A Qualitative Assessment of Emergency Physician Perceptions and Experiences With Acute Pain Management

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BACKGROUND

- Pain-related admissions to the emergency department (ED) account for approximately 45% of ED visits. Furthermore, it is estimated that 40% of patients admitted to the ED have severe pain[1]
- When inadequately managed, acute pain can result in adverse impacts on patients' health and wellbeing, including detriments to quality of life and prolonged recovery time.[2] Yet, as little as 60% of patients admitted to the ED in pain receive analgesics, and three-quarters are discharged while still experiencing moderate-to-severe pain, regardless of whether they received analgesics or not[3]
- Prior research has described the patient experience of acute post-operative pain,[4] which included negative impacts on physical functioning, completing activities of daily living (ADLs), mental health (e.g., feeling down, depressed, worried), sleep, and work/productivity; however, there is little research on the viewpoints and experiences of emergency physicians responsible for managing patients' acute pain in an emergency setting

OBJECTIVES

To collect data from United States (US)-based emergency physicians who are involved in the management of acute pain to better understand:

- **The challenges and barriers related to managing acute pain in adult patients**
- **From the emergency physician perspective, identify how adult patients with inadequately managed acute pain are impacted**

METHODS

- This non-interventional, cross-sectional study employed semi-structured concept elicitation interviews to collect and analyze emergency physician descriptions of their experiences with acute pain management
- This study was reviewed and approved by a central institutional review board

Inclusion Criteria

- Purposive sampling was used to identify and screen 15 emergency physicians who met key eligibility criteria:
  - Were certified by American Board of Emergency Medicine (ABEM) and were in good clinical standing (i.e., held an active medical license) in the US
  - Were involved in the management of patients' acute pain and had ≥3 years of experience providing care in an emergency setting following completion of a medical residency/fellowship program
  - Spent 6 or more shifts a month, on average, in a clinical emergency setting (e.g., hospital emergency department and/or free-standing emergency department, not in an urgent care setting)
  - Had an average caseload comprised of ≥50% adult patients

Data Analysis

- Emergency physician interview transcripts were coded and analyzed using NVivo qualitative software
- Saturation of concepts was assessed through analysis of interview transcripts in five equally sized groups; analyses determined that 100% of concepts were identified after 4 sets, suggesting saturation was reached
- Thematic analysis was used to identify patterns in participant responses concerning the relevant and important elements of acute pain management

RESULTS

Study Population

- 15 emergency physicians participated in the interviews (**Table 1**)
- Respondents reported practicing in community hospitals (n=8, 53.3%) and academic hospitals (n=6, 40.0%), and four physicians also practiced in non-hospital settings, including an external emergency department (ED) or urgent care (n=2, 13.3%), or telehealth emergency care platform (n=2, 13.3%)
- Emergency physicians estimated a median of 60.0% of patients (range, 25.0-99.0%) presented with acutely painful medical conditions or complaints
- All physicians (n=15, 100%) reported being primarily responsible for patients' acute pain management in the ED and writing prescriptions at discharge

Table 1. Emergency Physician Demographic & Experience Characteristics

Demographic Characteristics	n	%
Sex		
Male	9	60.0
Female	6	40.0
Race/Ethnicity		
White	8	53.3
Asian	4	26.7
Black or African American	1	6.7
Hispanic or Latino	1	6.7
Prefer not to answer	1	6.7
Geographic Region		
Northeast	11	73.3
South	3	20.0
West	1	6.7
Clinical Experience & Characteristics	**Median (range)**	
Experience Post Residency or Fellowship, years	23.0 (11-29)	
Number of Clinical Shifts per Month	14.0 (8-20)	
Patients Who Are Adults, %	90.0% (70-98%)	

Key Concepts and Themes

- Emergency physician interviews highlighted distinct themes; key findings are summarized below, and details are reported in **Figure 1**:
  - **Only 33.3% of participants reported being satisfied with acute pain medication; 66.7% reported being only somewhat satisfied or not satisfied**
  - When describing **opioids**, emergency physicians reported **concerns around addiction and diversion risk, safety profile**, and **burden** related to **administrative tasks** when prescribing, while **acknowledging their effectiveness** as analgesics
  - Non-opioid analgesics such as **NSAIDs**, acetaminophen, and gabapentinoids were described as associated with **modest effectiveness**, and **tolerability risks** (e.g., increased risk of serious renal and gastrointestinal implications (NSAIDs) and hepatotoxicity (acetaminophen))
  - Respondents noted that **patients suffer negative impacts due to inadequately managed acute pain** and are not fully satisfied with treatment options

