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# Physicians' Opinions on Connecticut's Prescription Drug Monitoring Program

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Physicians' Opinions on Connecticut's Prescription Drug Monitoring Program

Carolyn Kwiat

B.A., Boston University 2009

A Thesis

Submitted in Partial Fulfillment of the

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APPROVAL PAGE

Master of Public Health Thesis

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Program

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2017

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## ABSTRACT

**Background:** The increase in prescription opiate misuse has become one of the largest public health crises facing the United States. Prescription Drug Monitoring Programs (PDMPs) are large online databases that states use to monitor prescribing and filling of controlled drugs by physicians and pharmacies to identify patients who are misusing prescription drugs and to reduce the prevalence of opioids misuse. However, the literature is not conclusive as to whether or not PDMPs are effective in decreasing opioid misuse, and the rates of PDMP usage among physicians remains low, even in states where usage is mandatory.

**Objectives:** To investigate physicians' attitudes towards the use of the Connecticut Prescription Monitor and Reporting (CPMRS) and to inform a future statewide survey planned by the Connecticut Department of Consumer Protection (DCP) and to identify possible ways to increase the usage of the CPMRS and strengthen its efficacy.

**Methods:** A qualitative study based on semi-structured interviews with physicians was used to explore their attitudes about the use of the CPMRS and toward the opioid epidemic in general.

**Findings:** All participating physicians (n=10) had prescribed opioids for chronic pain and all were knowledgeable about the 2016 Centers for Disease Control (CDC) guidelines. A majority reported using the CPMRS and said that time constraints were the largest barrier to using it. Half of the physicians had used CPMRS to confirm their suspicions about specific patients' behavior. Participants were evenly divided on whether specific "reports" comparing their opioid prescribing frequency to the prescribing frequency of other physicians in their specialty would be

useful. Using the label “epidemic” to describe the current public health concerns about prescription opioids was controversial among participants, but all believed that physicians have a role in preventing prescription drug misuse and overdose.

**Conclusions:** Data from these interviews revealed several policy implications that may increase usage and accessibility of the CPMRS for all prescribers. These include increasing education efforts to inform prescribers about CPMRS features, incorporating the CPMRS into electronic medical records (EMRs), and offering specific training or tutorials on how to use the system effectively and time efficiently. Public health implications revealed from these interviews indicate that not all physicians are unified in their view of the current prescription opioid situation as an “epidemic” and there is concern that the medical community may “overcorrect” in their prescribing practices and block patients from receiving the medication they need to function day to day.



## INTRODUCTION

The rise of prescription opioid misuse has become one of the largest public health crises facing the United States. According to the CDC, drug overdose deaths now outnumber deaths from vehicle collisions and over half of those drug overdose deaths “...involved some type of opioid, including heroin.”<sup>1</sup> Many researchers have placed blame on the increase in prescriptions of opioid pain medication for the management of chronic pain that started in the late 1990s and early 2000s. Prior to that time, opioids were primarily used to manage pain for terminally ill cancer patients on hospice care. However, prescriptions started increasing dramatically after the healthcare community labeled pain as the “5<sup>th</sup> vital sign” and Purdue pharmaceuticals started marketing Oxycontin for the management of chronic pain.<sup>2</sup> The number of prescriptions written for opiate pain medication increased from 30 million in 1991 to 259 million in 2012, which is enough for one prescription for every adult in the United States.<sup>3</sup> CDC data from this same time period show that deaths from prescription opiate overdoses tripled from 1990 to 2013 and now exceed the number of deaths from all illicit drugs combined.<sup>3</sup>

This crisis has affected Americans of all backgrounds, socioeconomic statuses, races, and education level. However, the epidemic has affected some communities worse than others. The state of Connecticut has seen a drastic increase in drug overdose deaths and it appears to be getting worse. The number of people who have died from prescription drug overdoses in Connecticut has been higher than the national average since 2013 and has increased from 6.2 per 100,000 people in 2000 to 14.7 per 100,000 people in 2014.<sup>4</sup> The majority of these overdoses are due to prescription pain medication. In 2014, only five states had higher death rates than

Connecticut from prescription drug overdoses.<sup>4</sup> The prescription opiate crisis is so severe, it has appeared to cause a heroin epidemic as well. Patients who can no longer obtain prescriptions for opiates turn to the illegal equivalent, heroin. The American Society of Addiction Medicine estimates that four out of every five new heroin users started after using prescription opiates.<sup>5</sup> According to the chief medical examiner of Connecticut, deaths from heroin increased 27% and deaths from fentanyl (a specific opiate prescription pain medication) increased 148% from the year 2014 to 2015.<sup>6</sup> The rise of prescription opiates throughout the past two decades appears to have had a staggering ripple effects throughout the country on a multitude of levels.

Prescription Drug Monitoring Programs (PDMPs) are one of the public health tools being used to address the current opioid abuse epidemic. PDMPs are large online databases that monitor the prescriptions of controlled drugs and are easily accessible to prescribers, pharmacists, and law enforcement. These databases are not only for opiate pain medication, but have also been used to monitor the prescription of all controlled medications. If a health care provider is considering prescribing opiate pain medications to a patient, they are able to look up that patient's prescription history and how often he/she has filled those prescriptions. One goal of PDMP is to identify patients who attempt to obtain prescriptions from multiple providers, a practice colloquially described as "doctor shopping." PDMPs also give providers a way to be aware and to be held accountable for their prescription decisions. The first blueprint for PDMPs was established in the 1940s and currently, all states except Missouri have implemented one.<sup>7</sup> In 2013, Connecticut passed a law strengthening the state PDMP and stated that "all prescribers in possession of a Connecticut Controlled Substance Registration ... will be required to register as a user with the Connecticut Prescription Monitoring and Reporting System (CPMRS)."<sup>8</sup> Further,

the law mandates that “any prescribers who dispense controlled substances from their practice or facility will be required to upload dispensing information into the CPMRS Data Collection website.”<sup>8</sup>

The purpose of this study was to investigate physicians' attitudes towards and use of CPMRS and to inform a future statewide survey planned by the DCP. We also sought to obtain physicians' opinions regarding the use of prescription opioids and the current public health issue regarding opioid abuse.

## BACKGROUND

### Effectiveness of PDMPs

Data concerning the effectiveness of PDMPs in reducing opiate prescriptions and misuse are mixed. An early study by Paulozzi et al., analyzing data from 1999 to 2005, concluded that PDMPs were not effective in decreasing drug mortality rates, drug overdoses, or the consumption of opiates in general.<sup>9</sup> Critiques of this article have pointed out that this study did not take into account the percentage of providers who were using the PDMPs in the states and 21% of the states included in the analysis had newly established PDMPs.<sup>10</sup> However, this study was substantiated by Li et al., who analyzed mortality data of all 50 states from 1999 to 2008 and found no association between the implementation of PDMPs and a decrease in drug overdose mortality.<sup>11</sup> Furthermore, Maughan et al., studied emergency department visits involving opiates from 2004 and 2011 nationwide and concluded that “PDMP implementation was not associated with a change in opioid-related morbidity, as measured by emergency department visits involving opiate analgesics.”<sup>12</sup>

