

# Reducing Harm: Exploring Perceptions of Chronic Pain and Opioid Misuse in Healthcare Settings

Cheyenne Reyes, MPH\* 1,2, Dr. Carrie Lawrence, PhD, CFLE, CHES 2, & Tessa Nalven, MA 1

1 University of Rhode Island, Department of Psychology, 2 Indiana University School of Public Health, \* Corresponding Author

## ABSTRACT

Background: Opioid misuse has increased significantly in the U.S., with mortality rates tripling within the past decade and a half.

Purpose: The purpose of this study is to explore healthcare providers' perceptions of how the opioid epidemic has impacted their day-to-day patient interactions and practice.

Method: Semi-structured phone interviews were conducted among healthcare providers ( $n=6$ ), recorded, and transcribed verbatim. An interpretive phenomenological analysis framework was then used to evaluate these data, with two independent coders analyzing these data for common themes.

Results: Major themes emerging from the data include: (1) skepticism and apprehension in medical decision-making, (2) increased awareness of and focus on patients' chronic pain and opioid use, and (3) influences of the financial market on medical practice, access, and care.

Discussion/Conclusion: This study provides insight on how evolving policy and professional standards impact providers' everyday practice. Integrating in-depth training and continuing education on treating patients who misuse opioids may build provider self-efficacy and lead to more informed and effective treatment.

Patient or Public Contribution: Healthcare providers working with members of their communities gave their testimonials of patient care. These testimonials provide insight into how the historical context of the opioid epidemic and resultant changes in professional standards and healthcare policy may impact the provider-patient relationship.

Keywords: chronic pain; substance use; opioids; doctor-patient, nurse-patient communication; professional education; healthcare; medicine; qualitative; phenomenology

## **INTRODUCTION**

The significant increase of opioid misuse and overdose in the last twenty years is a high-profile public health issue in the United States. While opioid medications serve a medical purpose strong pain relievers, their misuse (i.e. use of non-prescribed opioids or use in a different way than is prescribed) is associated with negative consequences [1]. Overdose-related hospitalizations have risen substantially while the rate of overdose deaths tripled from 1999 to 2014. In addition, over 60% of overdose deaths involved opioid use or misuse [2-4]. Prescribing practices are also highly impacted by the increased rates of opioid misuse. From 1999 to 2011, opioids prescribed in the United States almost tripled as prescription opioid misuse doubled [6]. It is evident that primary care patients with chronic pain are overprescribed opioid medications and are at higher risk for opioid dependence or addiction. Furthermore, the varied impact of the opioid epidemic across the United States was magnified by regional differences in access, resources, and policy.

The state of Indiana has been hard-hit by the opioid epidemic. From 2011-2015, the Indiana State Department of Health reported a 14.2% annual increase in the rate of non-fatal Emergency Department (ED) visits due to opioid overdose as well as a 3.5% annual increase in overdose deaths [7], with rates of opioid misuse higher than the national average [8]. In 2015, rural Scott County experienced a devastating HIV (Human immunodeficiency virus) outbreak due to injection drug use. This outbreak contributed to 30.4% of newly diagnosed cases of HIV in the state, with 169 out of a population of approximately 24,000 testing

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positive for HIV [9, 10]. This HIV outbreak is thought to be linked to the slow-release opioid Opana [9, 12]. Although designed to be “abuse deterrent”, IV use of this medication created conditions for the spread of infectious diseases such as Hepatitis C and HIV associated with needle-sharing [6]. Increased needle sharing, which was considered illegal in the state at the time, with no legal needle exchanges programs greatly contributed to the severity of this outbreak [13].

Health inequities have also magnified effects of the opioid epidemic in rural states such as Indiana. Rural geographical area has been identified as a predictor of opioid-related morbidity, mortality, and over-prescription [15]. Some rural communities have limited access to healthcare related to low population density and lack of resources (e.g. lower income and poverty) [16]. Increased likelihood of misusing opioids includes low-income individuals and those who are uninsured or on Medicaid [2]. Distance, financial burden, and fear of stigma also present significant barriers for seeking healthcare in rural areas [17], highlighting the importance of addressing the opioid epidemic within disproportionately impacted rural communities.