Figure 1. Identified Key Concepts & Themes

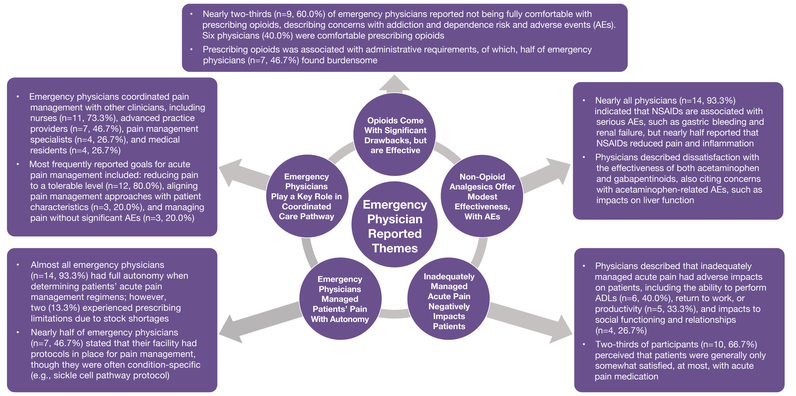

Table 2. Emergency Physician Perceptions of Key Advantages & Disadvantages of Acute Pain Medications[a]

	Key Advantages	Key Disadvantages
Opioids	• Analgesic effectiveness (n=8, 53.3%)	Risk of side effects, including at-risk populations – Risk of AEs (e.g., drowsiness/sedation/altered cognition, constipation, respiratory depression, overdose) [n=14, 93.3%] – Prescribing to at-risk populations (n=10, 66.7%) – Medication interactions or allergies (n=5, 33.3%) Risk of opioid dependence, overdose or addiction: – Opioid habituation or misuse (n=12, 80.0%) Administrative factors[b], including: • State monitoring programs (n=14, 93.3%) • Formulary or medication restrictions (n=7, 46.7%) • Quantity limits (n=6, 40.0%) • Pharmacy stock shortages (n=5, 33.3%) • e-Prescription requirements (n=4, 26.7%) • Pharmacy consultation requirements (n=2, 13.3%)
NSAIDs	• Analgesic effectiveness and/or inflammation reduction (n=7, 46.7%) • Ability for intravenous administration (n=3, 20.0%) • Non-opioid/non-addictive (n=3, 13.3%)	• Side effects/AEs, such as GI bleeding and renal failure (n=14, 93.3%) • Prescribing to at-risk populations (n=9, 60.0%) • Medication interactions or allergies (n=3, 20.0%) • Modest analgesic effect compared to opioids (n=2, 13.3%)
Acetaminophen	• Analgesic effectiveness (n=3, 20.0%) • Non-opioid/non-addictive (n=2, 13.3%) • Safety/well tolerated (n=2, 13.3%)	• Impacts on liver function (n=6, 40.0%) • Modest analgesic effect compared to opioids (n=3, 20.0%) • Risk of overdose (n=2, 13.3%)
Gabapentinoids	• Treats neuropathic pain (n=2, 13.3%)	• Slow and weak analgesic onset (n=1, 6.7%)

[a] Only advantages or disadvantages reported by ≥10% of emergency physicians are reported **Table 2**, excluding gabapentinoids due to being mentioned fewer times by physicians.
[b] About half of emergency physicians (n=7, 46.7%) described opioid-specific administrative factors as burdensome.

- Emergency physicians discussed many patient factors that impact their pain management decisions, such as comorbidities, history of opioid misuse, age, and clinical factors, including type of medical condition and severity of pain (**Figure 2**)
- All emergency physicians described challenging patient populations; the most common were patients experiencing chronic pain, opioid tolerance, or opioid addiction (n=10, 66.7%), patients with medication interactions or allergies (n=3, 20.0%), and elderly patients (n=3, 20.0%)
- Seven emergency physicians (46.7%) incorporated patients' preferences into their approach to pain management, with an additional five (33.3%) noting they only consider patients' medication preferences within certain contexts (e.g., prior opioid use disorder)

Figure 2. Patient & Clinical Characteristics Impacting Emergency Physicians' Pain Management Decisions

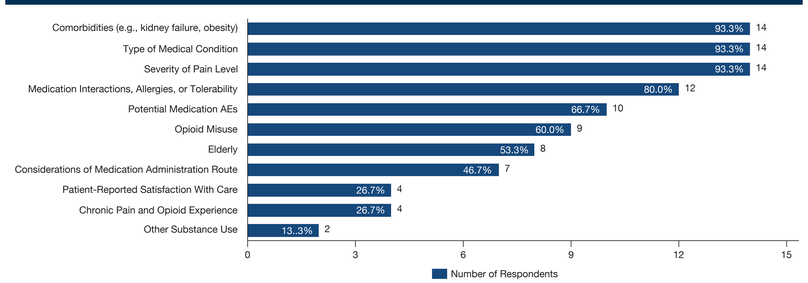

Figure 3. Representative Quotes From Emergency Physicians Describing Their Experience Managing Patients' Acute Pain

