NALOXONE USE BY FIRST RESPONDERS IN MONTANA

JG Research & Evaluation | Bozeman, MT

REPORT INFORMATION AND ACKNOWLEDGEMENTS

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STUDY SUMMARY

The efforts of the Addictive and Mental Disorders Division (AMDD) of the Montana Department of Public Health and Human Services (DPHHS) to help limit adverse outcomes related to illicit opioid use in Montana have included increasing access to naloxone, commonly referred to by the brand name Narcan, through both the State Targeted Response (STR) and State Opioid Response (SOR) funding provided by the Substance Abuse and Mental Health Services Administration (SAMHSA). During the course of this study, interviews were completed with first responders and staff from community-based organizations who have received naloxone units paid for with STR and SOR grant funds. The primary goal of the study was to improve understanding about the ways that frontline responders who receive naloxone perceive its importance as they work to limit overdose fatalities within their communities.

Key Findings

- Naloxone is an important tool in the toolbox for first responders.
- For community organizations, access to naloxone is useful in situations where they do not know the substances being used or the type of overdose an individual is experiencing.
- Very few first responders interviewed for this study have needed to administer naloxone.
- Study participants have varied views on harm reduction approaches designed to limit the adverse effects of opioid use, and some are concerned that these approaches may encourage use.
- First responders are increasingly concerned about the rising use of heroin and an associated increased risk of overdoses.
- First responders expressed concern that the general public lacks understanding about Good Samaritan laws. As a result, members of the public often leave overdose scenes, depriving emergency medical staff of essential information about the overdose victim.
- Current naloxone training programs are well suited to first responders but not to community-based organization staff and their affiliated medical staff.

BACKGROUND

Naloxone, otherwise known by its common brand name, Narcan, is an opioid antagonist that has been used for opioid overdose in the United States since 1971. Naloxone helps reduce opioid-related deaths by countering the decreased respiratory rate that results from an opioid overdose and can be administered in three main ways: intranasally, intravenously, or intramuscularly (NIDA, 2020). These methods vary in how quickly they work, but generally it can take one to five minutes for naloxone to have effect (FDA, 2019). An opioid overdose is a medical emergency, and in some states access to and quick administration of intranasal naloxone by law enforcement have been associated with decreased deaths from opioid overdose (Rando et al., 2015). Fortunately, naloxone is not dangerous if administered to someone who does not have opioids in their system, and thus can be useful in situations where the substance or source of overdose is unknown (FDA, 2019).

First responders and community organizations are on the front lines of the opioid epidemic and have contributed to the reduction of opioid overdose across the United States by effectively using naloxone to quickly reverse overdoses. Owing to increases in opioid-related overdoses during the opioid epidemic, access to naloxone has been greatly expanded as a public health intervention for limiting overdose fatalities. Law enforcement agencies and other emergency medical services (EMS) have access to naloxone and may administer it in emergency situations. In addition, naloxone is becoming easier to acquire for the general public (Davis et al., 2014). Some states have passed laws allowing naloxone to be purchased over the counter, while other states require a prescription for naloxone for those who may be at high risk of an opioid overdose (SAFE Project, n.d.).

In 2017 the Montana Legislature passed House Bill (HB) 333. Also known as the Help Save Lives from Overdose Act, HB 333 increased naloxone access by allowing pharmacists to dispense naloxone prescriptions to any eligible recipient. Based on HB 333, an eligible recipient includes the following:

a) “a person who is at risk of experiencing an opioid-related drug overdose;

b) a family member, friend, or other person who is in a position to assist a person who is at risk of experiencing an opioid-related drug overdose;

c) a first responder or a first responder entity;

d) a harm reduction organization or its representative;

e) the Montana state crime laboratory or its representative;

f) a person who, on behalf of or at the direction of a law enforcement agency or officer, may process, store, handle, test, transport, or possess a suspected or confirmed opioid;

g) a probation, parole, or detention officer;

h) a county or other local public health department or its representative; or

i) a veterans' organization or its representative” (Help Save Lives from Overdose Act, 2017)

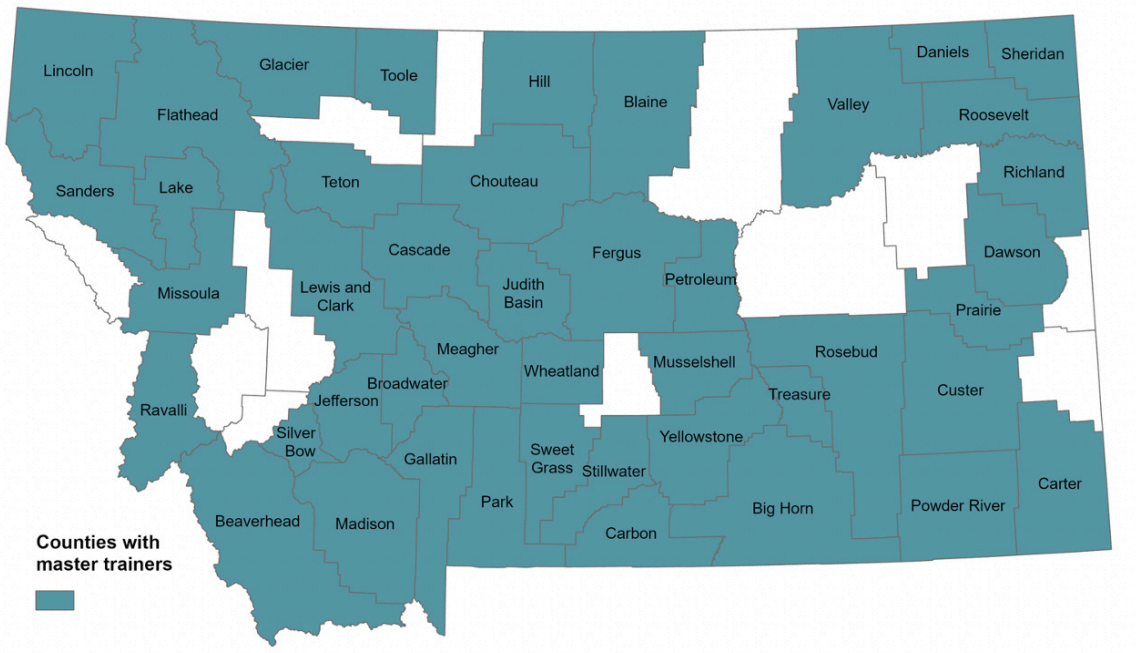
With the State Targeted Response (STR) and State Opioid Response (SOR) funding from the Substance Abuse and Mental Health Services Administration (SAMHSA), two major prevention objectives were met regarding naloxone. Objective 1.1 was to increase the number of EMS and law enforcement staff trained in the use of naloxone. Objective 1.2 was to increase the number of EMS and law enforcement providers carrying naloxone for emergency purposes.

