Database Versus Patient - Things to Consider when Utilizing the Hawai‘i Prescription Drug Monitoring Program

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Abbreviations

AMA = against medical advice
HI-HIDTA = Hawai‘i High Intensity Drug Trafficking Areas
HI-PDMP = Hawai‘i prescription drug monitoring program
PDMPs = prescription drug monitoring programs
SUD = substance use disorders

Introduction

Substance use has cost the United States billions of dollars.[1] According to Zhang et al,[2] 11.1% of patients who visit the emergency department have substance use disorders (SUD), highlighting the importance of recognizing SUD as risk factors for increasing morbidity amongst acutely ill and injured patients. In Hawai‘i, the estimated cost of each opioid-related overdose is $4 050 per emergency department visit and $40 100 for each hospitalization.[3]

Patients with SUD are approximately 3 times more likely to leave the hospital against medical advice (AMA) as compared to those without SUD. Patients leaving AMA often result in uneconomical use of resources through repeated emergency room visits and readmissions. For patients who leave AMA, the risk of readmission is more than doubled and their subsequent length of stay in the hospital after readmission is almost doubled as well; the overall cost for patients who leave AMA is 56% higher than it is for patients who leave on their planned discharge date.[4,5] One of the major reasons SUD patients leave AMA is undertreated withdrawal,[4] which includes not being given sufficient outpatient maintenance prescribed controlled medications.

According to the Centers for Disease Control and Prevention, the total number of drug overdose deaths quintupled between 1999 and 2020. The age-adjusted death rate from overdoses increased from 28.3 per 100 000 in 2020 to 32.4 per 100 000 in 2021. Except for those aged 15–24, drug overdose death rates in 2021 were significantly higher than those in 2020 for all age groups.[6-8] Similar to national trends, Mr. Gary Yabuta, the Executive Director of Hawai‘i High Intensity Drug Trafficking Areas (HI-HIDTA) reported that drug related deaths in Hawai‘i increased from 249 in 2016 to 320 in 2022.[9] In 2021, Hawai‘i had 269 overdose deaths, approximately 17.3 overdose deaths per 100 000 people (age-adjusted).[10]

From 1999 to 2017, the number of overdose deaths involving prescription opioids rose by almost 500% in the United States.[8] There was a temporary decline in prescription opioid overdose deaths between 2017 and 2019, but in 2021, the deaths increased, accounting for approximately 15.7% (16 706) of all drug overdose deaths in the United States.[8] When compared to other parts of the country, Hawai‘i has a lower rate of overdose deaths involving opioid prescription medications.[11] Data from HI-HIDTA show that there were 24 prescription opioid medication related deaths in 2020.[12]

Unfortunately, overdose deaths usually involve multiple substances, hence identifying the exact substance causing a person’s death can be very challenging. Indeed, instead of “opioid overdose death crisis,” the proper terminology may be “polysubstance overdose death crisis.” For example, both illicit and common substances such as alcohol and prescription sedative medications (such as benzodiazepines, which are one of the most commonly prescribed controlled medicines) may be involved in prescription opioid deaths.[13] Although both opioids and benzodiazepines are prescription medications, combining them can increase the risk of an overdose because both types of drugs can cause respiratory suppression, leading to fatality.[14]

Prescription drug monitoring programs (PDMPs) have been enacted across the United States in an effort to combat the ongoing overdose death crisis and to protect the public. PDMPs are statewide electronic databases that tracks controlled medication prescriptions. The program allows health care providers to access information about patients’ controlled medication prescriptions in order to provide optimal and safe medical care.[15] Although the impact and effectiveness of PDMPs remain

mixed,[15] in 2015 the National Heroin Task Force[16] found that PDMPs reduce doctor shopping behaviors amongst patients and reduce rates of unhealthy use of prescription medications. PDMPs have also been shown to impact prescribing behaviors in an emergency setting, sometimes resulting in no, or fewer, opioid pill prescriptions.[17] As of January 2023, all 50 states, Washington D.C., and Guam have PDMPs.[18]

Despite the benefits associated with PDMPs, there are multiple barriers to the success of the program. For example, the usage and regulation of PDMPs vary widely between states. In some states, prescribers are mandated by law to check the PDMPs before prescribing controlled medications, whereas in others, it is voluntary.[19] Unfortunately, PDMP data are not shared across the country and data sharing policies vary between each state and jurisdiction.[20] PDMPs are not a comprehensive system, as the databases do not collect the method of payment used to fill the prescription, the identification of the person filling the prescription medications, or the disciplinary status of prescribers. There is also variable lag time between filling prescriptions and reporting to PDMPs.[21] Other barriers to success of PDMPs identified by Martin et al[22] include difficulties accessing PDMPs, lack of knowledge or awareness of PDMPs, and lack of electronic medical record integration.

