Drug Overdose Prevention
Healthcare and First Responders
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NEBRASKA
Good Life. Great Mission.
DEPT. OF HEALTH AND HUMAN SERVICES
DRUG OVERDOSE PREVENTION

UNIVERSITY OF NEBRASKA AT OMAHA
SUPPORT AND TRAINING FOR THE EVALUATION OF PROGRAMS

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In 2019, STEPs conducted quantitative surveys and focus groups with healthcare and EMS/fire first responders. Due to the amount of data collected and the tight timeline of the overall project, analyses of both the quantitative and qualitative data were minimal. Data and findings from the healthcare and EMS/fire first responders were analyzed and reported separately in the initial report. The research team hoped that an in-depth analysis would provide greater insight into this data. The following report is a secondary analysis of the 2019 data.

Executive Summary of New Findings

Findings by Sections

National Data Sets

The National Survey on Drug Use and Health (NSDUH) estimates the highest rates of substance use for Nebraskans aged 18–25 years across all substances discussed in this report. Additionally, the NSDUH data estimates more Nebraskans misuse prescription pain relievers (opiates) than use methamphetamines. However, the TEDS data indicates 29% of admissions reported methamphetamines as a primary drug of choice, and 4% reported heroin and other opiates as their primary drug of choice.

Secondary Survey Data Analysis

The secondary analyses in this report provide a more thorough breakdown of the number of overdoses and the types of drugs used by individuals in overdose situations. These analyses show that nearly half of the EMS/fire responses came from the three largest counties in Nebraska whereas healthcare responses came from a more equal mix of urban and rural communities. Differences between rural and urban first responders as well as volunteer and career EMS/fire first responders became more evident in the secondary analyses regarding the topics of training and fears related to administering naloxone.

New themes in the secondary qualitative analysis also discussed include a focus on resources, barriers to access, and the cycle of mental health and substance abuse.

Secondary Qualitative Analysis

The focus of the initial coding centered on the training needs of first responders with naloxone as well as understanding the extent to which they considered opioids a problem. During these focus groups and interviews, first responders talked at length about some of the other challenges they faced when responding to overdose calls. As STEPs reanalyzed the focus group and interview data, several themes emerged that warranted further evaluation: Resources, Barriers to Access, and Cycle of Mental Health and Substance Use.

Executive Summary of New Findings (cont.)

Secondary Qualitative Analysis

EMS first responders felt as though the only true resource available to them was the ability to treat the symptoms and transport the patient to the hospital. They often referred to this as "treat and transport," and many felt frustrated with the lack of other resources.

Hospital first responders felt there was a gap in their available resources and that there was little they could do without having a social worker or case manager on hand to connect the patient to viable resources.

Regarding barriers to access, both EMS and hospital first responders were united in their observation that patients do not often understand there is a problem, and, therefore, they do not want to accept help if offered. A patient's family is often in denial as well, making it more difficult to provide appropriate care.

Lastly, first responders mentioned the cyclical nature of substance use/abuse and its relationship to mental health. The overall sense is that they keep treating the symptoms (i.e., the overdose) without ever getting to the root cause. Both EMS and hospital first responders talked about the repeat patients that they frequently see.

This report section provides examples of each of these points and allows a further understanding of the needs of first responders when working with a population that is need of assistance but does not know how to ask for it, access it, or follow through when there are limited resources available.

Literature Review

The updated literature review suggests that individuals who misuse drugs or experience a drug overdose are often stigmatized by healthcare professionals and first responders. This causes apprehension for individuals who misuse substances to attend medical appointments or get help when needed. As more attention has been placed on opioid overdoses, naloxone availability has increased for both individuals in the community and professionals. Training for first responders on administering naloxone has helped increase successful reversal of individuals' overdoses.

Types of substances and overdoses, including alcohol, meth, heroin, and pain relievers
Secondary Data on Substance Use Trends in Nebraska

Analyzing secondary data is a valuable method to provide additional context and was deemed necessary to include in this second data analysis. Secondary data tends to have a lag time of 1–2 years from the collection date to the reporting or publication date. STEPs did not analyze secondary data during the initial analysis because of this delay.

Secondary databases were used to look at types of substance use trends in Nebraska. Substances included alcohol, meth, heroin, and pain relievers.

STEPs reviewed various secondary data sources to provide insight into substance use trends in Nebraska during 2018 to determine relevance to the 2018 First Responders Report. STEPs utilized two secondary data sources to meet this need:

1. 2018–2019 National Survey on Drug Use and Health (NSDUH): Model-Based Prevalence Estimates (50 States and The District of Columbia); and
2. 2018 Treatment Episode Data Set Admissions (TEDS).

STEPs selected the NSDUH to compare substance use statewide estimates to national averages and selected TEDS to gain a deeper understanding of drug use trends by region.

2018-2019 National Survey on Drug Use and Health (NSDUH): Model-Based Prevalence Estimates

Methods

The NSDUH Model-Based Prevalence Estimates is a subsection of the 2018–2019 State Estimates of Substance Use and Mental Health Disorders. The NSDUH utilized professional interviewers to conduct face-to-face surveys with individuals across the nation in 2018 and 2019. This survey includes all individuals except those who are unhoused and not utilizing a shelter, incarcerated individuals, and deployed military personnel. Results from this survey are used to create estimates of substance use and substance use disorder diagnoses in each state, as well as to provide national estimates. The NSDUH asks individuals about their substance use within the past 30 days, 1 year, 5 years, or lifetime, depending on the substance in question.

STEPs utilized the 2018–2019 NSDUH Model-Based Prevalence Estimates to identify the estimated prevalence of alcohol, binge alcohol, methamphetamines, pain reliever misuse, and heroin use in Nebraska by age group. While alcohol use is a priority for the NE DHHS Division of Behavioral Health, alcohol use is outside of the scope of DOP. However, STEPs included alcohol use in this report because first responders indicated they are more likely to see an overdose where alcohol or methamphetamines were involved as compared to opiates.

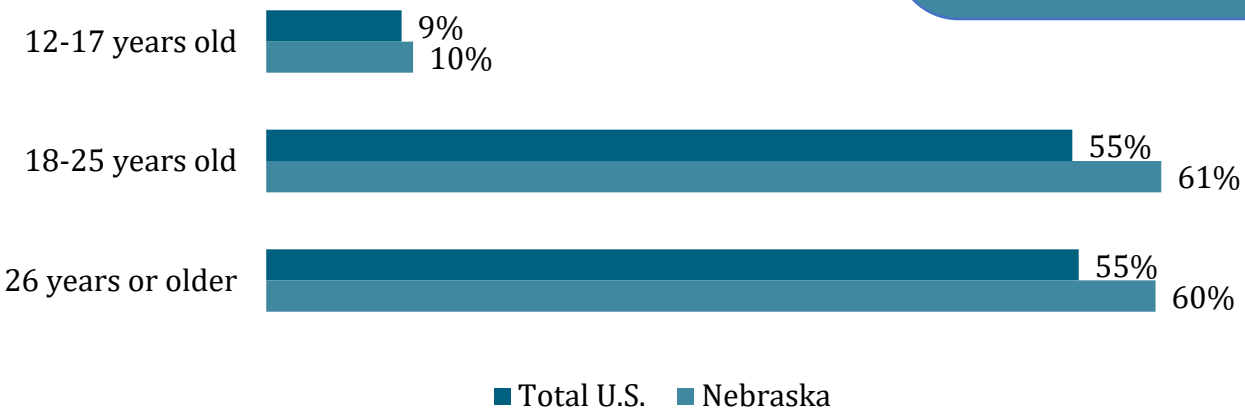
Secondary Data on Substance Use Trends in Nebraska (cont.)

Alcohol

The NSDUH estimates a higher rate of alcohol use "*in the past month*" in Nebraska than the national estimates for each age group. In addition, individuals 18–25 years old reported using alcohol at a higher rate than all other age ranges. The graph below indicates the estimated percentages.

The NSDUH questions ask respondents to provide responses to questions based on their usage *"in the past month"* and *"in the past year."* All data provided is specific to the 2018–2019 survey.

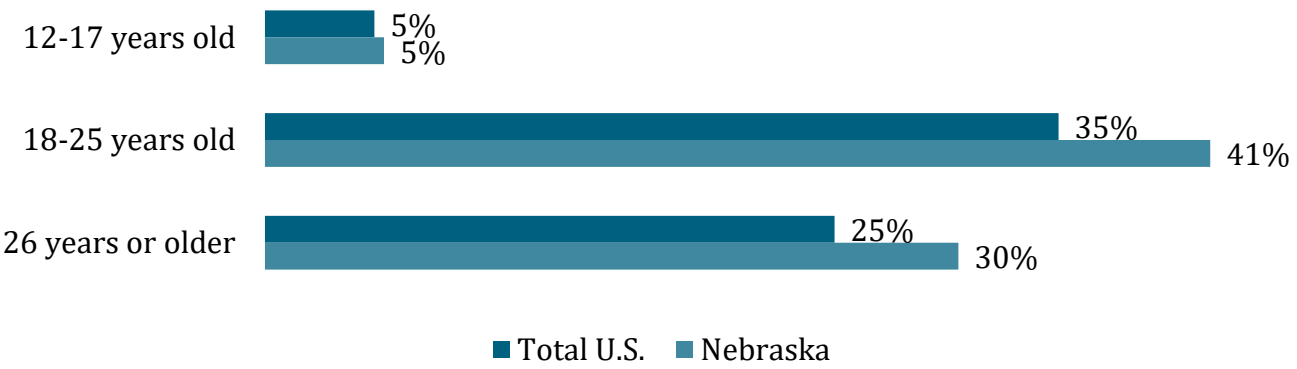
Estimates of Alcohol Use



Source: 2018–2019 NSDUH Model-Based Prevalence Estimates Table 13

Similarly, individuals' binge alcohol use "*in the last month*" is also estimated at a higher rate in Nebraska, across all age groups, than compared to the national estimates. The graph below represents these estimates. Percentages were rounded to the nearest whole number.

Estimates of Binge Alcohol Use



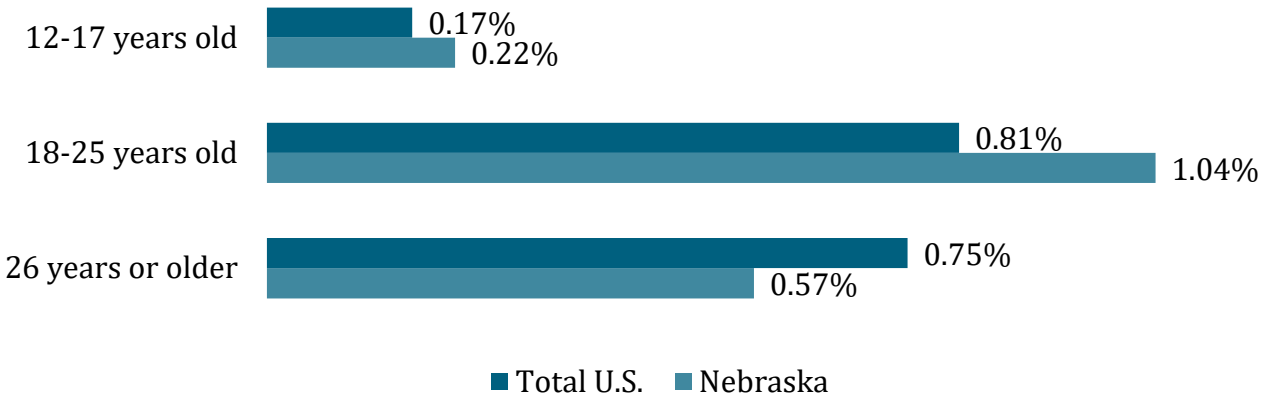
Source: 2018–2019 NSDUH Model-Based Prevalence Estimates Table 14

Secondary Data on Substance Use Trends in Nebraska (cont.)

Methamphetamines

The NSDUH estimates a slightly higher use among Nebraskans, aged 12–25, than national estimates, with Nebraskans aged 26 or older showing less usage than national estimates. The graph below indicates estimates of methamphetamines use across all age groups.

Estimates of Methamphetamine Use in the Past Year

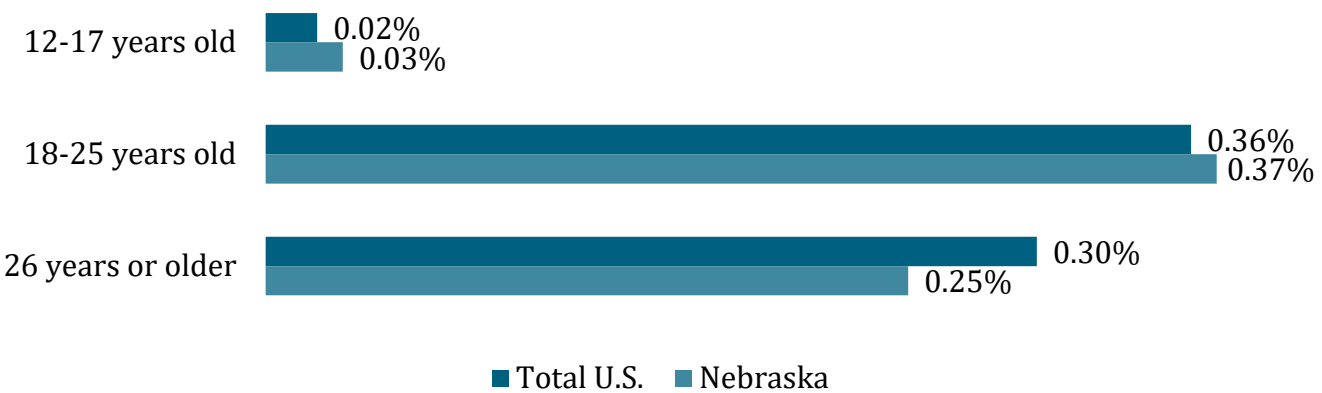


Source: 2018–2019 NSDUH Model-Based Prevalence Estimates Table 11

Heroin and Other Opiates

The NSDUH estimates show a similar pattern for heroin use as seen with the methamphetamine data. The NSDUH indicates a higher estimate of heroin use for individuals in the 12–25 age group compared to national estimates, with those 26 years and older showing a lower estimate of use than national numbers.

