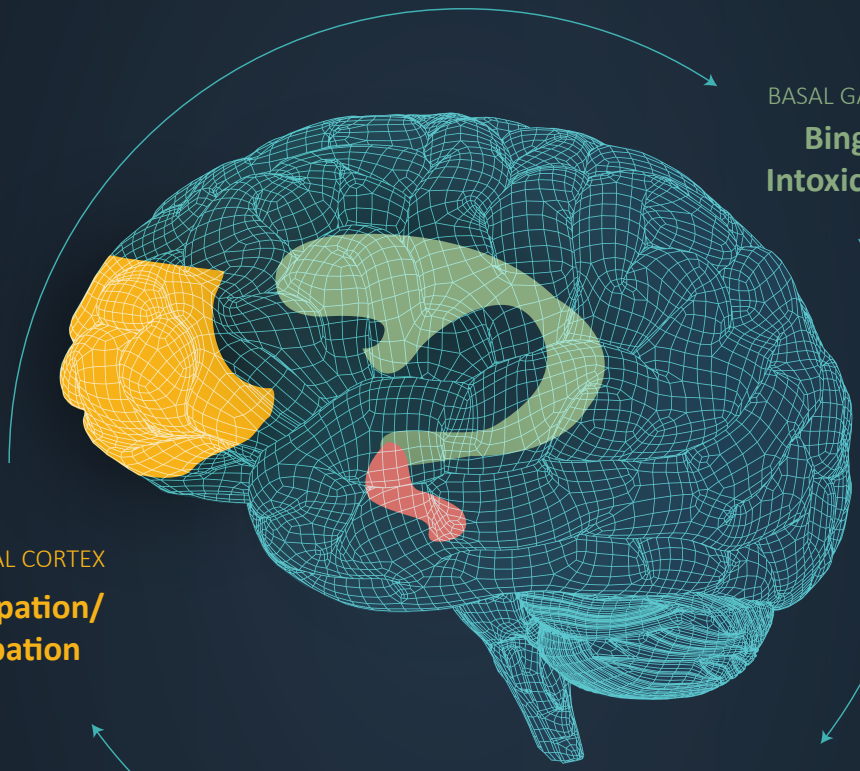
Opioid Overdose & Misuse

Examining Data for Spokane County, Washington

February 2018



SPOKANE REGIONAL HEALTH DISTRICT

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January 2018

IMAGE CREDITS
Cover: Johan Swanepoel
Page 2: NIH Image Gallery, MRI Scan
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There is increasing concern about opiate* and opioid misuse. 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 respiration. An overdose can result in the need for emergency care, hospitalization or death.

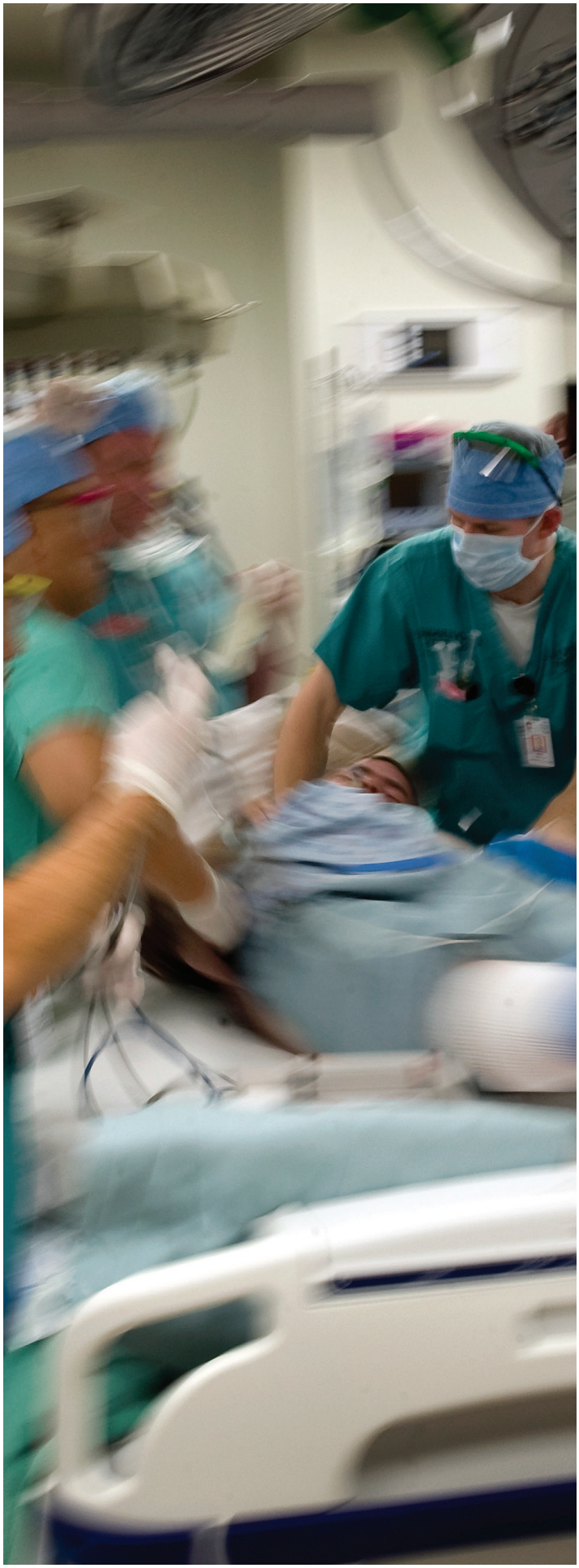
Substance misuse is a complex topic that includes not only health and social outcomes, but also issues of:

- addiction
- recovery assistance
- prescribing practices
- diversion of opioids when they become illegal through means such as being stolen, or when sold to another individual
- co-occurring disorders
- multi-substance misuse

Beyond the individual, there are costs to society, first responders and families.

