



# Snohomish County Naloxone Leave-Behind Program

EVALUATION  
SNOHOMISH COUNTY HEALTH DEPARTMENT

## Executive Summary

**Background:** The Snohomish County Health Department (SCHD) partnered with Snohomish County Emergency Medical Services (EMS) agencies to implement a Naloxone Leave-Behind Program funded by opioid settlement dollars. This program aims to reduce overdose deaths by making life-saving naloxone more accessible in the community.

**Methods:** Partner EMS agencies leave county-provided naloxone kits with people who use opioids and are at risk of future overdose, with their friends and family, or to bystanders on the scene during an overdose response or regular outreach. The number of kits given to each partner varies depending on the agency size and how frequently they engage with people at risk of overdose, or the people around an at-risk individual. Partners can distribute multiple kits at a time, for example, to multiple people on the scene, such as with the at-risk individual and a close personal contact. Participating agencies provide data back to SCHD through a survey.

**Results:** In the inaugural year, nine agencies participated in the program and 391 naloxone kits were distributed. Naloxone kits were most frequently left with the person at risk (43%), followed by a close personal contact such as family, friends, caregivers, or roommates (33%). Demographic information from kits given to people at risk of overdose, their close personal contacts, and bystanders show nearly half of the kits distributed were given to males (48%) and people aged 18-34 followed by those 35-44 (27% and 24%, respectively). More than half (55%) of the kits were given to someone identified as White and non-Hispanic. Though not a requirement, most kits were given out during an overdose response. Most naloxone kits were left at private residences (34%) followed by public outdoor spaces (22%) and nearly half of all kits were left in Everett ZIP Codes. Participating agencies provided positive feedback and described the necessity of the program.

**Conclusions:** The increasing number of participating agencies throughout the year and their positive feedback demonstrates the popularity and need for expanding this program beyond its pilot year. Unresponsiveness is one of the main symptoms to check for when identifying an overdose, and thus naloxone cannot be self-administered. Therefore, it is important to continue to provide naloxone to close personal contacts, in addition to the person who is at risk of overdose. This program has effectively made life-saving naloxone more accessible in Snohomish County and should be continued to reduce overdose deaths.

## Opioid Use Background

In the United States in 2022, nearly 108,000 people died from a drug overdose, and nearly 75% of those deaths involved opioids.<sup>1</sup> Healthy People 2030 targeted reducing drug overdose deaths in the United States to 20.7 per 100,000 population (the rate in 2018), and as of 2022 the nationwide rate has worsened to 32.6 drug overdose deaths per 100,000 population (23.8 in Snohomish County and 25.7 in Washington State).<sup>2,3</sup> In Snohomish County, the age-adjusted rate of opioid overdose deaths per 100,000 population exceeded the statewide rate until 2021, though the rates for both continued to rise in 2023 (30.4 and 34.7 per 100,000 population, respectively).<sup>3</sup>

Increasing rates of opioid-related deaths have been attributed to synthetic opioids such as fentanyl and co-use with other drugs such as stimulants. These trends are similar in Washington State where the highest age-adjusted rates of mortality from drugs are due to opioids and multi-drug use.<sup>3</sup> The burden of the opioid crisis on healthcare systems can be measured by the percent of emergency department (ED) visits related to an opioid overdose compared with all visits to an emergency

department to account for the hospital's visit volume. Since 2020 (when a complete statewide ED dataset became available), there has been a higher percentage of overdose-related emergency department visits to Snohomish County emergency departments compared to emergency departments elsewhere across the state (Figure 1). Snohomish County saw an average of 60 opioid overdose ED visits per month from 2020 through 2022. Visits were much higher in 2023 (106 visits per month on average) before decreasing to about 80 opioid overdose ED visits per month on average in 2024.