Estimates of Heroin Use in the Past Year



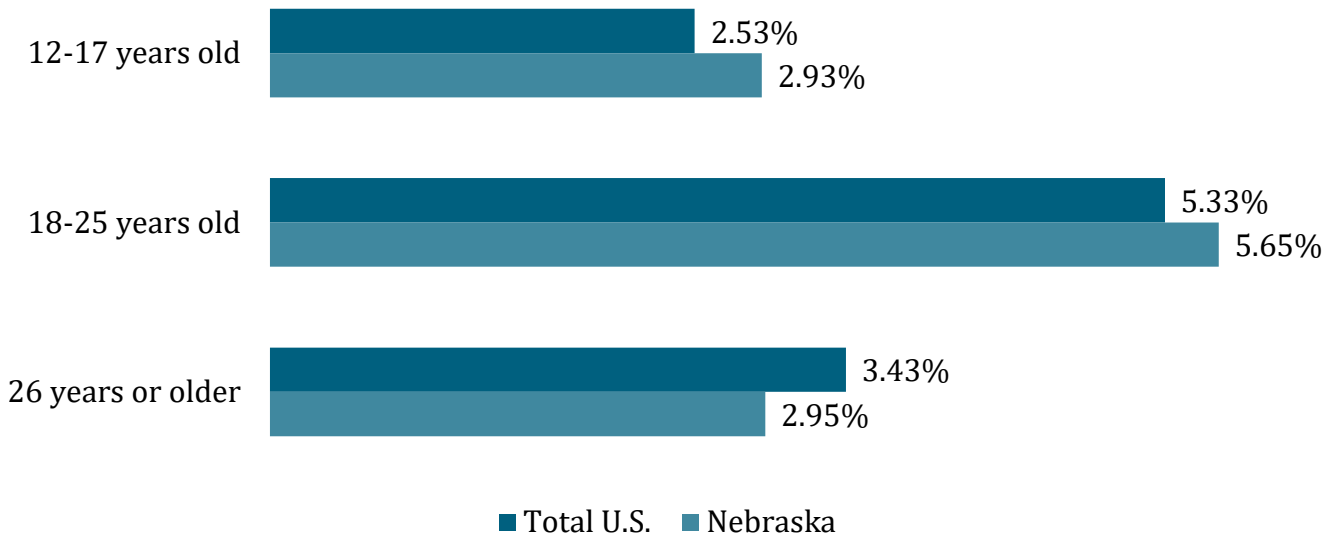
Source: 2018–2019 NSDUH Model-Based Prevalence Estimates Table 9

Secondary Data on Substance Use Trends in Nebraska (cont.)

Pain Relievers

Similar trends exists for pain reliever misuse. Again, there is a higher estimate of misuse among those in the 12–25 age range compared to national estimates, with adults ages 26 years or older showing a lower estimated use. The NSDUH estimates higher rates of pain reliever misuse "*in the past year*" as compared to other illicit substances. For ages 18–25 years, the NSDUH estimates 5.65% of Nebraska's population has misused pain relievers "*in the past year*" as compared to an estimated 5.33% at the national level. The graph below indicates estimates of pain reliever misuse in the past year across all age groups.

Estimates of Pain Reliever Misuse in the Past Year



Source: 2018–2019 NSDUH Model-Based Prevalence Estimates Table 12

2018 Treatment Episode Data Set Admissions

TEDS-A-2018

Methods

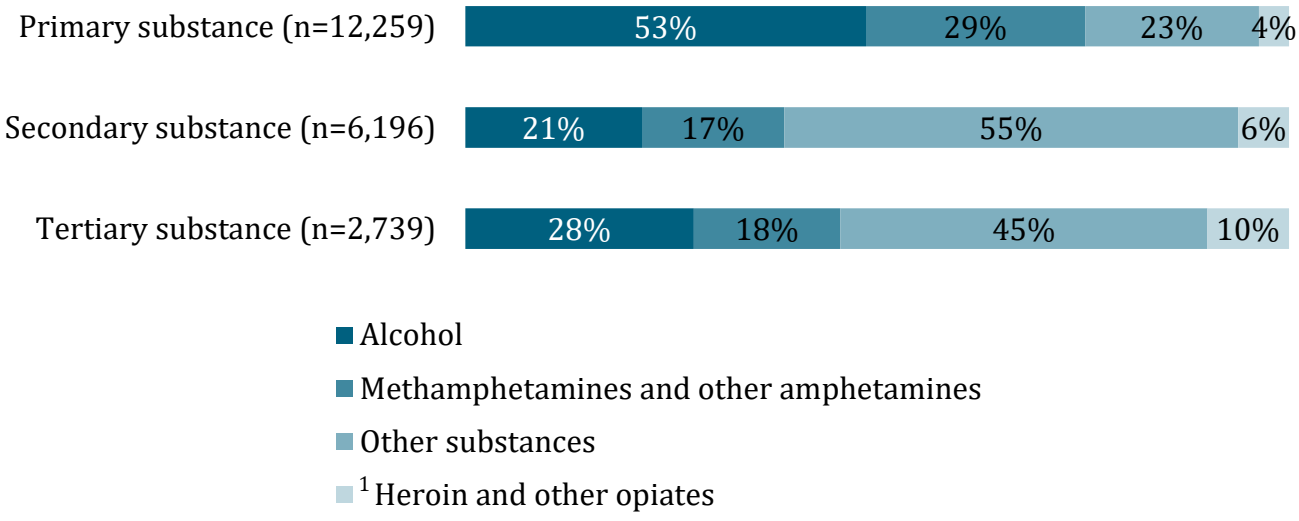
The second source STEPs utilized was the 2018 Treatment Episode Data Set Admissions (TEDS-A-2018). The TEDS data is a repository of treatment data collected by states for the purpose of monitoring their substance use treatment systems and providing that data to the national system. TEDS is created and maintained by the Office of Applied Studies (OAS) of the Substance Abuse and Mental Health Services Administration (SAMHSA).

Currently, the TEDS-A-2018 data set is only available at the national level. STEPs utilized SPSS and the 2018 TEDS-A codebook to exclude all data points outside of Nebraska and exported the file to Microsoft Excel for analysis. In total, 13,381 substance abuse treatment admissions occurred in Nebraska in 2018, each reporting their primary, secondary, and tertiary substances of choice upon entry. The following combinations were created using TEDS data:

- Heroin and other opiates—includes heroin, non-prescription methadone, and other opiates.
- Other substances—includes crack/cocaine, marijuana, PCP, other hallucinogens, benzodiazepines, non-benzodiazepine tranquilizers, barbiturates, non-barbiturate sedatives or hypnotics, inhalants, over the counter medication, and other substances.

2018 Treatment Episode Data Set Admissions (cont.)

For primary and tertiary substance of choice, alcohol was most frequently reported. Marijuana was the most frequently reported secondary substance of choice (47%, n=2,895). Marijuana had the highest percentage within the "Other substances" category for primary, secondary, and tertiary drug of choice. The graph below indicates the prevalence of alcohol, methamphetamines and other amphetamines, heroin and other opiates, and other substances as a primary, secondary, and tertiary substance of choice.



A table of this data is located in Appendix A.

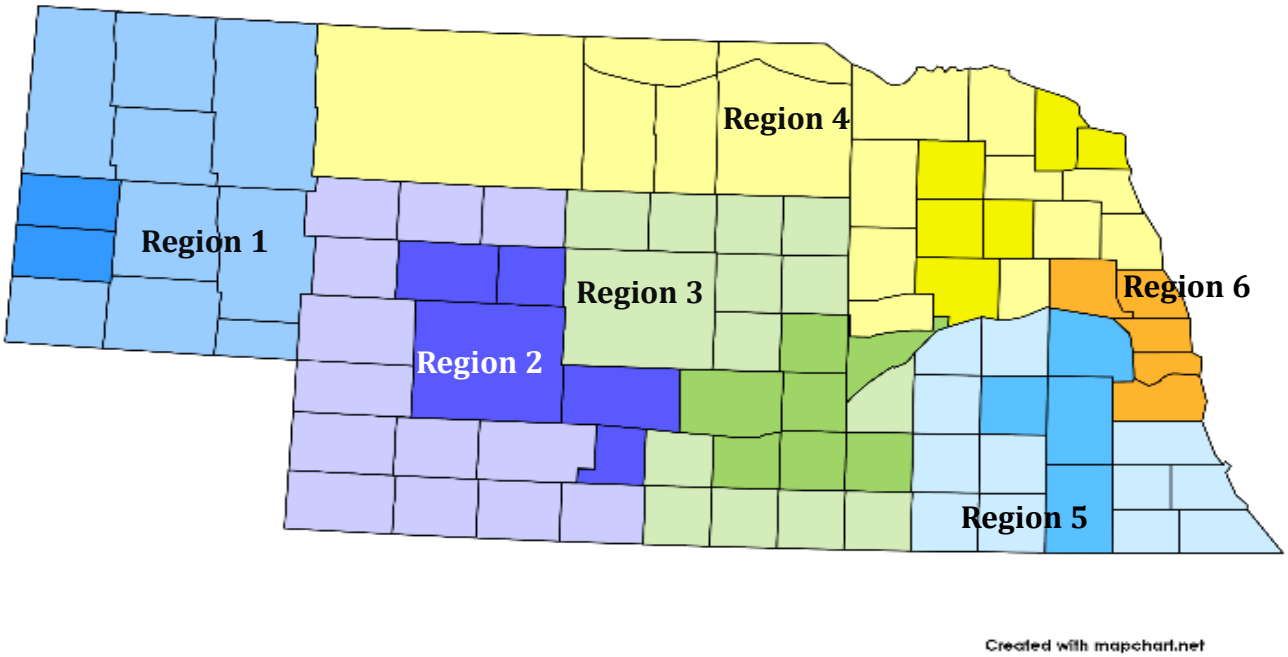
[1] STEPs created the category "Heroin and other opiates" based on the similarity of these substances. The majority of admissions represented in the "Other substances" category reported marijuana use which is outside of the scope of DOP and was not heavily mentioned by first responders. The other substances included in the "Other substances" category were combined due to low rates of use.

2018 Treatment Episode Data Set Admissions (cont.)

STEPs used a bivariate analysis to further explore substance use prevalence in Nebraska by geographic location. The TEDS-A-2018 data reported admission data from 29 of the 91 counties in Nebraska.

Counties	Region
Scotts Bluff and Banner	Region 1
McPherson, Logan, Lincoln, Dawson, and Gosper	Region 2
Buffalo, Dawson Howard, Kearney, Adams, Clay, Hall, and Merrick	Region 3
Platte, Stanton, Madison, Pierce, Dixon, and Dakota Counties	Region 4
Lancaster, Seward, and Gage	Region 5
Dodge, Washington, Cass, Sarpy, Saunders[2], and Douglas	Region 6

The map below provides a visual for the information. Each region is represented by the lighter shade with the counties represented in the data in darker shades. All counties in Region 6 are represented in the data and are all shaded dark.

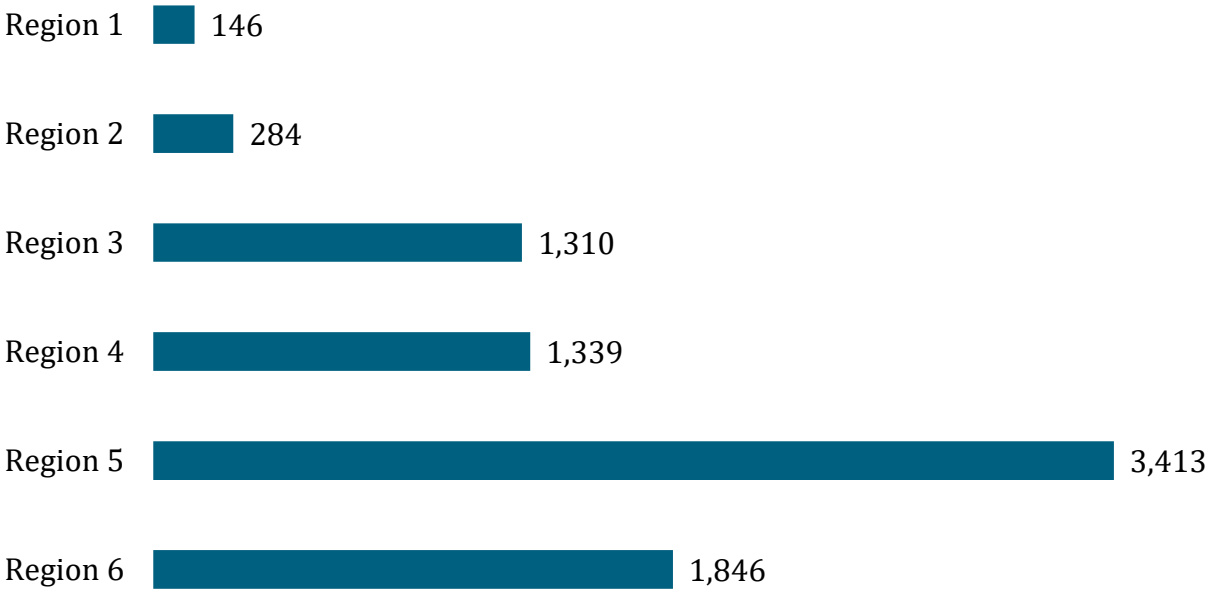


[2] Saunders County is within Region 5. However, the core-based statistical areas (CBSA) 2010 code from the TEDS-A-2018 combines Saunders County with Cass, Douglas, Sarpy, and Washington counties. For this reason, STEPS has included Saunders in Region 6 for the analysis.

2018 Treatment Episode Data Set Admissions (cont.)

Region 5 (41%, n=3,413) had the highest amount of treatment admission data in the TEDS-A-2018. The graph below shows the treatment admission numbers by region.

