

Limiting low-value practices to contribute to a sustainable, efficient and equitable health system

Juan Víctor Ariel Franco^{a,b} , Karin Kopitowski^{a,b} , Eva Madrid^c 

^a Departamento de Investigación, Instituto Universitario Hospital Italiano de Buenos Aires, Argentina

^b Servicio de Medicina Familiar y Comunitaria, Hospital Italiano de Buenos Aires, Argentina.

^c Centro Interdisciplinario de Estudios en Salud (CIESAL), Universidad de Valparaíso, Valparaíso Chile

*Corresponding author eva.madrid@uv.cl

Citation Franco JVA, Kopitowski K, Madrid E. Limit low-value practices to contribute to a sustainable, efficient and equitable healthcare system. *Medwave* 2021;21(03):e8161

Doi 10.5867/medwave.2021.03.8161

Publication date 19/4/2021

Origin Not commissioned

Type of review: With internal editorial review

Moving to a Sustainable Health System

The development of science and technology in healthcare can improve health outcomes for the population. For example, the pneumococcal vaccine can reduce pneumonia-associated mortality in children¹, and the polio vaccine might be able to eradicate the disease². In turn, the development of policies focused on the social determinants of health (including poverty and education) allows a more global impact than the individual actions taken by hospitals or other health providers³. In recent years, the safety and sustainability of interventions in healthcare have been questioned⁴, considering that it is estimated that a little more than a third of them are probably effective; 15% would be harmful or unhelpful, and up to 50% would be of unknown effectiveness⁵.

Low-value care: when the harms outweigh the benefits

In recent decades, there has been a great emphasis on diagnostic and therapeutic interventions called low-value care or medical excess, defined as those that provide little or no benefit to patients—or those that may be considered definitively futile, with the potential of causing harm and incurring unnecessary costs for patients and the health system, thus wasting limited resources⁶. These practices include a broad spectrum with different combinations of benefits, harms, and costs. As an example, some expensive surgeries produce little or no benefits with accompanying serious health risks⁷. Other relatively low-cost interventions, usually "preventive," such as some cancer screenings⁸, may result in harms through diagnostic cascades (procedures after the initial test), false positives, overdiagnosis (detection of diseases that would have had an indolent course if not detected) and subsequent overtreatment⁹. These "low-value" interventions differ from "medical

error" or malpractice, as they arise from expert recommendations, clinical guidelines, and public policies¹⁰. Still, "defensive medicine," a practice aimed at reducing the risk of malpractice litigation, contributes in part to the rise of low-value care by offering excessive diagnostic tests or therapeutic interventions that have not been proven effective¹¹.

The sustainability of the health system

There is evidence of widespread overuse of these ineffective health care interventions¹², enhanced by the phenomenon of medicalization, whereby some non-medical problems are defined and treated as diseases or disorders, expanding the use of low-value care¹³. The recipients of these harms are the people receiving these low-value interventions and the health system (and its subsystems). The value of costs incurred (called the cost-effectiveness ratio) and the total cost of implementing these interventions (budgetary impact) provide an idea of

the magnitude of the problem¹⁴. Low-value care is partly responsible for the exponential increase in health expenditure relative to the gross domestic product in many countries (GDP)^{15,16}, threatening the sustainability of the system and reproducing pre-existing inequities^{17,18}. In turn, they reduce the ability to finance policies to improve the social determinants of health, especially in a depressed economy and health systems in a post-pandemic future¹⁹.

Initiatives

At the international level, some initiatives emerged to identify "low value" interventions: the platform "No Gracias"²⁰, Choosing Wisely²¹, Less is More²², Wiser Healthcare²³ Médicos sin Marca, and the movements of Quaternary Prevention²⁴. Cochrane launched the working group Sustainable Healthcare²⁵ to research and intervene in areas where evidence can identify low-value care. Some of these initiatives have generated "do not do" lists that have effectively reduced low-value care in different areas of health²⁶.

At the regional level, some research indicates the high prevalence of low-value care in our population^{27,28,29} and the media's role in promoting it³⁰. In Argentina, the "Interspecialties Initiative" developed a list of locally drafted "do not do" recommendations informed by evidence³¹, which the Ministry of Health later replicated. In turn, the National Commission for Health Technology Assessment was created, focused on the evidence-based assessment of health technologies³². In Chile, the Ministry of Health has a Department of Health Technology Assessment in Health and Evidence-based Health Care that uses the GRADE methodology to formulate recommendations during the development of all ministerial clinical practice guidelines³³. The group Doctors Without Brand ("Médicos sin Marca") also mentions the importance of overdiagnosis as a form of iatrogenesis related to recommendations that are not supported by scientific evidence³⁴.

