



Opioid Overdose and Misuse Report

Examining Spokane County heroin and painkiller use data

There is increasing concern in the public health community about opiate and opioid misuse. Opiates are naturally occurring narcotics and opioids are synthetic opiates. This fact sheet will use the term opioid to cover both types of substances. Opioids include prescription narcotics, heroin, and methadone. Excessive use of opioids can lead to an acute overdose resulting in a decreased level of consciousness and a slowing of the heart rate and respirations. An overdose may lead to the need for emergency care, hospitalization, or may lead to death. Substance misuse is a complex topic that includes not only health and social outcomes, but also issues of addiction, recovery assistance, prescribing practices, diversion of opioids, co-occurring disorders, and multi-substance misuse. Beyond the individual, there are costs to society, first responders, and families.

This fact sheet focuses on the misuse of opioids, whether legally prescribed or illicitly used, leading to overdosing on the drug, which is technically called poisoning. Public services in the community used to assist individuals with issues of opioid misuse are described. Recommendations are provided for community consideration.



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Prevalence of use

In 2013, 1.7% of Spokane County adults (approximately 6,300) used an opioid medication to get high in the last 30 days. The proportion significantly increased since a 2011 rate of 0.3%. Illicit use of this narcotic was more likely among males, individuals with a lower education level (high school or less), and those with a low income (<\$25,000).¹

In 2014, 5.1% of Spokane County high school students (one in 20) used an opioid medication to get high in the last 30 days. The proportion significantly decreased since a 2010 rate of 9.0%. Having ever used heroin was reported by 3.7% of Spokane County high school students. This rate has been stable since 2010.²

Emergency response to opioid overdoses

The City of Spokane's Fire Department recently initiated the use of an electronic patient record system. This system allows a query specific to conditions that require a paramedic, allowing agencies to monitor urgent community needs. The definition of opioid overdoses for emergency response is a paramedic impression of overdose, poisoning, unconscious, altered level of consciousness, respiratory

arrest, and administration of Narcan. Information reported here is for January 2015 through June 2015.

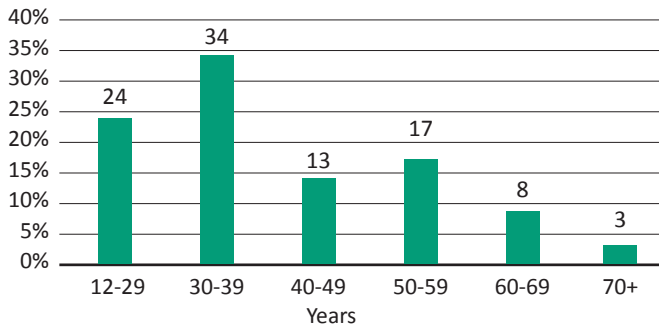
During the first six months of 2015, there were 134 responses for an opioid overdose. Two in three opioid overdoses were male (64.2%); 36% female. More than half of opioid overdose responses were for individuals 20-39 years of age—average was 40.5 years with a range of 12-90 years.

Heroin was the predominant opioid involved in the opioid overdoses needing emergency response. The next largest category of opioid was an unknown non-prescribed opioid. Anecdotally, some individuals presumed these non-prescribed opioid overdoses to also be the result of heroin use, which can falsely skew the data.

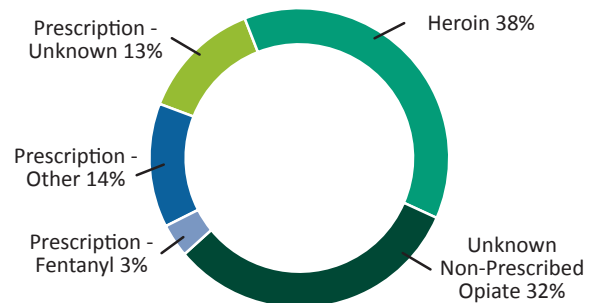
Among opioid overdoses, 95.5% of patients improved after an emergency response. Unfortunately, that means 4.5% of those who overdosed died.

One in four (26.8%) responses for an opioid overdose were for individuals with an immediate, life-threatening condition. These individuals were in respiratory arrest, cardiac arrest, or required mechanical ventilator support or CPR. Among these patients, 17% did not survive the overdose.