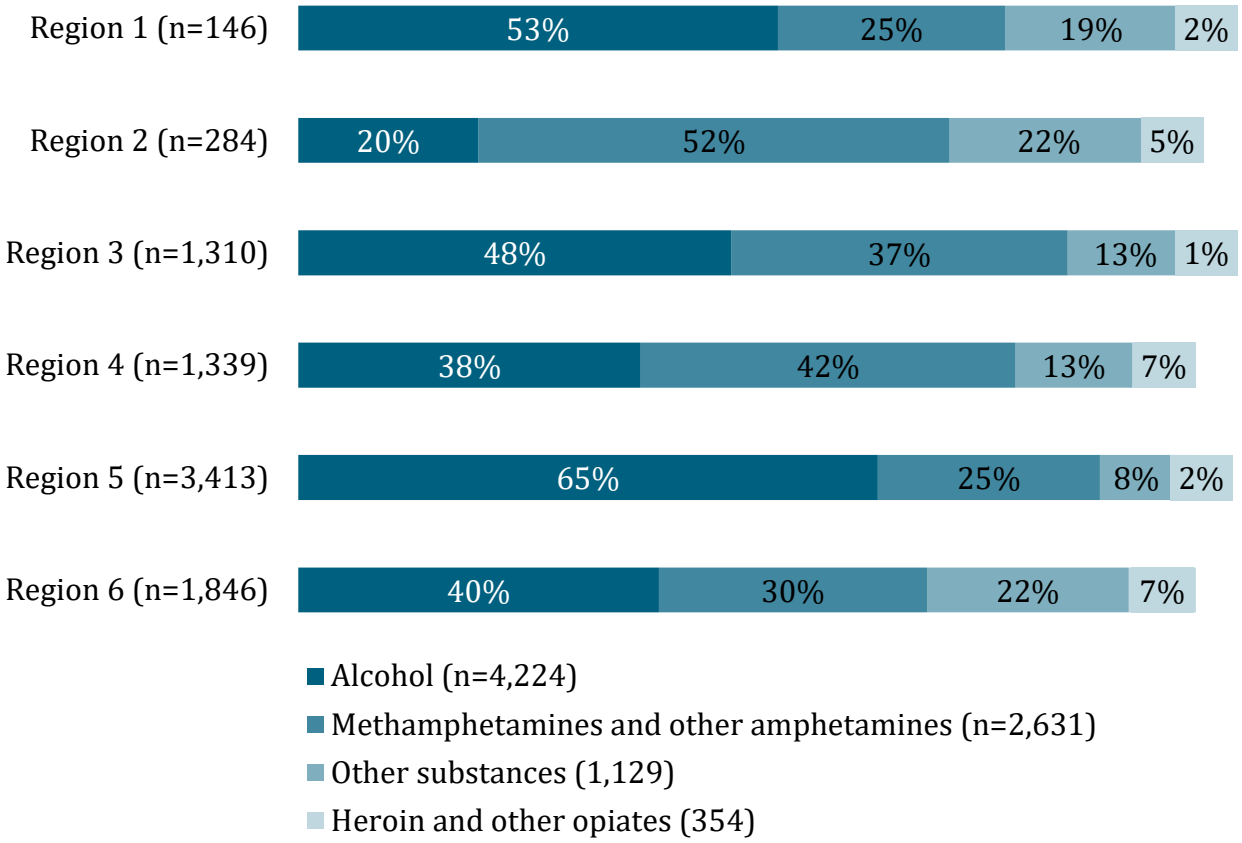
Number of Admissions with a Reported Primary Substance of Choice (n=8,338)



2018 Treatment Episode Data Set Admissions (cont.)

STEPs analyzed the TEDS-A-2018 data set by region and by primary reported substance of choice. Alcohol was reported as the primary substance of choice most frequently in Region 1 (53%, n=78), Region 3 (48%, n=632), Region 5 (65%, n=2,204), and Region 6 (40%, n=742). Methamphetamines and other amphetamines were reported as the primary substance of choice most frequently in Region 2 (52%, n=149) and Region 4 (42%, n=559). Heroin and other opiates had the lowest percentages of primary substance of choice in all regions. **This data further supports what first responders have indicated: in Nebraska, there is higher prevalence of alcohol and methamphetamine than of heroin and other opiates.** The graph below shows a comparison of the reported primary substance of choice by region.

Number of Admitted Clients by Reported Primary Substance of Choice (n=8,338)



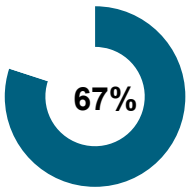
2019 Survey Findings

This section provides a brief overview of survey findings from the 2019 statewide needs assessment which gauged the capacity of emergency systems in Nebraska to respond to potential drug overdoses, focusing on opioids. Surveys were distributed statewide to healthcare professionals and to EMS/fire personnel. Below is a brief overview of the survey findings. The quantitative methodology is linked in Appendix B.

Demographics

Professional Role (n=368)

STEPs administered a survey to EMS/fire personnel and a very similar one to healthcare personnel in 2019. EMS/fire personnel submitted 247 responses and healthcare personnel submitted 121 responses, for a total of 368 responses.



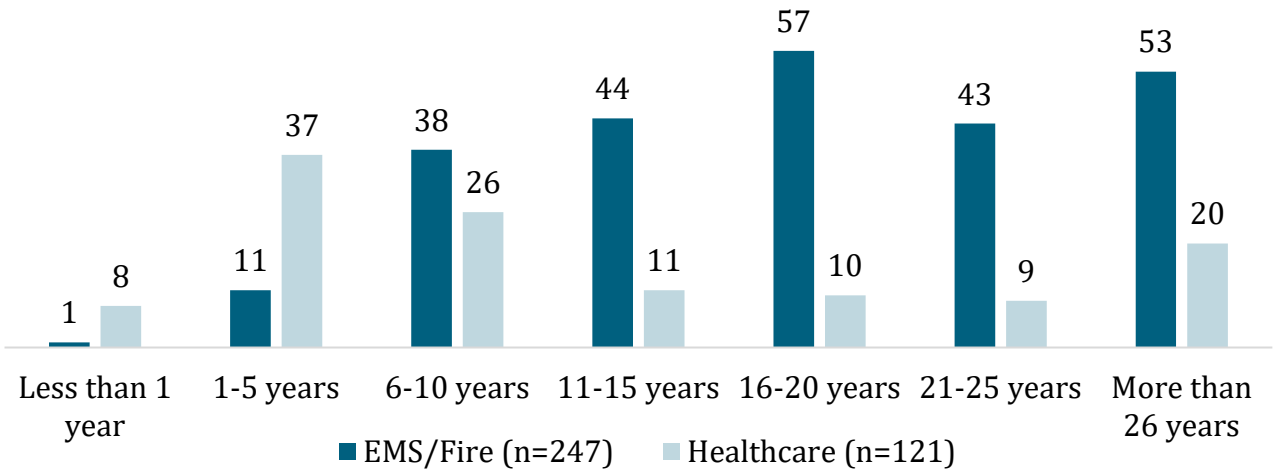
of respondents were EMS/fire personnel.

Of the EMS/fire responses, 49% (n=115) were from EMS and 21% (n=49) were from fire, with a large number (31%, n=72) coming from individuals who worked in both EMS and fire. 39% (n=91) of EMS/fire participants indicated they were volunteer workers. An additional 13 participants did not provide their EMS/fire status. Of the healthcare respondents, 81% (n=98) were nurses, while the remainder were physicians and other professionals.

Length of Experience (n=368)

Several of the healthcare responses were from individuals who had 10 or fewer years of experience in their role, while a large number of EMS/fire responses were from individuals who had been in their role for more than 15 years, with many over 25 years. The graph below represents this finding in the data. See Appendix C to see full table.

Length of Experience by Role (n=368)



2019 Survey Findings (cont.)

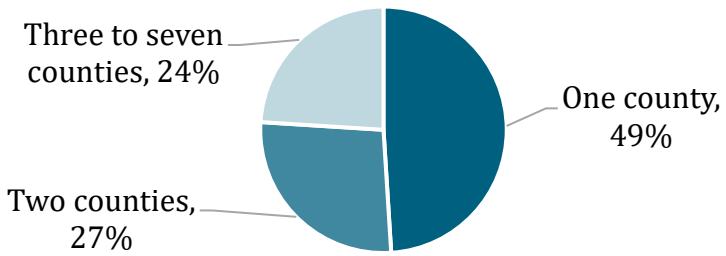
Geographic Location (n=368)

Nearly half of all responses (48%, n=176) came from the three largest counties in Nebraska: Douglas, Lancaster, and Sarpy counties, with a population of over 180,000 people in each. Remaining counties in Nebraska range from 395 to 61,000 people, with 12 counties having fewer than 1,000 people.

Area of Service	Percent and Count
Respondents serving inside of Douglas, Sarpy, or Lancaster County	52% (n=189)
Respondents serving outside of Douglas, Sarpy, or Lancaster County	48% (n=176)

While the EMS/fire respondents in the urban areas (49%, n=122) reported working in one county, the other EMS/fire respondents worked in two counties (27%, n=96) or three to seven counties (24%, n=85).

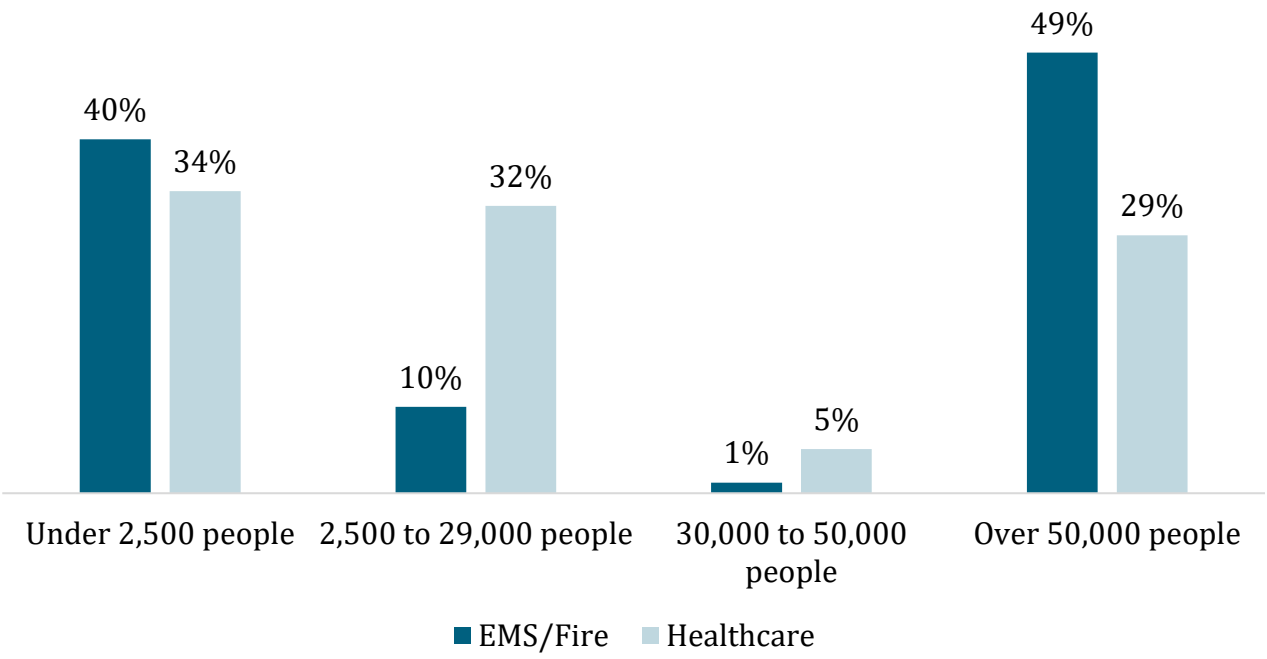
Number of Counties Served by Urban EMS/Fire (n=247)



2019 Survey Findings (cont.)

Healthcare responses came nearly equally from individuals in urban and rural areas. The graph below shows the percentage of respondents providing services by role and population size.

Respondents Providing Services by Role and Population Size



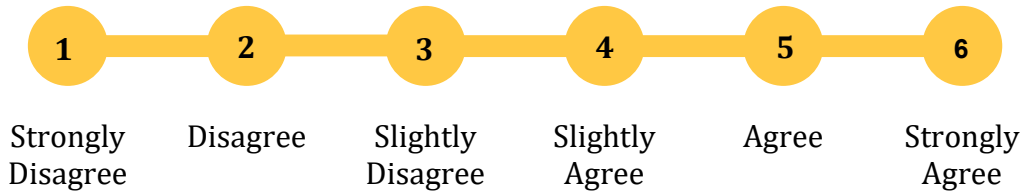
2019 Survey Findings (cont.)

Training by Role

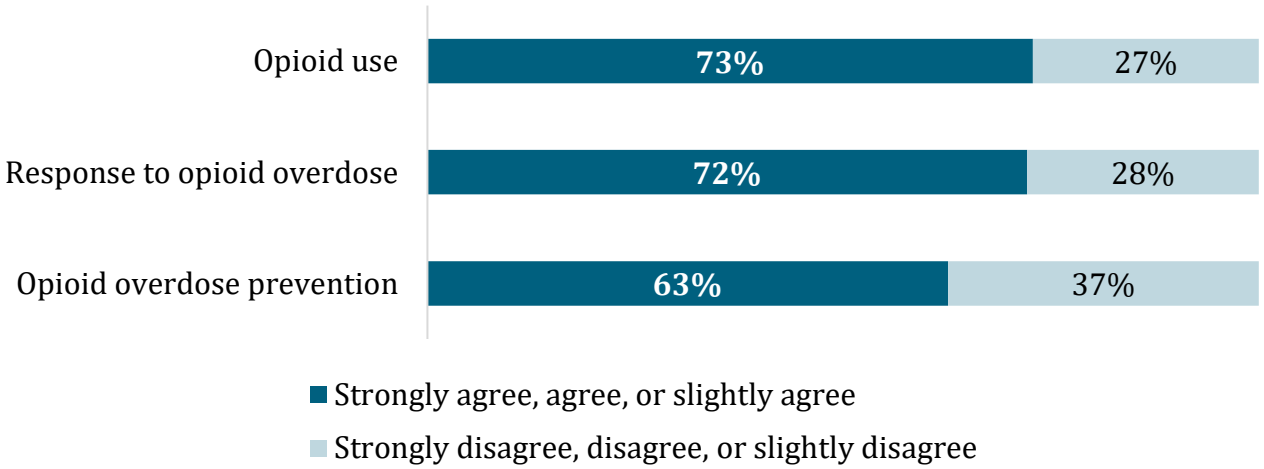
The survey asked first responders, both healthcare providers and EMS/fire, to provide ratings on the extent to which they felt, regarding opioids, they were:

- Provided sufficient training around opioid use.
- Provided sufficient training around responding to an opioid overdose.
- Provided sufficient training around opioid overdose prevention.

While most first responders indicated they received sufficient training about opioid use and response to opioid overdose, fewer reported they had received sufficient training on the prevention of an opioid overdose. The table in Appendix D provides the average response to these statement by role, geographic region, and length of experience.