The number of trained EMS and law enforcement personnel was greatly increased using the train-the-trainer model under STR. A total of 745 “master” trainers provided training to

1,361 professionals in the administration of naloxone. In addition, 1,473 units of naloxone were distributed across 35 of the 56 counties in Montana. With SOR funding, 671 "master" trainers provided training to 2,505 professionals in the administration of naloxone. In addition, 4,581 units of naloxone were distributed, meeting 195% of SOR grant target. The train-the-trainer approach has greatly expanded access and ability to use naloxone across the state. Figure 1 shows counties in Montana with at least one master trainer.

Figure 1. Master Trainers in Montana

Counties with at least one naloxone master trainer
Map created with data provided by Ki-Ai McBride and Tori Troeger of AMDD



This study was undertaken to improve understanding of how naloxone is being used to mitigate the risk of overdose from opioids. We conducted semi-structured interviews with a sample of emergency first responders and community organization leaders across Montana who were trained in administering naloxone. Our objectives were to determine how often they administer naloxone on active duty, how this education has affected their perspective on opioid use in Montana, and what barriers they perceive to using naloxone or training others in the use of naloxone.

METHODS

Research Questions

The research questions for this study included the following:

- How do first responders view naloxone as an effective harm reduction strategy?
- What types of overdoses do first responders experience on duty, and is naloxone a useful medication to have on hand?
- How are substance use disorders perceived by first responders and the community?
- Do first responders across the state use naloxone in response to opioid overdoses?

Study Design

Data gathering

For this study, the research team designed a sample frame intended to complete semi-structured interviews with three types of first responders, including EMS, fire, and law enforcement personnel. The initial study design aimed to interview a total of 45 individuals in the following scheme, grouped by units of Narcan received through STR funding:

- 1 of each first responder type in 3 counties with more than 100 units of naloxone
- 1 of each first responder type in 3 counties with 51–100 units of naloxone
- 1 of each first responder type in 3 counties with 21–50 units of naloxone
- 1 of each first responder type in 3 counties with 1–20 units of naloxone
- 1 of each first responder type in 3 counties with 0 units of naloxone

Counties within each grouping were picked at random, with small adjustments made to the sample to ensure geographic coverage across the state of Montana. In addition to first responders, we wanted to interview community group leaders, Tribal entities, and detention centers within each county to understand how these types of organizations are using and distributing naloxone.

Recruitment for interviewees with this sample frame was partially successful, and after three waves of recruitment, we adjusted the sampling method to increase the total number of respondents by expanding the sample to the 40 Montana counties with the largest populations. There were a few challenges during the initial phase of recruitment. Because of COVID-19, face-to-face recruitment efforts for interviews were not possible, and we could thus recruit participants only over the phone or via email.

One particular challenge was interviewing EMS and/or fire personnel in rural counties. In many cases, EMS and/or fire departments are operated by volunteers, and thus any tele-recruitment efforts were not guaranteed to reach those individuals. Without access to the phone numbers of volunteers, we were unable to contact individuals within many of the intended counties. To increase recruitment, we expanded our efforts, reaching out to 40 of the 56 counties in Montana. Those counties with the smallest populations were not included in the sample. In total, we were able to complete interviews with 22 individuals in 14 Montana counties.

Data analysis

Interviews were completed over the telephone and recorded. Each interview recording was de-identified and transcribed verbatim. The research team developed a closed coding scheme based upon the research questions for the study. All qualitative analysis was completed using NVivo Qualitative Software (QSR International Pty Ltd., 2020). During the coding process, emergent themes were identified within the broad coding scheme and constitute the results of the analysis. Coding was completed by one researcher and reviewed by the research team to ensure consistency and accuracy in the coding process.