This fact sheet focuses on the misuse of opioids in Spokane County, whether legally prescribed or illicitly used, leading to overdosing on the drug, technically called poisoning. Available data on emergency response, hospitalization, and death is also included. Community services that assist individuals with issues of opioid misuse are described. Recommendations are provided for community consideration. People who may find this information useful include individuals or government officials with an interest in the topic, as well as service providers in the community, such as those working in public health, public safety, drug treatment services, or health care.

Spokane Regional Health District (SRHD) provides this information related to opioid misuse as a service to the community. Recognizing the many facets of opiate misuse, SRHD is taking an active role in addressing the challenge by collaborating through cross-sectors partnerships and on-going efforts.



**Opiates are defined as naturally occurring narcotics, while opioids are synthetic opiates. This fact sheet will use the term "opioid" to cover both types of substances, which include prescription narcotics, heroin, and methadone.*

Prevalence of Use

In 2014, 1.7% of Spokane County adults (approximately 6,300) used an opioid medication to get high in the last 30 days. There was no significant trend in the proportion from 2011 to 2014. 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 2016, 4.9% 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%. Four percent of Spokane County high school students reported having ever used heroin. This rate has been stable since 2010.[2]

Emergency Response to Opioid Overdoses

Spokane Fire Department recently initiated the use of an electronic patient record system. This system allows staff to query records for conditions that required a paramedic to respond, allowing agencies to monitor urgent community needs. The definition for an opioid-overdose query was a paramedic's impression of:

- overdose
- poisoning
- unconsciousness
- altered level of consciousness
- respiratory arrest
- administration of Narcan

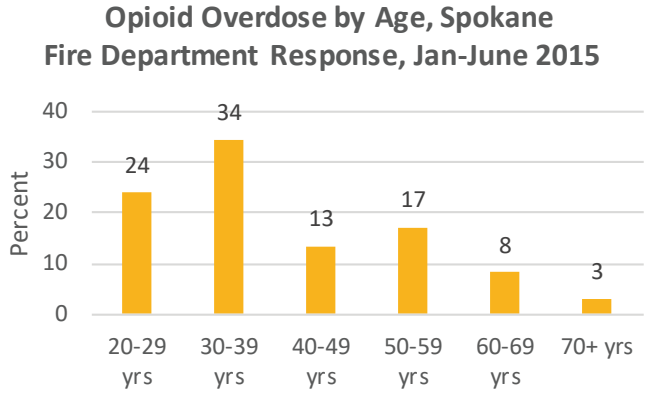
Information provided is for January 2015 through June 2015.

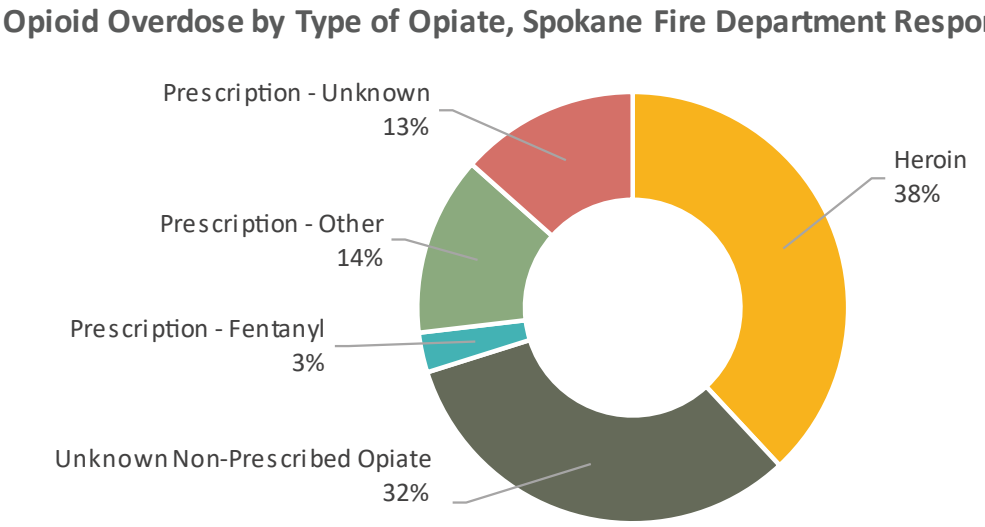
During the first six months of 2015, there were 134 responses for an opioid overdose. Two in three opioid overdoses were male (64.2%); 36% female. More than half of opioid-overdose responses (58%) were for individuals 20-39 years of age. The average age was 40.5 years with a range of 12-90 years.

Heroin was the predominant substance involved in opioid overdoses that required emergency response. The next largest category of opioid was an unknown non-prescribed opioid. Anecdotally, these overdoses are presumed to also be the result of heroin use.