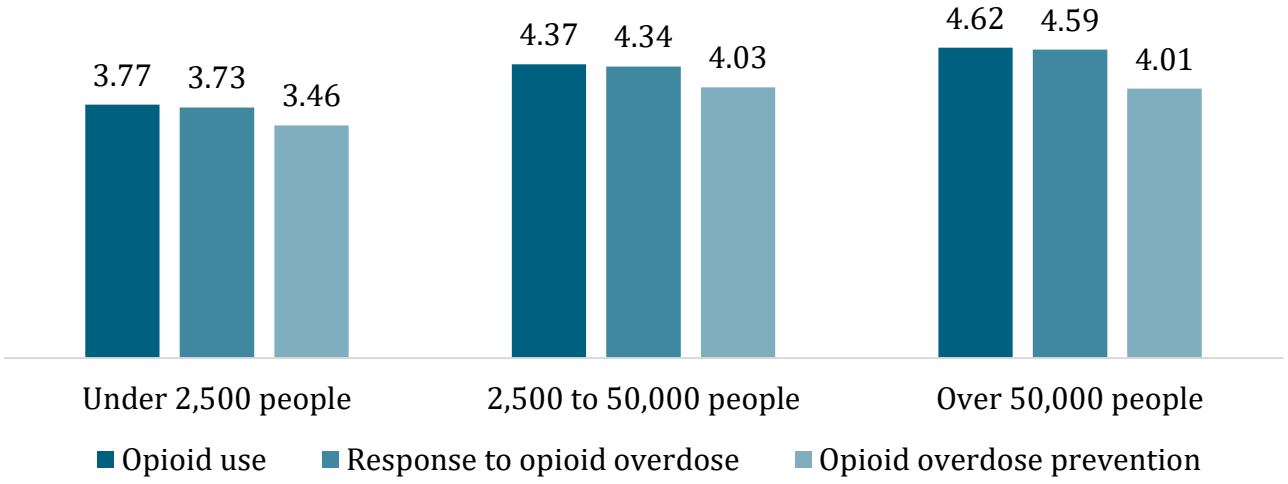
First Responders' Level of Agreement on Being Sufficiently Trained



2019 Survey Findings (cont.)

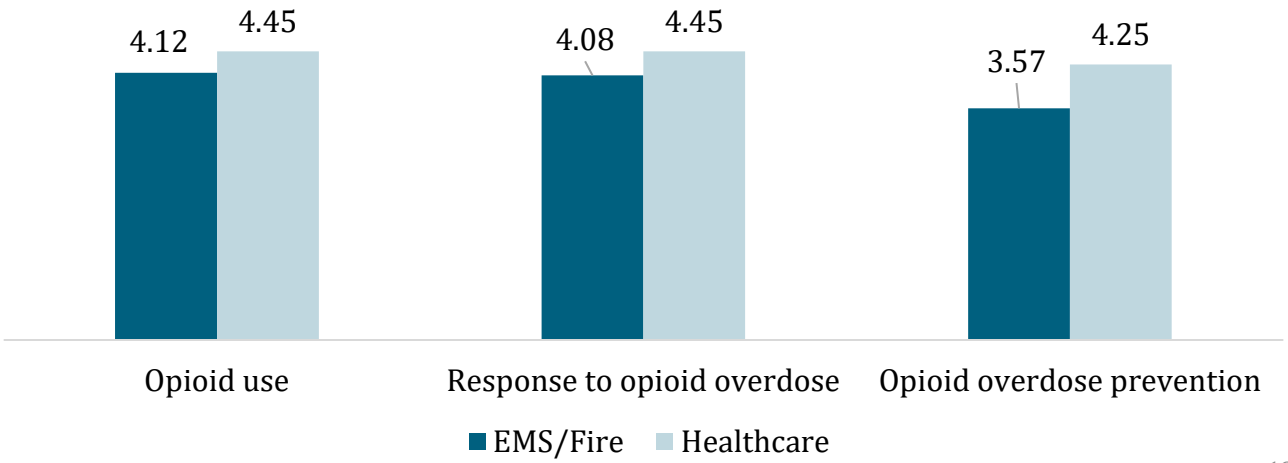
Differences were also found in geography, with **first responders in rural settings indicating they had less training in these areas than their more urban counterparts.** The graph below illustrates these differences.

Average of First Responders Level of Agreement with Sufficient Training by Population of Service Area



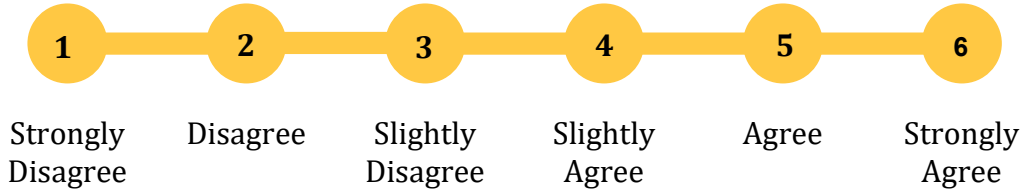
STEPs looked at the responses to these questions categorized by role: Healthcare and EMS/fire. Unsurprisingly, healthcare respondents reported having received sufficient training about opioid use, opioid overdoses, and opioid prevention more often than did EMS/fire at statistically significant levels. The graph below shows the average response by role.

Average Level of First Responders Level of Agreement with Sufficient Training by Role

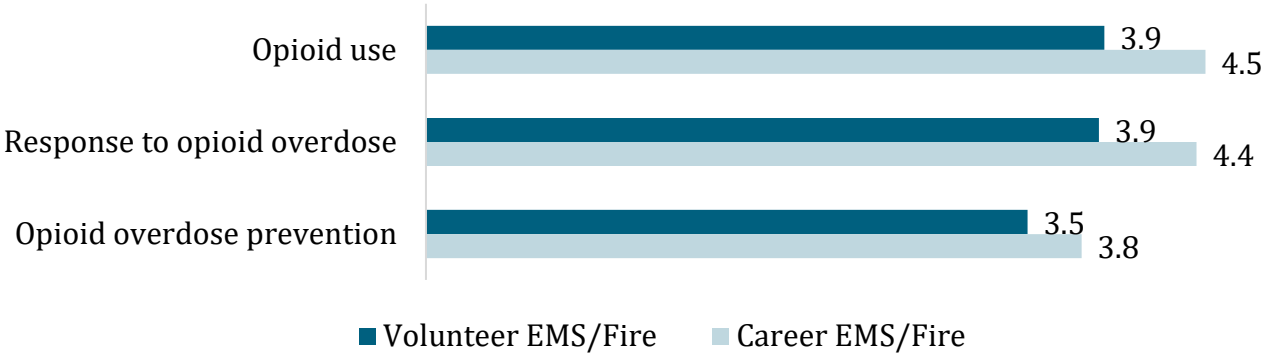


2019 Survey Findings

In looking further at the EMS/fire data, there was a difference in responses based on whether the respondent was career EMS/fire or volunteer. Volunteer EMS/fire were feeling less trained in opioid use or opioid overdoses. There was little difference between career and volunteers regarding their training in preventing opioid overdoses. Both ratings were low, which would be expected as prevention is generally not their objective. The differences are represented in the graph below.



Average Level of Agreement on Sufficient Training by Career or Volunteer EMS/Fire



40% of the EMS/fire responses were from counties that had a population of less than 2,500 people, with 49% of responses coming from Douglas, Sarpy, and Lancaster counties. Respondents from rural areas (under 2,500) reported similar responses on the training they received regarding opioid use (3.8), opioid overdoses (3.7), and prevention of opioid use (3.5). Additionally, EMS/fire personnel who served Douglas, Sarpy, and Lancaster counties reported receiving sufficient training at higher rates than those outside of these three counties. This information is shown in the table below.

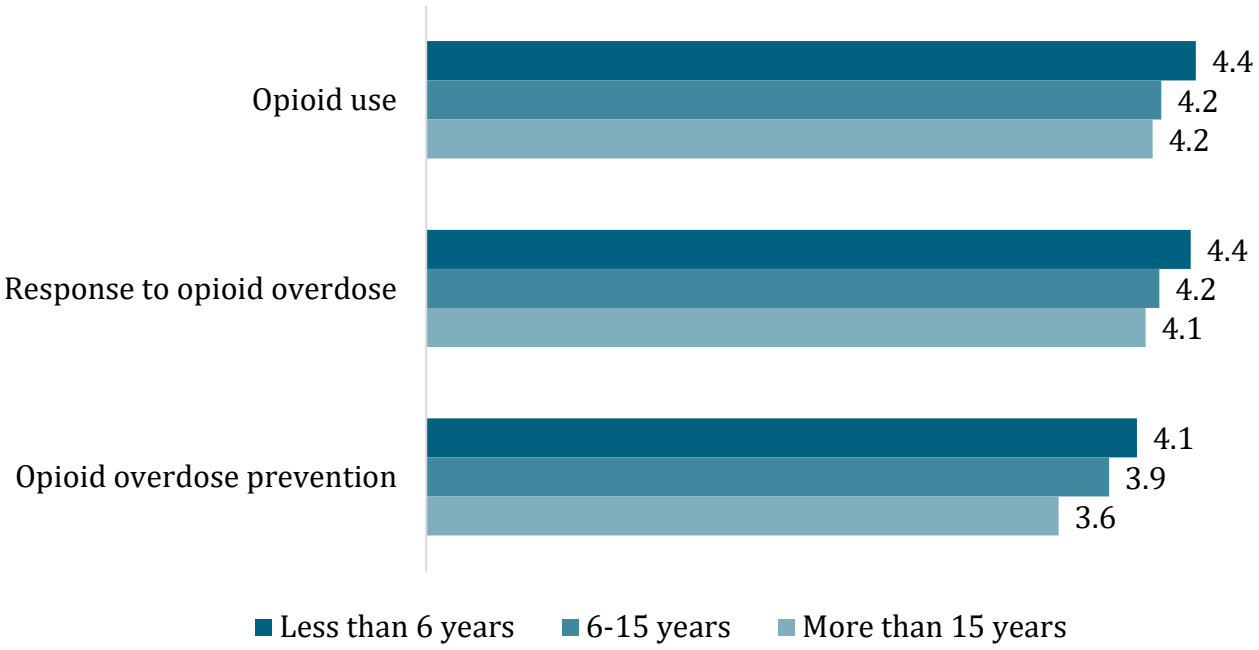
Average Level of Agreement with Sufficient Training by Location

Service Area	Opioid Use	Response to Opioid Overdose	Opioid Overdose Prevention
Douglas, Sarpy, and Lancaster counties	4.59	4.57	4.01
Outside of Douglas, Sarpy, and Lancaster counties	3.92	3.90	3.63

2019 Survey Findings (cont.)

Across experience levels, the more years someone had been in the role, the less likely they reported having received sufficient training about opioid use, opioid overdoses, and opioid prevention. This comparison by experience level is demonstrated in the graph below.

Average Level of First Responders Level of Agreement with Sufficient Training by Length of Experience



2019 Survey Findings (cont.)

Drug Overdose Situations

The survey asked first responders to provide information on the frequency with which they were responding to overdose situations. STEPs asked them to think about this with respect to two timeframes: 2 years ago and within the most recent 6 months, on a scale of 0 to 100. The graphs below represent these averages of EMS/fire and healthcare respondents combined.

For this data, STEPs looked at responses from first responders in the three urban counties that have the highest population: Douglas, Sarpy, and Lancaster counties.

Both urban and rural overdose occurrences showed the same pattern, with number of overdoses higher in the 2 years prior than in the most recent 6 months. EMS/fire and healthcare in the three highest populated Nebraska counties responded to many more overdoses than did those in lesser populated counties.

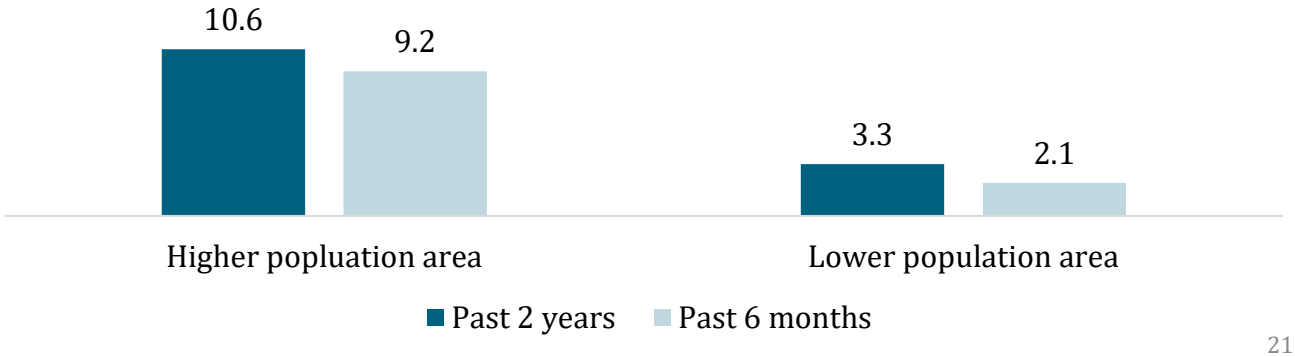
With respect to geography differences, rural areas experienced fewer drug overdoses and less opioid use than urban areas–the same applies to alcohol, fentanyl, and meth.

EMS/fire and healthcare in the three highest populated Nebraska counties responded to many more overdoses than did those in lesser populated counties.

Think back to the overdose situations you were responding to two (2) years ago. On average per month, how many situations involved responding to a drug overdose? (scale of 0-100)

For this question think back to the situation you've responded to in the most recent six (6) months. On average per month, how many situations involved responding to a drug overdose? (scale of 0-100)

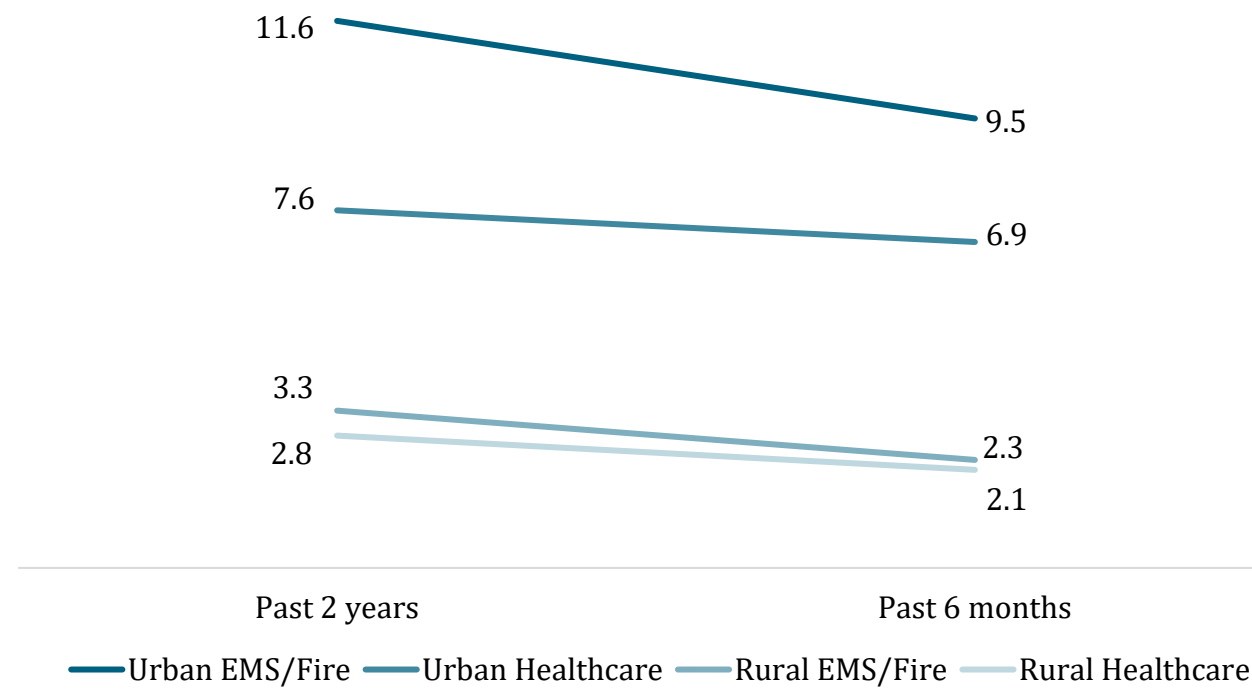
Average Number of Overdose Situations per Month



2019 Survey Findings (cont.)

STEPs categorized overdose data down into EMS/fire and healthcare for the same two time periods. EMS/fire in higher population counties reported a mean of 11.6 overdose situations per month 2 years prior to the survey, compared to 9.2 situations per month in the 6 months prior to the survey. The graph below illustrates the decrease. A full table of this data is located in Appendix E.