Opioid Overdose by Age, City of Spokane Fire Department Response, January-June 2015



Opioid Overdose by Type of Opiate, City of Spokane Fire Department Response, January-June 2015



Overdose hospitalizations³

Data used by fire officials is one of many data sources that can be used to look at opioid misuse. Specific to hospitals, the definition of opioid-related hospitalizations is ‘having an ICD-9 Ecode of E850(.0-.2)’. These codes include accidental poisoning by heroin, methadone, and other opioid, respectively.

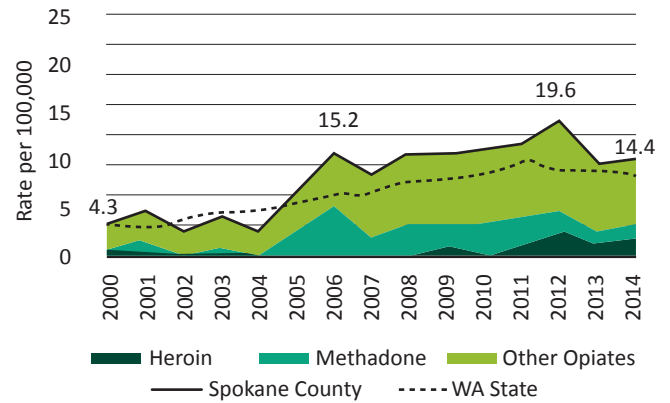
In 2014, 70 Spokane County residents were hospitalized for an unintentional opioid-related poisoning, excluding those who died. From 2010-2014 among individuals admitted to the hospital for an unintentional opioid poisoning, an average of 2.5% died.

Hospitalizations for opioid-related poisoning among Spokane County residents significantly increased 8.9% annually from 2000 to 2014, growing over time from a rate of 4.3 to 14.4 per 100,000. There was no statistically significant difference between the 2014 rates for Spokane County and Washington state overall, or for heroin, methadone, and other opioids individually. Among Spokane County opioid-related poisoning hospitalizations in 2014, approximately one-quarter (23%) were from heroin, 10% methadone, and the remaining 67% from other opioid.

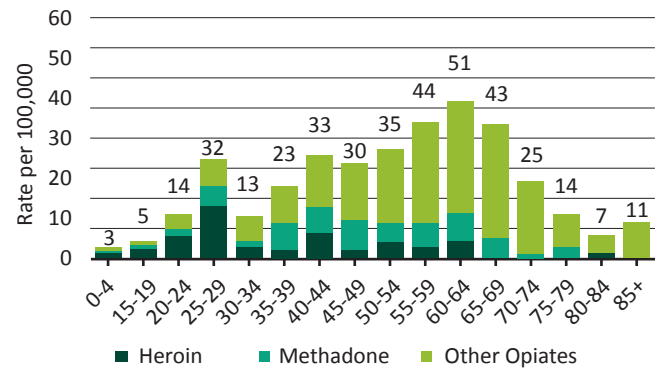
During 2010-2014 in Spokane County, individuals 60-64 years of age had the highest number of opioid-related hospitalizations. The average age was 52 years and the age range was 1-93 years. The type of opioid varied by age. Young adults had a higher proportion from heroin and older adults had a higher proportion from other opioid. Males accounted for 41% of opioid -related hospitalizations and females 59%. Specific to race, 92% of opioid-related hospitalizations were among white individuals. American Indian/Alaska Natives (AIAN) had the highest hospitalization rate by race though.

The average length of stay during 2010-2014 was four days for an opioid-related hospitalization. The range was one to 57 days. The average charge for an opioid-related hospitalization was \$28,000, with a range from \$2,400 - \$549,000. Total charges during 2010-2014 for inpatient hospitalizations was \$10.7 million.

