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Education

CONSENSUS-BASED RECOMMENDATIONS FOR AN EMERGENCY MEDICINE PAIN MANAGEMENT CURRICULUM

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☐ **Abstract—Background: Increased prescribing of opioid pain medications has paralleled the subsequent rise of prescription medication–related overdoses and deaths. We sought to define key aspects of a pain management curriculum for emergency medicine (EM) residents that achieve the balance between adequate pain control, limiting side effects, and not contributing to the current public health opioid crisis. Methods: We convened a symposium to discuss pain management education in EM and define the needs and objectives of an EM-specific pain management curriculum. Multiple pertinent topics were identified a priori and presented before consensus work. Subgroups then sought to define perceived gaps and needs, to set a future direction for development of a focused curriculum, and to prioritize the research needed to evaluate and measure the impact of a new curriculum. Results: The group determined that an EM pain management curriculum should include education on both opioid and nonopioid analgesics as well as nonpharmacologic pain strategies. A broad survey is needed to better define current knowledge gaps and needs. To optimize the impact of any curriculum, a modular, multimodal, and primarily case-based approach linked to achieving milestones is best. Subsequent research should focus on the impact of curricular reform on learner knowledge and patient outcomes, not just prescribing changes. Conclusions: This consensus group offers a path forward to enhance the evidence, knowledge, and practice transformation needed to improve emergency analgesia.**

☐ **Keywords—curriculum; emergency medicine residency; pain**

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INTRODUCTION

Starting with The Joint Commission's emphasis on the importance of treating pain and recommended implementation of a pain score as the fifth vital sign, prescribers increased their use of opioids for managing patients' pain (1–5). We now recognize that the national increase in prescription opioid use between 1990 and 2012 came with a price: many patients developed opioid use disorders (e.g., addiction), opioid

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side effects, heightened rather than improved pain (i.e., hyperalgesia), and death from overdose. Opioid use, abuse, addiction, overdose, and death are at epidemic levels in the United States, and exposure to prescribed opioids are an important part of the problem (1). Overdose admissions for substance abuse treatment—both illicit and prescribed—increased in parallel with the above changes (1,6). U.S. emergency departments (EDs) have >130 million visits each year, and a majority of these are pain-related visits (7,8). As such, EDs represent important venues in which to address optimal analgesic practice and the safe use of opioids.

The balance between safe and effective opioid use is challenging. Years of research highlighted that emergency clinicians often undertreat pain ("oligoanalgesia") and treat patients disparately despite similar conditions (5,9–12). In contradistinction to the oligoanalgesia era, we now have high enthusiasm for opioid dampening, such as having regulatory limits on prescribing (including in the ED), developing opioid-free EDs, and creating pathways to alter opioid use. However, we again run the risk of responding before understanding the consequences. Emergency physicians (EPs) provide about 5% of the total opioid prescriptions in the U.S., but often use short-acting opioids in limited quantities (13,14). We know that those filling an ED opioid prescription after discharge are more likely to have another exposure in the next year, but we do not know who suffers harm disproportionate to benefit from this practice (15). Despite limited evidence of ED-triggered opioid prescribing harm, the sheer volume of interaction, the lack of a longitudinal provider–patient relationship, and the around the clock availability of ED care, governmental and professional groups seek to provide guidance for the treatment of pain in ED patients (16,17).

Many call for opioid stewardship to enhance individual and public health. The optimal approach to achieving this goal is not clear, but education is consistently presented as a practical means to incrementally improve analgesic practice and opioid safety. Current and future generations of EPs need expertise in pain control, with an emphasis on therapeutic safety and efficacy, to simultaneously address pain while minimizing the potential for adverse outcomes. We gathered a panel of experts to lead development of a framework to achieve these objectives.

METHODS

We convened a full-day session at the Society for Academic Emergency Medicine Annual Meeting, held in Dallas, Texas in May 2014. Speakers were experts in emergency care, pain medicine, medical toxicology, medical education, and public health. They had both speaking and practical experience with pain treatment and education, and many had also written publications on the subject. The first part of the session included seven brief didactic sessions as shown below:

1. Teaching the fundamentals of analgesia
2. Review of existing pain curricula
3. Understanding the adverse effects of analgesics
4. Balancing over- and under-use of opioids in the ED
5. Using milestones to assess curricular success
6. Using simulation to teach pain management principles
7. Using open access methodologies and technologies to reinforce and disseminate a pain management curriculum

The second part of the session included two detailed breakout sessions involving all conference participants. The entire program was open to any interested participants, and we encouraged active participation in the breakout sessions. Session attendees apart from the authors are listed in the Acknowledgements. For the final document, all sessions were video recorded and transcribed by the first author. For the breakout sessions, we took additional notes to supplement the transcription. All authors reviewed the transcription and made edits and additional suggestions. The edited transcription from the seven didactic sessions was then reorganized into a new curriculum-focused framework, which is presented in this article.

RESULTS

Emergency Medicine Pain Management Curriculum Needs Assessment

Before embarking on the creation of a new curriculum, it is worthwhile to determine the current state of pain education. The 2011 survey of 117 medical schools in North America found that about 80% of schools required ≥1 pain session; the median total number of pain sessions taught was 7, accounting for 11 total hours, and only 4 U.S. schools had a required course in pain management (18). The authors concluded that "There are inarguable links between the undertreatment and the maltreatment of pain and the lackluster state of pain education in medicine. It is likely that unless opinion leaders and the next generation of physicians become aware both of the importance of conscientious pain management and the dangerous deficits in pain education, the crisis in pain care and resultant deaths from opioid abuse will only spiral upwards."

Obstacles to augmenting pain curricula in medical schools include the disconnect between classroom pharmacologic principles and clinically applicable skills, intrinsic barriers to curriculum reform, and a lack of time (19).