However, more recently, Chang et al. found statistically significant decreases in number of patients with an opioid prescription and a relative reduction in monthly total opioid volume in Florida after implementation of a PDMP.<sup>13</sup> However, these changes were only associated with “high risk” prescribers and patients, or those who prescribe or use the most amount of opiates. Furthermore, Florida passed a “pill mill” law imposing tight regulations on pain clinics at the same time as implementing the PDMP, so it is difficult to determine the extent to which each policy may have contributed to the results. That study did not analyze mortality or overdose

statistics. Another recent study by Patrick et al. analyzed data from 35 states that implemented PDMPs from 1999 to 2013 and produced more promising results. In this study, implementation of the PDMPs “was associated with a decrease of 1.12 opioid-related overdose deaths per 100,000 population annually after implementation.”<sup>14</sup> They also found that more frequent updates in PDMPs were associated with a greater reduction in opiate related deaths. Bao et al. analyzed mortality data from 2001-2010 and found that the implementation of a PDMP was “associated with a more than 30 percent reduction in the rate of prescribing of Schedule II opiate analgesics. This effect was immediate following the launch of the providers’ and dispensers’ access to a program database and was sustained in the second and third years afterward.”<sup>15</sup>

Other studies have analyzed if PDMPs have altered the prescribing habits of physicians by surveying doctors directly. One study surveyed emergency room physicians in Ohio and found that utilization of the PDMP changed physicians’ prescribing practice in 41% of their encounters.<sup>16</sup> The PDMP influenced the physicians to prescribe less or no opiates in 61% of cases, but in 39% of cases the PDMP data influenced them to prescribe more. This phenomenon of prescribing more opioids might be due to certain opioid medication being labeled either “schedule II” or schedule III” drugs by the Drug Enforcement Agency. Gilson et al. found that following a 2005 policy change to California’s PDMP that put more scrutiny on schedule II opioids, including OxyContin, Dilaudid, and Percocet, there was an increase in the number of schedule III opioids prescribed to patients.<sup>17</sup> This indicates that PDMPs may not change the sheer volume of opioids dispensed to patients, just the characteristics, as more doctors are wary of law enforcement scrutiny into their prescribing practices.

## **Barriers to Usage of PDMPs**

Many studies have uncovered potential setbacks and challenges physicians have to consistently using a PDMP while prescribing opioids. One large setback is not being aware of the state's PDMP or knowing how to properly use it. Rutkow et al. surveyed 1000 primary care physicians and found that only 72% of them were aware of their state's PDMP and 53% reported ever using it.<sup>18</sup> The largest barriers to utilization included the inability to navigate the online database and running a practice that cannot accommodate the time constraints imposed by the PDMP. Rutkow et al. found that a third of respondents labeled the PDMP data either "somewhat difficult" or "very difficult" to access. However, the study found that 57% of respondents believed the program had "greatly" or "somewhat" reduced drug abuse and diversion in their state and 84% of respondents believed the information contained in the PDMP was "very" or "moderately" useful.<sup>18</sup>

Green et al. used a survey to compare usage of the PDMP between Connecticut and Rhode Island in 2012, a time when Connecticut's PDMP was available online for all licensed prescribers and Rhode Island's PDMP was not accessible online at all. Only 16.3% of the 375 respondents from Rhode Island reported ever using the PDMP, whereas 43.9% of the 998 respondents from Connecticut had used the PDMP<sup>19</sup>. However, 74.3% of Rhode Island respondents indicated that they would be willing to use an online PDMP similar to the one in Connecticut if it was available.<sup>19</sup> Among respondents from both states who did not use the PDMP, a lack of knowledge as to how to access the data or how to enroll was a commonly stated reason. A minority of respondents from Rhode Island indicated that their employer "forbade or

discouraged” use of the state’s PDMP.<sup>19</sup> Time constraints were also cited as a barrier to using the PDMP in both states.

### **Physician Concerns with PDMPs**

As most states adopt their own version of PDMPs, many physicians are acknowledging both the advantages and disadvantages that come with their use. One concern is the stigmatization of pain treatment and the creation of “pseudo addicts.”<sup>20</sup> Pseudo addiction refers to the phenomenon of patients who are experiencing real pain being undertreated by physicians who are wary of prescribing strong pain medication. These patients will subsequently display behaviors more commonly associated with an opioid use disorder, such as obtaining prescriptions from more than one provider or inappropriately taking more than their prescribed dose of pain medication, in an attempt to relieve their suffering.<sup>21</sup> Therefore, some physicians are worried of overcorrection and undertreatment of chronic pain as a result of closely monitoring prescribing habits and treating it like a law enforcement issue. Physicians are also worried that undertreatment of pain may drive some patients to seek illicit drugs instead, potentially worsening heroin overdose risks.<sup>20</sup>

Another concern is the inability of certain providers to effectively discuss substance misuse with their patients, often due to a lack of continuing education about the signs, symptoms, and treatment of addiction.<sup>20</sup> Crozier et al. found that over 40% of primary care physicians they surveyed reported “difficulty discussing the possibility of prescription medication abuse with patients” and over 90% failed to correctly identify symptoms of a substance use disorder. This highlights the importance of continuing medical education (CME) for prescribing opioids for

chronic pain and correctly identifying patients who are likely to be misusing prescription opioids. Not only may this potentially cause mismanagement of patients, but PDMP data might indicate certain physicians have fraudulent or nefarious prescribing habits, when in actuality it is a problem of education or training.<sup>20</sup> However, mandating training has its own setbacks and issues. Slevin and Ashburn surveyed primary care physicians about proposed mandatory Risk Evaluation and Mitigation Strategies (REMS) that would, in part, require more CME in order to be able to prescribe certain opioids.<sup>25</sup> They found that only half of the 259 respondents in their study willing to comply with the REMS mandatory education component and 48% indicated they were willing to complete up to two hours of training if locally available.

Physicians have also expressed concern about PDMPs encouraging a law enforcement approach to opioid misuse rather than a public health approach.<sup>23</sup> Law enforcement officers have access to PDMP data and are more likely to view it as a means to identify criminals and use it punitively. Physicians are also concerned that law enforcement is also using it as a tool to scrutinize their individual prescribing habits as well as their patients' behavior. In the aforementioned study by Rutkow et al., 38% of primary care physicians surveyed believed they were under "moderate" or "much" scrutiny from law enforcement or other regulatory agencies due to PDMP use.<sup>18</sup> This may, in turn, influence physicians to undertreat legitimate pain patients and perpetuate pseudo-addiction and seeking illicit drugs. Similarly, physicians have expressed concern about privacy and the potential for data to be "leaked" or security of the database to be breached.<sup>20</sup> Data from PDMPs are frequently shared across state lines and have inputs from several different networks of health care providers and pharmacies. This places them at relatively high risk for security breaches. For example, in 2013, the names and detailed prescription drug prescription records of



over 3,000 patients in Florida were inadvertently given to defense attorneys after a drug sting.<sup>24</sup>

Security concerns put both physicians and their patients at risk, especially with the high street value of prescription opioids.