Average Number of Overdose Situations per Month by Role and Region

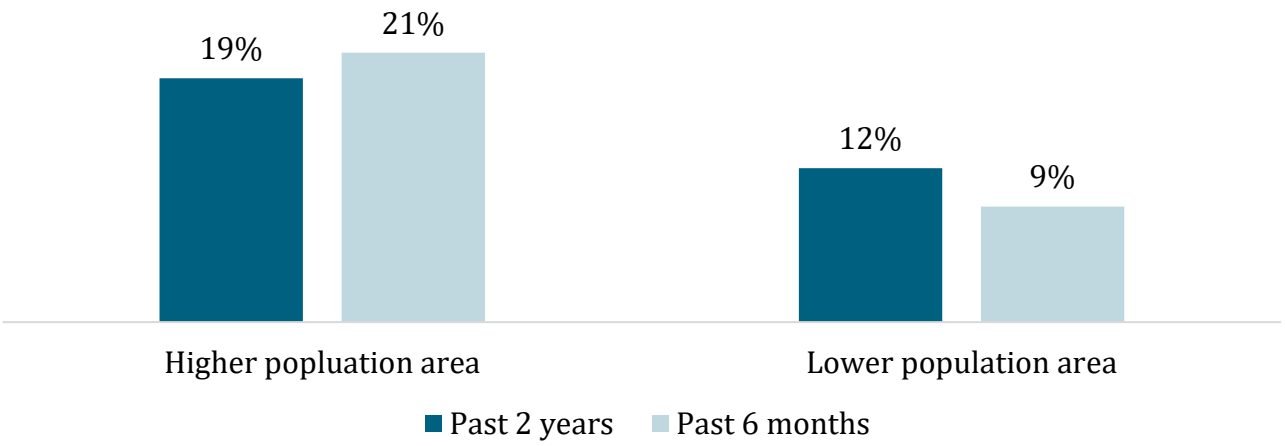


Healthcare in higher population counties reported a mean of 7.6 overdose situations per month 2 years prior to the survey and 6.9 overdose situations per month in the 6 months prior to the survey.

2019 Survey Findings (cont.)

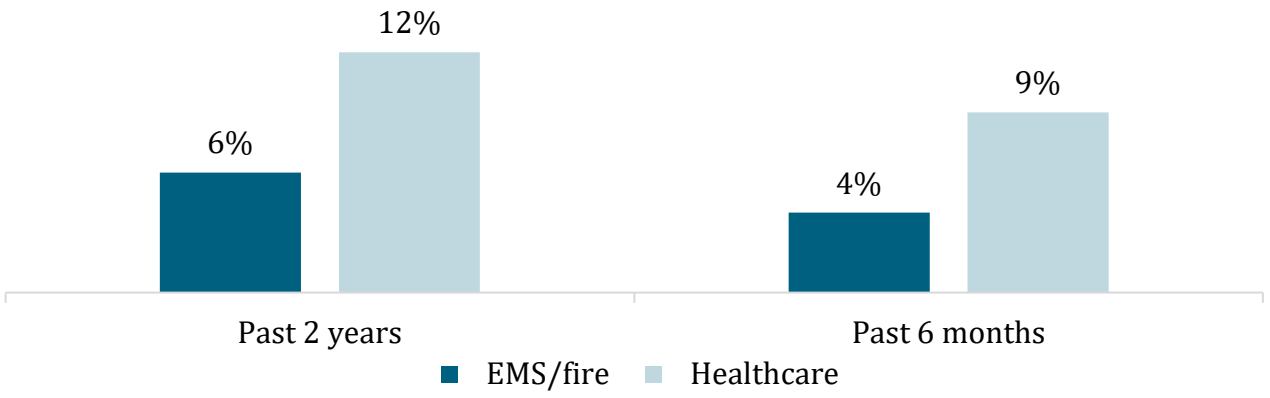
In 2019, STEPs asked first responders about the percentages of overdoses from 2 years ago and in the most recent 6 months that they suspected involved opioids. Using the same classification from above for the three most populated counties, EMS/fire and healthcare personnel reported that they responded to many more overdoses involving opioids than did those in less populated counties. There was little difference between EMS/fire and healthcare first responders in the higher populated counties.

Percent of Overdose Situations Involving Opioids



There was a difference in the less populated counties with healthcare first responders reporting much more opioid use in overdose situations than EMS/fire. The survey also asked first responders about the frequency of other substances in overdose occurrences. Specifically, the questions asked about the frequency of alcohol, opioid pain relievers, fentanyl, and heroin. The following graphs provide data on each of these substance types.

Opioid Use in Overdose Situations in Less-Populated Counties

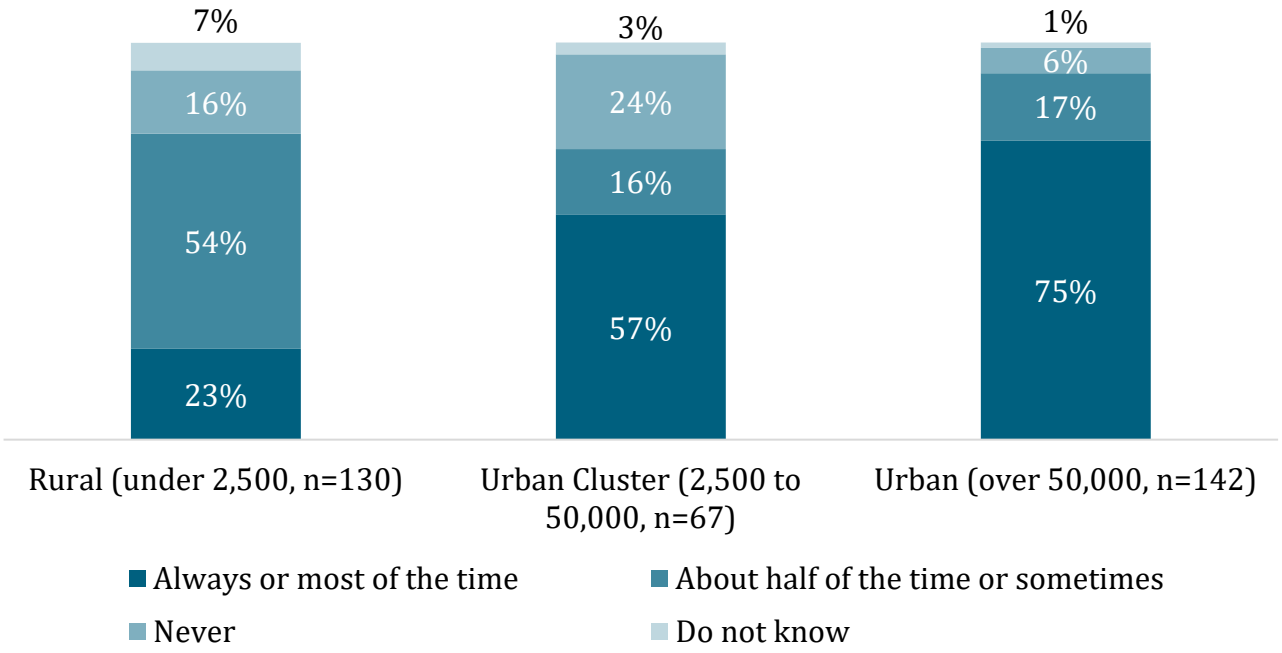


2019 Survey Findings (cont.)

Across all geographic settings, alcohol was the substance most frequently involved in an overdose. Alcohol was reported to be a factor in most overdose occurrences. For a full table, see Appendix F.

Never | Sometimes | About half of the time | Most of the Time | Always | Do not Know

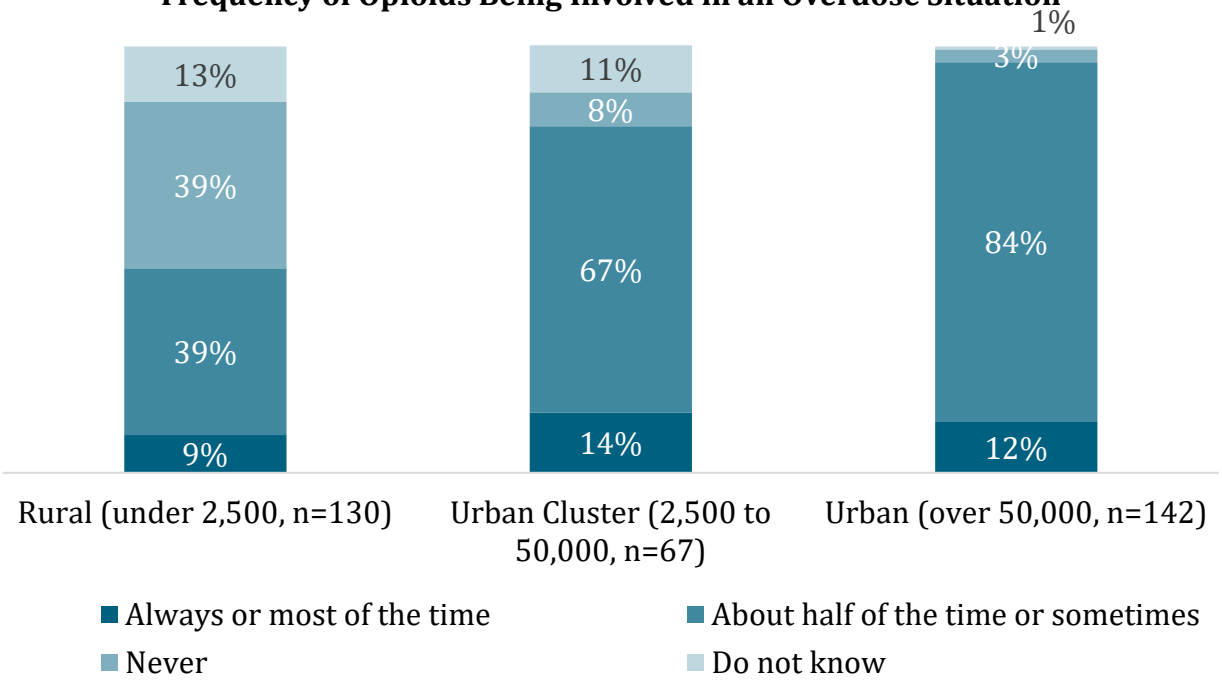
Frequency of Alcohol Being Involved in an Overdose Situation



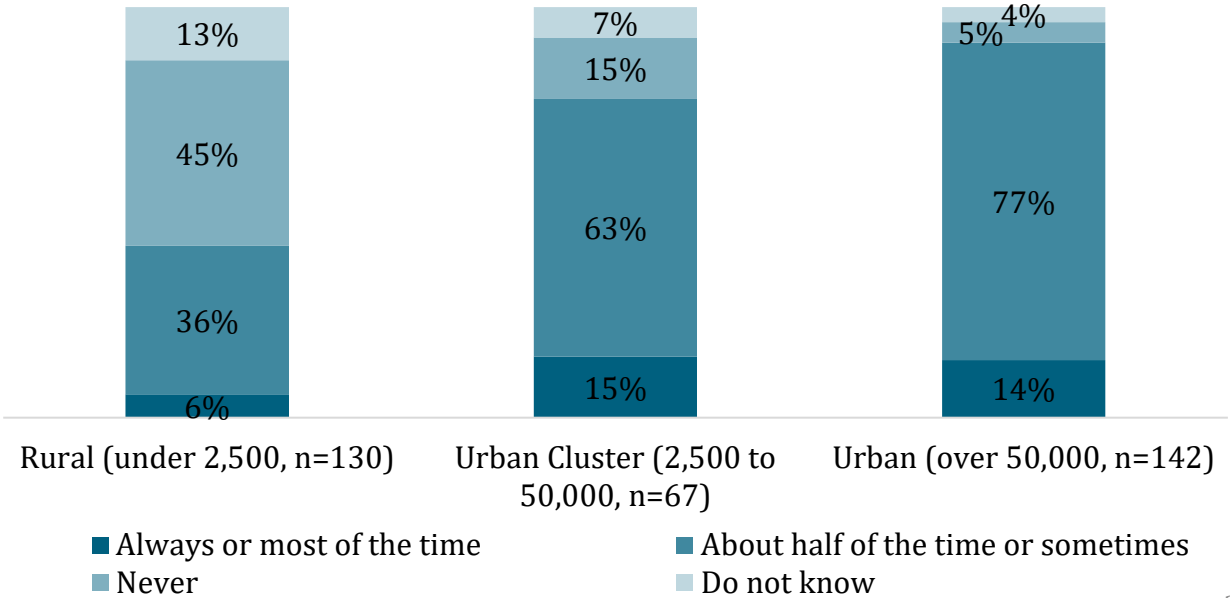
2019 Survey Findings (cont.)

Both meth and opioids were more frequently involved in urban areas and less frequently in rural areas.