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

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

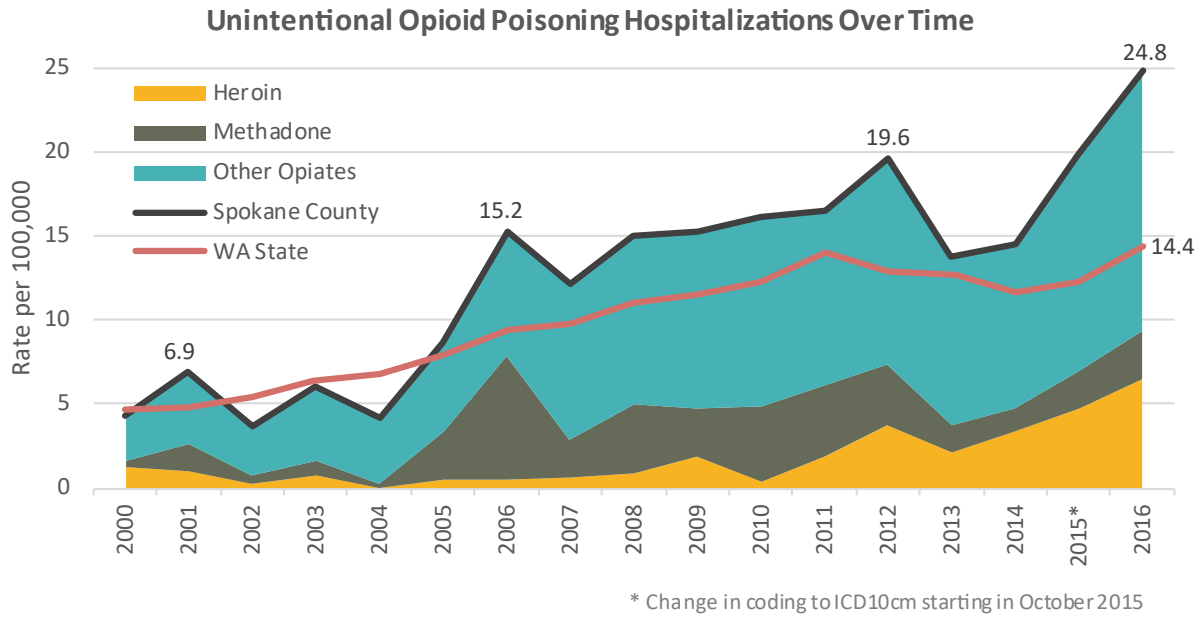




Overdose Hospitalizations

Inpatient hospitalizations are another data source used to look at opioid misuse.[3] Opioid-related hospitalizations were defined as a record having an ICD-9 E-code of E850(.0 - .2). These codes include accidental poisoning by heroin, methadone, or "other opioids," respectively. Beginning in October 2015, the definition was an ICD-10-CM code of T40.(0 - 4)x1, T40.601 or T40.691. These codes include accidental poisoning by opium, heroin, methadone, other opioids, synthetic narcotics, other narcotics, and unspecified narcotics.

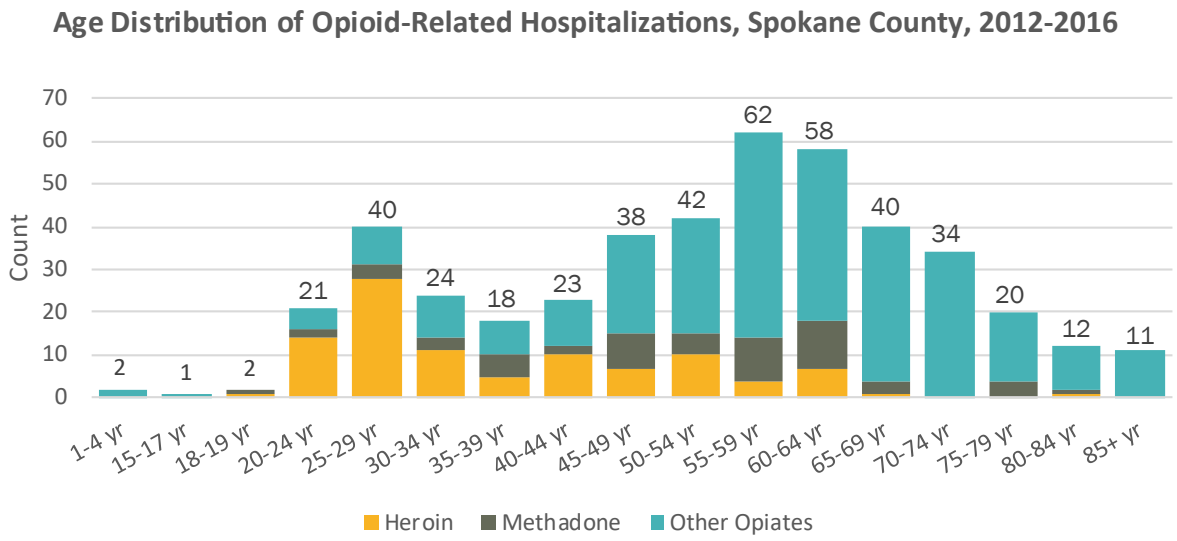
In 2016, 122 Spokane County residents were hospitalized for an unintentional opioid-related poisoning, excluding those who died. From 2012-2016, 2.6% of individuals admitted to the hospital for an unintentional opioid poisoning died (12 individuals).