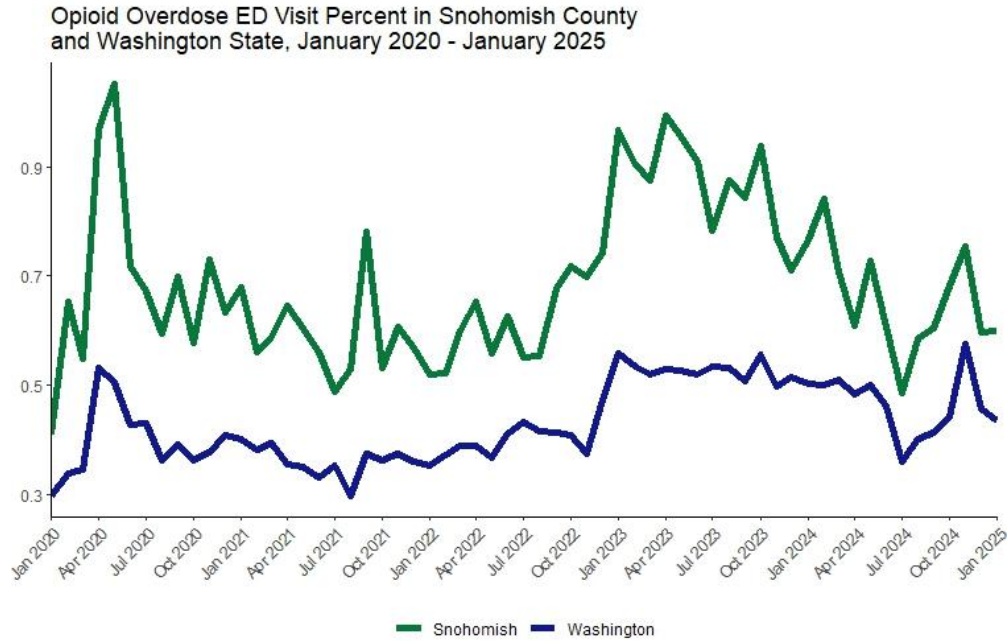


Figure 1. Percent of emergency department visits attributed to opioid overdose in Snohomish County and Washington State, January 2020 – January 2025.

Timely use of life-saving naloxone can reverse opioid overdose symptoms and prevent death. Modeling studies have found that increased naloxone distribution could reduce opioid overdose deaths by 9 - 25%.<sup>4,5</sup> In Snohomish County, about 71% of opioid overdoses were treated with naloxone prior to treatment at an emergency department from 2021 – 2024, and only 19% of these were administered by a family, friend, or bystander (whereas EMS and law enforcement made up the majority, 49% and 11%, respectively).<sup>6</sup> Increasing access to naloxone among potential bystanders, friends, and family of a person at risk for overdose (as it cannot be self-administered) is an effective harm reduction strategy.

### Snohomish County Naloxone Leave-Behind Program Description

The goal of this program is to reduce overdose deaths by making life-saving naloxone more accessible in the community. The Snohomish County Health Department (SCHD) worked with the Snohomish County Multi-Agency Coordination (MAC) Group to secure opioid settlement funds to purchase the naloxone and other kit supplies. In 2023, the Naloxone Leave-Behind Program was officially implemented in partnership with Snohomish County Emergency Medical Services (EMS) agencies. Partner EMS agencies leave county-provided naloxone kits with people who use opioids and are at risk of future overdose, with friends and family, bystanders on the scene during an overdose response, businesses where the response occurred, or during regular outreach. The kit includes a hard case, 2-doses of naloxone nasal spray, gloves, hand sanitizer, CPR face shield, and pocket resource guides. To participate in the program, partners are required to sign contracted agreements that outline the requirements for participating, which included submitting data reports. Participating agencies provide data to SCHD through a REDCap (Research Electronic Data Capture) survey, a secure web application supported in part by the National Institutes of Health for building and managing online surveys and databases. A link to the survey was distributed via email to all contracted partners.