Policy and healthcare interventions have been implemented to reduce opioid-related harm. Federal and state governments have attempted to ameliorate this crisis by addressing prescribing practices at the provider level [18]. Federal funds for naloxone prescriptions, used to temporarily reverse the effects of opioid overdose, and medication assisted treatment (MAT) programs, offering opioid agonist therapies, have increased as part of the U.S. Department of Health and Human Services’ Opioid Initiative [19]. State legislation designed to limit diversion of opioids into illicit drug markets by limiting supply, mandating dispenser reporting, and enacting prescription drug monitoring programs [PDMPs] are related to significant reduction in prescription misuse and overdose rates [20-25]. A notable intervention in Indiana is PDMP INSPECT, a surveillance program which allows Indiana prescribers and law enforcement to monitor and track prescribed controlled substances [26]. Local implementation of syringe exchange programs was also permitted to combat communicable diseases associated with IV drug use [27]. Further, funding was increased for naloxone and MAT and state medical board-mandated “treatment agreements” were created to measure opioid treatment compliance among providers [27-30]. Indeed, implementation of “treatment agreements” and monitoring INSPECT has been associated

with decreased opioid use across the state [31]. Interventions have also experienced varying degrees of effectiveness, confounded by factors such as utilization of interventions by healthcare providers and stigmatization of patients when seeking treatment for substance misuse [29, 34-36]. Despite significant changes to policy and private-sector interventions, few studies have explored perspectives of Indiana's health care providers on the opioid epidemic or opioid misuse in general [37].

Primary care providers, as primary prescribers of opioids in the U.S., have largely been the focus of practice and policy interventions [38]. Yet, there is limited research on how the opioid crisis has impacted their practice and/or patient populations. Barriers to appropriate treatment include the provider's lack of confidence in identifying substance use and prescribing accordingly [39]. Many prescribers report feeling inexperienced in dealing with substance use within chronic pain management [40, 41]. Negative patient interactions also present unique challenges for primary care providers treating chronic pain [42, 43], particularly patients with current or a history of opioid misuse [44, 45]. Difficulty identifying opioid misuse may impact rapport and create barriers for patients seeking treatment for pain and/or substance use.

As standards of care shift due to the opioid epidemic, it is important to understand healthcare providers' attitudes and approach to addressing the opioid epidemic in their practices. This interpretive phenomenological study aims to elicit healthcare providers' perceptions of the opioid epidemic's impact on their patient populations and day-to-day practice. This study will contribute to greater understanding of how these providers navigate an ever-changing healthcare landscape.

## **MATERIALS AND METHODS**

Recruitment and Participation: Licensed healthcare providers with the ability to prescribe in the state of Indiana were eligible for participation in this study. Participants were recruited through flyers posted in the offices of healthcare providers interested in prior related studies. Interested participants were also referred by other providers. After expressing interest, contact was made by email to arrange for an interview time and consent was obtained. Consent was confirmed verbally over the phone prior to commencement of the phone interview.

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Semi-Structured Interview: A semi-structured interview script was used to guide coding and analysis, and interviews were conducted to elicit responses that explored perceptions, beliefs, and opinions of the participants [46, 47]. Broad, open-ended questions were designed to elicit perceptions of the opioid epidemic, explore the impact on their pain management patients and practice, and identify tools used by participants to identify and address opioid misuse in clinical settings. This study and its materials were approved by the university's Internal Review Board.

Interview Procedure: The lead author acted as the interviewer. The interviewer and participants called into a secure conference call line with audio recording coordinated by a large Midwestern university's Conference Call Services to maintain confidentiality. A phone interview was then conducted, lasting between 25-60 minutes ( $M=45$  min). During the interviews, field notes were taken and stored in a field journal to chronicle reflections and reactions to the interview. Audio-recorded interviews were transcribed verbatim by the author, with personal identifiers removed to preserve participant confidentiality.