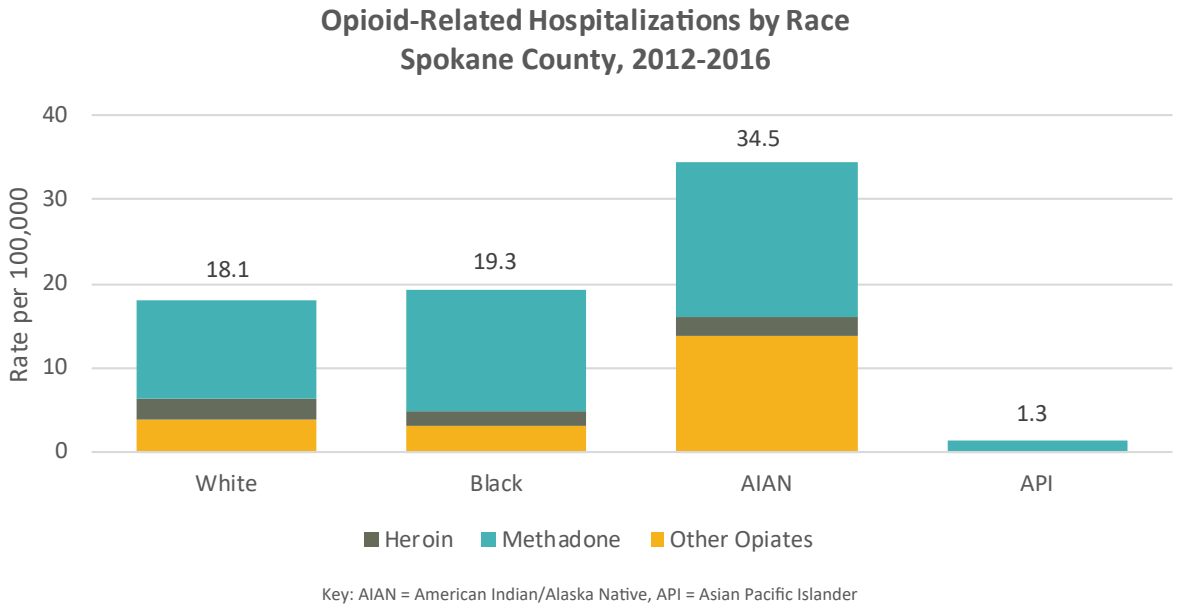


Hospitalizations for opioid-related poisoning among Spokane County residents significantly increased 8.8% annually from 2000-2016, from a rate of 4.3 to 24.8 per 100,000. The 2016 rates were significantly higher for Spokane County compared to Washington state overall, and for heroin, methadone, and "other opioids†" individually. Among Spokane County opioid-related poisoning hospitalizations in 2016, approximately one-quarter (26%) were from heroin, 11% from methadone, and the remaining 63% from "other opioids."

During 2012-2016 in Spokane County, individuals 60-64 years of age had the highest number of opioid-related hospitalizations. The average age was 52, with a range of 1-93 years. Young adults (<30 years) were more often hospitalized for heroin poisoning, while older (45+ years) for "other opioids." Males accounted for 41% of opioid-related hospitalizations. Whites accounted for 92% of opioid-related hospitalizations, because they were the majority race in the county. When calculating a rate to adjust for variability in population size, American Indians/Alaska Natives had the highest hospitalization rate.

† *Starting in October 2015, "other opioids" also included synthetic, unspecified and other narcotics.*





Key: AIAN = American Indian/Alaska Native, API = Asian Pacific Islander

The average length of stay for an opioid-related hospitalization during 2012-2016 was four days, with a range of one to 72 days. The average charge for an opioid-related hospitalization was $35,000, with a range of $2,900 - $549,000. Total charges during 2012-2016 for inpatient hospitalizations among Spokane County residents was $15.8 million.

Charges for Non-Fatal Unintentional Opioid Poisoning Hospitalizations, Spokane County, 2012-2016

	Count	Total	Average	Min	Max
All Opioids	448	$15,770,071	$35,201	$2,896	$548,936
Heroin	99	$4,697,415	$47,449	$2,896	$548,936
Methadone	58	$1,610,689	$27,771	$3,446	$133,017
Other Opioids	293	$9,542,929	$32,570	$4,631	$290,365