Table 1. Key Program Partners

	Persons served or affected by the program	Persons who plan or implement the program	Persons who may use evaluation findings
Community members	X		X
Emergency Medical Services (EMS) organizations	X	X	X
Snohomish County Multi-Agency Coordination (MAC) Group		X	X
SCHD Epidemiologists		X	X
SCHD Program Staff		X	X
SCHD Leadership		X	X
Local Health Jurisdictions in WA			X

## Evaluation Plan and Methodology

### Evaluation Purpose

The Snohomish County Health Department conducted a process evaluation of the naloxone leave-behind program to understand the program’s operation, monitor progress of program goals, and identify best practices and lessons learned. Interest holders (Snohomish County Multi-Agency Coordination (MAC) Group, Snohomish County Health Department, and participating EMS organizations) will use the evaluation to assess the program’s expansion capacity and continued support of the program. Evaluation findings will be disseminated for all interest holders via an annual report.

### Data Source(s)

A new data source was developed alongside the development of the Naloxone Leave-Behind Program. Data collection began in January 2024 and is ongoing through a REDCap survey distributed to Snohomish County EMS agencies. Some additional qualitative data around program satisfaction may need to be collected (likely via email) from participating organizations. Data are stored in a secure database accessible by select Snohomish County Health Department staff. Data will be visualized in a public facing dashboard (go-live Q2 2025) and analysis of all data variables will be conducted as part of the pilot year report. Some existing data sources (such as death data, emergency department data, and emergency medical services (EMS) data) may be examined alongside newly collected program data.

### Evaluation Components

A logic model was developed to identify the Naloxone Leave-Behind Program required inputs, activities, outputs and outcomes (Figure 2). The program requires settlement dollars and partnerships with EMS organizations in Snohomish County. Once established, the following early activities occurred simultaneously by the Snohomish County Health Department: naloxone and other kit supplies were purchased, a data collection tool was developed (REDCap survey), and data agreements with partner organizations were established. Following the successful completion of the early activities, naloxone leave-behind kits were assembled and distributed to partner agencies, who then began to distribute kits and submit data using the new data collection tool. The program aims to increase access to naloxone, improve knowledge of geographic distribution and need for naloxone, and ultimately reduce the number of opioid overdose deaths.

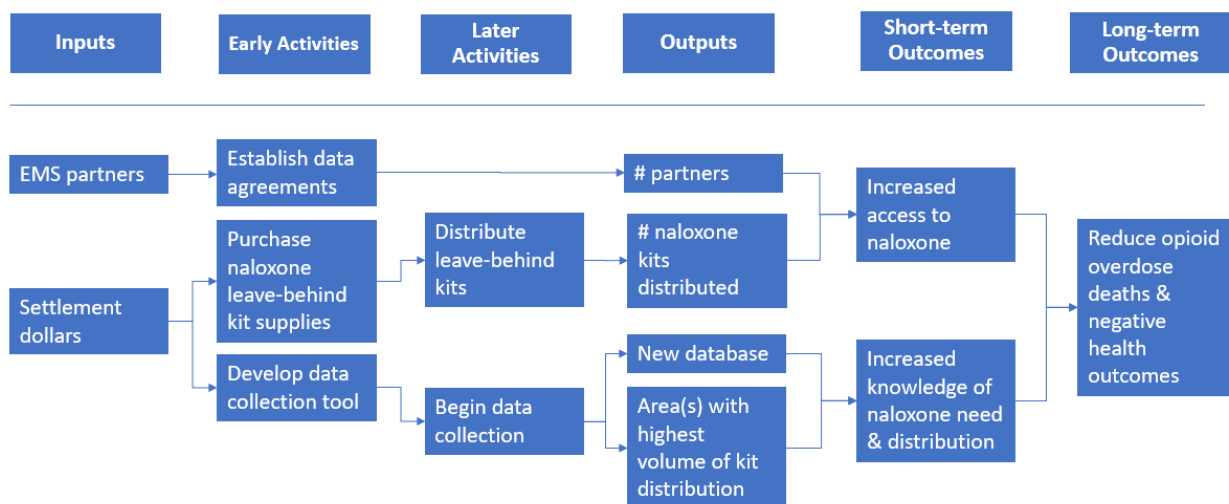


Figure 2. Logic Model for Naloxone Leave-Behind Program.

To evaluate the program, several evaluation questions with measurable indicators were developed and data collected (Table 2).

