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EDITORIAL

Reconnecting fragmented knowledge in pain practice

Reconectando o conhecimento fragmentado na prática da dor

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From the late eighteenth to the early nineteenth century, the production of knowledge underwent profound transformations. During this period, scholars, philosophers, and researchers working within broadly holistic traditions—drawing on art, history, poetry, politics, and observations of lived experience—gradually gave way to a modern scientific model, increasingly defined by the fragmentation of knowledge into narrower, more specialized fields. Over the course of the twentieth and twenty-first centuries, this trend became even more pronounced in medicine, which moved progressively away from integrative perspectives and came to be organized into an expanding range of subspecialties[1].

As disciplines became increasingly specialized, distinct classificatory systems emerged within their respective knowledge silos, each reflecting the priorities and forms of knowledge specific to its field. The International Classification of Diseases (ICD), developed by the World Health Organization (WHO), was designed to standardize the nomenclature of diseases and health conditions according to etiologic, anatomic, and clinical criteria[2]. The ICD has become indispensable for epidemiologic surveillance by providing a shared framework that transcends linguistic and cultural boundaries. Yet the very logic that gives the ICD its strength as a classificatory instrument may also limit the extent to which other dimensions of illness are fully represented. The International Classification of Functioning, Disability and Health (ICF)[3], also developed by WHO, shifts attention to the consequences of disease in everyday life, describing health conditions in relation to functioning, disability, and social participation. Grounded in a biopsychosocial model, it integrates biological, psychological, and social factors, thereby enabling a more comprehensive and nuanced account of how health conditions shape individuals' lives. When applied to the same health condition, these different classificatory "languages" may generate distinct approaches, as they not only describe a problem but also shape how it is understood and managed. This disconnect becomes especially evident when clinical or legal decisions about an individual's health and capabilities rely exclusively on the ICD while overlooking key functional dimensions better captured by the ICF.

The distance between these two "worlds," exemplified by the contrast between a disease-centered framework and a functioning-oriented one, reflects a broader consequence of specialization: fragmentation. Although such a system may serve well for pedagogical purposes, its use in clinical settings can constrain innovation and hinder the development of clinical outcomes that are better aligned with the complexity of health-related phenomena. In this context, the issue is not that these models are incompatible, but rather that meaningful dialogue between them remains insufficient, and as Alexander von Humboldt observed, "without diversity of opinion, the discovery of truth is impossible"[4].

The scientific community has increasingly recognized these setbacks as consequences of knowledge fragmentation. Successive revisions of World Health Organization (WHO) frameworks, such as the International Classification of Diseases (ICD), now in its 11th edition, reflect, at least in part, efforts to address this challenge. ICD-11 represents an important step toward a broader biopsychosocial perspective. This challenge is particularly evident in the field of pain. Despite major advances in the understanding of mechanisms, phenotypes, and psychosocial determinants, the translation of this knowledge into clinical practice remains limited. Bridging different models requires more than technical expertise; it also requires the ability to relate these dimensions to the patient's individual experience through careful, skilled, and context-sensitive listening. In addition, ICD-11 distinguishes seven categories of chronic pain[5], reflecting the work of an International Association for the Study of Pain (IASP) task force in collaboration with WHO.

Even so, improved classification and a more sophisticated understanding of pain are not, in themselves, sufficient to overcome fragmentation in multidisciplinary clinical practice. A central difficulty is that clinical conditions are often interpreted differently across professional disciplines, making it difficult to coherently integrate these multiple "realities," each shaped by the training and perspective of a particular field.

Classifying disease, functioning, and pain does not necessarily mean that the professionals involved in a patient's care have fully grasped the real-world consequences of illness. The experience of pain is shaped by individual, contextual, and social factors, and variability in patient history-taking across healthcare professionals—often determined by disciplinary background—brings additional elements into focus that should also inform treatment planning based on clinical assessment.

In practice, difficulties in communication among professionals, as well as inconsistencies between findings obtained through patient history and clinical examination, can have subtle yet important consequences for treatment adherence and clinical outcomes. Patients with the same diagnosis may receive similar treatment recommendations despite marked differences in functioning, occupational demands, and psychosocial context.

For students and early-career professionals, adopting a broader approach requires more than simply recognizing differences among health specialties. It also demands the active incorporation of clinical reasoning and interprofessional discussion into practice. Defining therapeutic goals requires communication both with the patient and with the team involved in their care. Consolidating this perspective will likely depend less on governmental action or professional regulatory bodies than on the willingness of healthcare professionals to engage consistently with one another around the shared goal of everyday care. In this sense, the challenge lies not only in the absence of tools but also in how knowledge is communicated and shared among professionals and patients.

Ultimately, the contemporary challenge lies not only in producing new knowledge, but in connecting it. Communication should therefore be understood not as an ancillary component of care, but as one of the structuring mechanisms of clinical practice. It is through communication that different forms of knowledge can be brought into dialogue, allowing care to more closely reflect the complexity that characterizes the human experience of pain. In pain management, the problem is not necessarily a lack of knowledge, but rather the difficulty of integrating what is known about the patient's lived experience, findings from different health disciplines, and the goals of the person who is suffering.

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