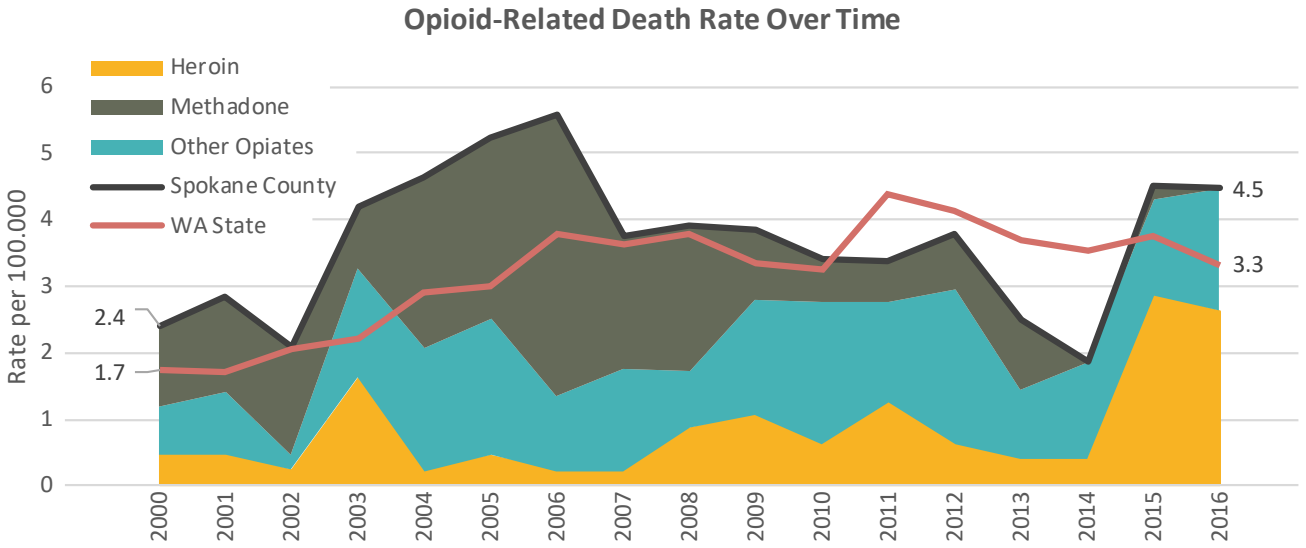
Overdose Deaths

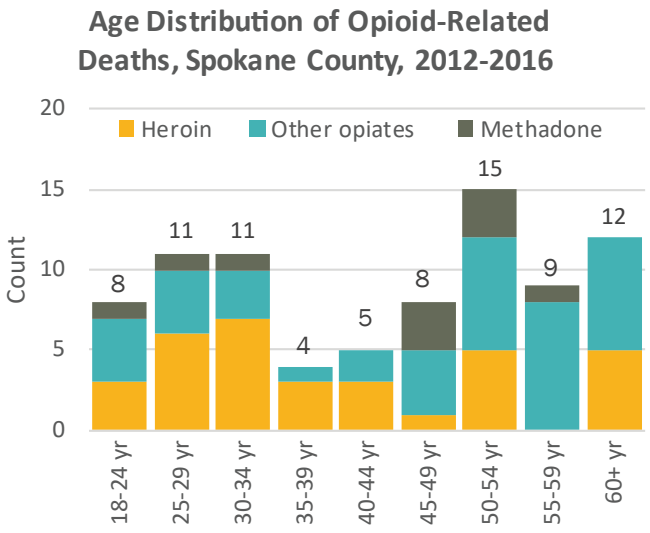
Death records provide additional information about individuals who overdosed.[4] Opioid-related deaths were defined using ICD-10 code X42 for the underlying cause of death 'accidental poisoning by narcotics and psychodysleptics‡' and a code of T40(.0 - .3) in any of the multiple causes of death fields. The T40 codes were for opium, heroin, "other opioids," and methadone, respectively.

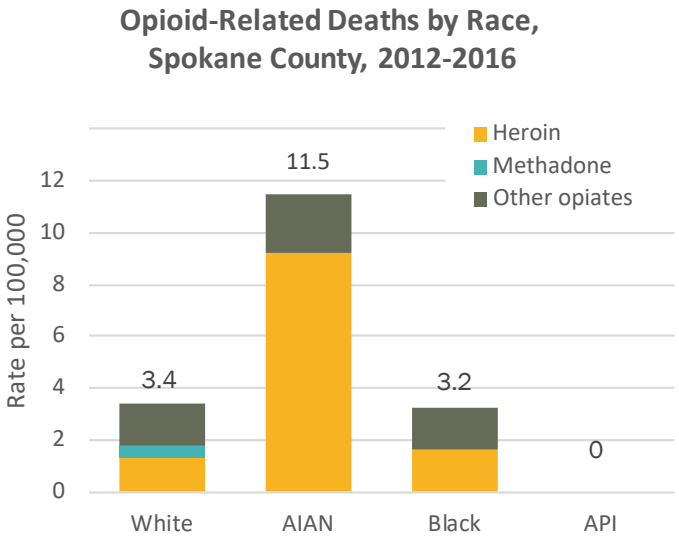
In 2016, there were 22 deaths among Spokane County residents due to unintentional opioid-related poisoning. The rate of opioid-related deaths significantly increased by 19% annually from 2000 to 2005. This was followed by a decreased annual rate of 8.3% through 2014, only to see a dramatic increase in 2015. The 2016 Spokane County rate was significantly higher than the statewide rate.

In 2016, 59.1% of unintentional opioid-related poisoning deaths in Spokane County involved heroin use. The type of opioid involved varied by age. Older adults had a higher proportion of poisoning deaths from "other opioids."

During 2012-2016, individuals 50-54 years of age had the highest number of opioid-related deaths. The average age at death was 44 years, with a range of 20-73 years. Males accounted for 74% of opioid-related deaths. Whites accounted for 92% of opioid-related deaths. When calculating a rate to adjust for variability in population size, American Indians/Alaska Natives had the highest hospitalization rate. There was no seasonal variation in opioid-related deaths.