## METHODS

### **Research Objectives**

The research objectives of this study are to investigate physicians' attitudes towards the use of the CPMRS and to inform a future statewide survey planned by the Connecticut Department of Consumer Protection (DCP) which will further investigate these issues. Since PDMPs in general have been a major tool being used by almost all states to address the prescription opiate epidemic, this study aimed to describe possible ways to increase the usage of the CPMRS and strengthen its efficacy. This study also aimed to identify ways to make the CPMRS a more effective and widely used public health resource to address the prescription opiate abuse epidemic in Connecticut. Lastly, this study sought to gather physicians' opinions on whether or not they would describe the current crisis as an "epidemic" and what role they think physicians play in addressing opioid misuse and abuse. The specific research questions were:

1. What are physicians' opinions on Connecticut's Prescription Monitoring and Reporting System (CPMRS) and what are their experience using it?
2. What are physicians' opinions on the current opioid epidemic and do they believe that the CPMRS can be an effective tool to address it?

### **Research Design**

This is a single group descriptive study using semi-structured interviews with physicians. A convenience sample of 10 physicians was selected. These physicians were affiliated with a major academic medical center in the Northeast, were licensed to prescribe controlled substances in the state of Connecticut, treated adult patients, and were at least 25 years of age. Physicians who do

not treat adult patients, such as pathologists or pediatricians, were not included.

Resident physicians were also excluded from the study.

The approach taken in this study was qualitative, semi-structured, in-person interviewing with study participants. The questions were selected in consultation with representatives from the Connecticut Department of Consumer Protection in order to better inform their statewide survey. The interview consisted of 14 questions and were a mix of “yes” or “no” questions with prompts and open-ended questions (see Appendix 1). The interview covered the following major themes: the prescriber’s experience using the CPMRS as a public health tool, prescriber familiarity with current guidelines for prescribing opioids for chronic pain, opinions on the nature of the current public health crisis regarding opioids, and opinions on the role physicians have in addressing it. The only information regarding the participant him or herself collected was the physician’s specialty and the approximate number of patients the participant prescribed opioids to within the last six months. The interviews lasted approximately 30 minutes and responses were written down verbatim. The interviews were transcribed and thematically analyzed using Atlas.ti software.<sup>29</sup> This research study was approved by the Institutional Review Board of the University of Connecticut Health Center (UCHC) in April of 2016.

### **Recruitment**

Recruitment was completed through a snowball approach after referral from Dr. Rao, one of the advisors of this project. The physicians were contacted by Dr. Rao for potential participation, who in turn contacted myself, the co-investigator. The co-investigator screened them using a screening form to determine whether they meet eligibility criteria. If all eligibility criteria were

met, the co-investigator scheduled a time and place convenient to the participant to conduct the interview. The screening form with any potential identifying information was deposited in confidential shredding bins in the Office of Community Health at UCONN immediately after the interview was conducted to ensure there is no link between the participant and questionnaire. Once the interview was over, the co-investigator asked participants to forward recruitment material to or discuss the study with another colleague who they think may be interested in participating. Colleagues of previous participants then approached or contacted the co-investigator to participate in the interview.

### **Consent Process**

Consent was obtained in person prior to the interview. The investigator obtained a Waiver of the Requirement to Document the Consent of Subjects from the UCHC Institutional Review Board. Participants were told that no identifying information would be collected and they did not need to sign a consent form since their signature would be the only identifying information linking them to participation in the study. The participant was given an information sheet that included a description of the study's purpose, how to reach the co-investigator, risks and benefits of the study, a statement that participation in the interview was completely voluntary and the participant can withdraw at any time, and that completion of the interview implies consent (see Appendix 2). The co-investigator explained each section of the information sheet and allowed for any questions to be answered before starting the interview.

Participants were told that the interviews would not be audio recorded, but that their responses would be written verbatim. Participants were reminded that participation was completely

voluntarily and they could choose to skip any questions they did not want to answer. It was explained that all transcripts of the interviews would not contain any identifiers and be kept on an encrypted, password-protected computer and would be deleted after transcription.

### **Data Analysis**

Qualitative data analysis was performed using Atlas.ti software<sup>29</sup>. The goal of the data analysis was to find common themes and patterns among responses in order to create a narrative of physicians' experiences with using the PDMP. Another goal was to find patterns among participants' opinions on opioid prescribing and the prescription opioid abuse and misuse crisis. The data were analyzed using a general inductive approach. The goals of this approach are to “condense raw textual data into a brief, summary format, establish clear links between the evaluation or research objectives and the summary findings derived from the raw data, and develop a framework of the underlying structure of experiences or processes that are evident in raw data<sup>28</sup>.”

Data analysis started with the transcription of interview notes into Microsoft Word documents to be uploaded in to the Atlas.ti software. After interview transcripts were uploaded, specific codes were generated using the inductive analysis approach. The interview itself served as a guide for code categories (Code Families) and analysis codes were created to depict recurring themes or patterns in responses to questions. Analysis codes included, but were not limited to, “time,” “multiple\_prescribers,” “epidemic,” “responsibility,” “reimbursement,” “counseling,” and “contract.” Each interview transcription was read and highlighted for quotations that fit the analysis codes. After each interview was thoroughly examined for inclusion of analysis codes,

the transcripts were printed and it was determined whether or not certain codes contained enough quotations or patterns among the raw data to be included in the findings of the study. If codes contained three or more quotations, they were included for analysis. The themes were considered relevant and included in the findings if they helped describe physicians' experience using the CPMRS and if they helped elucidate physicians' opinions on the current public health issue of opioid misuse and abuse.