Table 2. Evaluation Methods

Evaluation Question	Indicator(s)	Frequency	Responsibility
To what extent is the program being implemented as planned? What are facilitators and barriers?	<ul style="list-style-type: none"> <li>New secure database with export capabilities.</li> <li>At least 50% of organizations with a signed data use agreement are submitting data.</li> </ul>	Pilot Year	SCHD
Are participants (EMS) satisfied with the program?	<ul style="list-style-type: none"> <li>Percent of positive qualitative feedback from participating organizations.</li> </ul>	Pilot Year	SCHD
To what extent is the program progressing towards its intended outcomes?	<ul style="list-style-type: none"> <li>Number of naloxone kits distributed by month and organization.</li> <li>Area(s) with highest volume of kit distribution (location &amp; setting).</li> </ul>	Pilot Year	SCHD

## Results

A REDCap survey was developed as has been actively collecting data since January 2024. The database can export data by downloadable file and via API. In the inaugural year, ten organizations had a signed data use agreement and nine (90%) of those organizations submitted data.

The Naloxone Leave-Behind Program began distributing naloxone kits on January 23, 2024. In its pilot year, the following nine agencies participated in the program:

- City of Everett Embedded Social Workers
- City of Everett Fire Department
- Darrington Fire District #24
- Lake Roesiger Fire District #16
- North County Regional Fire Authority
- Snohomish County Fire District No. 5
- Snohomish County Regional Fire & Rescue
- Snohomish County Sheriff
- South County Regional Fire Authority

In the inaugural year, 391 naloxone kits were distributed. One pop-up event was hosted by SCHD, Snohomish County Human Services, and South County Fire in an unincorporated part of the County near Everett in November 2024. At the event, 72 kits were distributed directly to individuals at-risk of overdose. The pop-up event data will be excluded from the rest of the report and visuals.

On average, 26 kits were distributed each month, though this number was largely influenced by the number of agencies participating each month (Table 3). In the first four months of program

implementation, only two organizations participated. The three-month moving average shows that as time progressed and more agencies began to participate, the average also increased (i.e., in the first three months of the year, seven kits on average were left behind each month compared to 40 kits on average per month in the last three months of the year). This indicates that the request for, and distribution of, naloxone kits increased over the inaugural year and will likely continue to do so with more participating agencies.

Table 3. Number of naloxone kits distributed by month and organization.

	Participating Organization									Total
	#1	#2	#3	#4	#5	#6	#7	#8	#9	
January	0	0	0	0	0	4	0	0	0	4
February	0	0	0	0	0	3	0	0	0	3
March	0	7	0	0	0	6	0	0	0	13
April	0	11	0	0	0	2	0	0	0	13
May	0	9	0	0	0	1	0	0	10	20
June	0	1	0	14	0	1	0	0	23	39
July	0	5	0	10	0	2	1	0	15	33
August	1	0	0	6	0	0	0	0	7	14
September	0	14	0	7	2	0	0	6	30	59
October	0	3	0	13	0	1	0	1	22	40
November	0	0	1	12	0	2	0	0	22	37
December	0	5	0	6	2	5	0	2	24	44
<b>Total</b>	1	55	1	68	4	27	1	9	153	319

Naloxone kits were given out primarily during overdose responses but also during regular outreach. Other reasons included: requests from people actively detoxing and in withdrawal, release from jail, and at pop-up events. Naloxone kits were most frequently left with the person at risk (43%), followed by a close personal contact such as family, friends, caregivers, or roommates (33%). Most naloxone kits were left at private residences (34%) followed by public outdoor spaces (22%; Figure 3). Other locations noted included an emergency department and a resource event at Everett Community College. Naloxone kits were distributed in 21 of 25 (84%) general Snohomish County Zip Codes, most frequently in Everett and Lynnwood ZIP Codes, particularly 98201, 98204, and 98036 (24%, 12%, and 11%, respectively; Figure 4).

Figure 3. Setting where naloxone kits were left behind.