Transcription and Analysis: An interpretive phenomenological analysis (IPA) framework was used to interpret how the opioid epidemic has affected each providers' perception of their medical practice. As a methodology focused on examining the lived experiences of the participants, studies that focus on uncovering attitudes and perceptions among their participants are a good fit for IPA [48]. As the participant reflects upon their experience, the researcher is mindful of how their own worldview may impact understanding of the participant's experiential account [49]. IPA allows the researcher to gather rich data while also allowing the researcher space to explore their own interpretations of the participants' experiences [50]. Audio files of the interviews, interview transcripts, and field notes were used for these analyses. Audio files were transcribed and reviewed to ensure verbatim client responses including pauses, inflections, and other types of emphasis that might convey meaning in the written transcripts. Triangulation of recurrent themes, new observations, and conflicting themes from interview scripts field notes were used to control against internal biases and increase internal validity. Two coders (the first author and the second author) individually analyzed and elicited common themes from the scripts and field. The interviewer also routinely consulted with the second author, who specializes in qualitative methodology, throughout the course of the interview to ensure

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that the interview data was sufficiently elicited and collected. Trends in the interview data were then isolated, with similar trends being grouped together into one of three major emerging themes.

### **RESULTS**

The final sample included four primary care providers, an occupational health physician, and a physiatrist (physician specializing in physical medicine and rehabilitation) in Indiana ( $n=6$ ). The size of this sample is considered optimal for IPA, as a small sample allows for detailed exploration of the subject matter [50]. Three major themes emerged from the: increased awareness of and focus on patients' chronic pain and opioid use in medical practice, adaptation to changing standards in medical decision-making, and market influences on medical care.

#### Increased Awareness of and Focus on Patients' Chronic Pain and Opioid Use in Medical Practice

The scope and severity of the opioid epidemic has led to a shift in providers' day-to-day medical practice and perceptions of pain-related pathology. Awareness of possible opioid misuse was noted among providers. While discussing the impact of the opioid epidemic on their pain management patients, one provider noted,

*"I have stories of patients who have had primary care physicians that have been prescribing pain medication to them but stopped because they were scared of the new CDC guidelines"* (Provider 6)

Diversion of opioids is also salient to providers, who are taking steps to decrease over prescription and diversion of opioids in their communities,

*"We have cut down on prescribing opioids because we've found out that those medications have not been going to the correct patient"* (Provider 4)

The role of inappropriate prescribing patterns in the exacerbation of the opioid crisis has been identified as a catalyst to prevent opioid misuse and associated health conditions. One provider commented on the link between opioid prescription and resulting dependence:

*I can say from experience that it appears that the majority of patients that are on methadone that I have seem to have- the crux of their issue*

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*has begun with prescription opioid medication... If we could stop the opioid prescribing patterns, we could stop other things like the AIDS epidemic that happened in Scott County with [intravenous] drug use that all started with prescription medication. (Provider 1)*

Although Indiana providers are required to limit opioid prescriptions per SEA 226, a state senate bill mandating a prescribing cap on opioids, they are still addressing patients' pain. Addressing the injury where the pain originates is now the focus of pain management, impacting medical decision-making. One provider noted their decision to prescribe opioid painkillers,

*"It's the severity of the injury, and if the pathology matches their complaint, then I will prescribe pain medication"* (Provider 5)

Providers also described opioid painkillers commonly being a treatment of last resort with growing emphasis of comprehensive pain management. The importance of including holistic approaches to pain management was emphasized:

*"We don't just stop with 'your pain is not resolved, so let's just write you another script'... Whether that be acupuncture, anti-inflammatories, physical therapy, yoga... other avenues besides pills..."* (Provider 2)

Providers consider multiple non-opioid treatments and tailor these treatment plans to manage chronic pain long-term.

### Uncertainty and Adaptation to Changing Standards in Medical Decision-Making

Although healthcare providers are aware of best practices to address chronic pain and substance use, there is still uncertainty when prescribing opioids in Indiana's ever-changing medical landscape. Providers have implemented controlled substance agreements, monitoring PDMPs, random urine drug screens, and other approaches to provide objective treatment measures. One prescriber described their organization's recently implemented opioid prescribing guidelines:

*"We don't prescribe freely. First of all, we have very strict guidelines in our organization in terms of who gets it and if they meet the criteria. Secondly, there always has to be an alternative always being tried and the patient is always educated... every patient has*

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*to have a controlled substance agreement with a treatment plan as well as an informed consent for the medication prescribed annually.*  
(Provider 1)

