSK and many clinical areas of medicine (10, 11).
- The definition of gestational diabetes mellitus (GDM) varies considerably internationally and recently the range of acceptable blood glucose values has been tightened by key organisations. As a direct result, the number of women diagnosed with GDM in Australia has increased dramatically with now 1 in 6 pregnant women affected. However, the new GDM diagnostic criteria has not been linked to better outcomes for mother or child but has significant risks of harms and burdens to women and to the health care systems. There are now calls to revisit the Australian criteria (12).

These are just a few examples. A key paper by Elshaug et al 2012 provides a list of more than 150 low value care practices in Australia that provide opportunities to cut costs while delivering co-benefits to patients and the environment (13):

https://www.mja.com.au/sites/default/files/issues/197_10_191112/els11083_Appendix.pdfSpecific

The Wiser Healthcare team have produced a wide range of evidence-based strategies to address the problem of low value care and waste in healthcare. These are highly relevant to Section D of the Inquiry. Specific strategies are listed below with brief descriptions of the research and references for further information.

A. Strategies to reduce low value imaging

Key paper: O'Connor DA, Glasziou P, Maher CG, McCaffery KJ, Schram D, Maguire B, Ma R, Billot L, Gorelik A, Traeger AC, Albarqouni L, Checketts J, Vyas P, Clark B, Buchbinder R. Effect of an Individualized Audit and Feedback Intervention on Rates of Musculoskeletal Diagnostic Imaging Requests by Australian General Practitioners: A Randomized Clinical Trial. JAMA. 2022 Sep 6;328(9):850-860. doi: 10.1001/jama.2022.14587. PMID: 36066518; PMCID: PMC9449798.
<https://pubmed.ncbi.nlm.nih.gov/36066518/>

This is a world first, nation-wide cluster randomised controlled trial (RCT) of musculoskeletal imaging feedback to 3,819 GPs with Australian Dept of Health and Aged Care. It showed that:

- Providing feedback to GPs who request musculoskeletal imaging much more frequently than their peers can reduce overuse, which may translate into better patient outcomes while also strengthening Australia’s health system sustainability.
- Feedback reduced imaging requests by 11% over six months, 9% over 12 months, 8% over 18 months compared to no intervention control and an estimated 47,000 fewer scans.

Accompanying JAMA editorial: “Important high-quality evidence that a national audit and feedback program might help reduce widespread use of low-value testing”. The Hon Andrew Leigh, Assistant Minister Treasury, said “*a fascinating Australian randomised trial finds that sending gentle reminder letters to doctors who are ordering excessive scans has big effect*”.

B. Strategies to reduce low value care for low back pain

We have conducted RCTs in emergency departments of effective interventions to reduce low value care for back pain and mass media education programs that changed clinician and consumer behaviour.

Key paper:

Coombs DM, Machado GC, Richards B, Needs C, Buchbinder R, Harris IA, Howard K, McCaffery K, Billot L, Edwards J, Rogan E, Facer R, Li Q, Maher CG. Effectiveness of a multifaceted intervention to improve emergency department care of low back pain: a stepped-wedge, cluster-randomised trial. *BMJ Qual Saf.* 2021 Oct;30(10):825-835. doi: 10.1136/bmjqs-2020-012337. Epub 2021 Mar 10. PMID: 33692191. <https://pubmed.ncbi.nlm.nih.gov/33692191/>

Buchbinder R. Self-management education en masse: effectiveness of the Back Pain: Don't Take It Lying Down mass media campaign. *Med J Aust.* 2008 Nov 17;189(S10):S29-32. doi: 10.5694/j.1326-5377.2008.tb02207.x. PMID: 19143582. <https://pubmed.ncbi.nlm.nih.gov/19143582/>

In Coombs et al (2021) as part of The SHaPED Trial, clinicians were given access to educational seminars and materials, non-opioid pain management strategies, and a dashboard showing real-time audit and feedback data on admission rates, opioid use and imaging. The SHaPED trial reduced opioid prescriptions by 12 per cent across the four hospitals, with Sydney’s Canterbury Hospital recording the biggest drop of 24 per cent over four months. These results were sustained three years after the intervention was introduced (14). See: <https://www.medicalresearch.nsw.gov.au/back-pain-study-wins-clinical-trial-of-the-year/>

C. Policy led strategies to reduce unnecessary surgery

We carried out a study whereby clinicians in one local health district initiated a policy to restrict knee arthroscopy for patients aged 50 years or over. Results showed a significantly greater reduction in knee arthroscopy in this district relative to other districts where there were no similar policy restrictions. The finding suggest that the implementation of a simple clinical governance process may help reduce inappropriate surgery.