Limitations

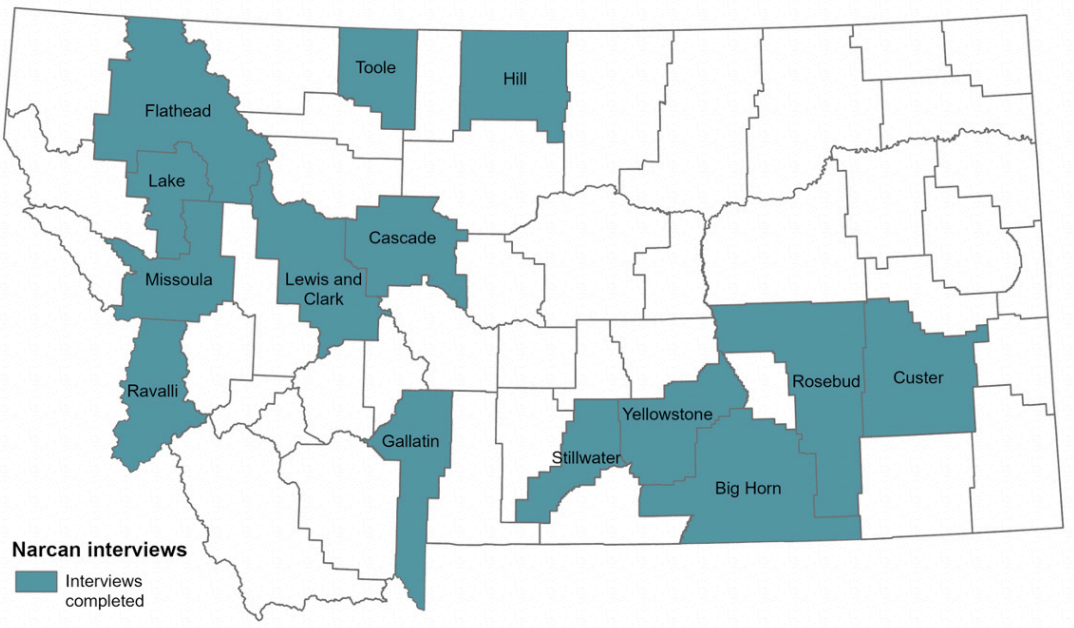
This study has a few limitations. First, this study is limited to the experiences of first responders and community organizations in Montana, a rural, frontier state. It is thus difficult to compare the results of this study with the experiences of other states. Second, the study has a relatively small sample size owing to the difficulty of recruitment.

Profile of Respondents

A total of 22 interviews were conducted for this study: 11 of the interviews were with members of law enforcement, 8 were with EMS and/or fire personnel, and 3 were with community organizations. Figure 2 shows the counties where respondents were located.

Figure 2. Map of naloxone interviews completed by county

Counties in which interviews were completed with first responders about naloxone use



RESULTS

General Attitudes

About naloxone

The general sentiment about naloxone among first responders is that it is a useful tool for saving lives. This sentiment was generally expressed in a neutral way by the interviewees in EMS, fire, and law enforcement. With the exception of one individual in law enforcement, who felt that naloxone was burdensome to carry and keep track of, all others saw naloxone as another tool in the toolbox that is useful in their work setting.

> *"[Naloxone's] **a tool in the toolbox** that you see around the country" (firefighter/ EMS provider).*

> *[Interviewer: Do you think that Narcan is useful in your setting as a police officer?]*
>
> *"You know, it's just another **tool in your tool belt** to use to protect not only you and other people, to possibly save a life. Anytime you have the ability that you can save somebody's life by something pretty simple and it doesn't take up much space. It's convenient to use and stuff like that. I mean, it's good to have" (law enforcement official).*

> *"It's a drug in a box, no different than . . . Epi, and Atrophy, and morphine. Even all these other stuff, **it's just another tool in the box**. So I guess there's [no] negative or positive connotation about it" (EMS provider).*

For interviewees based in community organizations, naloxone was viewed as necessary to have, regardless of the type of drug used by an individual. Concerns about illicit substances containing fentanyl, like methamphetamine and cocaine, broaden the importance of naloxone.

> *"Now we give naloxone to everyone, and we actually educate meth users to just be aware of fentanyl that has been cut into meth. So **it doesn't really matter what substance people are using**, we do the education with everyone" (community organization leader).*

In addition to naloxone's potential for preventing overdose fatalities, law enforcement personnel viewed naloxone as providing personal protection in the case of their exposure to fentanyl or a fentanyl-derivative during an overdose call. In fact, law enforcement personnel seemed to value naloxone primarily for personal protection and secondarily for reversing an overdose, as law enforcement often reported that EMS staff would administer naloxone before their arrival to the scene.

> *"The number one reason was for the instances where my deputies might come into contact with particularly fentanyl. So it was **officer safety first**, and then obviously community safety because deputies often beat ambulances to overdose calls" (law enforcement official).*

> *"And then I also think it's valuable for officers to have in case that we become exposed to something. We've had powder fentanyls and carfentanils here in Billings. Luckily we haven't had any actual exposures to that, but obviously as far as the **safety thing for law enforcement**, to be able to, as a first-line drug, to be able to take care of each other, if something happens, I think that's imperative as well" (law enforcement official).*

First responders had broader concerns, however, about naloxone's being accessible to people who use drugs. The majority of the first responders believe that putting naloxone in the hands of people who use drugs would enable drug use or become a safety net for riskier drug use.

> *"I think it goes to the aspect that it **empowers the use of illegal drugs** to a degree. [...] Again, by spreading a whole bunch of Narcan all over the place, and now what you've done is said, 'You can try it, and if you mess up, this guy's going to save your life[…]' kind of thing. You know?" (law enforcement official).*

> *[When asked to elaborate why naloxone might prolong drug use]*
>
> *"Well, they have an automatic way out. They have an automatic way out, so if they have [naloxone], **they're more prone to use it more frequently** because they always know that they have a way out" (law enforcement official).*

Despite the concern on the part of many first responders that naloxone might enable drug use, their general sentiment was that the increase in access to naloxone was positive, with the benefits (reducing mortality) outweighing the risks (enabling drug use).

About overdoses

For most of the interviewees, opioid overdoses did not seem to be an immediate concern, particularly in rural parts of Montana. While first responders believe that drug use may be hidden from the community and being dealt with privately, first responders in rural Montana have not had to respond to many calls related to overdoses from opioids. Consequently, the majority of EMS and firefighters have rarely had to use naloxone in the past year, if at all.