‡ *Hallucinogens.*

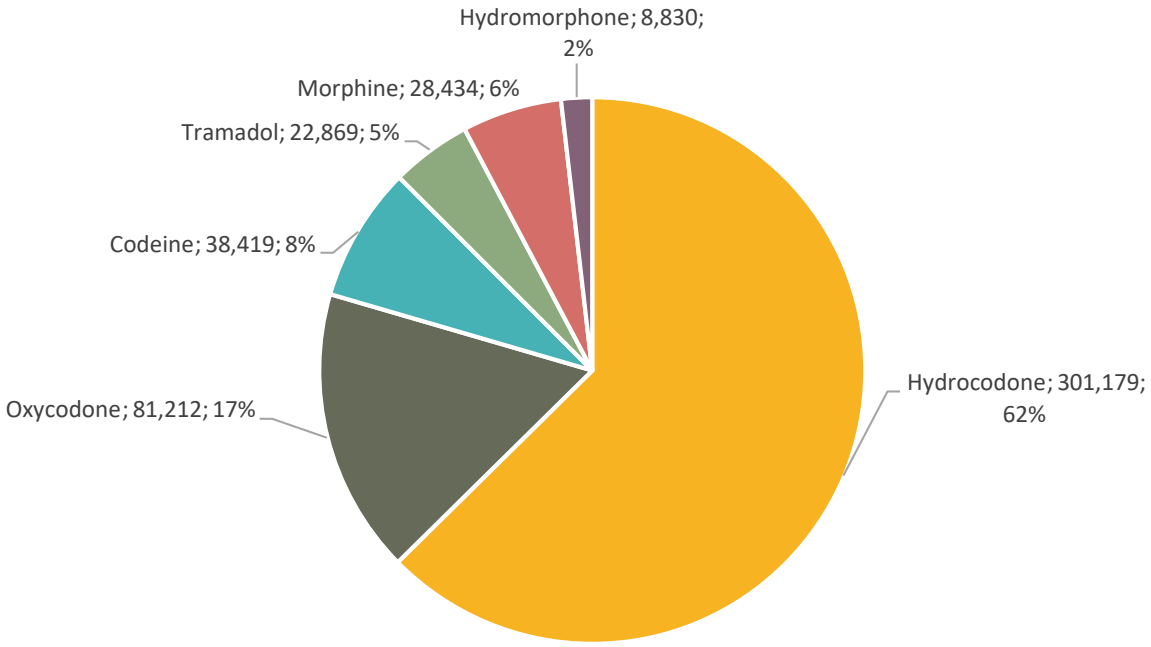
Opioid Prescribing

Provider prescribing practices impact the availability of prescription opioids.[5] Washington State Department of Health oversees the state's Prescription Monitoring Program (PMP). Assessing data in the PMP can help identify prescribers who may be writing prescriptions for opiates in excess of guidelines. It can also help individual prescribers identify patients who may be receiving opioid prescriptions from multiple providers.

Data was collected from all dispensers for the PMP beginning in October 2011, with the intention of improving patient care and reducing prescription drug misuse by collecting all records for Schedule II, III, IV and V drugs. Prescription opioids are a Schedule II drug used to treat moderate to severe pain that may not respond well to other pain medications. They include hydrocodone, oxycodone, codeine, tramadol, morphine, and hydromorphone. Schedule I drugs, which includes heroin, have no accepted medical use and have a high potential for abuse.

In 2014, there were 213,845 prescriptions dispensed to Spokane County residents for opioid medications. The majority were for hydrocodone/acetaminophen. The numbers and proportions were similar in 2012 and 2013.