Key paper: Chen HY, Harris IA, Sutherland K, Levesque JF. A controlled before-after study to evaluate the effect of a clinician led policy to reduce knee arthroscopy in NSW. *BMC Musculoskelet Disord*. 2018 May 16;19(1):148. doi: 10.1186/s12891-018-2043-5. PMID: 29769120; PMCID: PMC5956807.
<https://pubmed.ncbi.nlm.nih.gov/29769120/>

D. The environmental cost of low value healthcare and strategies to reduce it

Key paper: McAlister S, Smyth B, Koprivic I, Luca Di Tanna G, McGain F, Charlesworth K, Brown MA, Konecny P. Carbon emissions and hospital pathology stewardship: a retrospective cohort analysis. *Intern Med J*. 2023 Apr;53(4):584-589. doi: 10.1111/imj.15622. Epub 2022 Aug 20. PMID: 34779562.
<https://pubmed.ncbi.nlm.nih.gov/34779562/>

In a world-first, study our team (McAlister, Barratt and Bell) measured the carbon footprint of five pathology tests (15). Each test produced 49g-116g CO₂e. The high volume of testing (>70 million haematology & biochemistry tests 2018-2019) means the national footprint is large. Also, 12-44% of tests are not clinically needed (16), e.g. >75% of Vit D tests are unnecessary, but cost Medicare >\$114 million in 2020 alone (17). This is one example of how low value care is contributing to higher costs, and the sector's carbon footprint. In a subsequent paper we examined the impact of a policy to reduce non-urgent pathology testing to two days per week and on other days only if essential for public in-patients admitted under medical consultants within the Department of Medicine at St George Hospital Sydney. In total, 24,585 pathology collections in 5,695 patients were identified. In adjusted analysis, the rate of collections was 10% lower during the intervention period (rate ratio 0.90; 95% confidence interval (CI), 0.86–0.95; P < 0.001). This resulted in a reduction of 53 g CO₂e (95% CI, 24–83 g; P < 0.001) and \$22 (95% CI, \$9–\$34; P 0.001) in pathology fees per admission. The intervention was estimated to have saved 132 kg CO₂e (95% CI, 59–205 kg) and \$53,573 (95% CI, 22 076–85 096) over the six-month intervention period.

Other carbon initiatives underway to reduce waste: *NSW Health Net Zero Leads*

NSW Health established the Net Zero Clinical Leads program in 2022 by selecting 10 Net Zero Clinicians who are conducting sustainability projects in their area of clinical work. The leads act as change agents and are developing and evaluating scalable, low carbon models of care in NSW. Most projects focus on reducing waste, for example a project at the Bathurst hospital aims to reduce pharmaceutical waste through better segregation and recycling of pharmaceutical waste. Others target volatile anaesthetic gases with a high carbon footprint, aiming to reduce use and eliminate unnecessary greenhouse gas emissions from these agents (18). See: <https://www.health.nsw.gov.au/netzero/Pages/net-zero-leads.aspx>

Their remit could be expanded to support sustainable healthcare through the reduction of low value care. Higher value care is beneficial for patients and has financial and environmental co-benefits. (See high value care is low carbon care (19):

<https://onlinelibrary.wiley.com/doi/full/10.5694/mja2.51331?msckid=493c26aed0b211ec9f93345cc41d3898>).



E. Strategies to reduce consumer demand for low value care

We have conducted a series of studies examining consumer drivers of low value care. These address aspects such as informed and shared decision making about tests and treatment that show reduced uptake of low value options when harms are clearly communicated (e.g. PSA testing). Additionally, studies examining the language used in diagnosis and threshold changes to define disease drive increased demand for medical intervention over more conservative 'wait and see' management options. This work covers a range of topics including PSA testing, Poly Cystic Ovarian Syndrome (PCOS), screening among older adults, and papillary thyroid cancer.

Key papers: Pickles K, Scherer LD, Cvejic E, Hersch J, Barratt A, McCaffery KJ. Preferences for More or Less Health Care and Association With Health Literacy of Men Eligible for Prostate-Specific Antigen Screening in Australia. *JAMA Netw Open*. 2021 Oct 1;4(10):e2128380. doi: 10.1001/jamanetworkopen.2021.28380. PMID: 34636915; PMCID: PMC8511975. <https://pubmed.ncbi.nlm.nih.gov/34636915/>

Nickel B, Barratt A, Copp T, Moynihan R, McCaffery K. Words do matter: a systematic review on how different terminology for the same condition influences management preferences. *BMJ Open*. 2017 Jul 10;7(7):e014129. doi: 10.1136/bmjopen-2016-014129. PMID: 28698318; PMCID: PMC5541578. <https://pubmed.ncbi.nlm.nih.gov/28698318/>

Copp T, Nickel B, Lensen S, Hammarberg K, Lieberman D, Doust J, Mol BW, McCaffery K. Anti-Mullerian hormone (AMH) test information on Australian and New Zealand fertility clinic websites: a content analysis. *BMJ Open*. 2021 Jul 7;11(7):e046927. doi: 10.1136/bmjopen-2020-046927. PMID: 34233986; PMCID: PMC8264877. <https://pubmed.ncbi.nlm.nih.gov/34233986/>

Copp T, Jansen J, Doust J, Mol BW, Dokras A, McCaffery K. Are expanding disease definitions unnecessarily labelling women with polycystic ovary syndrome? *BMJ*. 2017 Aug 16;358:j3694. doi: 10.1136/bmj.j3694. Erratum in: *BMJ*. 2017 Nov 20;359:j5380. PMID: 28814559. <https://pubmed.ncbi.nlm.nih.gov/28814559/>

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Yours sincerely,



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