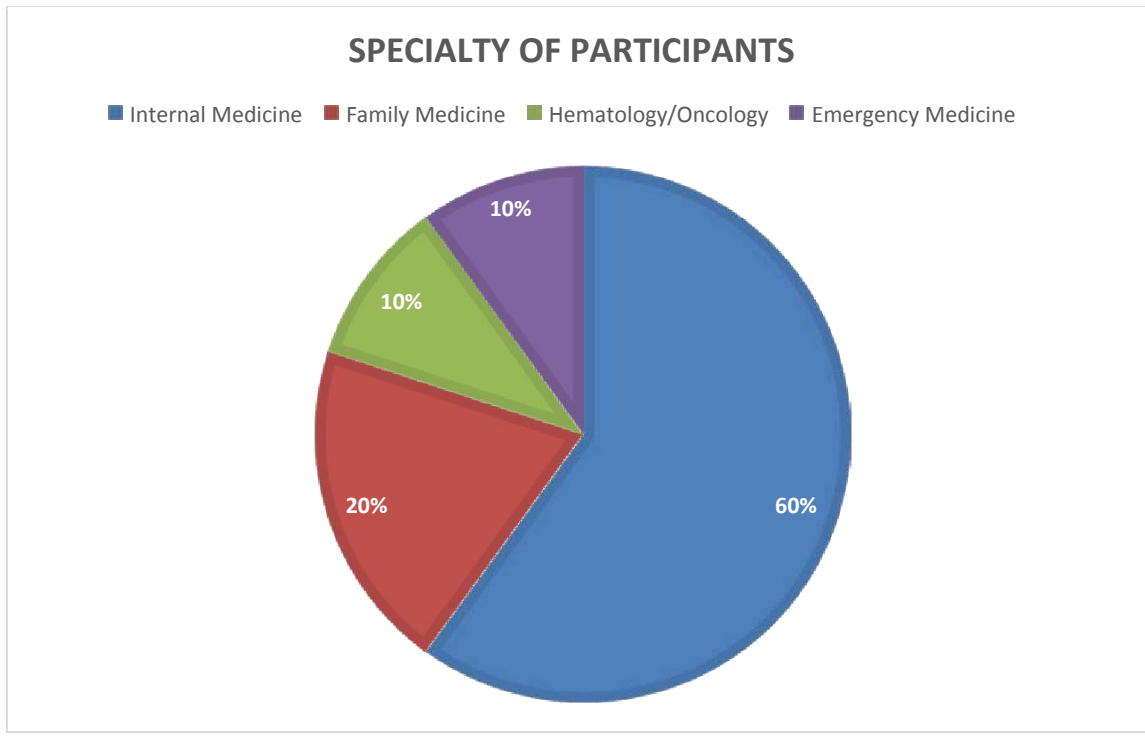
## RESULTS

The results of this study are based on an analysis of semi-structured interviews conducted in April 2016 with ten physicians affiliated with a large academic medical center licensed to prescribe controlled substances. Six of these physicians were board certified in Internal Medicine, two were Family Medicine doctors, one specialized in Hematology/Oncology, and one was an Emergency Medicine physician (see Figure 1). All participants had prescribed opioid pain medication within the last six months for chronic, acute, or terminal pain. Seven of the eight participants regularly used the CPMRS. All participants were familiar with the increase in misuse of prescription opioids and number of deaths from opioid overdoses. A detailed breakdown of pertinent participant information is contained in Table 1.

**Table 1.** Participant Information

<b>Participant*</b>	<b>Specialty</b>	<b>Number of patients to whom they prescribed opioids within 6 months</b>	<b>Type of Pain for which Participant Usually Prescribes Opioids</b>
Dr. Jones	Internal Medicine	1 - 20	Chronic
Dr. Smith	Internal Medicine	1 - 20	Chronic
Dr. Williams	Internal Medicine	21 - 40	Chronic & acute
Dr. Brown	Hematologist/Oncologist	61 or more	Chronic & terminal
Dr. Miller	Internal Medicine	21 - 40	Chronic & acute
Dr. Taylor	Internal Medicine	1 - 20	Chronic
Dr. Thomas	Family Medicine	1 - 20	Chronic
Dr. White	Family Medicine	1 - 20	Chronic & acute
Dr. Cary	Internal Medicine	1 - 20	Chronic & acute
Dr. Moore	Emergency Medicine	21 - 40	Acute

\* All names are pseudonyms

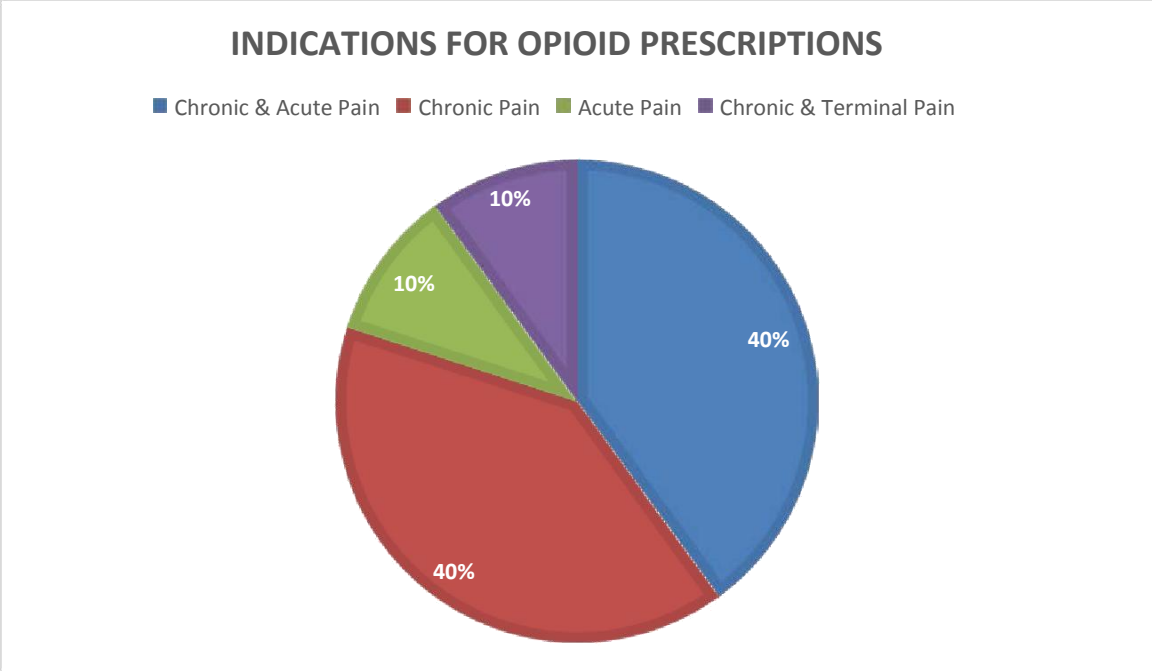


**Figure 1.** Specialty Breakdown of Study Participants

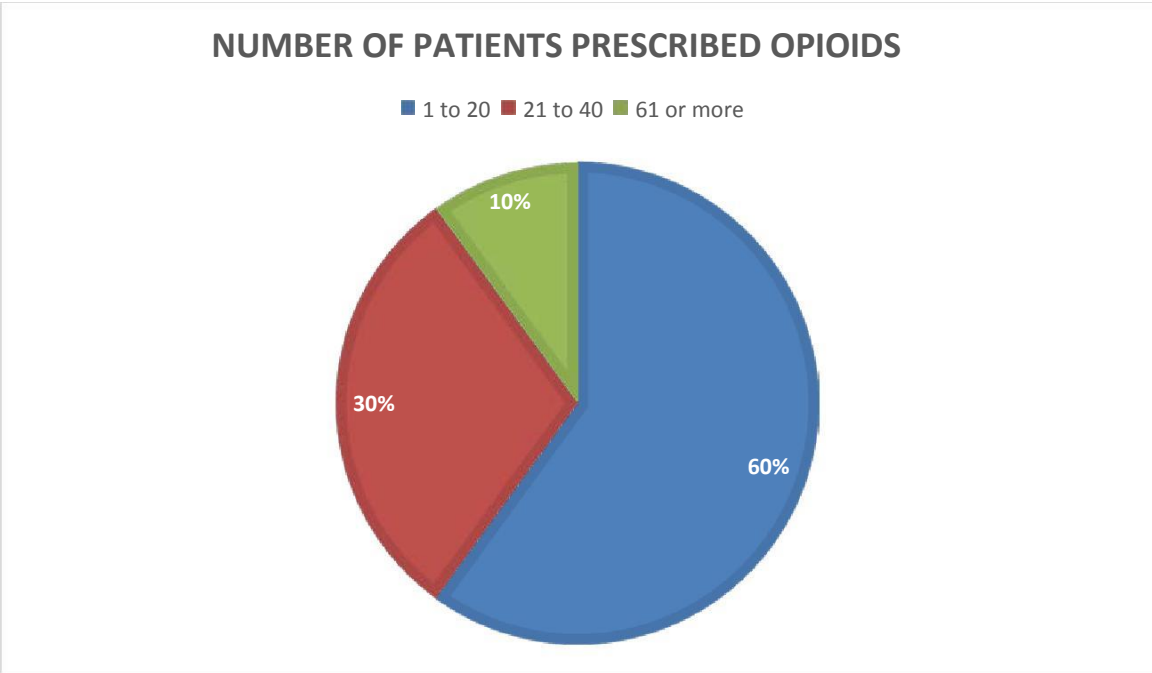
### Current Prescribing Habits

All but one of the participants in the study had written opioid prescriptions for chronic pain, with many prescribing for both chronic and acute pain (see Figure 2). All participants were aware of the 2016 CDC Guidelines for Prescribing Opioids for Chronic Pain. A majority (**60%**) of the respondents prescribed opioids to one to twenty patients within the past six weeks (see Figure 3). Eighty percent of the participants had received specific training on how to prescribe opioids for chronic pain. Dr. Thomas characterized his CME as occurring “mainly through talks” and Dr. Williams characterized it as “a couple hours mandated by the state.” Dr. Smith had not only received CME training, but stated that she did a lot of the CME for other providers.