Opioid Prescriptions Dispensed, Spokane County, 2014



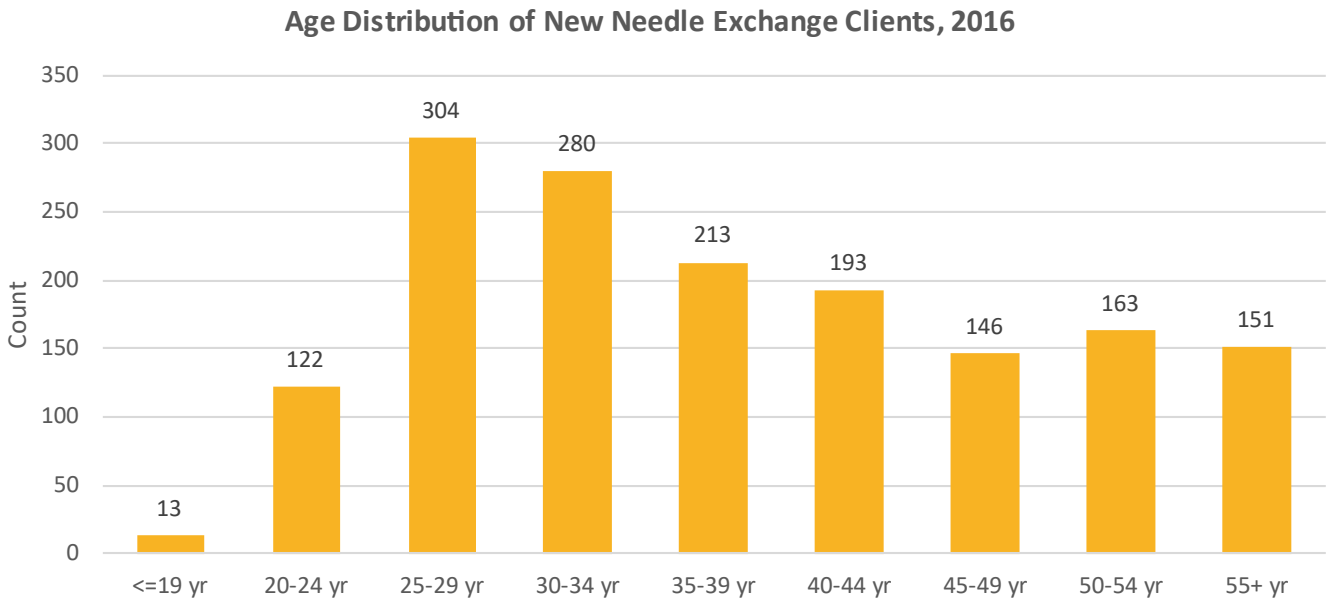
As of September 30, 2015, there were 809 health providers registered to use PMP in Spokane County. The majority (49%) were physicians. Advanced practice providers accounted for one-third of registered providers – 20% were advanced registered nurse practitioners (ARNPs) and 12% were physician assistants. Dentists accounted for 13% of registered providers and pharmacists for 4%. The remaining 2% of providers were a variety of specialties with five or fewer individuals registered.

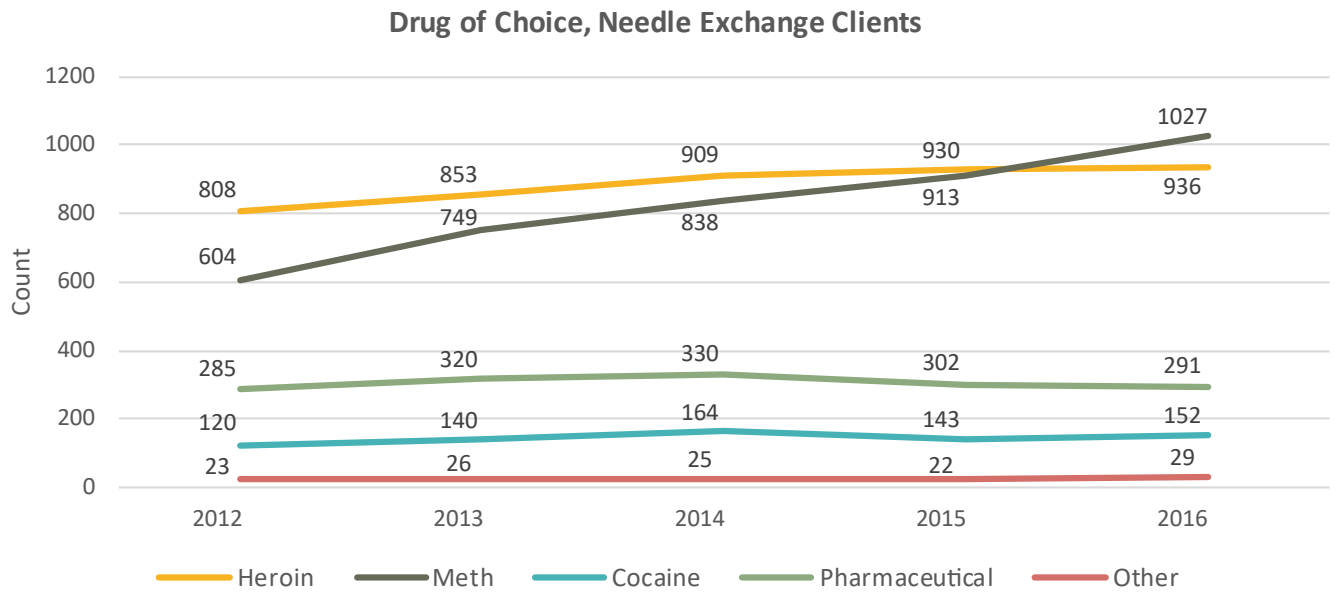
More information about the PMP can be found on the Washington State Department of Health website.[6]

Needle Exchange

SRHD 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. Needle exchange data provides information on illicit intravenous drug use.

During 2012-2016, the majority of Needle Exchange clients (62%) indicated heroin was their preferred drug of choice. In 2016, 1,585 individuals used the Needle Exchange program. Nearly half of the clients (47%) were young adults 25-34 years of age. American Indians/Alaska Natives comprised 9% of needle exchange clients, yet they only represent 1.7% of the population. Clients were 62% male and 38% female.





Over 900,000 needles were exchanged in 2016. The number of visits for needle exchange increased from 2012-2015. In 2016, the Needle Exchange program received 9,514 visits from 1,585 unique individuals. For a little more than half of visits (54.4%), the individual exchanged needles for more than one person.

