



Beth Israel Deaconess
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HARVARD MEDICAL SCHOOL
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Transforming Pain Medicine Fellowship: Adapting to Increasing Demands and Dynamic Changes of Modern Medicine

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Introduction

Pain medicine continues to advance, necessitating thorough reevaluation of existing educational and practical frameworks. Pain medicine fellowships serve as critical training grounds for future specialists. They are tasked with adapting to dynamic changes of our modern healthcare system that now incorporates telemedicine, artificial intelligence, and ever-changing medical legislation. Many factors influence this evolution, including the proliferation of novel pain management techniques (i.e. neuromodulation and regenerative medicine) and requirement of interdisciplinary approaches (i.e. physical therapy, psychology, and integrative medicine). The spectrum of managed pain conditions continues to widen as patient populations expand. The medical landscape is shifting towards personalized medicine. Factors ranging from genomic to socioeconomic considerations inform individualized treatment strategies.

Materials and Methods

A systematic literature review of data concerning pain management and fellowship structure was accessed via PubMed. Articles were selected for this poster presentation based on clinical relevance and applicability. As the case report is devoid of patient-identifiable information, it is exempt from IRB review requirements as per Beth Israel Deaconess Medical Center policy.

Ultrasound-guided interventions and regenerative medicine are transforming pain management, with studies demonstrating up to a 30% increase in efficacy as compared to traditional methods.¹

Platelet-rich plasma and stem cell treatments have shown promising results, with up to 40% improvement in pain and function for conditions such as osteoarthritis.²

Up to 50% of pain fellows express insufficient training prior to entering practice.³

One modality to optimize trainee experiences includes high-fidelity simulation, with studies suggesting improved procedural skills and confidence by up to 35%.⁴

Despite the increasing prevalence of certain pain pathologies, including head and facial pain, approximately 60% of programs lack adequate didactic and clinical exposure for these conditions.⁵

Several studies have indicated that nearly half of training programs lack updated curricula for pelvic, gastrointestinal, pediatric, and cancer pain.⁶



Results

Pain medicine is continuing to expand with new methods of multimodal analgesia. Including implementation of ultrasound, platelet-rich plasma, stem cell treatment, and further advanced procedures. It is imperative that pain medicine curriculum continues to advance alongside the technological advancements of the field.

Discussion

To adequately prepare future physician specialists for the rapid advancements in pain medicine, it's imperative that fellowships commit to adaptation, incorporate hands-on training with current technologies, foster collaborative networks between healthcare disciplines, and nurture national and international advocacy. A conscientious remodeling effort is vital to address the evolving opportunities and challenges within this field. Failing to recognize these gaps risks producing undertrained and intellectually stagnant cadre of physicians. Leaders in the pain medicine field must continue to deliberate the remodel of this fellowship including increasing training length or the creation of separate dedicated residencies.

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