> *[When asked how often they were called for drug overdoses and what kind of drugs were involved]*
>
> *"Alcohol, a fair amount. But since I've been here with the ambulance service, I started in 2014, I don't know that we have gone on any opioid-related calls, or any methamphetamine. I know it's prevalent. There's no doubt it's prevalent, but we just haven't been deployed to it" (EMS provider).*

> *"I would say as far as substance-wise, the most common substance we're going to see is, obviously, alcohol intoxication. I would say on an average day citywide, we'll probably run 60 calls, give or take, some days more" (firefighter).*

> *"In our county right now and in the past, it's been pretty rare I guess you'd say. We've had overdoses and deaths in our county but they are spread. I can think of* ***three overdose deaths in the last 15 years****. [...] So we don't get a lot of calls. We're seeing more, and actually our last confirmed overdose was in February of 2019. Yeah. That was the last overdose and that was a methamphetamine overdose" (law enforcement official).*

There is notable frustration from law enforcement about witnesses to an overdose, such as friends or family, who call 911 but then leave the scene because of fear of arrest. Law enforcement wants to collect information from those who were on the scene before the overdose to be better able to understand what happened.

> *"I would say some of the biggest challenges sometimes are getting good information. As we're going to the call, our dispatchers do a great job. But just trying to get a feel for what's going on is sometimes the biggest one. The other one that I would say is probably trying to get a straight answer out of what's going on, on scene" (firefighter).*

> *"I mean, people don't want to get jammed up in a drug investigation themselves. Someone dies, and then all of a sudden, it was a house full of people, and then by the time we get there, there's nobody there. [...] And then there's always a bunch of conjectures surrounding the death. Whether they're like, 'Oh, well, was it a force within a homicide? Did they force them to take the drugs?' There's always these questions that would be obviously more easily answered if there would be people willing to help" (law enforcement official).*

One law enforcement officer pointed out that even with immunity in the case of an overdose, lack of trust may prevent witnesses from speaking with officials.

> *"Even though there are statutes in place providing people with immunity if they provide us that information, most people still aren't going to share that. It's hard to get somebody to talk to law enforcement about drug use, because no matter what, even though they're protected, that's a challenge for us, is to get folks to be frank and honest with a uniform, badge and gun that's in their living room trying to help a person that OD'd" (law enforcement official).*

Generally, first responders seem to have a growing concern about heroin. Paired with what seems to be an increasing need for naloxone in their possession, first responders feel as though they are experiencing more heroin overdoses.

> *"I mean, we'll have a few here and there with pills, but usually with the diversion programs that we have in the State of Montana, pills are harder and harder to get.* ***Heroin is getting easier and easier to get****. Anybody that has an opioid addiction after a while, they can't get the pills that they need, they'll turn to heroin" (law enforcement official).*

> *"I think a lot of the effort that is going on right now, and doctors and stuff being more restricted on what they can give away, and so on and so forth, the over-the-*

counter stuff, we're not getting as many of those kind of problems, but what's happened is then ***heroin has worked its way into the system. So we're getting heroin overdoses****" (EMS provider).*

In some counties, however, some law enforcement personnel believe that prescription opioids are still a concern. One law enforcement interviewee believes that overdoses could increase as illicit users move away from use of prescription opioids toward heroin, as there is less certainty about the chemical composition of street drugs than drugs originally created for medicinal purposes. He fears that as access to illicitly used prescription opioids decreases, heroin use, and potentially overdoses, will increase.

"The huge markup of the prescription pills, it's not just a statewide issue. It's a whole United States issue and the whole pharmaceutical industry and stuff like that, that they push these pharmaceutical drugs. Then when you can't get the opiate medications, then the heroin starts moving into areas, and ***that's why we don't have a huge problem with heroin right now, is because we have access to pills. Lots of it****" (law enforcement official).*

This sentiment is echoed by an EMS professional, who noted that her county has a low incidence of heroin-related overdoses: "[I]f we go on overdoses, it is intentional overdoses of Tylenol or prescription meds. It's not people using heroin. Just don't have it."

While respondents have varied views of what drugs Montanans are overdosing on, there is a consensus on the utility of and growing need for naloxone, whether it is deployed or not, and a general concern about an increased prevalence of heroin and heroin use.

About substance use disorders (SUDs)

Overall, first responders recognize substance use disorders (SUDs) as medical conditions. They acknowledge the difficulty of having an addiction and recognize that there is an underlying story explaining why someone might have a SUD.

"And we understand that the addiction, it's very tough from the other side of the spectrum so to speak because we don't judge or anything like that" (narcotics agent).

"If somebody overdoses, it's a big deal. That's a fatal life-threatening situation. And yeah, I would be mortified if it happened in my family. So, I wouldn't want it to happen to somebody else's family. If something was readily available that could potentially reverse that. I know there's both camps, as far as are we enabling people to continue to be addicts? And potentially, yes, but at the same time, they're going to be an addict until they don't want to be an addict, if that makes sense. So, I think trying to give people the benefit of the doubt, and help them, and try and move forward with their life. I hope so. I hope they're going to make changes" (firefighter).

"There's a certain segment of our community that says, 'Oh, they're just dope addicts.'[...] That's not the case. I mean, ***these are human beings that have an addiction that has been classified as a disease****. We're providing a low-cost option to try and help folks that maybe made a mistake. Not everybody is a street junkie.*

Some folks, you know what? They started with an injury and moved all the way through pills to the street drugs because they can't get pills anymore. We don't know what this person's history is. We don't know the circumstances, but we know that they need help right now. Why wouldn't we want to be able to give that to them?" (law enforcement official).

"There's always been negative connotations that go along with it because initially that first choice to use drugs is a choice that the person made. After a while that doesn't become a choice, it becomes part of the addiction piece. You know what? I think people have a hard time getting to the point where, okay, the choice was made first, but after a while addicts don't have a choice anymore" (law enforcement official).

