Management pathway for emergency department patients in the setting of the opioid epidemic and emergency department overcrowding

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Objective The United States is currently in the midst of a major opioid addiction epidemic, of which the primary drivers are a sharp increase in prescription opioid pain medications, their misuse, and the inordinate illicit use of opioids. Declared a national health emergency, the opioid crisis puts enormous pressure on various systems, including increasing overcrowding in emergency departments (EDs) and forced changes in prescribing practices. We are piloting a newly-developed ED opiate pathway to streamline ED care for patients who frequently present at the ED for chronic pain management or other recurrent pain-causing medical problems.

Methods Patients at risk of possible opioid addiction are identified and their records are reviewed. If there is no narcotics agreement in place, the ED care team contacts the primary care physician and any other service providers involved in the patient’s care to create a comprehensive pain management program.

Results Our pathway is simple and geared toward streamlining and improving care for patients with opioid addiction and misuse. We looked at seven patients in this pilot study with mixed results regarding decreasing future ED visits.

Conclusion This strategy may both limit opioid usage and abuse as well as limit ED visits and overcrowding by streamlining ED care for patients who frequently present for chronic pain management or other recurrent medical problems.

Keywords Opioid-related disorders; Crowding; Opioid epidemic; Public health; Critical pathways

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INTRODUCTION

The United States is currently in the midst of a major opioid addiction epidemic. The primary drivers of this epidemic are a sharp increase in the prescription of opioid pain medications and their misuse.\textsuperscript{1-5} Recent data showed that there are currently 20 million narcotic addicts, with more than 33,000 opioid-related deaths in the United States in 2016, and a measurable decrease in life expectancy of opioid users.\textsuperscript{6} The opioid crisis has been declared a national health emergency and has put enormous pressure on an already overburdened health care system, contributing to the overcrowding in emergency departments (EDs), among other factors.\textsuperscript{7-9}

According to the Centers for Disease Control and Prevention, 26\% of patients using prescribed opioids become opioid-dependent, while one in 550 patients receiving chronic opioid treatment dies from opioid-related causes.\textsuperscript{9} EDs contribute to this crisis by prescribing large numbers of opioids, making them a primary source of opioid over-prescription.\textsuperscript{7,8,10} Opioid overdose has been named the eighth leading cause of mortality within the first week after an ED visit.\textsuperscript{7} ED physicians face the challenge of balancing patient risk against patient discomfort daily when prescribing opioid painkillers in the absence of relevant prescribing tools and guidelines.\textsuperscript{1,11,12} Clinicians are forced to determine the safest treatment options, having to decide which patients are best suited for opioid treatment.\textsuperscript{13} A recent study grouped emergency physicians as either high prescribers (opioids prescribed to 25\% of ED patients) or low prescribers (prescribed to 7\% of patients), with ED patients who saw a high-prescribing physician being three times more likely to receive an opioid.\textsuperscript{14}

As the opioid epidemic has escalated markedly in recent years, EDs—despite worsening overcrowding—have moved to the forefront of assisting those affected by the epidemic, caring for tens of thousands of overdose victims across all demographic groups.\textsuperscript{1,2,7} In contrast with inpatient wards and outpatient clinics, ED decisions regarding opioid management are made under intense time pressure, limiting ED physicians’ ability to make complex treatment decisions regarding opioid use.\textsuperscript{14,15} Compounding this problem, physicians in an outpatient setting are becoming more restrictive in prescribing opioids, meaning that patients present at EDs for pain control and the opioid prescriptions that they would have obtained as outpatients.