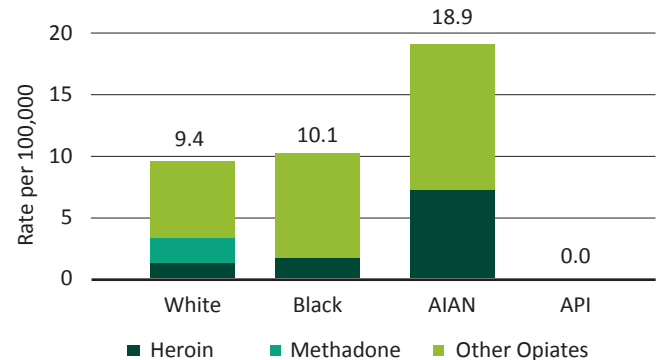
Unintentional Opioid Poisoning Hospitalizations Over Time



Age Distribution of Opioid-Related Hospitalizations Spokane County, 2010-2014



Opioid-Related Hospitalizations by Race Spokane County, 2010-2014



Charges for Non-Fatal Unintentional Opioid Poisoning Hospitalizations, Spokane County, 2010-2014

	Count	Total	Min	Max	Average
All Opioid	383	\$10,729,185	\$2,436	\$548,936	\$28,014
Heroin	55	\$2,400,893	\$2,896	\$548,936	\$43,653
Methadone	73	\$1,567,144	\$2,436	\$128,713	\$21,468
Other Opioids	255	\$6,761,148	\$2,473	\$290,365	\$26,514

Overdose deaths⁴

After examining hospitalization data, it is useful to also examine death rates as defined by health care. The definition of opioid-related deaths uses the ICD-10 code X42 for the underlying cause of death (accidental poisoning by narcotics and psychodysleptics⁵) and also having a code of T40(.0-3) in any of the multiple causes of death fields. The T40 codes are for opium, heroin, other opioids, and methadone, respectively.

In 2014, there were nine deaths among Spokane County residents due to unintentional opioid-related poisoning. The rate of opioid-related deaths significantly increased 19% annually from 2000 to 2005. Since 2005, the rate significantly decreased 8.3% annually. The 2014 Spokane County rate was significantly lower than the statewide rate.

In 2014, 28.6% of unintentional opioid-related poisoning deaths in Spokane County involved heroin use. The distribution of drug type varies by age. Older adults have a higher proportion of poisoning deaths from other opioid.

During 2010-2014, individuals 50-54 years of age had the highest number of opioid-related deaths. The average age at death was 43 years. The age range was 18-85 years. Males accounted for 69% of opioid-related deaths; females 31%. Specific to race, 92% of opioid-related deaths were among white individuals. AIAN had the highest death rate by race though. There was no seasonal variation in opioid-related deaths.

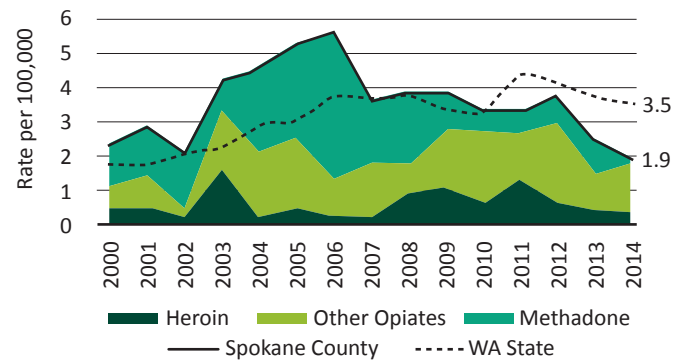
Opioid prescribing⁶

Washington State Department of Health oversees the state's Prescription Monitoring System. The program's purpose is to improve patient care and stop drug misuse by collecting prescription records for addictive drugs. The program began collecting data from all dispensers in October 2011.

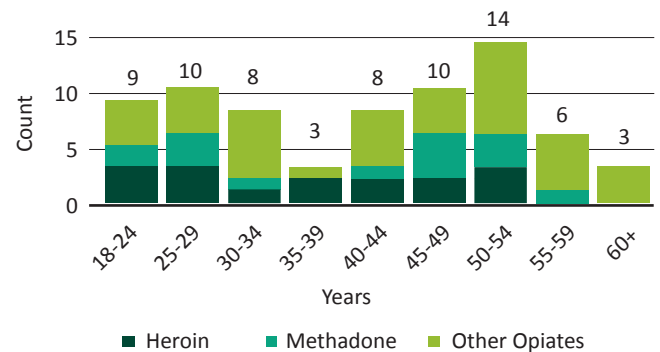
Statewide in 2014, there were 4.7 million prescriptions dispensed for three opioid medications used to treat moderate to severe pain that may not respond well to other pain medications. Those medications were hydrocodone/acetaminophen (Lortab, Vicodin), oxycodone HCL (Oxycontin), and oxycodone HCL/acetaminophen (Percocet). The majority of the opioid prescriptions were for hydrocodone/acetaminophen. The numbers and proportions were similar in 2012 and 2013.