	2012	2013	2014	2015	2016
Number of visits	7,054	8,603	9,199	9,843	9,514
Total needles in	809,016	995,157	995,810	1,058,616	900,802
Total needles out	808,486	995,019	994,670	1,068,222	944,776
Average needles in per visit	115	116	108	108	95
Average needles out per visit	65	64	59	109	99

People may visit the Needle Exchange program more than one time per year. The program 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 Needle Exchange program distributes clean syringes in packs of 10. The amount of syringes distributed is rounded up if the client comes in with less than a multiple of 10. Additionally, some clients' needles may have be confiscated or stolen. In these scenarios, the program lead may provide up to 20 replacement syringes, to prevent situations where clients are forced to share syringes with others.

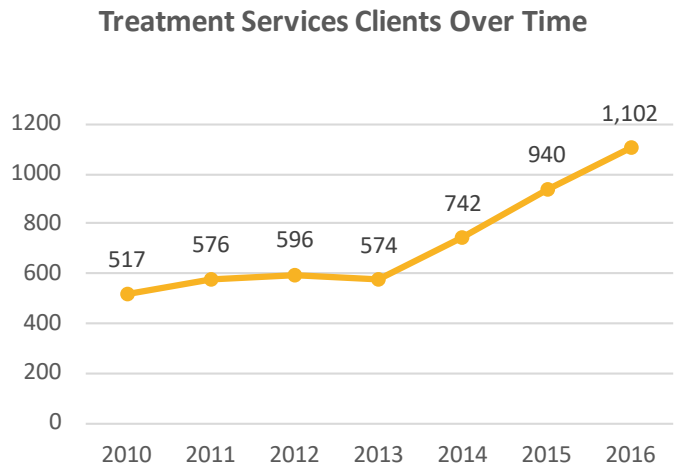
Publicly-Funded Drug Treatment

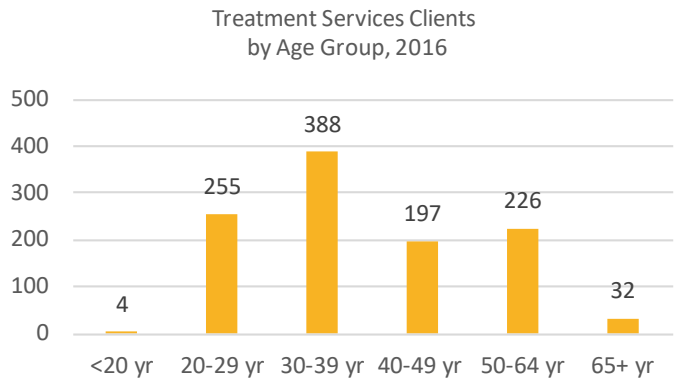
During 2013-2015, Spokane County had a rate of 215.8 per 100,000 for publicly-funded treatment admissions involving any opioid.[7] Spokane County's 2013-2015 rate was higher than the statewide rate of 186.3 per 100,000. The rate increased 237% since 2002-2004.

Spokane Regional Health District Opioid Treatment Program

One publicly-funded drug treatment program is SRHD's Opioid Treatment Program (OTP). This program 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 fewer of the 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.

Based on the availability of public funds, historically there were limits on the number of individuals who could be served by OTP. In 2014, the program began accepting private-pay clients. The number of clients served by OTP increased in 2016 to a total of 1,102 individuals. Among 2016 clients, the highest proportion were 30-39 years of age (35%). Among clients where race was reported, most were white (87%), a disproportionate amount were American Indian/Alaska Native (9%), 3% were black, and 1% were Asian/Pacific Islander.





Recommendations

Individuals misusing or abusing opioids may be part of a vulnerable population or may be marginalized for their substance use. These individuals may suffer from addiction, chronic pain, or 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 and the Washington State Association of Local Public Health Officers[8] (WSALPHO) supports the use of community-level approaches to prevent opioid-related poor health outcomes.[9] The Washington State Opioid Response Plan is the state's comprehensive strategy to reduce morbidity and mortality associated with opioids.[10] It encourages local health departments and their communities to collaborate on efforts to implement these priority goals, strategies, and actions throughout the state. SRHD supports these recommendations and will use this framework in its efforts to address this public health concern.

Education

- Support the education of healthcare professionals on appropriate prescribing practices for acute and chronic pain, especially when prescribing opioid pain medications.
- Promote use of Washington State's Agency Medical Directors' Group *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 state's PMP 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, 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 patients and the public on the methods and importance 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.
- Increase the availability of current data to aid in identification of new issues and monitoring of trends.
- 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.

Endnotes

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- 4 and 3U58SO000047-03W1 (2014). Calculations and presentation of data by SRHD, Data Center.

2 Washington State Department of Health Healthy Youth Survey. 2016. 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 Washington State Department of Health, Prescription Monitoring Program.

6 Washington State Department of Health, Prescription Monitoring Program. https://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/HealthcareProfessionsandFacilities/ Prescription Monitoring ProgramPMP/PublicFAQ

7 University of Washington, Alcohol & Drug Abuse Institute. Opioid Trends Across Washington State. https://adai.washington.edu/wadata/admissions.htm, Accessed 08/24/17.

8 Washington State Association of Local Public Health Officers. http://www.wsalpho.org

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.

10 Washington State Department of Health. https://www.doh.wa.gov/YouandYourFamily/PoisoningandDrugOverdose/OpioidMisuseandOverdosePrevention. Accessed 01/24/18.

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