2022 EVALUATION OF THE WASHINGTON SAFE MEDICATION RETURN PROGRAM

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Executive Summary

Introduction

Nonmedical use of prescription medications, defined as the use of a drug for non-therapeutic purposes, is associated with a significant increase in non-fatal and fatal overdose and has risen substantially over the last two decades. Between 1999 and 2019, the age-adjusted drug overdose death rates rose from 6.1 per 100,000 to 21.6 per 100,000 (Centers for Disease Control [CDC], 2021). These deaths are attributed to not only illegal substances but also prescription medications. Between 2019 and 2020, the prescription opioid overdose death rate in Washington rose from 3.3 deaths per 100,000 to 4.0 deaths per 100,000 (CDC, 2021).

In response to the non-fatal and fatal overdoses from misuse of prescription medications, the Washington State Legislature created the Washington Safe Medication Return Program in 2018 to provide a statewide system for the safe disposal of unwanted/unused medications (Drug Take-Back Program, 2018). The intent of the law is to prevent misuse, abuse, and overdoses of both prescription and nonprescription medications by providing a system to collect and dispose of unused/unwanted medications. The program, funded by drug manufacturers, provides medication disposal services to the public via mailers and kiosks. The program includes marketing and educational campaigns for the general public and outreach to health professionals and veterinarians who have prescribing privileges, pharmacists, law enforcement officers, and public health professionals.

In order to assess the efficacy and efficiency of the program, researchers at the Institute of Rural Health (IRH), Idaho State University conducted a process evaluation to assess the implementation and impact of program activities after the first full year of implementation.

Methods

In order to evaluate the Washington Safe Medication Return Program, multiple data sources were reviewed and analyzed. A statewide survey addressing awareness and utilization of the program, satisfaction with the program, and knowledge and behavior related to medication storage and disposal was developed and administered online and by phone to Washington residents ages 18 and over who were recruited for participation through advertising and direct mailing. Three surveys were developed and administered to pharmacists, veterinarians, and healthcare providers currently practicing in the state. The surveys addressed awareness of the program, respondents' communication with patients/pet owners concerning medication storage and disposal, and behavior and attitudes concerning

medication storage and disposal, in addition to demographic questions. Two surveys were developed and administered to local health jurisdiction staff and law enforcement professionals and included questions on knowledge of the program and outreach by program operator(s).

Additional datasets included in the evaluation were from national and state sources, including the CDC's Social Vulnerability Index (2018), the National Survey on Drug Use and Health (SAMHSA, 2020bwashi), the 2020 and 2021 Med-Project Annual Reports, the 2021 Washington Healthy Youth Survey (Washington State Health Care Authority, Department of Health, Office of the Superintendent of Public Instruction, and Liquor and Cannabis Board, 2022), and the WA DOH, Washington Tracking Network Opioid Prescriptions Dashboards (2022). The Washington Department of Health also provided evaluators with Program Operator Reports from 2020 and 2021.

Key Findings and Conclusions

Lack of Awareness about the Program

Awareness of the Washington Safe Medication Return Program was low among most respondents. Healthcare providers and veterinarians reported being largely unaware of the Washington Safe Medication Return Program with 33.3% and 36.0%, respectively, indicating that they were aware of the program. Half of the respondents to the survey of residents reported that they were unaware of the program.

Veterinarians and healthcare providers reported less awareness of program components. Only 26.8% of healthcare providers and 17.5% of veterinarians were aware of kiosks and 9.1% and 2.2%, respectively, reported awareness of medication return mailers.

Professional and Patient-Provider Communication as Sources of Information

Communication with peers and professionals were the most important sources of information about the program rather than public media and professional outreach campaigns with 38.5% of residents reporting that they heard about the program from health professionals and 21.7% to 44.8% of pharmacists and healthcare providers reporting that they heard about the program from a colleague or employer.

Residents reported that they became aware of the program from a health professional, yet among all respondents to the statewide survey, both those who had heard of the program and those who had not, few reported that they had received information about medication storage or disposal from a health or veterinary professions.

Pharmacists as Information Messenger

Residents reported that pharmacists were the health professionals who discussed safe medication storage and disposal with them more often than any other professional, 31.9% and 20.6%, respectively. In addition, among those who had used a medication return kiosk, 64.2% of residents reported using one at a pharmacy.