Frequency of Opioids Being Involved in an Overdose Situation



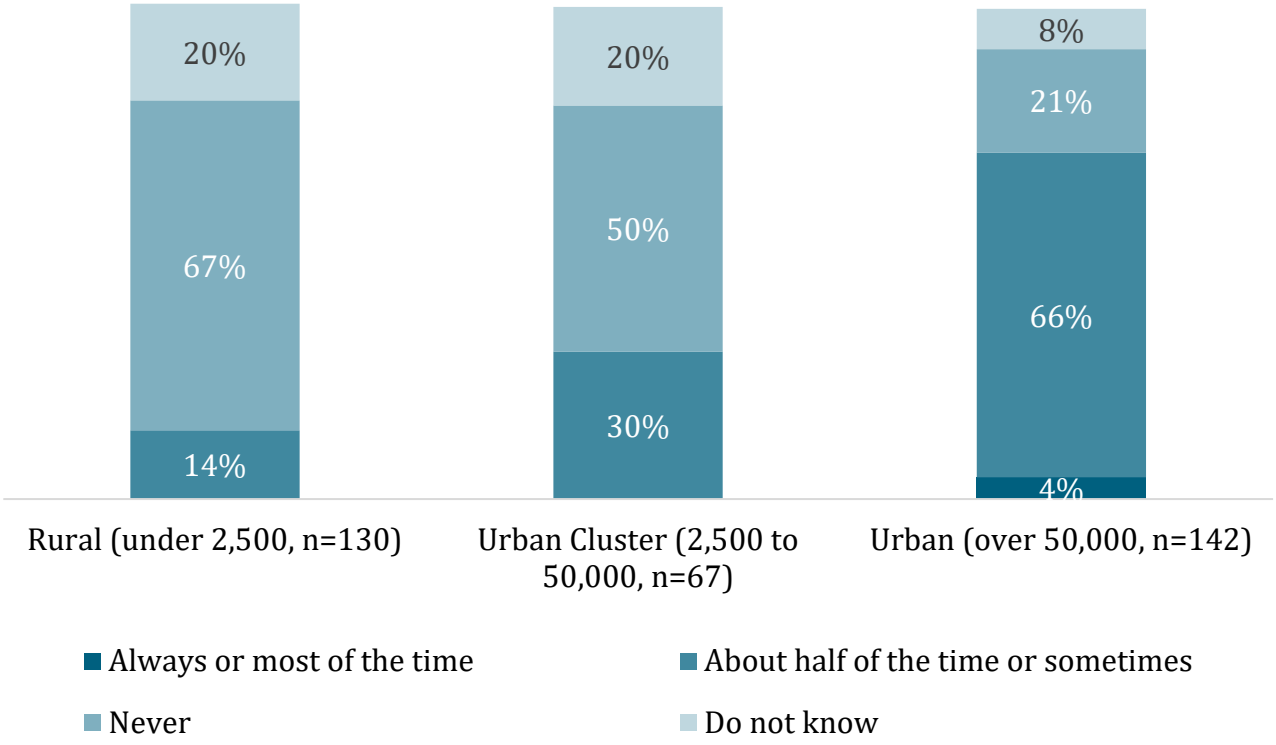
Frequency of Methamphetamines Being Involved in an Overdose Situation



2019 Survey Findings (cont.)

Regardless of the population size, no respondents indicated fentanyl as "always" involved in an overdose situation. This data is consistent with what was reported in the earlier section with TEDS data.

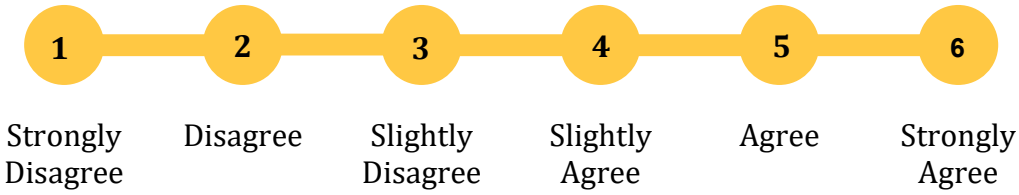
Frequency of Fentanyl Being Involved in an Overdose Situation



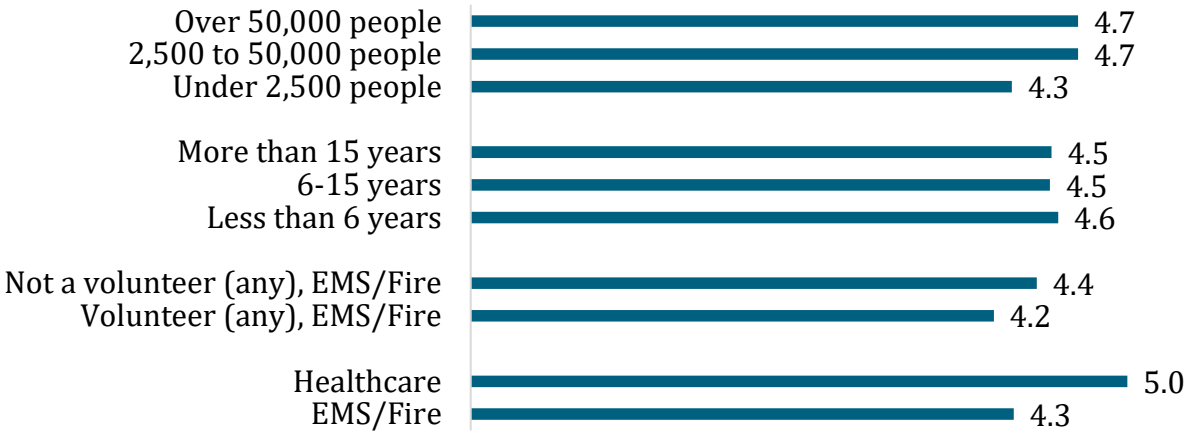
2019 Survey Findings (cont.)

Confidence/Fears

Across all groups (EMS/fire and healthcare, volunteer, years of experience, and population area), most respondents reported feeling confident they could administer naloxone (scores of 4.2 or higher).

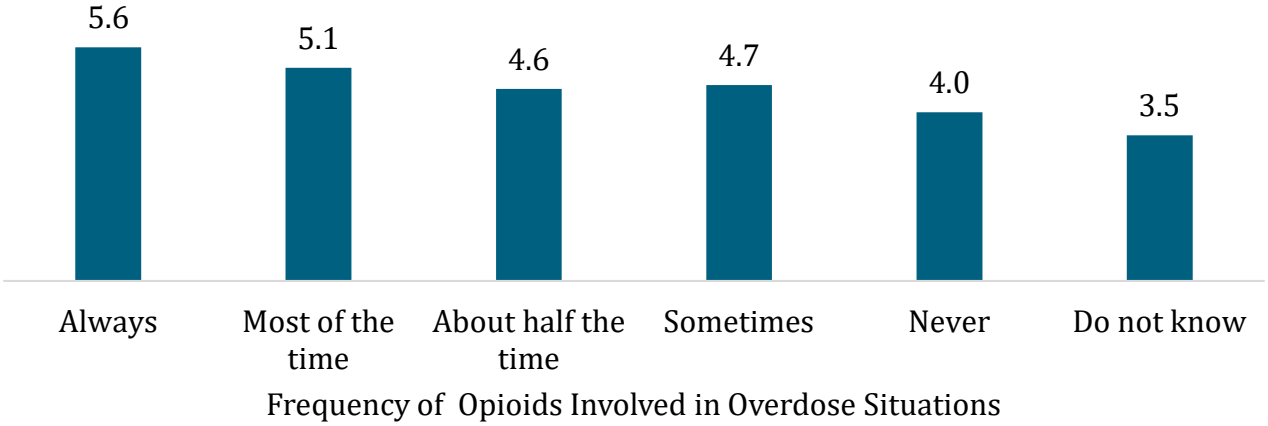


Confidence Administering Naloxone



The more often the respondent indicated that opioids were involved in situations, the more likely they were to feel confidence in administering naloxone. The graph below represents this trend.

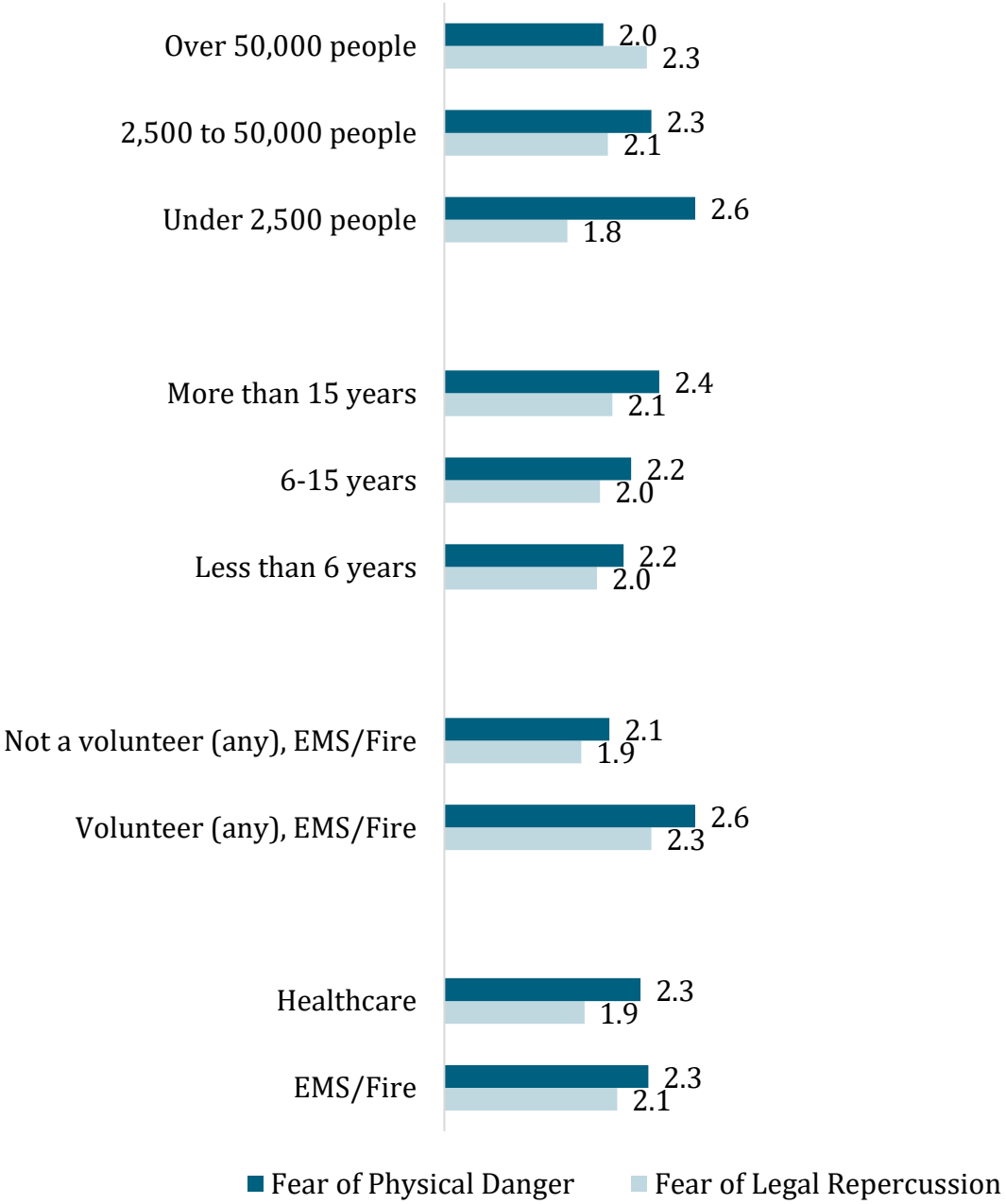
Confidence Administering Naloxone



2019 Survey Findings (cont.)

Volunteers were slightly more likely to express fear of legal repercussions for administering naloxone. Volunteers and those in areas with populations under 2,500 people also expressed they were more likely to administer naloxone out of fear for their own physical safety. These findings are demonstrated in the graph below. A table of this information can be found in Appendix G.

Reluctance to Administer Naloxone



2019 Qualitative Findings

The 2019 report provided an in-depth look at first responders' capacity to respond to an opioid surge as well as their perceived prevalence of overdoses, both generally and specifically related to opioid use or misuse. The following is a brief overview of relevant information as it pertains to this report as a secondary analysis was done to provide additional information on several factors. This section is specific to the qualitative data provided by both healthcare and EMS/fire professionals. The Qualitative methodology is linked in Appendix B.

Three primary themes emerged from the secondary analysis that were common across both professions. The following section describes the viewpoints expressed by each profession across the three themes:

1. Resources
2. Barriers to Access
3. Cycle of Mental Health and Substance Use

Resources

EMS/Fire

In the 2019 report, there was a focus on the lack of community resources. After secondary analysis, it appears that not only did EMS/fire staff feel that the community lacked resources, but that they were not in a position to provide resources to a patient to begin with. As EMS/fire staff reported being unable to provide many resources, they spoke to the role they play in overdose situations as a resource to those experiencing an overdose. All of the EMS/fire interviews and focus groups had one commonality in that they stated the single resource that is consistently provided to overdose calls is that they "treat and transport them" to the hospital. This phrase was consistently stated in the focus groups to convey the idea they "treat the patient, get them stabilized, then transport them to the hospital." This sentiment was expressed consistently across all focus groups and in many of the individual interviews.

Our resources are basically you give Narcan if needed and transport to a hospital.

Another resource EMS/fire personnel mentioned was "talking" to the patient. Several of the groups mentioned that they talk to the patients during transport, especially if they had transported them before, to encourage them to get help. When this was mentioned, many of the groups followed this up with a statement of frustration. In general, many stated that they knew the patients need help with resources but did not really see how they could do anything more than "treat and transport" due to the limited time they are with the patient.

I've had heart to hearts, all the way to the ER, and you're thinking 'I finally got through,' and then you see them the next day. You do what you can, you keep trying, but you get disheartened, like, alright, 'How many times did I give you this speech?' and believe one of these times it's going to get through to his head.

2019 Qualitative Findings (cont.)

Resources

EMS/Fire

Many also mentioned that EMS spends so little time with the patient that it is not likely they could provide resources other than stabilizing them and transporting them. There seems to be a collective understanding that once the patient was transported to the ER, the emergency department would provide the patient with resources for additional help and/or counseling.

When asked about their knowledge and understanding of the community resources available in their area, the most common response was that they had some familiarity with general resources in their community. Based on the type of responses, it did not seem that there was much knowledge about how to access community resources.

Responses from those in the Panhandle stated they did not know of many community resources. Responses from Regions 3 and 4 indicated there were no resources in their community and these were the only regions which specifically mentioned the need for additional treatment facilities and/or beds in their area. This was vastly different from Douglas County, as there are a vast number of resources available.

We are lacking resources in the Panhandle in general. In behavioral health, mental health, I mean the opioid disorder we don't have anyone that treats it at this point.

The conversation naturally moved toward what resources could be potentially helpful. Several groups, though not all, thought that providing naloxone to the family for future use would be useful. There was some concern though that the family would need to be educated to not wait too long to provide it or to call 911 if it didn't work. In addition, it was suggested that while providing pamphlets or brochures to the patient might be helpful, it might be better to give it to a family member instead. Other suggestions were to make sure that there were social workers, therapists, or chaplains available in the medical setting for individuals who have overdosed.

2019 Qualitative Findings (cont.)

Resources

EMS/Fire

Overall, EMSs did not see how they could do much more than provide information in addition to treating and transporting. One EMS suggested that all patients or their families should be instructed to ask for a social worker once they got to the hospital. The challenge with all of these came down to determining the role of EMS when treating the overdose as most felt their role is to mediate the immediate medical situation and not assess other needs.

This is a challenge. It's a challenge. You're with somebody for what? 15, 20 minutes, maybe 45, depending what's going on, and you might have some repeat customers.

We can keep 'em breathing, and get 'em to the ER. We don't do the… Addiction is not something you can treat in a 10- or 15-minute EMS call. It's a long-term issue. It's a bigger issue than… So our best resources are stabilize the medical side of the overdose, and then the social side, the social behavioral side, that's something that's out of our scope, or out of our realm. We just don't have the training or the background. I can't change someone's addictive behaviors in 20 minutes.