This general empathetic view of SUDs and addiction among first responders is in tension with how individuals with SUDs are viewed in the community. Some of the stigma that individuals with SUDs experience from first responders may come from a negative view of people who may be repeat offenders in drug-related crimes or overdoses or who are unwilling to speak to first responders after an overdose.

"You got HIPAA, you got all these things, but to be able to, I guess, get their permission or consent to provide their name to someone. Because most people, though, right after you've administered Narcan, either they don't want any help, and they don't want to hear anything about what just happened. So it's hard to deal with them right then and there, so that makes it difficult" (law enforcement official).

Representatives of community organizations, who interact in a more supportive role than law enforcement or first responders with individuals with SUDs, reported that individuals with SUDs experience a lot of judgment from law enforcement and the community.

"I've heard a couple of times people say like, 'Why are we bringing them back?' [...] 'If they're overdosing, that's their problem and why are we wasting taxpayer dollars?' You've never heard that? I've heard that so many times. Yeah. Oh yeah. Yeah. That's a pretty pervasive[...]like, 'If they OD, that's on them, they shouldn't have been doing drugs.' I hear that all the time" (community organization leader).

A firefighter/EMS provider echoed this sentiment about what he had heard in the community and among his peer first responders.

"I mean, you definitely hear people say it. 'Why are we going to wake them up? They did it to themselves.' Or, 'Now they're going to just keep doing it.' Or whatever. I definitely hear that from people."

[Interviewer: I guess in regards to the sentiment about like, "Oh, they did it to themselves," or that sort of thing, is that sort of a widespread sentiment across the department or across various departments? Where are you hearing that from?]

"I don't think that's super entrenched here. I mean, a little bit probably with a few people. Definitely from law enforcement, other departments especially, or healthcare providers that see it all the time. I think that can be frustrating when

they're repeat or whatever else it is. Or sometimes they feel like resources are being wasted" (firefighter/EMS provider).

This perspective may contribute to the stigma that individuals with SUDs feel. The experience of being stigmatized during a crisis event such as an overdose may cause the person who overdosed to mistrust first responders.

Another prevalent topic identified by interviewees was the use and adverse impacts of methamphetamine use. Methamphetamines seem to be the predominant issue when it comes to illicit drugs—more so than opioids. As one law enforcement officer said, "We are seeing heroin on a more consistent basis, but it's still, it's nowhere near in the realm of what methamphetamine is." Many other first responders echoed this statement.

"Yeah. Our main drugs of abuse [...] alcohol is probably close to 90% of our calls, but methamphetamine is really high, and opiate-type medications are probably our three big abused illegal narcotics. Well, I guess alcohol is not illegal, but it [...] So" (law enforcement official).

"I think it's been like three or four years now probably, it was about 50/50. We would see 50% opioid and 50% meth use. That has dramatically shifted and swung toward meth use, although we see a lot of poly drug use, and so it's really like, it becomes an issue of access. So whatever, it's kind of like people will use what they can get access to. So we do see a lot of people who it just depends on the week or the day, that determines what substance they are using, so yep. But right now it's about 75% of our folks will say that their primary substance is meth" (community organization leader).

While there was some variation among interviewees about the substances of greatest concern and prevalence within their county, all interviewees noted that substance use disorders are a prevalent community issue to which they must respond.

About harm reduction

Naloxone is a harm reduction strategy to reduce fatalities from opioid overdose. Expanding naloxone access to individuals with substance use disorders or those who are at risk of opioid overdose has been shown to be an effective strategy to prevent overdose-related mortality (Hawk et al., 2015).

The EMS, fire, and law enforcement personnel interviewed had divergent views on additional harm reduction strategies, including community naloxone accessibility and needle exchange programs. As expressed above, many first responders believed that easy access to naloxone would enable drug use. Interviewees also mentioned needle exchange programs, which they perceived more negatively than naloxone.

"There's places where we have to draw the line too. I mean, like we got approached a while back about a needle exchange program, and we're like, [...] 'Absolutely not. We will not be involved in that as law enforcement.' Then there are safe injection sites and things like that. We're not going to encourage illegal drug use. We're not going to do that. We'll help folks, but we're not going to stand by idly and just say, 'Okay. We're going to give you more precursors to feed your addiction.' We can't be

about that stuff. There's where we have to, as law enforcement, draw a line in our perspective" (law enforcement official).

"I think these people are going to use drugs no matter what, [...] if they got a clean needle, they'll use it. If they got a dirty needle, they'll use it. The problem I have with the needle exchange is that it's a lie, because first of all, they say, 'Oh, we exchange needles.' Well, no you don't. You don't exchange needles. No one ever gives you a dirty needle, and then keep the clean needle. They're sending people out of their places with boxes and hundreds of needles. And what that translates to is a bunch of garbage dirty needles, all over our community, all over the cars that my cops are searching, all over the houses that my cops are searching. My kids are finding them in the public places where we go to recreate. That is a problem. I don't care if somebody wants to use drugs, but about the time my kid gets stuck with a needle. That's a problem" (law enforcement official).

Ultimately, those respondents who were in favor of having naloxone widely available among citizens within the community believed firmly that if naloxone can help prevent fatalities and save lives, it is a priority to have naloxone in the community.

"I know we did have one of those at-risk individuals, he had a vial of Narcan, and he administered it on somebody who had overdosed on some heroin. Actually, it wasn't even heroin. It was one of those synthetics like carfentanil or something like that. He administered Narcan and probably saved the person's life. I think like the needle exchange program, I think people would have it, would use it if they needed it. As long as they didn't have to put their name out there or anything like that, they could just get it anonymously that I don't think that that would be a bad idea to have the most vials out there possible" (law enforcement official).

