

# Advancing Pain Medicine Through Interdisciplinary Approaches and Platforms [Letter]

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## Dear editor

I read with keen interest the recent editorial titled “The Future of Pain Medicine: Emerging Technologies, Treatments, and Education”<sup>1</sup> The comprehensive overview presented exciting advancements in pain medicine, particularly emphasizing the roles of virtual reality (VR), wearable technology, and artificial intelligence (AI). Building upon their discussion, I would like to underscore the significance of interdisciplinary research, especially in pain medicine, sports rehabilitation, and digital sports technology, as well as the necessity of establishing dedicated platforms for pain medicine.

Pain medicine is rapidly evolving, and integrating new technologies holds immense potential for improving patient outcomes. As the authors pointed out, VR, wearable technologies, and AI have effectively managed chronic pain. However, it is through interdisciplinary collaboration that the full potential of these technologies can be harnessed. Combining the expertise of pain medicine specialists with sports rehabilitation professionals and digital sports technology experts can lead to the development of more personalized and effective treatment plans for sports-related injuries and chronic pain patients.

Sports rehabilitation and sports medicine have made significant strides in recent years, focusing on leveraging technology to enhance performance and recovery. By integrating these disciplines with pain medicine, we can devise innovative solutions that alleviate pain, facilitate faster recovery, and improve functional outcomes. For instance, VR can be utilized for pain distraction and rehabilitation training, engaging patients in immersive and interactive sessions that aid in restoring strength and mobility.<sup>2</sup> Furthermore, wearable technology provides data on patients' physical activity, which can be used to tailor pain rehabilitation programs and monitor progress, and it has proven useful and sustainable.<sup>3</sup> AI algorithms can analyze this data to identify patterns and predict potential issues, enabling healthcare professionals to intervene before minor problems escalate.<sup>4</sup>

Importantly, the future of pain medicine must also emphasize the role of narrative and humanistic care. While technology plays a crucial role in pain management, understanding the patient's story and emotional and psychological well-being and incorporating these aspects into treatment plans is vital. Narrative medicine allows healthcare professionals to understand the patient's experience better, fostering empathy and trust, essential for effective pain management.<sup>5</sup> Moreover, humanistic care approaches, such as mindfulness and compassion, can complement technological interventions, providing a holistic approach to pain relief.

Establishing dedicated pain medicine platforms is crucial to facilitate these interdisciplinary efforts. Such platforms can serve as hubs for education, research, and collaboration. They can function as digital repositories containing case studies, treatment protocols, and data, accessible to global medical professionals to stay abreast of the latest advancements. Additionally, these platforms can promote communication and learning among professionals through online forums and seminars. Education is another pivotal function of these platforms, which should offer comprehensive educational programs encompassing theoretical knowledge and practical skills to cater to different professional levels. By integrating the understanding of pain medicine, sports rehabilitation, and digital technology experts, innovative methods for addressing chronic pain can be developed.

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