As of September 30, 2015, there were 809 health providers registered to use the prescription monitoring program in Spokane County. The majority (49%) were physicians. Mid-level health care providers accounted for one-third of registered providers; 20% were an advanced registered nurse practitioner (ARNP) and 12% were a physician assistant. Dentists accounted for 13% of registered providers and pharmacists were 4%. The remaining 2% of providers were a variety of specialties with five or fewer individuals registered.

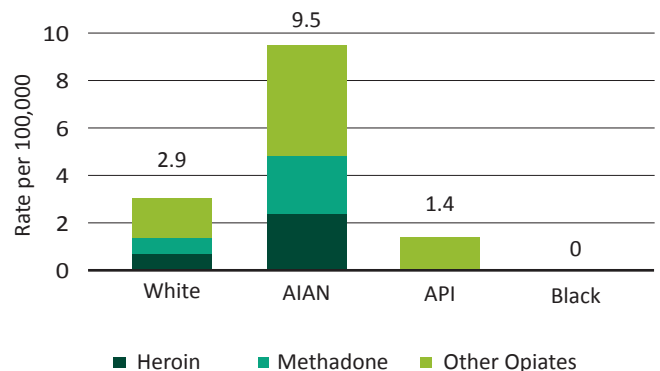
Opioid-Related Death Rate Over Time



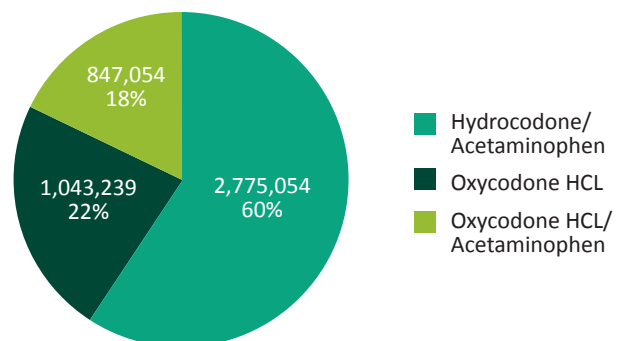
Age Distribution of Opioid-Related Deaths Spokane County, 2010-2014



Opioid-Related Deaths by Race Spokane County, 2010-2014



Opioid Prescriptions Dispensed Washington State 2014



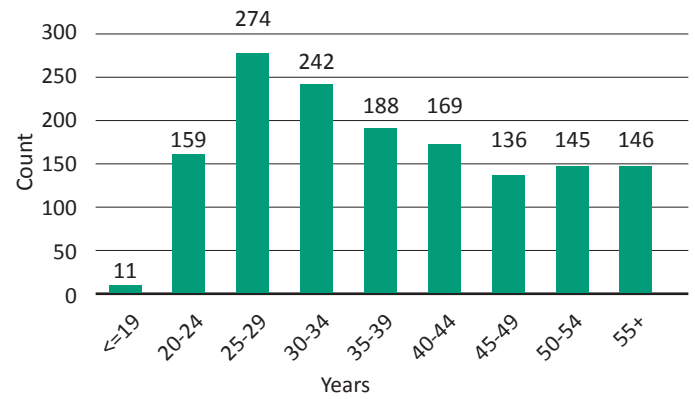
Needle exchange

Spokane Regional Health District offers needle exchanges to injection drug users. The program provides free one-for-one exchange of used needles for clean needles in an effort to prevent the spread of infectious diseases, such as HIV, hepatitis B, and hepatitis C. Exchange rates can be used as an additional data source to define problem.