**Figure 2. Type of Pain for Which Physicians Prescribed Opioids**



**Figure 3. Number of Patients for Whom Physician Had Prescribed Opiates within the Past Six Months.**

## Use of the CPMRS

Seven participants said they regularly and consistently used the CPMRS. The remaining three physicians reported using an alternate prescription drug database built into their EMR . Dr. Thomas acknowledged this method only allowed him to see the prescriptions written by himself or other doctors in their clinic, but it was “much more convenient” to use. All participants used the CPMRS themselves; none had an authorized delegate who used the CPMRS on their behalf. None of the participants had received any training on how to use the CPMRS. Five of the respondents were aware of the change to the CPMRS operating system that occurred in June 2016. Three of those respondents indicated that they found the new operating system easier to use and more intuitive. One physician specifically mentioned “I like the ability to save reports and add it in the chart.” Dr. Taylor noted “it’s easier to find prescriptions from other states, more obvious now.”

Half of the respondents found the alerts notifying prescribers of patients who had suspicious patterns of access to prescription drugs to be helpful. All of these respondents cited the alert that notified them of prescriptions from other providers to be the most useful. One participant was unaware of the alert notifications and preferred the “pop-up” notifications she had gotten previously. Two participants noted that the alert for patients being prescribed opioids and benzodiazepines were not useful because they have always been the prescriber for both. However, one noted that she has found her patients on chronic opioids being prescribed very high dose benzodiazepines from psychiatrists, which has been alarming. In those instances, she has called the psychiatrist and found that most of the time the psychiatrist was unaware of the

opioid prescription. Two participants reported never having to act on any alerts they have received because they were legitimate prescriptions.

### **Impact on Opioid Prescribing**

A majority of participants reported they have used CPMRS data to stop prescribing opioids to patients. Dr. Smith described her initial experiences with the CPMRS by stating, “when I first started using it, I found a lot of funny things and kicked a lot of people off opiates.” A common theme among respondents was the realization that some of their patients were obtaining opioid prescriptions from multiple doctors. All respondents said that they use “contracts” when prescribing opioids for pain to patients. These are agreements between the physician and patient that certain rules must be followed in order to continue obtaining prescription opioids from this prescriber. One of the rules is that the patient may not obtain prescription opioids from any other provider. Many of the physician respondents said they used the CPMRS data in conjunction with the contract to justify why they would no longer prescribe opioids to a patient who was found misusing prescriptions. As Dr. Miller explained, “I noticed people getting prescriptions from other prescribers, other pharmacies, ER visits and stopped treating them with opioids.”

Many physicians spoke of the CPMRS giving them “leverage” when discussing opioid use with patients: “I think it gives doctors leverage when discussing opioid use with patients. It makes it easier for doctors to say ‘no’ to patients since it provides evidence if they have been breaking the rules of a prescription opioid contract” (Dr. Smith). Participants also stated that it made them more comfortable and confident in their clinical decision making: “It’s easier for me to say ‘you signed a contract to only get opioids from one prescriber’ and provides evidence. It gives me

even more valid justification to get patients off opioids and makes me feel more comfortable about prescribing” (Dr. Taylor).

Other respondents similarly described using CPMRS data in conjunction with their clinical judgment to reinforce their policy on prescribing opioids for chronic pain. This represents a recurring theme of the PDMP as a tool respondents used as one of many tools to identify opioid misuse and support their clinical decision-making.

The consistency with which the CPMRS is used may be based on physician intuition. Dr. Williams stated, “It makes me more diligent in following up on folks. There are patients I implicitly trust and therefore don’t check too often, and patients I don’t trust and check more often.” However, another doctor stated that the only impact it has had on her opioid prescribing is “making it more time consuming and onerous,” and that it “has not decreased the amount of prescriptions I write.” She said that she had never found anything untoward on the record indicating one of her patients is misused opioids.

If they think one of their patients is misusing or abusing prescription opioids, a majority of the doctors said their first step was to counsel the patient and present their concerns. Counseling patients was a major theme among how to address patients about whom there were concerns. Dr. Smith summarized her policy by saying, “I will call the patient in and have a fact-based discussion, review the prescription opioid contract, perform a urine screen, and if necessary, tell the patient I will no longer be prescribing opioids and offer other pain treatments.” Dr. Miller also referred to the contract his patients sign when they start prescription opioids: “Chronic opioid users sign an agreement about what they can and can’t do while being prescribed by us. I

might do a urine tox screen more frequently, check the CPMRS more than three months. The PDMP provides objective evidence that can be used then I confront a patient about suspicious behavior.” Only one physician said he does not like to perform urine toxicology screens or pill counts because he thinks it comes across as accusatory and antagonistic.

Only one doctor who was interviewed spoke of referring patients for detoxification, addiction treatment facilities, or to providers who prescribe suboxone. Dr. Taylor lamented the fact that there is only one physician in her practice that is authorized to prescribe suboxone and there are only two pain management specialists in the state who accept patients with Medicaid insurance. She spoke of the limited options she has to send these patients to alternative treatment. She stated that her ultimate goal is to have all her patients on chronic opioids to wean them off, whether she is concerned they are abusing them or not.

### **Barriers to Using the CPMRS**

The majority of participants cited time as a significant barrier to using the CPMRS. The amount of time it takes to look up patients and gather data on their prescription history was a major theme during the discussion of why these physicians did not use the CPMRS consistently.

Follow-up visits with most general practitioners are booked for 15 minutes, which often does not allow enough time to go through all the data regarding a specific patient’s prescription history.

Dr. Jones thought that it would be more efficient to have nurses or MAs in the practice check the PDMP data before a patient’s visit, stating “it’s so time consuming, but currently no other staff in this office have access to [the CPMRS].” He was unaware that delegates could be authorized to use the PDMP on a physician’s behalf. Dr. Moore, an emergency room physician, cited time as

the reason he uses the PDMP built into the EMR at his hospital instead. Some of his patients have been waiting “for hours and hours” and logging in and out of the CPMRS is not conducive to his work flow.

Many physicians cited features inherent to the operating system that made the CPMRS more difficult to use, including requiring a password change every 90 days and not being allowed to stay logged into the system for an extended period of time. Dr. Miller stated “it’s cumbersome to log in and log out” and it adds to the amount of time it takes to use. Dr. Brown described prescribing opioids while using the CPMRS as “time-consuming” and “onerous,” but acknowledged that it’s better than calling pharmacies individually.