The Program is Accessible but Varies by County Implementation Date and Rurality

Collection sites are available throughout the state. Residents reported that the medication return drop-boxes were accessible, easy to use, and would use them again. Most kiosks were located in counties that had grandfathered drug take-back programs and in urban counties. Slightly more than thirty-three percent of kiosks were located in new counties and 32.3% were in rural counties. Mail-back distributors increase access in areas underserved by kiosk. Counties with higher overall social vulnerability index scores had less access to mail distribution centers. Communities in the southern part of the state--Skamania, Klickitat, and Yakima counties--and the northern part of the state--Chelan, Okanogan, and Whatcom—had less access to the mail-back distribution centers. Other areas, on the coast and eastern Washington, also had less access.

Although residents report access to kiosks, 32.2% of pharmacies and 55.1% of law enforcement agencies were authorized collection sites in 2021.

Lower Satisfaction among Residents from New Counties and Rural Counties

Of those respondents who had disposed of medications in kiosks, mailers, or at take-back events, 57.1% of respondents from the new counties reported that they liked the program and 59.0% said that they would use it again. Among rural respondents, 56.2% reported that they liked using the program and 60.6% reported that they would use it again.

Recommendations

- Conduct targeted outreach to health providers and veterinarians to increase dissemination of information about the Washington Safe Medication Return Program.
- Focus on rural areas and new counties.
- Increase the number of authorized sites throughout the states.

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Background

Introduction

Nonmedical use of prescription medications, defined as the use of a drug for non-therapeutic purposes, is associated with a significant increase in non-fatal and fatal overdose and has risen substantially over the last two decades. Between 1999 and 2019, the age-adjusted drug overdose death rates rose from 6.1 per 100,000 to 21.6 per 100,000 (Centers for Disease Control [CDC], 2021). These deaths are attributed to not only illegal substances but also prescription medications. Of the 70,630 overdose deaths reported in the US in 2019, 11.7%, or 8,263, involved prescription opioids. Between 2019 and 2020, the prescription opioid overdose death rate in Washington rose from 3.3 deaths per 100,000 to 4.0 deaths per 100,000 (CDC, 2021).

In addition to deaths, the misuse or abuse of prescription medications has also increased. In 2019, 16.1 million people aged 12 and over reported misusing prescription psychotherapeutic drugs, prescription stimulants, tranquilizers or sedatives, and pain relievers (Substance Abuse and Mental Health Services Administration [SAMHSA], 2020).

Unsecured storage of medication and use of another's prescription medications provide youth and adults uncontrolled access and contribute to the high rates of substance misuse in the US. Fifty-one percent of youth aged 12-17 and 50.8% of adults aged 18 and over who misused prescription pain relievers in 2019 reported receiving, buying, or taking the medication from a friend or relative (SAHMSA, 2020).

Over the past decade several interventions have been implemented to reduce the risk of the nonmedical use of prescription medications. One widely used strategy has been the implementation of medication take-back programs aimed at educating patients on the appropriate disposal of medications and providing resources for patients and communities to facilitate timely and environmentally acceptable disposal of medications (Hawk, Vaca, and D'Onofrio, 2013).

The first medication take-back programs in the state of Washington were established at the county level. Between 2016 and 2018, seven Washington counties—Clallam, King, Kitsap, Pierce, Skagit, Snohomish, Whatcom—passed ordinances requiring a safe medication disposal program funded by drug manufacturers. These first counties informed the development of the statewide program.

Washington Safe Medication Return Program

The Washington Safe Medication Return Program was created by legislative action in 2018 to provide a statewide system for the safe disposal of unwanted/unused medications (Drug Take-Back Program, 2018). The intent of the law is to prevent misuse, abuse, and overdoses of both prescription and nonprescription medications by providing a system to collect and dispose of unused/unwanted medications. The program, funded by drug manufacturers, provides medication disposal services to the public via mailers and kiosks. The program includes marketing and educational campaigns for the general public and outreach to health professionals and veterinarians who have prescribing privileges, pharmacists, law enforcement officers, and public health professionals.