Public policies and lines of action

Considering the difficulty of de-implementing ineffective interventions that are already implemented due to resistance at all levels, it is of the utmost importance that decision-makers identify strategies to reduce the harms of 'low-value' interventions and implement efficient and equitable resource allocation in health. These strategies should be informed by the best available evidence, focusing on the sustainability of the health system and broad participation of the community considering their needs, values, and preferences. The interaction of

the multiple sectors of the health system--typically fragmented--and not always well coordinated in Latin America, is also essential.

We propose the following lines of work to articulate public policies with specific programs and incentives to achieve a sustainable health system.

- a. Research: To carry out research studies to identify "low value" practices and strategies of de-implementation and develop guidelines for high-quality clinical practice, focusing on the sustainability of the health system.
- b. Education and training: Include, in the undergraduate, graduate, and continuing education curricula of the health disciplines, contents related to potential harms of "low value" interventions and the implications for resource use and equity of its implementation. Considering the thousands of articles published every day, training professionals must acquire the ability to discriminate between good-quality evidence and critical analysis concerning low-value interventions.
- c. Health systems management: To implement coverage policies that consider the potential harm to people and the sustainability of the subsystems and effectors of the health system and promote a healthy relationship between patients and health professionals, mitigating the excesses caused by "defensive medicine."
- d. Intersectoral Programs: To collaborate with the media to avoid the medicalization or promotion of "low-value" practices that are not supported by rigorous evidence. Link health policies with the actions of other government portfolios with responsibility for the social determinants of health.

Conclusions

Avoiding "low-value" interventions would improve the sustainability of the healthcare system, but it largely depends on the acceptability and support of public bodies, healthcare professionals, and patients. Decision-making depends on many factors where evidence is not always the main one, and new public policies are urgently required to articulate it with the interests at stake. These could result in substantial improvements in the economy, and above all, in the health of the population.

References

1. Berman-Rosa M, O'Donnell S, Barker M, Quach C. Efficacy and Effectiveness of the PCV-10 and PCV-13 Vaccines Against Invasive Pneumococcal Disease. *Pediatrics*. 2020 Apr;145(4):e20190377. Mar 10. Erratum in: *Pediatrics*. 2020 Oct;146(4) | [CrossRef](#) | [PubMed](#) |
2. Ciapponi A, Bardach A, Rey Ares L, Glujovsky D, Cafferata ML, Cesaroni S, et al. Sequential inactivated (IPV) and live oral (OPV) poliovirus vaccines for preventing poliomyelitis.