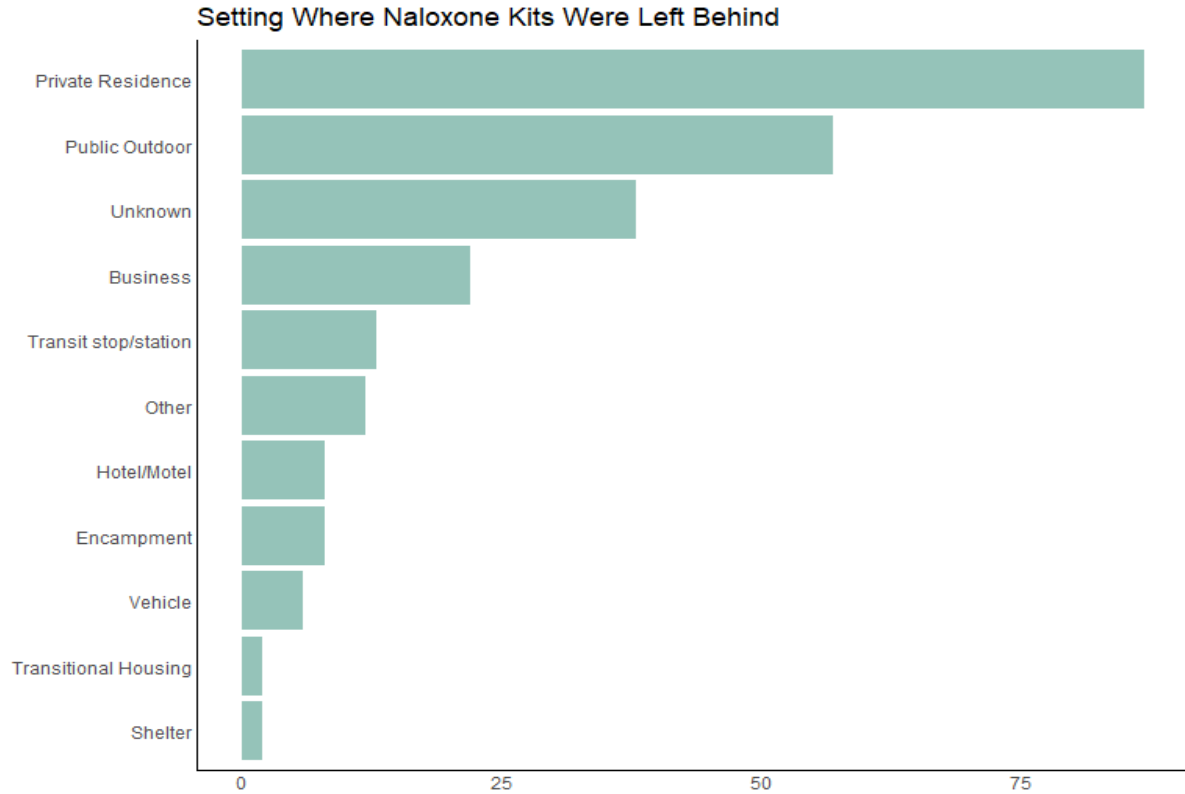
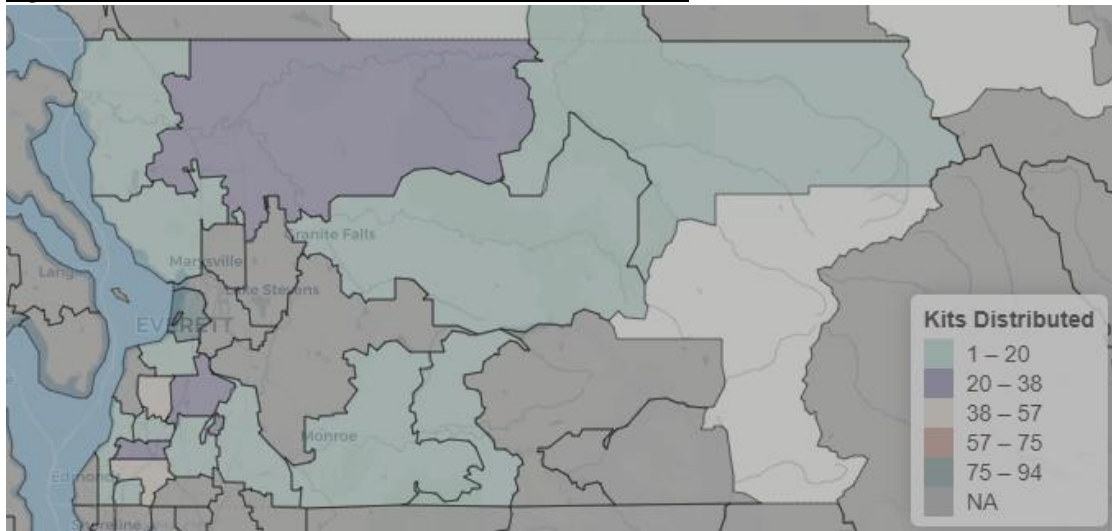