Combating the opioid epidemic requires a reassessment of how clinicians provide care to addicts and overdose patients, how they view and prescribe opioids, how they provide patients with treatment resources, and how they collaborate and coordinate with other stakeholders.\textsuperscript{4,13} To address this issue, we have developed a pathway to streamline ED care for patients who frequently present to the ED for chronic pain management or other recurrent pain-causing medical problems. The goal is to both limit narcotic usage and abuse as well as limit ED visits and overcrowding by streamlining ED care in patients who frequently present to the ED for chronic pain management or other recurrent medical problems.
The following protocol for the ED management of Mr/s. XXX’s pain when it becomes intractable to outpatient treatment, has been effective and can be used if he/she comes to ED, though not more frequently than once a week:

1) IM Phenergan 25 mg x 1
   IV Benadryl 25 mg x 1
   IV Dilaudid 0.5 mg x 1. May repeat x 1

2) May begin 15-30 minutes following IV Dilaudid from round 1.
   IM Phenergan 25 mg x 1
   IV Dilaudid 0.5 mg x 1. May repeat x 1

3) May begin 15-30 minutes following IV Dilaudid from round 2.
   IV Zofran 4 mg x 1
   IV Benadryl 25 mg x 1
   IV Dilaudid 0.5 mg x 1. May repeat x 1

4) May begin 15-30 minutes following IV Dilaudid from round 3.
   IV Benadryl 25 mg x 1
   IV Dilaudid 0.5 mg x 1. May repeat x 1
   A total of 4 mg of IV Dilaudid may be used.
   A total of 50 mg of Phenergan may be used.
   A total of 75 of Benadryl may be used.
   A total of 4 mg x 1 of Zofran may be used.

Fig. 1. Sample pain treatment protocol that can be sent to primary care physician. ED, emergency department; IM, intramuscular; IV, intravenous.
syndromes—with the goal of coordinating and improving overall patient care while limiting inappropriate use of the ED and the resultant ED overcrowding in this high-risk patient population.

**DISCUSSION**

To address the opioid crisis, providers need to shift from viewing addiction as a moral failure to rather viewing the problem as a treatable chronic illness.1-15 EDs, by helping to prevent inappropriate opioid use and identifying as well as treating those affected by the opioid crisis, can play an invaluable role, both in helping their patients and preserving ED capacity for acute illnesses.16-18

Hospital leadership and health systems must fully support clinicians in providing patients with resources and treatments and in addressing the system-based issues driving ED overcrowding.18 In synergy, the government needs to increase its efforts to reduce the public’s exposure to opioids, improve access to safe and effective addiction treatment, and help ensure the effective use of EDs through appropriate legislation.19 A novel adjunct has been the use of ‘navigators.’ These are ED staff allocated to follow up with the patients at home after they have been discharged from the ED to ensure that they receive the appropriate treatments and support.15

Standardization initiatives in the ED, such as opioid prescribing guidelines, have been suggested to reduce both the volume of opioid prescriptions as well as number of new addictions by decreasing opioid prescriptions.17 To address the variability in prescribing practices, hospitals and health care systems should ensure that clinicians and staff have the appropriate resources readily available, including prescribing guidelines, prescriber feedback, and patient education material.13,15

Future pathway development and goals, as the use of this pathway becomes more widespread, include the measurement of ED length of stay, finding variables that identify success, and performing specific outcome analyses. We plan to observe the post-implementation metrics of care pathways with the goal of ultimately discerning whether the pathway implementation has resulted in reductions in number of ED visits for individual patients as well ED visits in general for patients needing opioid-related care.

Although this is as a pilot study, we have anecdotaly seen that our pathway could limit both opioid abuse and—at least in one case—limit the frequency of ED visits. It is clear that robust data are critical to confirm scientific validity, and we plan to continue this study to establish its utility. Additionally, we have tailored our pathway to our in-house ED dashboard notification system. To use this system in other institutions, the logistics and electronic medical record system would have to be tailored appropriately.

Nevertheless, we believe that the principles of this notification system and the pathway in general remain the same, regardless of the individual hospital or patient care system. This pathway could be utilized in a paper format as well.

To summarize, creating an opioid management pathway may streamline ED care for patients who frequently present at the ED for chronic pain management or other recurrent medical problems. This strategy may both limit opioid usage and abuse as well as ED visits and overcrowding.

**CONFLICT OF INTEREST**

No potential conflict of interest relevant to this article was reported.

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