Two participants cited inaccuracies in the CPMRS data as a significant barrier to use. Dr. Taylor said she has noticed discrepancies between the prescription history in her EMR and the data on the CPMRS and attributes it to pharmacists not updating the CPMRS when a patient fills the prescription. She said she has called pharmacies who told her “that’s not my job.” Dr. Smith said she has seen “duplicate records” and it’s difficult to identify the most accurate or up-to-date one. This also adds to the time it takes to use the CPMRS, as she needs to figure out which patient record is the correct one.

### **CPMRS as a Public Health Tool**

Despite the barriers to their use, all of the respondents agreed that the CPMRS was useful as a public health tool to combat opioid misuse and abuse. Common themes among respondents was that the PDMP was better than any other alternatives and provided useful information. Dr. Smith

summarized their utility as: “It provides useful information and makes the doctors feel safe. The PDMP is not trying to be burdensome, just trying to make it safe. Doctors must find a balance between regulating and treating their patients and that it’s not our job to be law enforcement officers.” Dr. Brown thought it was useful because the alternative of calling pharmacies each time is too burdensome, but also thinks there is room for improvement. Dr. Taylor expressed gratitude that she works part-time so she has more flexibility to use the CPMRS, which she said is “very useful, but it takes a lot of time.”

When discussing public health tools to addressing opioid abuse, two of the ten respondents (20%) expressed concerns with Medicare linking physician reimbursement to patient satisfaction ratings: “Doctors who deny patients opioid medications are more likely to receive negative ratings, and therefore run the risk of receiving less reimbursements. This may have the potential to improperly incentivize physicians to prescribe opioids to ensure positive ratings. I am obviously salaried, but in private practice, that’s real money.” (Dr. Jones).

Both Dr. Jones and Dr. Smith also noted that patient satisfaction ratings and physician reimbursement are also bad for the ongoing problem of antibiotic resistance. They believed that altering this reimbursement schedule would be more effective as a public health policy to ameliorate opioid abuse and misuse.

The DCP is considering sending out personalized “reports” to individual physicians comparing their opioid prescribing frequency and patterns to all physicians within their specialty. Half of participants thought this would be helpful, while the other half thought it would not be helpful. Among participants who thought it would not be helpful, the common theme was that the

information would be “interesting” but ultimately would not change their prescribing habits. Dr. Williams, who thought it would not be helpful, stated, “It won’t change my prescribing habits. I don’t know how that would help. It might be interesting because it’s always nice to see what other people are doing.” Dr. Jones expressed similar sentiments, saying “It might be interesting to look at, but would not change prescribing habits.” Among participants who would find it helpful, a common theme was that these reports couldn’t hurt. Dr. Taylor thought it was a good idea stating, “anything to help get the whole problem under control.” Dr. Smith thought it would be important as a check on physician practices: I want to know because once you become an attending physician, the only way to know how you’re doing is data review and it would provide another metric with which to measure my practice. If the State of Connecticut is having problems I want to know, especially for teaching residents.” Dr. Thomas, who thought these reports would be useful, noted that the reports could be affected by the patient population of certain providers. As he stated: “a lot depends on how it’s collected and it depends on the prescribing habits of others.”

### **The Role of Physicians in Addressing the Opioid Crisis**

A majority of respondents believed physicians have a major role to play in addressing the issue of prescription opioid misuse, abuse, and overdose. Responsibility not only for safeguarding patients, but also for their role in exacerbating the problem, was a major theme among the respondents. Most acknowledged that physicians had a role in creating the problem and will have a role in solving it: “Doctors have a huge responsibility as the end-users of this. We are the lynchpin. We are making the decision to write. We should be targeted for education. Responsibility is on us and I’m OK with that” (Dr. Brown). Dr. Smith cited specific examples of



patients she has treated who came to her after being inappropriately prescribed opioids by another physician: “I recently saw a 26 year old male patient who was given Vicodin for back pain in the ED and now he’s using heroin. Giving Vicodin for back pain as first line treatment is mismanagement. Doctors need to be more responsible when they prescribe. A lot of doctors forget to refer patients to treatment, they don’t have enough resources.”

Many respondents stressed the seriousness of the crisis and offered specific examples of how physicians should approach this issue with patients: “It’s an epidemic. Ninety-one people die a day! We need to educate patients, set realistic expectations, talk about better studies and how the earlier studies about opioids were misleading. Patients have gotten better with expectations and don’t take it personally. The word is out” (Dr. Taylor). Dr. Miller expressed wariness about prescribing opioids and stated: “Doctors should avoid opiates if at all possible, counsel patients, go through entire medication agreement together. Most patients are aware that there’s an epidemic and don’t take it personally.”

Three respondents expressed their hesitation at calling the current problem with prescription opioids an “epidemic.” They did not believe that “epidemic” was a fair characterization of what is happening. Dr. Thomas cited the demographic differences among victims of opioid overdoses as compared to victims of other drug “epidemics.” According to his view, This is primarily a cultural phenomenon. There has been a drug problem in this country for over a century and most of it was located in minority communities, and as long as that was the case, it was OK to criminalize and punish addicts. Now that it’s spilled over, it’s a health problem and it’s disparately monitored and enforced. The uproar over ‘epidemic’ is aggravating. Drugs have been a problem since the 1920s and doctors have always been part of the problem. We didn’t speak out when these issues were plaguing minority communities and now we’re speaking very loudly in a way that is historically hypocritical. I am worried that the reaction will be overly aggressive and a lot of patients with real pain may not be adequately treated. It’s very easy to stigmatize people

Dr. Williams acknowledged that physicians must be aware of the issue, but noted the lack of options and the stigma now associated with opioid users and how it may affect his patients:

‘Epidemic’ is the wrong word, ‘overuse’ is the wrong word. There are not a lot of choices for people who have chronic pain, or pain controlled by opiates. I now have patients scared to take opioids. Doctors must be responsible for appropriate management of chronic pain, aware of abuse and mismanagement. Lots of other drugs cause death, but don’t carry same connotation in the public mind. You have to discuss with patients what the opioids are for. I have no problem prescribing opiates because I was taught to take what patients say at face value.

Dr. Williams, Dr. Thomas, and Dr. White expressed concern over the phenomenon of pseudo-addiction when patients’ pain complaints are not taken seriously. Their responses were in contrast to other respondents who said their clinical goals were to use opioids as a last resort and wean patients off of them as early as possible.

## DISCUSSION

This qualitative research study was designed to assess physicians' experience prescribing opioids and assess their experience using the CPMRS. Previous studies have shown that compliance with using PDMPs remains low and this study sought to identify specific barriers to usage as well as whether or not physicians thought it is an effective public health tool to address the opioid abuse issue. This study also aimed to assess physicians' opinions on the role they have in addressing the crisis. Findings from this study will be used to inform a statewide survey to be performed by the DCP in its campaign to increase physician participation in Connecticut's PDMP.