"Yeah, I mean, if you're going to give it to the public and the public is using it in the assumption they're going to save a life, if a loved one of theirs or something needs it. But I think for people that are using, I don't think it's a bad idea for them to have Narcan at all. I mean, if there's three or four people in a group that do heroin together, I would still like to know if they're doing that, but one of them has Narcan at their disposal. So, I'm a supporter of Narcan being out there. I think it's a good thing" (EMS provider).

Representatives of community organizations felt much more strongly about the benefits of harm reduction strategies like naloxone and needle exchange programs than did the first responder interviewees.

[When asked about the perspective that naloxone enables drug use]

"Yeah. Well, obviously we disagree, strongly. It takes me back to the argument that if we give people condoms they're just going to have more sex or have sex younger, or it's just not, it's like pretty much goes against everything that we believe in as far as the harm reduction community. I mean, we just believe that naloxone saves lives, right? And so no matter how many times a person might overdose and be revived, that is of like zero consequence to us" (community organization leader).

> *"I think it's the same thing like when they didn't want the syringe exchange to happen because they thought it would encourage drug use. It's the same thing. People are going to use no matter what. And if the first responder, like I did hear of somebody, there's an area south of us called Ferndale, and it's got a lot of the first responders down there are doing a lot of opioid response calls. And they're using Narcan on the same people over and over. And I'm imagining that that's probably where that kind of line of thinking comes from" (community organization leader).*

These divergent views on harm reduction models may contribute to the stigma around substance use disorders and limit the range of interventions that could be implemented within a community to decrease the likelihood of fatalities or negative health outcomes from illicit drug use. Whether it be naloxone or needle exchange programs, there are a variety of perspectives on whether harm reduction models ultimately hurt or help a community among the interviewees who participated in this study.

About training

Across all interviews with first responders, with the exception of one in law enforcement who felt that the training was burdensome, naloxone training was viewed positively. The interviewees identified the training conducted for their departments, whether it was conducted within or outside their department, as useful in educating them on how to identify an opioid overdose and then, if needed, to deploy naloxone.

However, when asked if community trainings on naloxone administration would be useful, many first responders believed that such training would have less value, unless it were targeted.

> *"The little old ladies, your teachers, your maybe teachers. I don't know. I don't know how prevalent it is in the schools, but like your local banker, the lady who owns the art store on Main Street, total waste of time, because they're not seeing these people. Who's going to be in the dingy living room where some guy that has an overdose? Probably people that live in the same dingy house, so I guess if you want to give the training to the people that live in the dingy house, great. Then, yeah. I mean, I think if my kid has an opioid use disorder, or was addicted to drugs then yeah, I guess I'd be interested in knowing how to use it just in case something happened. But I think as far as the community-wide thing, that's unnecessary, and it's a waste of time" (law enforcement official).*

Others believed it would be helpful to have community naloxone trainings. Ultimately, this view was motivated by the desire to help people save the life of a loved one.

> *"Well, I think medical professionals, people in the medical field, but then it should just be available to all walks of life[...]. Not only to people that can afford it [...] but all the way down to people that are struggling, that they could have an opportunity to be administered or given Narcan so that they could use it because they have family members and loved ones that could be and are addicted to opioids. And it could be life-saving for them at some point as well" (narcotics agent).*

Community organization interviewees reported that the trainings they participated in were not useful in meeting the needs of their staff. Rather, they said the trainings were

burdensome, too long, and lacking in content relevant to their staff and associated medical professionals.

Use of Naloxone

Distribution of those who carry naloxone and when they began to carry it

The year in which various departments across Montana began to carry naloxone varied. Naloxone is not a new drug to EMS, but fire departments and law enforcement officials have not carried it until more recently. Table 1 shows the year that first responder interviewees believed their departments began to carry naloxone and whether their department had administered naloxone during active duty.

Table 1. Self-reported year since first responders began carrying naloxone, by county and department, and whether it had been administered

Year	County	Department	Administered?
2019	Lake	Law enforcement	No
2019	Stillwater	Law enforcement	No
2018	Rosebud	Law enforcement	No
2018	State of Montana	Narcotics	No
2018	Lewis and Clark	Law enforcement	Yes, 6 in half year
2018	Yellowstone	Law enforcement	Yes, 14 in two years
2018	Sweet Grass	Law enforcement	No
2017	Hill	Law enforcement	No
2017	Cascade	Law enforcement	Yes, 4–5 a year
2017	Ravalli	Law enforcement	Yes, 1 a year
2017	Toole	Law enforcement	No
2016	Yellowstone	Fire	Yes
2016 or earlier	Hill	Fire / EMS	Yes, 3–6 a year
2016 or earlier	Gallatin	Fire	Yes, 1–3 a month
2016 or earlier	Sweet Grass	EMS	No
2012 or earlier	Custer	EMS / Fire	Yes, 30–50 a year
2000 or earlier	Cascade	EMS	Yes, 42 in 2019
1996	Rosebud	EMS	No
1984	Missoula	EMS	Yes

Frequency of administration

Overall, the frequency with which naloxone was administered was relatively low. More usage was reported by interviewees working in Montana's more populated and urbanized towns. In rural areas naloxone was generally administered less than once a month, or even not at all.

> *"[T]he only thing I do with Narcan is throw it away when it's outdated and order more. We haven't used it. So we didn't add it in the trucks. We carry two vials per truck, and that's it. [...] I'm not ever going to pull it off the ambulances, but we aren't using it on a regular basis" (EMS provider).*

Stories about administration are more associated with EMS and fire personnel than law enforcement.