Figure 4. Locations where naloxone kits were distributed.

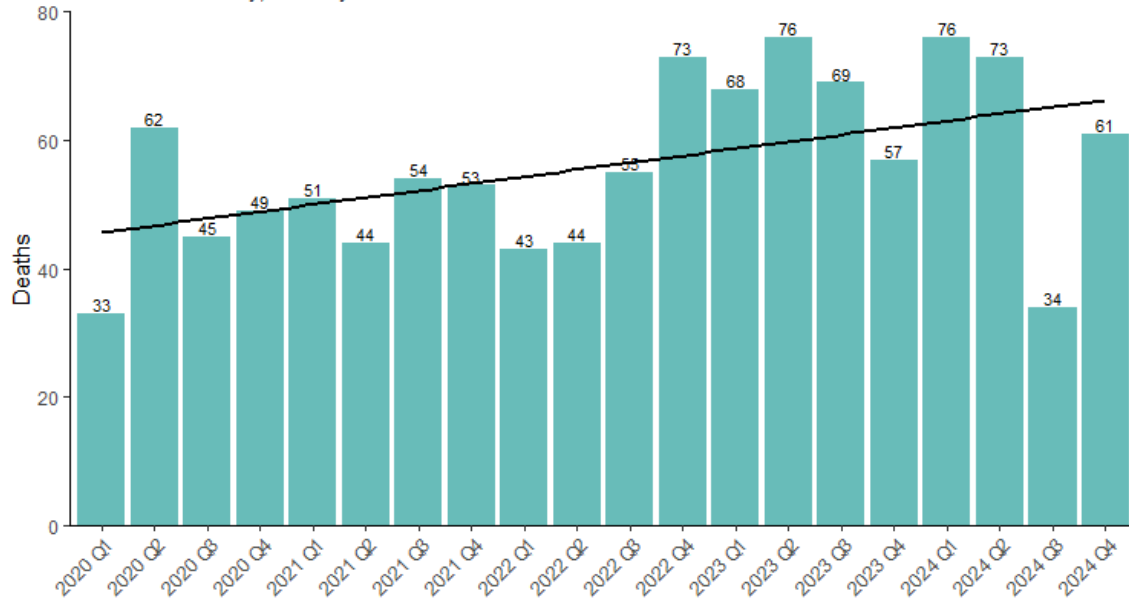


Since 2020, opioid overdose deaths in Snohomish County have generally been increasing (Figure 5)<sup>6</sup>. However, death counts were lower in 2024 than in 2023 (244 deaths and 270 deaths, respectively), indicating a possible flattening of the trend. A decrease in deaths in 2024 are not necessarily tied to increased naloxone distribution in the county but may be a contributing factor.

Figure 5. Opioid Overdose Deaths by Year in Snohomish County, January 2020 – December 2024.

## Opioid Overdose Deaths by Quarter and Year with Trend Line

Snohomish County, January 2020 - December 2024



### Success Stories

Frequent engagement with partners illuminated successes and challenges of program implementation. Four partner organizations submitted feedback on the Naloxone Leave-Behind program and all feedback was positive. The only challenge communicated to SCHD came from a larger organization who took a while to implement the program and data collection across their large team. Below a selection of quotes from partners are listed.