Adhering to prescribing guidelines gives providers the opportunity to tailor treatments to patient needs. By incorporating clear prescribing guidelines, prescribers can educate patients and allow them to be involved in their pain care, which may increase treatment compliance [51]. Though a complex issue, one provider had a straightforward strategy:

*“I am very upfront to my patients about why I prescribe medications and why I don’t want to prescribe medications”* (Provider 5)

Healthcare providers have found ways to increase certainty when prescribing opioids. Nevertheless, these strategies are only beginning steps in addressing a decades-long Public Health crisis. As pain management cases become increasingly complex with substance misuse, comorbid mental health concerns, or other chronic health conditions, these cases may be seen by providers as outside their scope of practice. Provider 2 states,

*“I have patients that are in drug court, and I have patients that have had failed back surgery, failed knee surgery, terrible arthritis that come in for pain medicine. Those are very few and I try to give them over to pain management.”*

Referral to specialists are increasingly common, especially for long-term pain management patients and patients with a history of substance use. Uncertainty and apprehension may still occur in day-to-day medical practice despite increased regulations and guidelines for pain management treatment.

### External Influences on Medical Care and Practice:

Factors outside patients’ and healthcare providers’ control may influence the quality of available medical services. In fact, many of these external factors are recognized as precipitating the opioid epidemic. Providers readily offered accounts of how past norms led to present-day health outcomes. One provider describes how the field of medicine has gotten to this point,

*“I think this happened over the past 20 years slowly. Twenty years ago, when I was a young nurse, pain was the 5<sup>th</sup> vital sign, and you*

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*were written up and physicians were pushed to write up and treat pain” (Provider 2).*

Monetary incentive and lowered appointment times were also commonly identified reinforcers. One provider drew parallels between the overprescription of opioids and increase of MAT providers saying,

*“You have a lot of physicians out there that make their money off prescribing pain medications or treating pain medicine abuse. I believe that it is abhorrent and unethical” (Provider 5).*

The opioid epidemic has sparked reflection among healthcare providers about standards of care. Providing care to the increasing number of insured patients is another for healthcare providers, especially concerning physician shortages in the United States relative to a growing and aging population [52]. One provider conveyed:

*“The Affordable Care Act, which I think is wonderful, but there’s now a lack of physicians to take care of the influx of patients... We don’t have enough psychiatrists in [the community] hands-down. Nobody does, we’re not making enough or training enough, so that could go all the way up to the federal government where the [Accreditation Council for Graduate Medical Education] isn’t sponsoring enough residency spots, and they should be emphasizing psychiatry and primary care. I mean I’m treating a ton on my own, and if I didn’t, you know, there’s no way I could get my patients in. So having more addiction specialists and having us be able to filter through to them being the screening people, we don’t have enough”.*  
(Provider 4)

The influx of newly-insured patients is taxing a healthcare system with insufficient provider coverage, while potential healthcare providers that would be best suited to address the opioid epidemic are not receiving residencies or being housed in the communities that need them the most. Geographical factors also present challenges to Indiana healthcare providers. Patients living in rural areas of the state must put more effort into accessing healthcare than patients in urban areas due to longer travel times for medical care and less access to specialists [53]. This is especially true for patients and providers dealing with opioid misuse in rural settings. Even if a provider can refer to a specialist, the specialist might not be accessible:

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*“Mental health and substance misuse referrals have been a gap in what I’ve been able to provide. There’s not a lot of treatment programs in our area for that, and treatment programs that take the uninsured are really far away or rare...” (Provider 3)*

Insurance, law and policy, geography-associated supply and demand, and healthcare norms are precipitating factors to the opioid epidemic. They are also seen by providers as barriers to providing adequate care.

### **DISCUSSION**

The present study explored providers’ perceptions of the opioid epidemic and its impact on rural Indiana. Despite increasing opioid misuse nationally, the opioid epidemic’s impact on patient care has not been explored in-depth. Through IPA, the present study uncovered three major themes relating to awareness of opioid use in medical settings, adapting to changing standards, and market influences.

