

Emergency Department Prescription Opioids as an Initial Exposure Preceding Addiction



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Study objective: Opioid abuse and overdose constitute an ongoing health emergency. Many presume opioids have little potential for iatrogenic addiction when used as directed, particularly in short courses, as is typical of the emergency department (ED) setting. We preliminarily explore the possibility that initial exposure to opioids by EDs could be related to subsequent opioid misuse.

Methods: This cross-sectional study surveyed a convenience sample of patients reporting heroin or nonmedical opioid use at an urban, academic ED. We estimated the proportion whose initial exposure to opioids was a legitimate medical prescription and the proportion of those prescriptions that came from an ED. Secondary measurements included the proportion of patients receiving nonopioid substances before initial opioid exposure, the source of opioids between initial exposure and onset of regular nonmedical use, and time from initial prescription to opioid use disorder.

Results: Of 59 subjects, 35 (59%; 95% confidence interval [CI] 47% to 71%) reported they were first exposed to opioids by a legitimate medical prescription, and for 10 of 35 (29%; 95% CI 16% to 45%), the prescription came from an ED. Most medically exposed subjects (28/35; 80%; 95% CI 65% to 91%) reported nonopioid substance use or treatment for nonopioid substance use disorders preceding the initial opioid exposure. Emergency providers were a source of opioids between exposure and onset of regular nonmedical use in 11 of 35 cases (31%; 95% CI 18% to 48%). Thirty-one of the 35 medically exposed subjects reported the time of onset of nonmedical use; median time from exposure to onset of nonmedical use was 6 months for use to get high (N=25; interquartile range [IQR] 2 to 36), 12 months for regular use to get high (N=24; IQR 2 to 36), 18 months for use to avoid withdrawal (N=26; IQR 2 to 38), and 24 months for regular use to avoid withdrawal (N=27; IQR 2 to 48). Eleven subjects (36%; 95% CI 21% to 53%) began nonmedical use within 2 months, and 9 of 11 (82%; 95% CI 53% to 96%) reported nonopioid substance use or treatment for alcohol abuse before initial opioid exposure.

Conclusion: Although short-term opioid administration by emergency providers is unlikely to cause addiction by itself, ED opioid prescriptions may contribute to the development of addiction in some patients. There is an urgent need for further research to estimate long-term risks of short-course opioid therapy so that the risk of iatrogenic addiction can be appropriately balanced with the benefit of analgesia. [Ann Emerg Med. 2016;68:202-208.]

Please see page 203 for the Editor's Capsule Summary of this article.

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INTRODUCTION

Background

During the past decade, a rapid increase in the sale of prescription opioids has been directly paralleled by an increase in overdose deaths.^{1,2} Approximately 16 million people in the United States report nonmedical use of prescription opioids.³ In 2008, overdoses caused by prescription opioids surpassed those caused by heroin and cocaine combined, and drug overdose surpassed motor

vehicle crashes as the number 1 cause of injury death for the first time.⁴ Recent increases in heroin use may be due in part to individuals transitioning from nonmedical prescription opioid use to heroin.⁵

The ways in which opioid prescribing leads to harm are not well characterized. To date, attention has focused on the problems of opioid abuse, diversion, and overdose. These issues pertain primarily to individuals who are already experiencing substance use disorders.⁶ More recently, the possibility that legitimate use of prescription opioids has led to incident substance use disorders (iatrogenic addiction) is

Editor's Capsule Summary

What is already known on this topic

Opioid abuse has increased during the past 15 years, and prescription opioids are one potential triggering source.

What question this study addressed

In a convenience sample of emergency department (ED) patients with declared opioid abuse, how often do they report prescriptive exposure as an initial event?

What this study adds to our knowledge

Of the 59 respondents, 35 (59%) said medical prescriptive exposure preceded opioid abuse, with 10 reporting the ED as the source. However, 28 of the medically exposed patients (80%) had another existing abuse issue before opioid contact, and the timing of first opioid exposure and abuse varied widely.

How this is relevant to clinical practice

ED prescribing can affect some individuals who will develop an opioid abuse syndrome, but the magnitude and course are uncertain.

beginning to gather attention.⁶⁻⁹ When iatrogenic addiction has been considered, it is almost exclusively in the context of chronic pain.¹⁰ Not surprisingly, emergency providers commonly believe that short courses of opioid therapy for acute pain are safe and that their role in the current opioid crisis is limited to attenuating diversion.¹¹ However, several recent studies have demonstrated that short-course opioid therapy for acute pain is associated with recurrent use of opioids, raising the possibility that short-course opioid therapy may be a trigger for the onset of opioid-related substance use disorders.⁷⁻⁹ If so, there are considerable health implications because more than 1 in every 6 patients discharged from an emergency department (ED) are given a prescription for an opioid pain reliever.¹²

Importance

The risk of iatrogenic addiction must be defined before providers can balance the risk of substance use disorders with the benefits of opioids for analgesia. Demonstrating that iatrogenic addiction is relevant to the ED setting could spur research needed to identify patients at risk of addiction and develop methods to modify that risk. Conversely, finding that the likelihood of iatrogenic addiction in ED patients is low could lead to improved pain treatment.

Goals of This Investigation

The goal of this study was to explore the extent to which ED patients who have come to use heroin or other opioids for nonmedical purposes report that a legitimate medical prescription (ie, prescription from their physician that is used for a medical purpose) was their first exposure to opioids, and how often that prescription came from an ED. Secondly, we measured the proportion of patients using nonopioid substances before initial opioid exposure, the source of opioids between initial exposure and onset of regular nonmedical use, and the time from initial prescription to indicators of opioid use disorders.

MATERIALS AND METHODS

Study Design

This was a structured, investigator-administered survey study that enrolled a convenience sample of ED patients who self-reported heroin or nonmedical prescription opioid use, defined as use of pharmaceutical opioids in a manner other than as prescribed. The study was approved by the institutional review board.

Setting

Subjects were recruited in an urban academic teaching hospital serving a predominantly adult population, with more than 70,000 encounters annually. It is the only adult Level I trauma center in the region, and it provides care for many of the region's uninsured.

Selection of Participants and Data Collection and Processing

Investigators screened for potential subjects with self-reported heroin or nonmedical prescription opioid use (defined as use to get high, using more than was prescribed, or receiving medication prescribed to someone else) from April 2015 through July 2015. This was primarily accomplished by reviewing the electronic medical record for chief complaints and triage notations including words such as *heroin*, *withdrawal*, *overdose*, and *abscess*. Potentially eligible patients could also be referred by ED staff. When no potential subjects were identified by these methods, study staff approached patients aged 18 to 40 years to assess for eligibility by asking about medication and drug use; general medication, opioid, and drug abuse questions were mixed to disguise the actual study focus. Subjects were excluded if they were unable or unwilling to consent, had previously enrolled in the study, or were in police custody. Although screening was not rigorously monitored, we did track which patients were approached and whether the approach was because of heroin use, opioid overdose,

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