Semi-structured interviews were conducted with ten physicians affiliated with a major academic medical center and the results showed that the majority have access to and use the CPMRS. Similar to the findings of Rutkow et al., a majority of participants said time constraints were the biggest barrier to using the CPMRS consistently. Most visits with primary care physicians are booked for 15 minutes based on how much insurance will reimburse for that visit. Current estimates by the American Medical Association predict a significant doctor shortage, particularly in primary care, in the United States by the year 2025.<sup>26</sup> Physicians are under increasing pressure to see more patients, especially with increased access to affordable health care as a stated policy goal of many politicians and policy makers. Therefore, time constraints will most likely continue to represent a significant barrier to many aspects of physician practice, including usage of the CPMRS.

None of the physicians surveyed had designated a delegate who to use the CPMRS on their behalf. One respondent was not even aware that delegates were allowed to use the CPMRS on

his behalf. Further research should be done into the effectiveness and feasibility of having delegates use the PDMP on a physician's behalf. Delegates, including medical assistant or nurses, who are specifically trained to review CPMRS data may be able to streamline the process verifying prescriptions and making sure patients in the practice are following the rules of the opioid contracts.

The minority of respondents who did not use the CPMRS consistently indicated that they used a prescription monitoring system built into the EMR at their hospital or clinic instead.

Incorporating the CPMRS into EMRs will be essential to increasing accessibility of the CPMRS and cutting down on the time it takes to use it. If clinicians could easily access the CPMRS directly through the EMR, it would decrease the amount of time they spend trying to access the CPMRS website and logging in and logging out of multiple web browsers. These interviews suggest that making the CPMRS easily available through the click of a button on a physician's EMR may increase the number of physicians who utilize the CPMRS and therefore represents a promising policy proposal for improving CPMRS compliance.

Several respondents raised the issue of the way in which physician reimbursement from Medicare is tied to patient satisfaction ratings. They believed this represented a barrier to reducing the prescription opioid problem. Participants expressed concern that patient satisfaction is an incentive for physicians to prescribe certain medications, including opioids and antibiotics, against clinical guidelines in order to make sure their patients leave satisfied. It is reasonable to conclude that patients will be upset if denied pain medication that they think will help them and dissatisfied patients are more likely to complete and send in satisfaction surveys. At the same

time, patient satisfaction plays a role in accounting for the overall quality of care and physicians should be held accountable if they are inappropriately treating their patients. Further studies should be conducted to assess whether or not this policy affects how often physicians prescribe opioids or if physicians are influenced to make decisions against clinical guidelines if their reimbursement is tied to patient satisfaction. Further studies should also be conducted to assess whether or not linking physician reimbursement to patient satisfaction improves outcomes and leads to a higher quality of care.

The vast majority of physicians interviewed stated that counseling was the first action they take when they are concerned a patient is abusing or misusing prescription opioids. Almost all participants reported that they stopped prescribing opioids when they discovered a patient had violated the terms of a contract they signed before starting opioids. Only one participant spoke of referring patients to treatment services after identifying patient misuse of prescription painkillers. She indicated that she knew of only two pain management specialists in Connecticut who will accept Medicaid patients and only one physician in her practice is licensed to prescribe Suboxone. Her comments highlighted the disparity between access to opioid medications and access to addiction treatment. Currently, access to opioid medication is much more available than access to addiction treatment which may further exacerbate the crisis of opioid abuse and overdose. As public awareness of the crisis rises and more Americans are affected by it, there may be political pressure and political will to increase access to treatment and take a harm reduction approach to drug use. However, public health officials should continue to advocate for increased access to treatment and insurance coverage for addiction services.

The characterization of the current opioid misuse crisis as an “epidemic” was controversial for a couple of the respondents. Some physicians were adamant in calling overdose deaths an epidemic and felt that their job was to wean chronic users off of prescription opioids and get their pain under control using alternative methods. However, other respondents viewed this issue as a continuation of drug abuse issues that have been prevalent in America for decades. They felt that opioids are not much different from other potentially lethal medications physicians prescribe as part of medical practice. All physicians interviewed gave examples of patients under their care who had acted inappropriately or illegally in their pursuit of prescription opioids. One physician described a patient who went so far as to call in a prescription to a pharmacy pretending to be the doctor. However, the physicians expressed differing views on how much they trust their patients or tend to believe if they are in chronic pain. These disparate views of the current crisis and differing tendencies to trust or not trust chronic pain patients illustrate how physician perceptions may influence prescribing behaviors irrespective of public health tools available for them to use.

The tendency to take patients’ reported pain at face value may reflect a wariness of causing pseudo-addiction, as explained by Islam & McRae.<sup>20</sup> If physicians do not take a patient’s pain seriously they run the risk of under treating that patient’s health problem, which in turn can result in the patient seeking prescriptions from other providers and inappropriately increasing the dosage of their pain medication. This may also drive some patients to seek out illicit drugs for analgesia. Some researchers have hypothesized that the increase in prescription opioid use has played a role in heroin overdose deaths, which have increased 6.2 fold from 2002 to 2015.<sup>27</sup> This phenomenon has policy implications because it illustrates the fact that physicians cannot simply

wean all their patients off of prescription opioids nor is it feasible for them to have a blanket policy to never prescribe opioids for chronic pain. Doing so has serious potential for life-threatening unintended consequences.

One major limitation to this study was the small sample size of ten physicians at a single academic medical center. The majority of the participants were also from one specialty, internal medicine. A larger sample size would have allowed for more diverse opinions and perspectives from other specialties. However, this qualitative study was designed to inform the development of a statewide survey to be completed by the DCP. This statewide survey will have a representative sample. Another limitation was the fact that these interviews were only around 30 minutes long and not audiotaped. Longer interviews may

## CONCLUSION

The main goals of this study were to investigate physicians' attitudes towards the use of the CPMRS and their opinions on opioid prescribing and the current opioid epidemic. This study revealed that not all physicians utilize the CPMRS in Connecticut, even though it is mandated. The reasons for this were primarily time and lack of easy accessibility to the web-based system. None of the participants reported receiving training on how to use the CPMRS and none had authorized a delegate to use the system on their behalf. Based off these responses, policy implications were identified that could be used to increase the use of the CPMRS among prescribers. Clinician education is one area for improvement, since many respondents were unaware of the features of the CPMRS, including the patient alerts or the ability to delegate other staff members to use it on their behalf. Incorporating the CPMRS into EMR systems will also benefit clinicians who opt to use their own EMR PDMP because it's more convenient.

The availability of addiction treatment is another issue discussed in this study. Most physicians did not discuss referral to treatment when asked what they do if they are concerned one of their patients is abusing prescription opioids. It is unclear whether or not they are unaware of the available treatment services, are not sufficiently trained to identify substance use disorder requiring treatment, or don't feel comfortable telling their patients they should seek treatment for addiction. Public health professionals must advocate for education efforts targeted at healthcare providers to increase their awareness of substance use disorder and the available treatment options in the state of Connecticut for those misusing or abusing prescription opioids. Public health officials should also advocate for physicians to become certified in prescribing Suboxone, a medication that is effective as long term maintenance therapy for opioid addiction.



While there was widespread acceptance of the public health utility of the CPMRS among the physician respondents, many brought up issues unrelated to the CPMRS as more problematic for the future of opioid prescribing, including physician reimbursement policies and a shortage of primary care physicians. They felt that linking physician reimbursement to patient satisfaction ratings provides incentive for physicians to prescribe opioids, even if not clinically indicated. Public health and medical professionals must further investigate whether or not this practice alters the behavior of prescribers and/or affects quality of pain management.