Resources

Hospital First Responders

For hospital staff, the barriers related to community resources stemmed around the frustration in how patients need ongoing long-term support, which is not something the ER provides. There were frequent references to gaps in resources and referral processes for individuals who are experiencing substance abuse and mental health problems. Some individuals are provided a list of resources or are recommended to attend outpatient therapy after being discharged from the ER. However, they are either not willing or not able to utilize these resources. With respect to patients presenting in the ER with an overdose, these are patients in need of emergency medical care for an overdose and are not in the prevention phase.

Many of the statements were related to treating the acute need and, once that need is met, identifying how best to continue treatment. There was a lot of frustration voiced regarding the lack of resources available in the ER including the lack of a social work resource, someone who can connect with the patient one-on-one and discuss options.

Several times I've had to… We send people out saying 'Good luck!' We don't have any beds available anywhere. Everywhere is full. And they feel defeated 'cause the system's now failed them in a way. And so, there is not enough resources out there for people who are genuinely trying to get help, get over this addiction they have, whatever it is, and they can't…

2019 Qualitative Findings (cont.)

Barriers to Access

EMS/Fire

When asked about resources that could potentially be helpful, most respondents thought that the easy accessibility of naloxone eliminated a barrier. However, several people mentioned that, in order for treatment or resources to be successful, the patient has to accept that they need it and be ready to get help, and that, of the patients they were seeing on a regular basis, it did not appear they were ready. Respondents also talked about the lack of available resources if a person were ready to get help such as being banned and barred from treatment facilities or having to wait for a spot to become available when the person is ready to get help immediately.

Once we get them to the point where they're stable, and now they' don't wanna go back and do this, then that's sometimes months before we can get them into a facility, and then cost is a factor.

Cause the shelters, like if we get a police officer there, they're not gonna take 'em to the shelter because they can't go in if they're under the influence of anything.

The biggest barrier mentioned was that patients did not recognize there is a problem, and they do not want to be helped. This was a fairly consistent themes across most focus groups and interviews.

And the same thing as being down here, we have the same repeat people that we know that drink all the time or use meth, like Robert, that he's had more than enough opportunities. The hospital has tried to help him, we try to help him. He doesn't want it.

Other barriers mentioned were the patients' family members being in denial about the patients' overdoses and need for help. It was also mentioned that there is little that an EMS can do in the 20 minutes they are with the patient to work on addiction or address mental health issues.

We're not trained in how to deal with a mental health person.

And on the flip side, occasionally family, they're in denial. 'Oh, so and so mom, dad, aunt, uncle, son, daughter, what have you. Oh they're not on drugs, no, no, no, no it can't be that, oh absolutely not. They're breathing now, sorry, we'll take them to the hospital and get em checked out, have a nice day.'

Yeah the family kinda denies it until we can prove it.

2019 Qualitative Findings (cont.)

Barriers to Access

Hospital First Responders

Hospital staff provide resources to patients in the ER, and oftentimes, they are either unwilling or unable to utilize these resources. Although providing a list of resources to a patient is a step in the right direction, healthcare first responders speculated that patients do not follow through with recommendations on their own. There also may be assumptions that "someone else" will continue to assist a patient in navigating resources, including treatment options. Patients need ongoing encouragement, support, and guidance to get the services they need.

A vicious cycle is created where the same individuals return again and again to hospitals with the same problem. There may be ways to address these problems, but patients are not getting connected. Facilities do not have detailed resource lists of local resources including substance abuse treatment, mental health treatment, crisis support, peer support, food pantries, transportation services, and more on hand.

You can only provide them so much education.

So we don't have resources to manage these patients. We don't have dedicated beds and we don't have enough support within our region to get the people where they need to go, it doesn't exist. We can't even get people into treatment for alcohol, hospital-issued treatment. There's a void there, there's no bridge therapy available and it creates that cycle in the emergency room where they're back and they're back and they're back.

Cycle of Mental Health and Substance Use

EMS/Fire

Most of the interviews acknowledged that mental health was an issue in many of the calls, especially those involving repeat trips to the same person's location. Most recognized that there is more to the call than just the overdose and that there are mental health issues related with the substance abuse. A common sentiment expressed by EMS/fire personnel was that they felt their "hands were tied." Many described treating and transporting as a band aid, but admitted they are not in a position to do much more than that.

There was a sense of frustration regarding the cyclical nature of these type of calls and an acknowledgement that the underlying problem was not being addressed. A common statement was a variation on a theme of the following:

It's all cyclical, that without treating the problem then you deep doing the same thing. You treat 'em and get them to the ER, the ER treats them, they send them on their way, and then nothing.

2019 Qualitative Findings (cont.)

Cycle of Mental Health and Substance Use

EMS/Fire

Although there was a lot of hopefulness regarding the help a person could receive in the ER, including more long-term solutions, most recognized that there are barriers that neither the ER nor EMSs could readily address.

Yeah, you get the repeats. The first EMS call that I ran on when I joined the department in '78 was one individual that we picked up pretty much regularly every 2 weeks until he finally passed away. And that was just a couple years ago. So we were picking him up every couple weeks.

Then they go back into the situation that they came from, waiting for a place to get in, and it's kind of a vicious cycle.

Yeah, you're right because we end up taking them to the ER and we feel like, in 6 hours they're gonna be out on the same boat they're in now.

I think the problem with this epidemic is that there is no quick fix. I mean not to sound negative, but it's only going to get worse. It's one of those things where you feel like, how do you stop this, or how do you reverse it?

Cycle of Mental Health and Substance Use

Hospital First Responders

Hospital staff often voiced the overlap of substance abuse and mental health issues. Many interviewees discussed how there needs to be a more directed effort at following up with these patients and providing needed supports to prevent cyclical behavior.

There's a void there, there's no bridge therapy available and it creates that cycle in the emergency room where they're back and they're back and they're back.

2019 Qualitative Findings (cont.)

Cycle of Mental Health and Substance Use

Hospital First Responders

Treating substance abuse as a public health crisis requires a community effort. Addressing substance abuse before it becomes an emergency would benefit many community stakeholders, including, but not limited to, paramedics, law enforcement, and crisis response teams. There may be an opportunity in joining efforts from multiple entities to address this issue in a collaborative manner. This type of initiative would need strategic planning on how it would benefit the community at large to maximize collaboration and investment.

The resources there are not, they're fiscally expensive, and so I don't know, it depends what the state wants to do, I guess.

Yeah, and you know, it'd be something where this other care area, if you will, like it doesn't have to follow the same guidelines as the emergency room. So, you don't have to hit all the same benchmarks, or we don't have to do all of these things. But it's almost like a walk-in clinic. Like an urgent, but like a primary care, or something like that because people come to the ER just 'cause they know you can go to the hospital and get help. So, they walk in for these chronic issues or these primary care complaints.

So, I don't know if that's something that we need to look at from the community health, paramedic response team that can go assess, 'Do you really need to go to the ED? What is it that I can do for you? What truly are the issues to keep you home or whatever?' So, that may be something to explore that role. But the hospital can't afford to support and pay for all of those, and that's some of the conversations before as the paramedic services that I've talked to have said, 'Well, we'll provide this if you pay us to do that.' And it's like, 'Well, what do we get out of it other than not getting, not bringing patients to the ED?' It's just complicated.

Literature Review

Literature Review

STEPs conducted an updated literature review in order to examine what is being done on a national level for drug overdose prevention. Through this literature review, two themes emerged:

1. Stigma in the medical system exists for people who misuse substances and experience an overdose, and
2. Naloxone has become more readily available for people.

Attitudes on Substance Use Treatment, Naloxone, and Individuals Who Misuse Substances

Powell, K. G., Treitler, P., Peterson, N. A., Borys, S., & Hallcom, D. (2019). Promoting opioid overdose prevention and recovery: An exploratory study of an innovative intervention model to address opioid abuse. ***International Journal of Drug Policy, 64*****, 21–29. https://doiorg.leo.lib.unomaha.edu/10.1016/j.drugpo.2018.12.004**

In 2015, New Jersey implemented the Opioid Overdose Recovery Program (OORP) "to address the opioid epidemic and the issue of low treatment admissions following a non-fatal overdose" (p. 22). Through OORP, peer recovery specialists, who are required to have at least 2 years of experience in recovery, provided support and referrals to substance use treatment to overdose survivors in emergency departments directly following their overdose. This qualitative study involved 17 interviews in 2016 and 2017 with OORP staff and stakeholders to understand the implementation process, successes, and barriers of the program.

Common barriers to substance use treatment, such as availability of treatment beds and lack of health insurance, continued to be an obstacle. However, using peers as first responders proved to be successful in linking patients to treatment and helping them achieve recovery. A peer-based intervention may help to improve patient engagement and prevent additional overdoses following emergency room visits.

Literature Review (cont.)

Attitudes on Substance Use Treatment, Naloxone, and Individuals Who Misuse Substances

Paquette, C. E., Syvertsen, J. L., & Pollini, R. A. (2018). Stigma at every turn: Health services experiences among people who inject drugs. *International Journal of Drug Policy, 57*, 104–110. https://doi-org.leo.lib.unomaha.edu/10.1016/j.drugpo.2018.04.004

This qualitative study explored the healthcare experiences of people who inject drugs and the influence these experiences have on their utilization of healthcare services in California. Through 46 interviews in 2015, participants reported being denied syringes at pharmacies due to stigma, deterring them from future attempts. Participants also shared experiences of inferior and delayed medical care from first responders and hospital staff when treated for an overdose or injection-related infection. Due to community-wide distrust from experiences of substandard medical care, participants reported refusing or delaying medical treatment and administering their own care to avoid contact with medical professionals. The authors emphasize the need for stigma to be addressed at the individual and system levels to improve the health of people who inject drugs, their utilization of health care services, and the care they receive.

Ezell, J. M., Walters, S., Friedman, S. R., Bolinski, R., Jenkins, W. D., Schneider, J., Link, B., & Pho, M. T. (2021). Stigmatize the use, not the user? Attitudes on opioid use, drug injection, treatment, and overdose prevention in rural communities. *Social Science & Medicine, 268*, N.PAG. https://doi-org.leo.lib.unomaha.edu/10.1016/j.socscimed.2020.113470

In 2018 and 2019, interviews were conducted to understand the stigma around substance use and harm reduction practices in rural areas. Participants included professional stakeholders who interact with people who use drugs (n=30) and people who use drugs (n=22) in rural Illinois. Interview participants, who included first responders and healthcare professionals, indicated significant stigma around drug use and harm reduction practices in rural communities. The attitudes of professional stakeholders tended to be in direct contrast with biomedical and sociocultural explanations for substance use and included resistance to use of public funds for harm reduction efforts and other social service supports. Efforts should be made to combat stigma in rural communities, increase knowledge around factors contributing to substance use, and conveying the moral and fiscal benefits of harm reduction efforts.

Literature Review (cont.)

Attitudes on Substance Use Treatment, Naloxone, and Individuals Who Misuse Substances

Henderson, S., Stacey, C.L., & Dohan, D. (2008). Social stigma and the dilemmas of providing care to substance users in a safety-net emergency department. *Journal of Health Care for the Poor and Underserved 19*(4), 1336-1349. doi:10.1353/hpu.0.0088.

Through 318 ethnographic observations between 2003 and 2005, Henderson et al. (2008) sought to address how patients with substance use issues in a community hospital were treated. Through this they found five major themes:

1. "Providers valued assisting vulnerable patients" (p. 1339). Many providers described feeling like they had a real sense of purpose while working at the hospital due to working with more vulnerable patients.
2. "Interactions with patients could be challenging" (p. 1340). There were some instances where patients became violent by swearing, hitting, and spitting at the providers. In the most extreme cases individuals had to be strapped to the hospital bed or sedated.
3. "Providers did not know if patients that misused substances provided accurate and complete medical histories" (p. 1341). There are individuals who would deny using substances. This is challenging as providers do not know if what is happening to the individual is due to substance use (elevated heart rate, etc) or due to a medical condition.
4. "Providers were concerned about drug-seeking behavior" (p. 1342). Some individuals would come in with generalized pain like "my back hurts," causing concern among providers.
5. "Providers had to balance the needs of substance-involved patients with the necessity to manage limited resources" (p. 1343). There are some situations of when people that are inebriated would take advantage of an emergency to sleep longer in a hospital bed or eat more food. Running tests and labs on these patients would cause a drain on the hospital's time and resources.

Literature Review (cont.)

Attitudes on Substance Use Treatment, Naloxone, and Individuals Who Misuse Substances

Saunders, E., Metcalf, S. A., Walsh, O., Moore, S. K., Meier, A., McLeman, B., Auty, S., Bessen, S., & Marsch, L. A. (2019). "You can see those concentric rings going out": Emergency personnel's experiences treating overdose and perspectives on policy-level responses to the opioid crisis in New Hampshire. *Drug & Alcohol Dependence, 204*, N.PAG. https://doi-org.leo.lib.unomaha.edu/10.1016/j.drugalcdep.2019.107555

Interviews were conducted with six firefighters, 6 police officers, 6 emergency medical service providers, and 18 emergency department personnel in New Hampshire in 2016 and 2017 about their experience with drug overdoses, attitudes about naloxone, and attitudes about harm reduction. First responders reported an increase in the availability of naloxone and described times when they would respond to a situation and someone in the family had already administered naloxone to the person experiencing an overdose. The feelings around syringe programs were mixed. Although some felt conflicted about these strategies, others understood the importance of harm reduction. First responders also discussed frustration with the barriers to treatment at a patient level (i.e., a lack of motivation) and at a systems level (i.e., lack of available treatment services, resources, funding, etc.). They highlighted the need for more low-cost treatment facilities and providers, and the need for prevention services.

Literature Review (cont.)

Other Related Professional Literature

Murphy, J., & Russell, B. (2020). Police officers' views of naloxone and drug treatment: Does greater overdose response lead to more negativity? *Journal of Drug Issues, 50*(4), 455–471. https://doi-org.leo.lib.unomaha.edu/10.1177/0022042620921363

In Pennsylvania, 618 police officers responded to a survey between 2018 and 2019 about their experiences with drug overdoses, attitudes toward drug treatment, and attitudes toward naloxone. The study found that those officers with greater exposure to overdose incidents were less likely to support using tax dollars for drug treatment, less likely to support officer referrals to treatment, and less likely to believe drug treatment is effective. Officers with less experience responding to overdose incidents were more likely to believe naloxone is a good solution. Almost all officers felt that their department provides adequate training on using naloxone and that naloxone enables individuals to continue using drugs.