> *"It was pretty simple. Had bystanders on scene saying overdose. I really didn't need to guess. There was bystanders there. There was paraphernalia there, so you knew overdose, and we did it subcutaneously, nasal spray, so it went fairly smooth" (firefighter/EMS provider).*

> *"Well, it's definitely interesting. Yeah. I've actually deployed it over the course of my career several times. It's interesting. It's very patient dependent. What we try and do is we do something that's called, we try and titrate to effect, which means basically, if you're under the influence of something, I don't necessarily want to wake you up. Knock all that stuff off, and wake you up 100% because what can happen is people can start vomiting, can start having seizures, things like that. If their body is used to having that, you just take it all away all of a sudden. So, typically, what we'll try and do is we'll try and give them just enough to where we can get them breathing on their own, to where they can protect their airway, and maybe wake them up just to touch. But if you can breathe on your own, and you want to sleep the whole way to the hospital, I'm super okay with that. You know what I mean?" (firefighter).*

> *"Yeah, you've seen a patient that's basically dying or will die without intervention, and I've seen Narcan administered, and the patient's condition improve within minutes. I mean, to witness it, if you never have,* ***it is a bit of a wonder drug****" (firefighter).*

Although the experience of administering naloxone was viewed as simple, respondents expressed some concerns about the reaction of someone who is revived after an overdose. EMS personnel were concerned about the dosage of naloxone because an inappropriate dosage may cause a person who has overdosed to go through severe withdrawal. Otherwise, the process itself often is smooth and is viewed as an effective drug during overdose.

Barriers to use

Law enforcement personnel often cited the quick response time of EMS as the reason EMS providers were the ones to deploy naloxone during an overdose, which could explain the infrequency of naloxone use among law enforcement. This pattern may also help explain why law enforcement officials tended to view naloxone more as a tool for personal safety.

> *"As far as the deployment goes, no, we have not [deployed naloxone]. To the best of my knowledge we have not deployed a Narcan usage, but that is only skewed by the aspects that our ambulance is so fast here in town" (law enforcement official).*

Fear and distrust of law enforcement may also contribute to the lack of administration of naloxone across Montana. Representatives of community organizations, which have more direct contact with individuals who are using drugs, have stated that there is a "deep distrust of law enforcement. And they don't want to go to jail."

When asked why someone might be unwilling to call 911 in the event of an overdose, a fire/EMS official stated, *"It would be basically based off of people just not wanting to get in trouble with either the drug use or being around it or witness to it or using it themselves."* Out of fear of arrest, individuals who overdose or witness an overdose may avoid reaching out for help

despite Good Samaritan laws to protect them in the event they need to call 911 for medical help.

Community-Based Interventions

Primary prevention

Educational programs or awareness trainings may be needed to reduce the stigma of substance abuse and increase community knowledge around what substance use disorders look like. Many interviewees acknowledged that opioid use might be more hidden than methamphetamine use.

> *"Our population and our culture tend to keep family problems at home. They don't like to bring it out to the open, do things like that. So they tend to cover or protect opiate use disorders, methamphetamine, use, all of those things. So that's a big problem of ours" (community organization leader).*

> *"[M]aybe some people [are] being naive to really what's going on around us, even though in Montana we still do have some big city issues, just a smaller scale. And people just don't want to think that that stuff's going on in their community" (law enforcement official).*

Because individuals with SUDs are often stigmatized, one community organization mentioned building compassion toward individuals suffering from these disorders.

> *"So basically, compassion building in this community. For a community that's super, super religious, the compassion part doesn't really happen. It just doesn't exist here. Building people's compassion, building compassion at the hospital, with law enforcement and most importantly with our county commissioners and elected officials locally, they don't prioritize it. So that makes things really, really difficult. Specifically, our county commissioners" (community organization leader).*

This sentiment was echoed by an EMS provider:

> *"And, I think our people tend to get a little bit callous to that kind of stuff and they don't[...]. They, depending on their past and their family and their upbringing and stuff like that, they might not have the compassion that would be helpful. And sometimes it's difficult. I have compassion, and sometimes even for me it can get frustrating" (EMS provider).*

These comments suggest that stigma is a major factor in how people with SUDs are treated in the community. While addiction and substance use disorders may generally be viewed in an empathetic manner, as addressed in the earlier section, the manner in which the community and professionals interact with individuals with SUDs may fail to reflect that empathy. Community awareness and education may help to reduce the stigma that exists for individuals with SUDs.

Many first responders thought the best way to prevent overdoses was to prevent people from engaging in drugs in the first place.

> *"The way that I think you fix it is, first and foremost[…] I'm not saying the DARE program, but a program where law enforcement officers, or medically trained individuals are going into schools, teaching young kids what happens when you do take any of the drugs. Alcohol, all the way up to the really nasty drugs. Going in, and giving them education to the youngsters would be the first and foremost to me. That's how you actually get ahead of things. You've got to get the demand taken care of. The only way you can get that demand taken care of is by getting into the younger schools, getting those youngsters to not even want to do it, which takes out the demand" (law enforcement official).*

Another theme across interviews included a registry for doctors prescribing opioids or providing alternatives to narcotic pain medications, which are highly addictive.

> *"Well, I would say for one thing, having a medication that could be used for pain management that is not narcotic based. Because, as I'm sure you know, probably a fair amount of drug use starts with a fairly normal person who just underwent a surgery where there were some pain killers needed after the surgery and they get addicted to it and then it kind of goes from there. Then I presume you still have people who like to experiment with drugs and stuff like that. But I think there's a certain amount of basically regular people who get hooked on narcotics" (EMS provider).*

Limiting the over-prescribing of narcotic medications, many interviewees believe, would reduce access and decrease the number of users and could thereby effectively prevent addiction that starts from pain or chronic pain-related issues.