These interviews revealed divisions in physician opinions regarding whether or not there is a public health “epidemic” of opioid dependence and misuse. Opinions were divided on whether or not over-prescribing is an issue or if the current crisis is different from the substance abuse struggles of previous generations of Americans. Finding practical public health policy solutions to the current increase in overdose deaths from prescription opioids may be challenging if the medical community is divided as to whether or not this is a public health matter in need of serious policy alteration. However, all respondents were unified in believing physicians have some role to play in addressing opioid misuse and overdose deaths. With this common understanding that the medical community has a responsibility to those affected by prescription opioid misuse, there is reason to be hopeful that clinicians will take public health interventions, such as the CPMRS, into more serious consideration for the future. It is our job as public health officials to continue to improve these interventions to make them as effective and efficient as possible.

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## APPENDIX 1

### Physicians' Experiences with Prescribing Opiates Interview

1. Medical specialty: \_\_\_\_\_

2. In the last six months, approximately how many patients have you prescribed opiates?

None  1 – 20  21 – 40  41 – 60  61 or more

3. For what conditions do you typically prescribe opioid medications?

4. Are you familiar with the CDC's 2016 Guidelines for Prescribing Opioids for Chronic Pain?

Yes  No

5. Have you received any specific training or education about how to prescribe opioid medications for chronic pain?

Yes  No

6. Have you, or a delegate on your behalf, used the Connecticut Prescription Monitoring and Reporting System (CPMRS) database when prescribing opiates?

Yes  No

6a. If No, why not?

**7. Have you experienced any particular barriers or problems in using the CPMRS?**

Yes                       No                       Never used CPMRS

**7a. If yes, what were they?**

**8. The Department of Consumer Protection (DCP) switched the CPMRS to a new operating system in June of 2016. Were you aware of this change?**

Yes                       No

**8a. If yes, describe your experience using it. (e.g., ease of use, usefulness)**

**9. Have you had any specific training on how to use the CPMRS?**

Yes                       No

**9a. If yes, did you find it useful? If no, why not?**

**10. How has the CPMRS affected your opioid prescribing, if at all?**

Yes                       No

**10a. If yes, how has it impacted your practice?**

**11. The Department of Consumer Protection is considering sending out personalized “reports” to physicians which will compare their opiate prescribing frequency and patterns to other physicians in their specialty. Would you find this helpful?**

Yes

No

**11a. Why or why not?**

**12. The CPMRS uses alerts to notify providers of suspicious patient behavior. This includes any patient with an opiate prescription filled within the last 30 days, a patient with both an opiate and a benzodiazepine prescription, and a patient with five or more opiate prescriptions. Do you find these helpful in your clinical decision-making?**

Yes

No

**12a. Why or why not?**

**13. If you are concerned that one of your patients is misusing or abusing prescription opiates, what do you normally do?**

**14. How useful do you think the CPMRS is as a public health tool to combat the prescription opiate epidemic?**

**15. What role do you think physicians have in addressing the prescription opiate misuse and abuse epidemic?**



## APPENDIX 2

### Physician Opinions on Connecticut's Prescription Drug Monitoring System Information Sheet

**Principal Investigator (PI):** Jane Ungemack, DrPH

**PI Phone Number:** 860 679-5403

**Co-Investigator(s):** Carolyn Kwiat, MD/MPH Student

**Title of Research Study:** Physicians' Opinions on Connecticut's Prescription Drug Monitoring Program

**Expected Duration of Subject's Participation:** 30 minutes

**IRB Number:** 17-119-2

#### **What Is The Purpose Of This Research Study?**

The research objectives of this study are to investigate physicians' attitudes towards and use of Connecticut's Prescription Monitoring and Reporting system (CPMRS) and to inform a future statewide survey planned by the Connecticut Department of Consumer Protection (DCP). Since Prescription Drug Monitoring Programs (PDMPs) in general have been a major prevention and monitoring tool being used by almost all states to address the prescription opiate epidemic, we aim to identify possible ways to increase the usage of the CPMRS and strengthen its efficacy. By performing these interviews, we aim to explore physicians' views about ways to make the CPMRS a more effective and widely used public health resource to address the prescription opiate abuse epidemic in Connecticut. We estimate about 10 to 15 physicians will participate in this study.

#### **Is Participation Voluntary?**

Participation in this study is voluntary. Your completion of this interview implies consent. After agreeing to participate in the study, you can change your mind at any time and stop participating. Refusal to participate in the study will involve no penalty or loss of benefits to which you are otherwise entitled. You can decline to answer any question during the interview. You may discontinue participation at any time without penalty or loss of benefits.

#### **How Long Will My Participation In This Study Last?**

You will be asked to meet with the co-investigator once to complete the interview. This visit will last approximately 30 minutes. No follow-up visits are required for this study.

#### **What Are the Costs To Me For Participating In This Study?**

Beyond 30 minutes of your time, there are no costs to participating in this study.

#### **What Are the Benefits To Me For Participating In This Study?**

There are no personal benefits to participants, but your answers will help to inform a statewide survey to be conducted by the Dept. of Consumer Protection. The goal of the statewide survey is to strengthen the CPMRS as a public health tool to address prescription opioid misuse and abuse. Participants will not receive compensation for completing the interview.

### **What Will I Be Asked to Do?**

Participation in this study will involve the following procedures:

- *Interview:* The study coordinator will conduct an in-person interview with you about your prescribing practices with regard to opioids, use of the CPMRS, barriers to using that monitoring system, and utility of the CPMRS to their practice. The results of this qualitative study will be used to inform the Dept. of Consumer Protection's statewide implementation and management of the CPMRS, as well as be used for the student investigator's thesis for the MD/MPH program.

*Risks Associated with the Interview:* You may feel uncomfortable answering some of the questions. There are no physical risks associated with the interview.

*Safeguards Taken:* You may always choose not to answer a question that makes you feel uncomfortable. No personal identifying information will be collected and these interviews will be anonymous and confidential. Only the PI and co-investigator will have access to participant's responses. No respondent will be identified in the final aggregate report.

### **How Will My Personal Information Be Protected?**

We will not collect any personal identifying information during the course of this interview, just your opinions on prescription opiates and the CPMRS. At the conclusion of this study the co-investigator intends to publish a Master's thesis. In addition, the findings of the study will be shared with the Dept. of Consumer Protection. Information will be presented in summary format and no participants will be identified in any publications or presentations. Confidentiality cannot be guaranteed, but no identifying information will be collected or recoded.

### **What if I Have Questions?**

The Principal Investigator and Co-investigator can answer any questions you have about the research. You are encouraged to ask questions before deciding whether to take part. You are also encouraged to ask questions during your study participation. If you have questions, complaints or concerns about the research, you should call the Principal Investigator at 860-679-5403.

If you have questions about your rights as a research subject you may contact a coordinator at the Institution Review Board at 860-679-1019, 860-679-4851, or 860-679-4849.

You may also call a coordinator at the Institutional Review Board if you want to talk to someone who is not a member of the research team in order to pass along any suggestions, complaints,

concerns or compliments about your involvement in the research, or to ask general questions or obtain information about participation in clinical research studies.

Please do not call the IRB number for medical related issues or to schedule or cancel an appointment.