Bessen, S., Metcalf, S. A., Saunders, E. C., Moore, S. K., Meier, A., McLeman, B., Walsh, O., & Marsch, L. A. (2019). Barriers to naloxone use and acceptance among opioid users, first responders, and emergency department providers in New Hampshire, USA. *International Journal of Drug Policy, 74,* 144–151. https://doi-org.leo.lib.unomaha.edu/10.1016/j.drugpo.2019.09.008

To understand perceptions of naloxone, interviews were conducted with 36 emergency responders and 76 people that use opioids between 2016 and 2017. Some responders reported being happy that naloxone has become more readily available for people in New Hampshire. However, others reported feeling like it is encouraging use and allows for riskier use behavior. Responders described naloxone as a short-term fix rather than a long-term solution and reported having difficult patient encounters after administering naloxone. People that use opioids reported seeing naloxone more often but not wanting to spend money on purchasing naloxone themselves. People who use opioids reported believing only medical professionals could administer it and holding other misconceptions on how to treat an overdose. Additionally, some respondents reported severe withdrawal symptoms kept them from wanting to have someone use naloxone on them.

Literature Review (cont.)

Training for First Responders

Davis, C. S., Ruiz, S., Glynn, P., Picariello, G., & Walley, A. Y. (2014). Expanded access to naloxone among firefighters, police officers, and emergency medical technicians in Massachusetts. *American Journal of Public Health, 104*(8), e7-9. https://login.leo.lib.unomaha.edu/login?qurl=https%3A%2F%2Fwww.proquest.com%2Fscholarly-journals%2Fexpanded-access-naloxone-among-firefighters%2Fdocview%2F1549549119%2Fse-2%3Faccountid%3D14692

Davis et al. conducted a review of a policy change that took place in Massachusetts, which allows for better access to naloxone for first responders. The Massachusetts Department of Public Health operates an Overdose Education and Naloxone Distribution program. This program trains participants on opioid overdose prevention, signs and symptoms of an overdose, and how to administer naloxone.

Police officers at the Quincy Police Department are a part of this program. Local leaders and advocates called for the police to participate, as officers are often the first to respond to an overdose. All officers at this department were trained and equipped with naloxone rescue kits. Although there is not enough evidence yet to determine the impact of these policy changes, Davis et al predict that police involvement in this program will reduce the number of overdose deaths. This will in turn have a positive impact on public health.

Janssen, A., Garove, B., & LaBond, V. (2020). Naloxone administration by nonmedical providers: A descriptive study of county sheriff department training. *Substance Abuse Treatment, Prevention and Policy, 15*, 1-4. http://dx.doi.org.leo.lib.unomaha.edu/10.1186/s13011-020-00327-w

Janssen et al. conducted a descriptive study to assess the impact of naloxone administration training for deputies implemented in a sheriff's office in southeastern Michigan. This was done by examining incidents where naloxone was administered. In this specific office, trainings on naloxone administration began in 2015. The training is a 45-minute lecture about the signs and symptoms of opioid use and overdose. After the lecture, the trainees practice administering naloxone.

From 2015 to 2018, there were 184 reported incidents where sheriff deputies administered naloxone. In this time, 95% were successful. Janssen et al. found that there was an 80% increase in the number of officers trained in 2016 compared to the previous year. In 2017, there was a 50% increase in the number of naloxone administered. Janssen et al. believed that the increase of trained officers in naloxone administration could be a contributing factor to the increase of successful naloxone administration.

Literature Review (cont.)

Training for First Responders

Simmons, J., Rajan, S., Goldsamt, L., & Elliott, L. (2016). Implementation of online opioid overdose prevention, recognition and response trainings for professional first responders: Year 1 survey results. *Drug & Alcohol Dependence, 169*, 1–4. https://doi-org.leo.lib.unomaha.edu/10.1016/j.drugalcdep.2016.10.00

In November of 2014, a free, online opioid overdose training was sent to the Opioid Safety and Naloxone Network listserv and posted on the two Pennsylvania state agency websites. The 45-minute training used destigmatized language to demonstrate how to respond to an overdose and provide information on Good Samaritan laws. A total of 387 first responders completed a pre- and post-training survey, most of whom reported being located in Pennsylvania. Most respondents reported high satisfaction with the format and content of the training. The results of this study support the use of a web-based overdose response training for first responders. The free training is available at www.GetNaloxoneNow.org.

Wood, C. A., Duello, A., Horn, P., Winograd, R., Jackson, L., Mayen, S., & Wallace, K. (2021). Overdose response training and naloxone distribution among rural first responders. *Journal of Rural Mental Health.* Advance online publication. https://doi.org/10.1037/rmh0000166

Police and fire fighter personnel in rural Missouri participated in an overdose response training to increase the capacity among rural non-emergency medical service first responders to address overdose situations. In addition to education on recognizing and responding to an overdose, the first responders were trained on naloxone-related legislation in Missouri, factors contributing to the development of substance use disorders, and situations that risk personal injury at the scene of an overdose.

Limitations

Secondary data:

1. TEDS-A-2018 collected data from agencies that are provided state funding. Private treatment centers may not be included within this data.
2. TEDS-A-2018 data may not be representative of those who did not receive treatment during 2018.
3. Some individuals may be included more than once within the sample as the data is based on individual admissions to treatment, not individuals. Clients with more than one admission to treatment in 2018 produce duplicated information.
4. Most treatment centers in Nebraska are in Lancaster and Douglas counties. This data may not be fully representative of the entire state.
5. The TEDS-A-2018 data set reported missing data and rural areas without a core-based statistical areas (CBSA) 2010 code with the same code. Roughly 4,000 admissions were excluded from the bivariate analysis by region because of unknown location data.
6. It is unknown if location data used in the bivariate analysis by region indicated where the client lived or where the client received treatment.
7. The raw data associated with the NSDUH is not available to create age groups which may provide better insight to NE DHHS.
8. The NSDUH data does not discuss polysubstance use.

Limitations specific to sections in the 2019 "Drug Overdose Prevention: Needs of Healthcare Professionals and First Responders" can be found at the page numbers listed below, which is linked here.

Healthcare survey limitations (p. 28)
EMS/Fire survey limitations (p. 80)

Healthcare qualitative limitations (p. 49)
EMS/Fire qualitative limitations (p. 103)

1. STEPs conducted focus groups and interviews with both EMS and fire. As STEPs conducted the interviews, it became clear that the questions asked were best answered by EMS.

Recommendations

From Secondary Survey Data:

1. Continue educating prescribers on the implementation of the PDMP and SafePrescribe program as misuse of pain relievers are estimated to be more prevalent than heroin.
2. Examine current practices to better understand the factors which contribute to more Nebraskans in treatment for methamphetamine misuse than opioid misuse, despite NSDUH estimates showing opioid misuse is more prevalent.
3. Provide additional trainings to first responders on responding to an opioid overdose based on prevalence of opioid misuse by region.
4. Focus prevention efforts on Nebraskans aged 18–25, as this age group uses substances at a higher rate.

From Qualitative Analysis:

1. Provide EMS personnel with information they can give to patients and their families, such as requesting a social worker once they got to the hospital.
2. Future evaluations involving OD responses should limit involvement to only those who consider themselves acting in an EMS capacity and not include all fire station staff.
3. Examine the possibility of using this data as baseline prior to COVID. At the time of the evaluation, nearly all first responders were indicating that opioids were not a prime factor in overdose occurrences. A year later the COVID-19 pandemic hit, and it was reported nationally that opioid abuse had increased. The 2019 data could be used as baseline data to determine whether there was an increase in Nebraska of opioids or of other substances.

From Literature Review

1. Utilizing peer support in emergency rooms for individuals who overdose could be a viable option to help individuals access more treatment or additional resources needed.
2. Education and competency training on substance misuse is needed for professionals in the medical field to address biases toward individuals that use substances.

References

Substance Abuse and Mental Health Services Administration. (2020). *Treatment Episode Data Set (TEDS-A): 2018 Codebook*. Substance Abuse and Mental Health Services Administration. https://www.datafiles.samhsa.gov/sites/default/files/field-uploads-protected/studies/TEDS-A-2018/TEDS-A-2018-datasets/TEDS-A-2018-DS0001/TEDS-A-2018-DS0001-info/TEDS-A-2018-DS0001-info-codebook.pdf

Substance Abuse and Mental Health Services Administration. (2020) *Treatment Episode Data Set (TEDS-A): 2018*. [Data set]. Substance Abuse and Mental Health Services Administration. https://www.datafiles.samhsa.gov/study-dataset/treatment-episode-data-set-admissions-2018-teds-2018-ds0001-nid19020

Substance Abuse and Mental Health Services Administration (2021). *2018–2019 NSDUH State-Specific Tables* [Data set]. Substance Abuse and Mental Health Services Administration. https://www.samhsa.gov/data/report/2018-2019-nsduh-state-prevalence-estimates

Appendix A

Secondary Data

	Primary substance (n=12,259)	Secondary substance (n=6,196)	Tertiary substance (n=2,739)
Alcohol (n=8,604)	53% (n=6,521)	21% (n=1,329)	28% (n=754)
Methamphetamines and other amphetamines (n=5,173)	29% (n=3,606)	17% (n=1,070)	18% (n=497)
Other substances (n=7,407)	23% (n=2,773)	55% (n=3,414)	45% (n=1,220)
[1]Heroin and other opiates (n=1,132)	4% (n=481)	6% (n=383)	10% (n=268)

Primary Substance Choice	Region 1 (n=146)	Region 2 (n=284)	Region 3 (n=1,310)	Region 4 (n=1,339)	Region 5 (3,413)	Region 6 (n=1,846)
Alcohol (n=4,224)	53% (n=78)	20% (n=57)	48% (n=632)	38% (n=511)	65% (n=2,204)	40% (n=742)
Methampheta-mines and other amphetamines (n=2,631)	25% (n=37)	50% (n=149)	37% (n=491)	42% (n=559)	25% (n=844)	30% (n=551)
Other substances (n=1,129)	19% (n=28)	22% (n=63)	13% (n=169)	13% (n=174)	8% (n=280)	22% (n=415)
[1]Heroin and other opiates (n=354)	2% (n=3)	5% (n=15)	1% (n=18)	7% (n=95)	2% (n=85)	7% (n=138)

[1] STEPs created the category "Heroin and other opiates" based on the similarity of these substances. The majority of admissions represented in the "Other substances" category reported marijuana use which is outside of the scope of DOP and was not heavily mentioned by first responders. The other substances included in the "Other substances" category were combined due to low rates of use.

Appendix B

Methods

Methodologies for the secondary data and additional literature review articles are located within their respective sections of this report. Methodologies specific to the quantitative and qualitative sections in the 2019 "Drug Overdose Prevention: Needs of Healthcare Professionals and First Responders" can be found at the page numbers listed below, which is linked here.

1. Healthcare Survey Methodology (p. 119)
2. Healthcare Qualitative Methodology (p. 132)
3. EMS/Fire Survey Methodology (p. 137)
4. EMS/Fire Qualitative Methodology (p. 150)

Appendix C

Length of Experience Survey Table

	Less than 1 year	1-5 years	6-10 years	11-15 years	16-20 years	21-25 years	More than 26 years
EMS/fire (n=247)	0% (n=1)	4% (n=11)	15% (n=38)	18% (n=44)	23% (n=57)	17% (n=43)	21% (n=53)
Healthcare (n=121)	7% (n=8)	31% (n=37)	21% (n=26)	9% (n=11)	8% (n=10)	7% (n=9)	17% (n=20)
Total (n=368)	2% (n=9)	13% (n=48)	17% (n=64)	15% (n=55)	18% (n=67)	14 % (n=52)	20% (n=73)

Appendix D

Substances Involved in Overdose Situations

Alcohol	Always	Most of the time	About half of the time	Sometimes	Never	Do not know
Under 2,500 (n=130)	2%	22%	12%	42%	16%	7%
2,500 to 50,000 (n=67)	7%	49%	16%	21%	3%	3%
Over 50,000 (n=142)	11%	65%	17%	6%	1%	1%
Total (n=339)	6%	45%	15%	22%	7%	4%

Opioids	Always	Most of the time	About half of the time	Sometimes	Never	Do not know
Under 2,500 (n=124)	2%	6%	6%	34%	39%	13%
2,500 to 50,000 (n=64)	2%	13%	20%	47%	8%	11%
Over 50,000 (n=141)	2%	10%	23%	61%	3%	1%
Total (n=329)	2%	9%	16%	48%	17%	7%

Methamphetamines	Always	Most of the time	About half of the time	Sometimes	Never	Do not know
Under 2,500 (n=124)	1%	5%	7%	29%	45%	13%
2,500 to 50,000 (n=67)	0%	15%	21%	42%	15%	7%
Over 50,000 (n=136)	4%	10%	21%	56%	5%	4%
Total (n=327)	2%	9%	16%	43%	22%	8%

Appendix E

Training

	I feel sufficiently trained in how to address..		
	Opioid Use	Response to Opioid Overdose	Opioid Overdose Prevention
EMS/Fire	4.12	4.08	3.57
Healthcare	4.45	4.45	4.25
P	0.00	0.00	0.03
Volunteer (any), EMS/fire	3.89	3.86	3.45
Not a volunteer (any), EMS/fire	4.47	4.42	3.76
P	0.50	0.63	0.95
Less than 6 years	4.43	4.4	4.09
6-15 years	4.23	4.22	3.93
More than 15 years	4.18	4.14	3.64
Under 2,500	3.77	3.73	3.46
2,500 to 50,000	4.37	4.34	4.03
Over 50,000	4.62	4.59	4.01

Appendix F

Respondents Role by Population of Service Area

	Under 2,500	2,500 to 29,000	30,000 to 50,000	Over 50,000
EMS/fire (n=247)	40% (n=98)	10% (n=24)	1% (n=3)	49% (n=122)
Healthcare (n=121)	34% (n=41)	32% (n=39)	5% (n=6)	29% (n=35)
Total (n=368)	38% (n=139)	17% (n=63)	2% (n=9)	43% (n=157)

Appendix G

Average Overdose Situations by Geographic Location and Role

Role	Average Number of Overdose Situations in Past 2 Years	Average Number of Overdose Situations in Past 6 Months	Change in Average Number of Overdose Situations
Combined urban	10.6	9.18	-1.57
Urban EMS/fire	11.6	9.53	-1.81
Urban healthcare	7.58	6.91	-0.51
Combined rural	3.25	2.11	-1.26
Rural EMS/fire	3.33	2.29	-1.22
Rural healthcare	2.8	2.08	-0.65

Appendix H

Reluctancy to Administer Naloxone

	Through my training, I feel confident that I can administer naloxone if needed	I am reluctant to administer naloxone for fear of...	
		Legal repercussions	Putting myself in physical danger
EMS/fire	4.29	2.11	2.31
Healthcare	4.98	1.9	2.26
Volunteer (any), EMS/fire	4.17	2.33	2.61
Not a volunteer (any), EMS/fire	4.43	1.88	2.06
Less than 6 years	4.56	1.98	2.15
6-15 years	4.51	2	2.2
More than 15 years	4.52	2.08	2.38
Under 2,500	4.28	1.79	2.61
2,500 to 50,000	4.68	2.05	2.33
Over 50,000	4.68	2.3	2.02