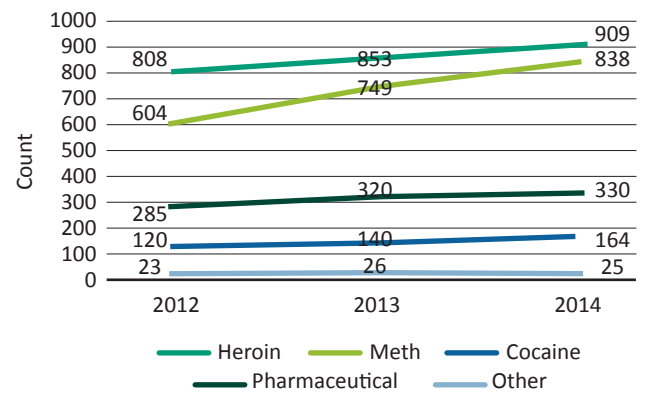
In 2014, there were 1,470 individuals who used the Needle Exchange program. One-third of the clients were young adults 25-34 years of age. AIAN comprised 11% of needle exchange clients, yet they only represent 1.7% of the population. Clients were 62% male and 38% female. The majority of clients indicated heroin (61.8%) was their preferred drug of choice.⁷ This was followed closely by methamphetamine (57.0%).

The number of visits the needle exchange program received increased from 2012 to 2014. People may visit more than one time per year. The Needle Exchange program also encourages exchanging needles for other people. This allows the service to reach those who might otherwise not be able to benefit from the program. The number of people for which needles were exchanged (to include the person bringing them in) increased from 2012 to 2014. In 2014, the needle exchange program received 9,199 visits to exchange needles for 16,809 people. Nearly one million needles were exchanged in 2014.

Age Distribution of New Needle Exchange Clients, 2014



Drug of Choice, Needle Exchange Clients



	2012	2013	2014
Number of visits	7,054	8,603	9,199
Number of people exchanging for	12,442	15,503	16,809
Total needles in	809,016	995,157	995,810
Total needles out	808,486	995,019	994,670
Average needles in per visit	115	116	108
Average needles out per visit	65	64	59



Publicly-funded drug treatment

During 2011-13, Spokane County had a rate of 184.3 per 100,000 for publicly-funded treatment admissions involving any opioid.⁸ The rate increased 188% since 2002-04. Spokane County's 2011-13 rate was higher than the statewide rate of 176.3 per 100,000.

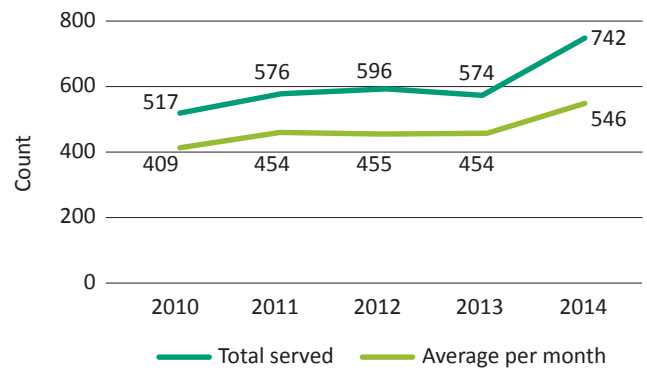
Spokane Regional Health District Opioid Treatment Program

One publicly-funded drug treatment program is the Opioid Treatment Program (OTP) at Spokane Regional Health District. OTP provides outpatient treatment, counseling, and referral services for adults addicted to opioids (heroin, morphine, hydrocodone, oxycodone, etc.). OTP provides medication-assisted treatment allowing patients to experience decreased withdrawal symptoms and cravings normally associated with opioid use. Ongoing therapy, implemented and overseen by a team of medical and counseling professionals, assists each patient with setting and achieving realistic health and lifestyle goals.

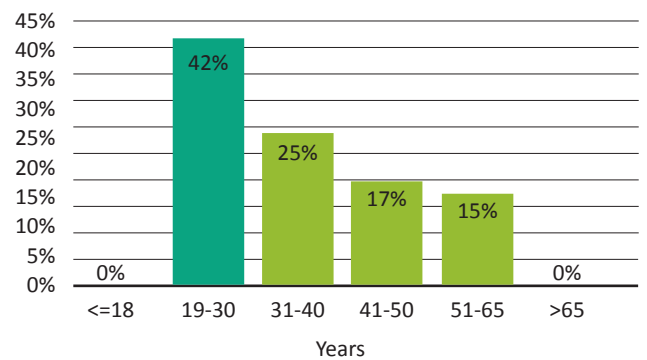
The number of clients served by OTP increased in 2014 to a total of 742 individuals, with an average of 546 individuals served each month. The majority of 2014 OTP clients were young adults; the proportion decreased as age increased. Among clients where race was reported, most were white (89%), a disproportionate amount were AIAN (8%), 2% were black, and 1% were Asian/Pacific Islander (API). Seventeen percent of clients were employed, 40% were unemployed and not seeking work, 17% were disabled, 21% were unemployed seeking work, and 4% were otherwise not in the workforce. Among clients who were discharged from treatment in 2014, 75% were in the program for 90 days or more.

