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Commentary

Management of non-serious low back pain in the context of emergency care. Is it worth the cost?

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Low back pain is a common symptom, characterized by a range of biopsychosocial dimensions that limits activity and restricts societal participation [1], which is experienced by individuals from adolescence to older ages living in low-middle countries to high-income ones [2]. This condition has long been recognized as one of the main causes of disability worldwide, resulting in substantial increases in the burden to individuals, healthcare systems, and society [1]. Recent data from the Global Burden of Disease Study 2019 [2] showed that low back pain was one of the top ten leading causes of increased years lived with disability (YLD) between 1990 and 2019, totaling around 63 million YLD in 2019.

This scenario does not come without a great economic cost to society. It is well-known that individuals affected by low back pain are high frequent users of health resources and numerous managing strategies provided by the different levels of health care systems. Evidence regarding healthcare costs due to low back pain has been established in several countries for the past 20 years [3-6], which provides insightful information to broaden the understanding of public health problems. For instance, the 12-month health care costs associated with the treatment of low back pain in the United Kingdom was estimated at approximately £2.8 billion [7]. Likewise, low back pain is a major health concern in Australia, and the total healthcare costs of low back pain were estimated at around AUD\$1.02 billion in 2001 [8].

In *The Lancet Regional Health - Western Pacific*, Dr. Coombs and Colleagues present interesting and up-to-date findings on the ac-

tual healthcare expenses due to non-specific low back pain or low back pain with radicular syndromes (both classified as 'non-serious') in emergency and hospital settings in an Australian public health district, associated with different management strategies and care pathways [9]. Their cost-of-illness study investigated 12 399 episodes of low back pain (10 691 individual patients) from 2014 to 2019, which totaled a healthcare cost of around AUD\$36.7 million (approximately US\$27.5 million). An important finding was the higher cost for male individuals over 65 years of age brought to the emergency department by ambulance, followed by emergency care and hospital admission. Although this care pathway presented fewer cases (1271) compared with the other pathways, the costs per episode of low back pain were the highest (e.g., AUD\$14 949/episode vs AUD\$584 when patients only used the emergency care without subsequent admission). Another relevant finding was a greater length of hospital stay for those patients brought to the emergency care by ambulance.

Their results provide an important reflection towards the need for improvement of health services and policies to deal with the increasing burden of low back pain [10]. Recent data from some studies strengthen the idea that we should refrain from low-value interventions, towards evidence-based cost-effective management strategies [10] to improve the sustainability of health systems [3]. This is relevant, as emergency care could expose patients to over-medicalization and unnecessary diagnostic imaging or hospital admissions when compared, for example, to management strategies

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provided by primary care professionals. Hence, a discussion pertaining the decision-making and the appropriateness of emergency care for episodes of non-serious low back pain may be necessary, given the benefits of other strategies such as supervised exercises and health education [11].

The care pathway for individuals with low back pain could also be improved, in order to allow a better quality and efficiency of care, optimize the use of resources, and reduce the absence from work [12]. A recent review [12] showed that the majority of care pathways from different countries integrates the primary, secondary and tertiary care, and adopt approaches such as multidisciplinary work, screening for psychosocial risk factors and patient self-management. Moreover, these integrated pathways might be a promising strategy to tackle the challenge imposed by low back pain disability. This is rather interesting because primary care management of low back pain adding exercises and behavioral counseling was deemed to be cost-effective [12]. Similarly, early primary care referral of individuals with low back pain to physical therapy interventions showed a decreased likelihood of diagnostic imaging use, additional physician visits, surgery, injections, and opioid use [13].

Clinicians and decision-makers should be aware that the use of unnecessary procedures for non-specific low back pain, such as diagnostic imaging, wastes scarce financial resources, and has little effect on clinical outcomes [14,15]. Coombs and Colleagues take an important step forward for the understanding of how clinicians and the health system are managing low back pain in emergency departments in Australia. Their findings warrant future studies to evaluate whether cost-effective and high-value interventions and more integrated care pathways could be implemented at a national level. It would also be important to determine whether these interventions could reduce the number of unnecessary hospitalizations and the subsequent healthcare costs. Prioritizing evidence-based decisions and high-value interventions for low back pain may be challenging, but may also provide a strengthening of the health systems and pay off in the long run.

Declaration of Competing Interest

Nothing to disclose.

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