Providers described how the opioid epidemic has influenced their perceptions of medical practice. Indiana healthcare providers described the opioid epidemic as the culmination of long-term culture and market shifts in healthcare. The scope and severity of the opioid epidemic has garnered nation-wide attention, leading shifts in day-to-day medical practice. Perceived effects of the opioid epidemic on patients were also examined with varying degrees of impact on perceived quality and access to care, with providers adjusting their opioid prescription policies to recommendations put forth by medical licensing bodies such as the CDC and American Pain Society [1, 54]. Although healthcare providers are aware of best practices regarding chronic pain and substance use, uncertainty with managing this patient population results in increased referral to specialists [55, 56]. Additionally, insurance, geography-associated supply and demand, and healthcare norms and standards are seen as precipitating factors of the opioid crisis and barriers to providing adequate care.

These emerging themes indicate a perceived shift in providers’ professional identities from patient advocates to medical gatekeepers. With new professional guidelines, laws, and policies being implemented to limit opioid prescription and reduce opioid misuse, providers had to alter their treatment of chronic pain and patient interactions [57]. Although screening tools, monitoring opioid use, and using non-opioid pain management are increasingly recommended to treat chronic pain,

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these treatments may not always be accessible to those who need them the most [59]. This discrepancy between best practice and practical application may contribute to increased disparities in healthcare access due to factors such as cost, availability, and time. Providers in this study expressed concern over the cost of utilizing these screening and monitoring tools, which they believe places additional financial burdens on their lower-income patients. As a result, the patient-provider relationship may be impacted by these changes to providers' pain management practices.

Providers in this study expressed concern over the cost of utilizing these screening and monitoring tools, which places additional financial burdens on lower-income patients. As a result, the patient-provider relationship may be impacted by these changes, leaving providers feeling frustrated with balancing adequate pain treatment, legal requirements, and patient-centered care [37, 57]. Changes in quality of care, patient-provider rapport, and job satisfaction among providers are direct consequences of the opioid epidemic on medical practice.

A lack of available training in addressing opioid misuse and safe prescribing practices was a notable concern among participants. Lack of confidence and proficiency in addressing these issues may affect quality of care [39, 43]. Providers' ability to communicate treatment options and recommendations with their patients may impact treatment progress [59]. One way that clinical uncertainty can be addressed is through increased training opportunities in pain management and safe opioid prescribing for students in the medical field, new healthcare providers, and seasoned healthcare professionals [60]. Communication between patients and providers can be improved through training, which may increase treatment adherence and patient satisfaction [61]. Integrating more in-depth training on chronic pain and substance use across healthcare providers' careers may build self-efficacy and lead to more informed and effective treatment.

Delimitations to this study have been considered. Professional and geographical constraints considered the selection criteria limited the number of participants eligible for participation in this study. Specificity of selection criteria is typical of studies using IPA. A narrow sample ensures that the researcher is able to understand a phenomenon from the lens of a particular group of people [62]. Conducting phone interviews in lieu of in-person interviews may also have limited richness of interview

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data to better accommodate participants. Additionally, convenience sampling may have increased the likelihood that providers with stronger views of the opioid epidemic to opt into the study.

Limitations are also considered in this study. Availability of participants was often limited, leading to varying duration of interviews. Shorter interviews may have garnered less detailed data. In addition, small sample size and constrained geographical criteria may limit transferability; however, this sample size is consistent with standards of IPA, and this sample size was sufficient to achieve saturation of arising themes. Future research should consider replicating this study in other geographical areas, utilizing mixed methods of data collection and analysis, and comparing and contrasting provider and patient perceptions of care.

### **CONCLUSION**

This study provides additional insight into healthcare providers' views of the opioid epidemic. Detailed accounts of treating pain before and after the onset of the opioid epidemic provide researchers and lawmakers with insight into how policy and professional guideline changes have impacted healthcare providers' prescribing practices. This study has implications for understanding how healthcare providers conceptualize and implement sudden changes in policy and standards of care to their everyday practice, as well as how this may impact pain management patients' treatment and outcomes. Focusing on provider training and education regarding pain management and opioid misuse may ease growing pains associated with shifting provider roles and stem the amount of prescription opioids diverted into the community.

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## **DECLARATION OF CONFLICTING INTEREST**

The Authors declare that there is no conflict of interest.

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