*"Our first responders have felt largely helpless when responding to this overdose crisis in the past few years. The leave behind program has the unintended fringe benefit of helping them feel like they are doing something (by leaving the Narcan) as opposed to nothing (just leaving the scene). ... Crews have shared with me it feels good to feel like part of the solution as opposed to helpless. Burnout is real in our field, and these calls really wear down on our providers. This is a small step in the right direction in combatting that."*

*"Getting naloxone into the hands of everyone in our community is critical in reducing deaths from overdose. The Naloxone-Leave-Behind program allows our prehospital providers to give naloxone liberally in the community, to high-risk individuals, family members, bystanders, or anyone who asks. We are grateful to the Health Department for facilitating such a fantastic program."*

*"The biggest impact [of the leave-behind program] I have seen and have had staff share with me is the feeling of empowerment families have when having a loved one who is suffering from opioid use disorder. Families who have to call 911 in duress without their own tools to assist in the rescue of their loved one is an incredibly traumatic moment. Having this option has allowed for people to feel as though they can actually help and save their loved one's life."*

*“...I was able to provide her with a Narcan kit. I showed her how to tell if someone is overdosed, how to use Naloxone and even what to expect after administering it. She was thankful and said she felt some relief knowing that if she comes across her grandson in an overdose state again, she will have the best chance at saving his life.”*

## Conclusions

The increasing number of participating agencies throughout the year (coupled with 90% of organizations with a signed data use agreement submitting data) demonstrates that the program is being implemented as planned. As this program is available to all Snohomish County EMS agencies, the program could partner with an additional 12 EMS agencies. The popularity for this program is clear as it is also gaining interest from other public safety agencies such as police and jails, as well as agencies with alternate response teams. Participating organizations shared positive feedback with program facilitators indicating EMS partners are satisfied with the program.

On average, 26 kits were distributed each month, though this number was largely influenced by the number of agencies participating each month (only two organizations participated in the first four months). The three-month moving average shows that as time progressed and more agencies began to participate, the average number of kits distributed also increased. More kits distributed in the community shows success in progressing towards the program’s intended outcome of improving access to naloxone in Snohomish County.

Naloxone kits were most frequently left at private residences (34%) followed by public outdoor spaces (22%) and most commonly in Everett, WA ZIP Codes. The high number of kits left in Everett could be due to the high need in the area, or perhaps the vicinity of the participating organizations. Pop-up naloxone distribution events in other areas of the county may help us understand the need in other areas.

This program has shown to be effective at increasing access to the life-saving medicine naloxone (Narcan) among people who use drugs, and their close personal contacts such as roommates, family, and friends. Data indicate that 43% of leave-behind kits were given directly to people at risk of overdose and 33% of kits were given to a close personal contact of the person at risk. Unresponsiveness is one of the main symptoms to check for when identifying an overdose, and thus naloxone cannot be self-administered. Therefore, it is equally important to increase naloxone access among close personal contacts in addition the person who is at risk.

## Recommendations

The program is being implemented as planned, has shown success in meeting program indicators and among program participants, and is progressing towards all program outcomes and the ultimate goal of reducing opioid overdose deaths in the county through increased access to overdose antidotes. It is recommended that the program continue and further increase the availability of naloxone in Snohomish County.

There are several opportunities to expand this program’s success, such as:

1. Continuing to engage with agencies to form new partnerships (among EMS agencies and elsewhere). Current partners had positive feedback and encountered very few barriers in program implementation.

2. Working with participating agencies to increase the completeness of demographic data collected to improve understanding of program reach. This can help inform naloxone distribution programs and insight into areas or subpopulations that may benefit from additional outreach.
3. Working with partners to identify new resources or supplies for the naloxone kits.
4. When feasible, pop-up events should be hosted to distribute naloxone kits and other resources due to the popularity of a November pop-up event co-hosted by one of the participating agencies and SCHED as it was highly successful in increasing naloxone access in the community. Real-time EMS overdose response data could be leveraged to identify areas in Snohomish County that may benefit the most from pop-up events.

Snohomish County's Naloxone Leave-Behind Program had a successful pilot year and is making progress towards increasing naloxone awareness and access in the county, a critical step in reducing opioid overdose deaths.

## References

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