The primary substance used by clients entering OTP was predominantly heroin. Between 2010 and 2014, there was a decrease in oxy/hydrocodone and other opioids identified as the primary substance used. Concurrently, there was an increase in prescribed opioid substitute as the primary substance.

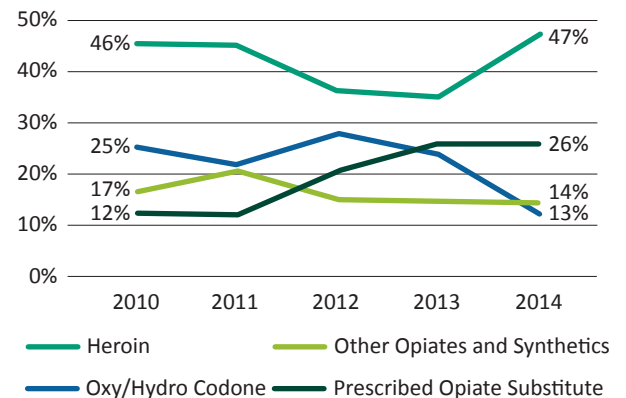
OTP Clients Over Time



OTP Clients by Age Group, 2014



Primary Substance Used by OTP Clients Over Time



1. Washington State Department of Health, Center for Health Statistics, Behavioral Risk Factor Surveillance System, supported in part by Centers for Disease Control and Prevention, Cooperative Agreement U58/SO000047- 3 (2013). Calculations and presentation of data by SRHD, Data Center.
2. Washington State Department of Health Healthy Youth Survey. 2014. Calculations and presentation of data by SRHD Data Center.
3. Washington State Department of Health, Comprehensive Hospitalization Abstract Reporting System. Calculations and presentation of data by SRHD Data Center.
4. Washington State Department of Health, Death Certificate Data. Calculations and presentation of data by SRHD Data Center.
5. Hallucinogens

6. Washington State Department of Health, Prescription Monitoring Program.
7. Percentages do not add up to 100% as individuals could mark more than one option.
8. University of Washington, Alcohol & Drug Abuse Institute. April 2015. Opioid Trends Across Washington State. ADAI-IB 2015-01.
9. American Public Health Association. Reducing Opioid Overdose through Education and Naloxone Distribution. Nov. 5, 2013. Policy number 20133. <http://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/16/13/08/reducing-opioid-overdose-through-education-and-naloxone-distribution>. Accessed 10/13/15.



Recommendations

Individuals misusing or abusing opioids may belong to a vulnerable population or may be marginalized for their substance use. These individuals may suffer from addiction, chronic pain, and mental health disorders and have limited social support or other factors that increase their susceptibility to opioid misuse or abuse. The American Public Health Association supports the use of community-level approaches to prevent opioid-related poor health outcomes.⁹

Education

- Support the education of healthcare professionals on appropriate prescribing practices for acute and chronic pain, especially prescribing opioid pain medications
- Promote use of Washington state's Agency Medical Directors' Group's *Interagency Guidelines on Prescribing Opioids for Pain*
- Educate healthcare providers to recognize opioid use disorder, use substance abuse screening tools, and properly refer if a disorder is identified
- Promote use of the Prescription Monitoring Program among healthcare providers to help identify opioid use patterns among patients to decrease misuse and abuse of opioids

Treatment

- Support greater access and utilization of medication-assisted treatment for opioid addiction
- Support increased availability and utilization of less prevalent medication-assisted treatment (MAT), such as buprenorphine and naltrexone
- Support increased distribution and utilization of naloxone to intervene in opioid overdoses to prevent opioid deaths

Storage and Disposal

- Educate patient and public on the importance and methods of proper storage and disposal of prescription pain medications
- Expand the utilization of drug take back programs
- Explore establishing permanent locations to properly dispose of controlled substances in communities without such locations

Data

- Increase the use of available data to understand patient and provider patterns to target interventions
- Support the use of available data to understand morbidity and mortality associated with opioid misuse and abuse
- Support the use of data to evaluate the effectiveness of interventions



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