The Hawai‘i PDMP (HI-PDMP) became operational in 1943 and became accessible online in 1997.[23] As of 2018, per Act 153(18), prescribers are required to consult the HI-PDMP before prescribing any schedule II-IV controlled substances, with the exception of prescriptions for a supply of up to 3 days made by an emergency medical provider or in an emergency room.[24] As of September 2023, the HI-PDMP shares data with 13 states plus military health systems.[25]

Considerations when Utilizing the HI-PDMP

Providers should consider a few important facts when utilizing the HI-PDMP. When searching for a particular patient in the HI-PDMP, there may not be a result for several reasons. First, the HI-PDMP is not updated in real time, sometimes resulting in up to a 7-day delay between when prescriptions are filled and when they are reported to the PDMP. Second, the HI-PDMP only includes prescriptions that are dispensed within the state of Hawai‘i. Third, controlled substances dispensed to inpatients in hospitals and nursing homes, as well as those administered at a health care facility are exempted from reporting to the HI-PDMP.[26] Fourth, the HI-PDMP and electronic health records are not integrated. And finally, as previously stated, Hawai‘i shares PDMP data with a select number of states.[25]

Despite various laws and regulations intended to keep Hawai‘i safe, the HI-PDMP may at times become an obstacle to providing proper care. In a recent situation, the HI-PDMP flaws were the reason a patient was denied medication and eventually left AMA. A patient with a history of SUD insisted on being prescribed controlled medication as an outpatient. At that time, the patient did not have any acute medical indication for such medication or objective signs or symptoms of withdrawals. The hospital provider checked the HI-PDMP but there were no such encounters recorded, resulting in the medication not being prescribed. Days later, after the patient pleaded multiple times, the provider called the outpatient office and pharmacy which both confirmed the prescription. The pharmacy was not aware that the patient's prescription was not in the HI-PDMP because they had been relying on third parties to input the data. By this time, the patient had already left the hospital AMA out of frustration and necessary medical treatment was not completed. Although there were no acute indications or objective withdrawal symptoms observed in this case, many SUD patients suffer from strong cravings. These cravings may lead to maladaptive behaviors, such as leaving the hospital AMA.[4]

The above case demonstrates the discordance between the HI-PDMP and the patient's reported history. Although the health care provider checked the HI-PDMP prior to prescribing the controlled substance as required by law, the patient unfortunately left AMA. Prior to mandatory consultation with the HI-PDMP, health care providers often called the outpatient provider or pharmacy to confirm the patient's story because not all providers were aware of, or had access to the HI-PDMP. Although the HI-PDMP is convenient and provides valuable information, it is important for health care providers to keep in mind that the HI-PDMP has limitations. When there is a discrepancy between a patient's account and the HI-PDMP, the provider should gather more information so that optimal care can be provided.

Conclusion

More than 45 people in the United States die daily from prescription opioid medications.[8] Unfortunately, overdose deaths also commonly involve other illicit and prescription substances, such as benzodiazepines.[13] PDMPs are convenient tools which were enacted across the United States with the intention to keep the public safe and healthy. They also allow health care providers to access information on patients' controlled medication prescriptions. Laws and regulations pertaining to PDMPs were created in an effort to combat the ongoing opioid overdose death crisis, or more specifically, polysubstance overdose death crisis. Although results are mixed, studies show that PDMPs reduce doctor shopping amongst patients and reduce the rates of unhealthy prescription drug use.[15,16,17] It also appears to have a positive impact on physician prescribing habits.[17] In Hawai‘i, the law mandates that health care providers consult the HI-PDMP prior to prescribing controlled medications.[24] Although the HI-PDMP provides valuable information, it is important for providers to be aware that no system is perfect. To provide optimal health care for patients and to keep Hawai‘i safe, providers should be aware of the HI-PDMP's limitations and take extra steps when necessary to confirm the patient's story when there are discrepancies with the PDMP data. A

few additional steps may prevent patients from leaving AMA and ensure delivery of proper care and judicious utilization of public resources.

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