Secondary prevention

As mentioned above, interviewees expressed frustration about people who leave a person who has overdosed out of fear of being reprimanded or arrested. Increasing awareness among users about Good Samaritan laws may help mitigate this issue. In addition to increasing awareness, a number of interviewees noted that robust prevention and diversion are important elements of a care continuum aimed at reducing the need for emergency services related to drug overdoses. A law enforcement interviewee displayed an orientation toward both prevention and diversion to treatment, as strategies for decreasing the need for administering of overdose reversal medications.

> *"So if there was anything that the state could do to fund education, or diversion before it gets to us, and then give us the tools and the resources to direct them and divert them afterwards to at least help filter some of that through" (law enforcement official).*

Many first responders brought up concerns that people who overdose do not use the overdose as a motivating event for seeking treatment for SUD and that they have too many legal protections.

> *"Well, I think that the bad guys get way too much leeway whenever it comes to court. There's too much slap-on-the-wrist type of deal. And talking with our district court judge here, and I tend to agree with them a little bit, there needs to be some*

follow-up with treatment and things like that rather than just they get caught, 'Okay, it's your first time. Don't do it again. See you later'" (law enforcement official).

"The other thing is, I think we've spent tons and tons of money trying to rehabilitate people who are not ready to be rehabilitated. You have to have the person want[...]. They need to realize there's a problem and want to make the change. And too often, when we've had somebody who's overdosed, we just automatically send them off to rehab. Well, if they're not ready, they might stay clean while they're in rehab. But as soon as they get out, they're back to their old habits. Because they are not ready to make the change. So, I think we need to work on that too" (EMS provider).

"I guess from the standpoint of our local criminal justice system is really crippled by the fact that we are essentially not able to put anyone in jail for anything, unless it's a violent crime. And so, I'm not one that necessarily believes in throwing addicts in jail, but it is a tool that can't be discounted. And the reason I say that is, given the treatment providers and places that we have in the State of Montana, which I think we have good ones, but a lot of times, it takes a week for a person to be accepted into a program, or whatever. And if you want to interrupt that drug use, you've got to put these people in jail for a minute before they go to their programs. Some of the programs won't take them unless they've been sober for a period of time" (law enforcement official).

When it came to addressing treatment and resources for people who have overdosed, interviewees expressed a desire for better linkages between hospitals and mental health and/or substance use disorder providers.

"We drop them off at the hospital. I don't know how far the doctors go with them. I know there's very compassionate ER doctors and nurses that I think would, I'm hoping that they're trying to help them get into those services. But having that lack of service in your community, it doesn't give them a whole lot of options either. So, ultimately, what happens is those people end up back out on the street again. So that's where those support programs would be huge. To have a place to send them and help them" (EMS provider).

"I think there needs to be some more coordination between addiction and mental health. I think the two things co-occur all the time. It's really hard to treat somebody with mental health issues if they've got co-occurring addiction because you can't really address the mental health until you address the addiction. I think if there was something that I would really like to see in Great Falls, I'd like to see a more coordinated effort from our providers to address those things" (law enforcement official).

More specifically, some interviewees expressed a need for co-responder programs to deal with the co-occurring mental health and substance abuse needs.

> *"They keep talking about all this defund the police. Well that's fine, just we could have had a social worker go handle that call yesterday, and I don't have a social worker that lives in the county. [...] Now granted we're rural, we're less than 10,000 population, but still the fact that we don't have those resources available right here, that can deal with this" (law enforcement official).*

> *"Now, those who are already in crisis, and then in need, then I would say you'd need more of the social working-type individuals that can get in there, help them get off of it, and give them an education of why[...]. Answer the why. You know?" (law enforcement official).*

> *"I think some crisis-type training for law enforcement and forgive me, the class kind of alluded me there. I can't think of it. It's a week-long class that we then get trained with dealing with people that are in crisis and stuff like that. Again, mental health and drugs seem to go hand in hand, so having that availability. I know we looked at it a couple of years ago, and it wasn't feasible for us to put together because you have to have all these different people in your area to put the training on. Then you have to have this group of people, again like I told you, we're short having those different branches, the mental health and all the different things that you need in it. And it's not out abouts, I think we sent some guys to Kalispell, so they got the training, but they learned what resources are in Kalispell not what resources are here" (law enforcement official).*

The barrier to implementing better mental health and substance abuse treatment and to setting up co-responder programs in rural towns in Montana seems to be the difficulty of getting people in various needed professions to come to work in these towns and stay there. This is a broader challenge Montana and other rural communities face with healthcare in general (Weisgrau, 1995).

IMPLICATIONS AND RECOMMENDATIONS

The individuals who participated in the interviews for this study represent a diverse cross-section of professionals who work within Montana to limit adverse outcomes associated with illicit drug use. Law enforcement, EMS, fire, and community-based organization staff provided different perspectives on the relative value of carrying and using naloxone. Interviewees shared the view that naloxone should be present in first responders' response kits, even in counties with low overdose rates. Interviewees expressed varied perspectives on harm reduction approaches in general: community organization leaders were supportive, law enforcement officials were resistant, and EMS staff were mixed in their view of these interventions. All interviewees shared the view that primary and secondary prevention strategies could be strengthened within their communities, noting that the most effective way to prevent an overdose is to prevent use.

Based upon the results of this study, we have the following recommendations for AMDD and its partners working to provide naloxone and decrease overdose deaths throughout the state:

- Update the content of training programs to better align with the context of community-based organizations
- Consider developing, or supporting the development of, training in naloxone administration for family members of at-risk individuals
- Continue to provide naloxone access to first responders and community-based organizations
- Monitor the potential for increasing use of heroin, and in communities where this is happening, support local organizations in creating public information campaigns about naloxone
- Encourage better linkages between first responders and medication-assisted treatment (MAT) provider sites as a method for increasing enrollment in MAT programs among those who experience an overdose

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CONTACT INFORMATION

Frances Kim

frances@jgresearch.org

Brandn Green

brandn@jgresearch.org