- Cochrane Database Syst Rev. 2019 Dec 5;12(12):CD011260. | [CrossRef](#) | [PubMed](#) |
3. Organización Panamericana de la Salud. Determinantes sociales de la salud en la Región de las Américas. 2017. paho.org [on line] | [Link](#) |
 4. Harris C, Green S, Ramsey W, Allen K, King R. Sustainability in Health care by allocating resources effectively (SHARE) 1: introducing a series of papers reporting an investigation of disinvestment in a local healthcare setting. *BMC Health Serv Res.* 2017 May 4;17(1):323. | [CrossRef](#) | [PubMed](#) |
 5. Prasad V, Vandross A, Toomey C, Cheung M, Rho J, Quinn S, et al. A decade of reversal: an analysis of 146 contradicted medical practices. *Mayo Clin Proc.* 2013 Aug;88(8):790-8. | [CrossRef](#) | [PubMed](#) |
 6. Colla CH. Swimming against the current--what might work to reduce low-value care? *N Engl J Med.* 2014 Oct 2;371(14):1280-3. | [CrossRef](#) | [PubMed](#) |
 7. Elshaug AG, Watt AM, Mundy L, Willis CD. Over 150 potentially low-value health care practices: an Australian study. *Med J Aust.* 2012 Nov 19;197(10):556-60. | [CrossRef](#) | [PubMed](#) |
 8. Schwartz AL, Landon BE, Elshaug AG, Chernenw ME, McWilliams JM. Measuring low-value care in Medicare. *JAMA Intern Med.* 2014 Jul;174(7):1067-76. | [CrossRef](#) | [PubMed](#) |
 9. Ripping TM, Ten Haaf K, Verbeek ALM, van Ravesteyn NT, Broeders MJM. Quantifying Overdiagnosis in Cancer Screening: A Systematic Review to Evaluate the Methodology. *J Natl Cancer Inst.* 2017 Oct 1;109(10). | [CrossRef](#) | [PubMed](#) |
 10. Kale MS, Korenstein D. Overdiagnosis in primary care: framing the problem and finding solutions. *BMJ.* 2018 Aug 14;362:k2820. | [CrossRef](#) | [PubMed](#) |
 11. Carroll AE. The High Costs of Unnecessary Care. *JAMA.* 2017 Nov 14;318(18):1748-1749. | [CrossRef](#) | [PubMed](#) |
 12. Brownlee S, Chalkidou K, Doust J, Elshaug AG, Glasziou P, Heath I, et al. Evidence for overuse of medical services around the world. *Lancet.* 2017 Jul 8;390(10090):156-168. | [CrossRef](#) | [PubMed](#) |
 13. Conrad P, Mackie T, Mehrotra A. Estimating the costs of medicalization. *Soc Sci Med.* 2010 Jun;70(12):1943-1947. | [CrossRef](#) | [PubMed](#) |
 14. Pandya A. Adding Cost-effectiveness to Define Low-Value Care. *JAMA.* 2018 May 15;319(19):1977-1978. | [CrossRef](#) | [PubMed](#) |
 15. Mafi JN, Russell K, Bortz BA, Dachary M, Hazel WA Jr, Fendrick AM. Low-Cost, High-Volume Health Services Contribute The Most To Unnecessary Health Spending. *Health Aff (Millwood).* 2017 Oct 1;36(10):1701-1704. | [CrossRef](#) | [PubMed](#) |
 16. Health spending set to outpace GDP growth to 2030 - OECD. OECD. [on line] | [Link](#) |
 17. Hart JT. The inverse care law. *Lancet.* 1971 Feb 27;1(7696):405-12. | [CrossRef](#) | [PubMed](#) |
 18. Nambiar D, Mander H. Inverse care and the role of the state: the health of the urban poor. *Bull World Health Organ.* 2017 Feb 1;95(2):152-153. | [CrossRef](#) | [PubMed](#) |
 19. Clarke L. COVID-19 and Sustainable Healthcare Systems. 2020. [on line] | [Link](#) |
 20. Plataforma Nogracias. [on line] | [Link](#) |
 21. ABIM Foundation. Choosing Wisely. [on line] | [Link](#) |
 22. Jama network. Less is More. [on line] | [Link](#) |
 23. Beard J, Dakin T. Wiser Healthcare - A research collaboration for reducing overdiagnosis and overtreatment. *wiserhealthcare.org* | [Link](#) |
 24. Global Family Doctor - WONCA Online. [on line] | [Link](#) |
 25. Johansson M, Bero L, Bonfill X, Bruschetti M, Garner S, Glenton C, et al. Cochrane Sustainable Healthcare: evidence for action on too much medicine. *Cochrane Database Syst Rev.* 2019 Dec 6;12:ED000143. | [CrossRef](#) | [PubMed](#) |
 26. ABIM Foundation. Does Choosing Wisely Work? *choosingwisely.org* [on line] | [Link](#) |
 27. Salgado MV, Kopitowski KS, Barani M, et al. Sobreuso de mamografía para rastreo en un hospital académico de Buenos Aires. *Revista Argentina de Salud Publica* 2016;7:27; 6. | [Link](#) |
 28. Ganiele MLN, Terrasa SA, Kopitowski KS. Excesivo rastreo de osteoporosis en mujeres menores de 65 años: estudio de corte transversal [Excessive osteoporosis screening in women under 65 years: a cross-sectional study]. *Salud Colect.* 2016 Jul-Sep;12(3):443-452. | [CrossRef](#) | [PubMed](#) |
 29. Esteban S, Ricci R, Terrasa S, Kopitowski K. Colonoscopy overuse in colorectal cancer screening and associated factors in Argentina: a retrospective cohort study. *BMC Gastroenterol.* 2017 Dec 15;17(1):162. | [CrossRef](#) | [PubMed](#) |
 30. Spina S, Lombardi, Vanina Terrasa, Sergio Kopitowski, Karin Villallon, Gabriel. Cuán precisos son los principales diarios de Argentina el informar sobre los métodos de prevención del cáncer de mama. *Rev Argent Salud Pública* 2018;9:9-14. | [Link](#) |
 31. Iniciativa Inter-Especialidades. Home page. *interespecialidades.org* [on line] | [Link](#) |
 32. Republica de Argentina. Comisión Nacional de Evaluación de Tecnologías de Salud. CONETEC. [on line] | [Link](#) |
 33. Mendoza C, Kraemer P, Herrera P, Burdiles P, Sepúlveda D, Núñez E, et al. Cómo interpretar guías de práctica clínica elaboradas con metodología GRADE [Clinical guidelines using the GRADE system (Grading of Recommendations Assessment, Development and Evaluation)]. *Rev Med Chil.* 2017 Nov;145(11):1463-1470. | [CrossRef](#) | [PubMed](#) |
 34. Médicos sin marca. MSM busca promover una medicina crítica, independiente y centrada en las necesidades del paciente. [on line] | [Link](#) |

Correspondence to
Potosí 4265, Buenos Aires,
Argentina



Esta obra de Medwave está bajo una licencia Creative Commons Atribución-No Comercial 3.0 Unported. Esta licencia permite el uso, distribución y reproducción del artículo en cualquier medio, siempre y cuando se otorgue el crédito correspondiente al autor del artículo y al medio en que se publica, en este caso, Medwave.