Satisfaction With Pain Medications

I think that we as, as a medical community, ***I think that it would be nice to have other options.*** *And the* ***options that we have are—I think are more limited,*** *because a* ***lot of people, they can't tolerate the NSAIDs,*** *and they also have sometimes, a* ***not-so-great safety profile long-term****—and that they can cause GI bleeds and renal dysfunction. So, it would* ***definitely be nice to have other options****—now that opioids are considered to be dependent (EP107).*

I don't think they're necessarily great. *I think non-steroidals are really good but they have their own side effects. GI upset and a lotta GI potentially issues, especially if the person's not eating, and then they're having kidney issues. It's just problematic. And then* ***sometimes in acute pain, non-steroidals are just not enough,*** *at least initially. And then with everything going on* ***with opiates, it's just very, very difficult to be confident in the fact that you're writing this prescription, and that you're not compromising your patient in some way…It's very complicated, especially in an emergency setting*** *where, 1) you're trying to adequately treat acute pain, and then, 2) you don't really know these patients (EP108).*

Challenging Patient Populations

Patients with a ***history of chronic pain is very, very tough.*** *Patients with a history of* ***substance abuse, psychiatric patients…****patients who are demented is huge,* ***elderly patient populations with multiple drug interactions, constipation*** *of course, with these elderly patients, with general populace, but especially with the* ***elderly are particularly tough*** *(EP103).*

Physician-Reported Patient Impacts

Oh, my God, ***[patients are] destroyed by inadequate pain management.*** *Inadequate pain management is probably* ***the reason why we have an opiate problem.*** *It's not because we prescribe too much, it's because* ***we prescribed the wrong stuff to the wrong people. And we've left a lot of people in the lurch in terms of still being super uncomfortable and looking for pain control*** *and getting it in all the wrong places. So, we've missed the mark in both directions in my mind (EP113).*

Oh, yeah. ***They don't want to get addicted.*** *So,"Oh, no, no, I heard this can—you get addicted, and I don't want to do this," or they had a previous experience that they had the issue with addiction. Or they have a family member or somebody who was on it and they're just scared.* ***So, the addiction is more issue than anything.*** *(EP105).*

Emergency Physician Prescribing Autonomy

[T]he war on prescription opiates and narcotics has limited the amount of pain medicine we can give and I'm okay with that—within reason. ***There's gonna be a few people that probably need more and they're really struggling to get it. Doctors are afraid to write for large amounts and for some people it's a big problem*** *(EP110).*

Physician-Reported Patient Satisfaction

[Patients are] ***Horribly satisfied.*** *None of them like it 'cause they don't work.* ***Opiates aren't great pain medicine. They knock you out. They're sedatives.*** *They make you apathetic and somewhat indifferent to the situation. They don't actually make it so the broken bone doesn't hurt. They make it easier to live with the pain that you have (EP113).*

Administrative Burden With Opioid Prescribing

[W]hen you prescribe opiates using the EMR, there's a Duo push that goes to your phone, and ***you have to click it and you have to kinda enter in your username and password. It's kind of a pain in the butt,*** *but you get used to it,* ***it's another, another minute of your day, every time you need to do that.*** *I think also an issue is prescribing medications these days and the* ***shortages at local pharmacies.*** *Also, pharmacies close quite early, um, so a supply issue, can the patient actually get the medication when you're discharging them, right, 'cause the pharmacy closes at 7 or 8 o'clock at night? So, we're* ***frequently giving patients, a few doses to get them through that day, and so they can get to the pharmacy. That's also another order to put into the EMR*** *(EP103).*

DISCUSSION

- Opioids are commonly used for the treatment of moderate-to-severe acute pain; emergency physicians reported concerns with AEs and addiction, diversion, and overdose risk, but cited satisfaction with the analgesic effectiveness of opioids
- Emergency physicians described that prescribing opioids results in additional administrative burden and process complexity, suggesting that opioid-related tasks may increase pain management prescribing time
- Emergency physicians reported mixed perceptions about the analgesic effectiveness of NSAIDs and acetaminophen, and further highlighted safety concerns. Perceived dissatisfaction with the effectiveness of non-opioid analgesics may be due to the difficulty of managing severe pain, which is common in emergency settings, particularly in cases of trauma,[5] although emergency physicians noted the advantages of having non-opioid analgesic options
- Two-thirds of emergency physicians reported being not fully satisfied with current treatment options. Moreover, some physicians perceived that limitations with available therapies may result in inadequately managed post-operative pain, leading to impacts to patients' ADLs, productivity, and social functioning

CONCLUSIONS

- **This qualitative research illustrates emergency physician perspectives of the challenges and barriers to acute pain management and highlights the detrimental effects of inadequately managed acute pain on patients, such as negative impacts to ADL and productivity**
- **Emergency physician perspectives of the benefits and challenges of medications for acute pain management underscore a need for novel therapies with analgesic effectiveness, improved safety, reduced administrative burden, and no addictive potential**

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Author Disclosures

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