The Washington Department of Health provides oversight of the Safe Medication Return Program (Drug Take-Back Program, 2018). All program activities are managed by two state-approved program operators, MED-Project, approved in 2020, and Imar Intelligence, approved in 2022.

Chapter 69.48 RCW established the program for 32 counties in 2019 and the remaining seven counties with grandfathered ordinances began operating under the statewide program on November 21, 2021.

Evaluation Purpose and Design

In order to assess the efficacy and efficiency of the program, an evaluation plan was developed by researchers at the Institute of Rural Health (IRH), Idaho State University. The plan consists of process measures, which assess the implementation of program activities, and impact measures, which assess factors directly related to program activities, including knowledge, behavior, and program costs. In addition, outcome measures, which assess the long-term impact of the program on knowledge, attitudes, and behaviors of stakeholders, medication disposal, and fatal overdose rates, will be evaluated in 2025. See Appendix A for approved evaluation plan.

The evaluation design consists of baseline, annual, and follow-up measures and include survey and administrative data. Data sources include Program Operator Annual Collection Reports, Washington Tracking Network (WTN), Washington Prescription Drug Monitoring Program, Washington Healthy Youth Survey, Washington Poison Control Survey, and the National Survey on Drug Use and Health. IRH, in collaboration with DOH program staff, developed surveys for statewide residents, local health jurisdictions, law enforcement, pharmacists, veterinarians, and healthcare providers. Program Operator Annual Collection Reports will be included in the annual evaluation reports. All other measures are included in this baseline report and will be included in the 2025 report on program outcomes.

Methods

In order to evaluate the Washington Safe Medication Return Program, multiple data sources were reviewed and analyzed.

Survey Development. A statewide survey of Washington residents ages 18 and over was developed in collaboration with staff from the Washington Department of Health. The survey consisted of 15 multiple choice questions addressing awareness and utilization of the program, satisfaction with the program, and knowledge and behavior related to medication storage and disposal. The final section of the survey included demographic questions. The 2022 Statewide Resident Survey is included in Appendix B.

Three surveys were developed for pharmacists, veterinarians, and healthcare providers and included 16 multiple-choice questions addressing awareness of the program, respondents' communication with patients/pet owners concerning medication storage and disposal, and behavior and attitudes concerning medication storage and disposal, in addition to demographic questions (see Appendix C). Two surveys were developed for local health jurisdiction staff and law enforcement professionals and included questions on knowledge of the program and outreach by program operator(s). See Appendix D for the local health jurisdiction and law enforcement professional surveys.

Data Collection. The 2022 Statewide Resident Survey was administered by Resolution Research through a subcontract with Idaho State University. A quota sampling methodology was used (Adams and McGuire, 2022). The sample size calculations for each of the 39 counties were based on the population in each county of persons ages 18 and older and the minimal sample sizes required to comparisons between new and grandfathered counties and between rural and urban counties, with rural counties defined as those having populations equal to or less than 50,000.

Survey respondents were recruited through advertising and direct mailing. Respondents could complete the surveys online or by phone. Respondents received a $5 incentive for completing the survey.

The DOH Safe Medication Return Program staff provided IRH researchers with lists from the state licensing database of veterinarians, healthcare professionals, and pharmacists with prescribing authority and contact information for law enforcement officers. The online surveys for prescribers and law enforcement officers were administered through Qualtrics. All contacts in the provided lists were sent email requests to participate in the survey.

The DOH local health jurisdiction liaison collaborated with the Washington Association of Local Public Health Officials to email a request for participation and survey link to the Community Health Leadership Team and the Behavioral Health Group.

Additional datasets provided by DOH and which were used in this report include credentialing data for all pharmacies in the state and a list of all law enforcement agencies from the Washington Association of Sheriffs and Police Chiefs. Program Operator Reports from 2020 and 2021 provided additional data for the evaluation.

National and state data sources included the CDC's Social Vulnerability Index (2018), the National Survey on Drug Use and Health (SAMHSA, 2020bwashi), the 2020 and 2021 Med-Project Annual Reports, the 2021 Washington Healthy Youth Survey (Washington State Health Care Authority, Department of Health, Office of the Superintendent of Public Instruction, and Liquor and Cannabis Board, 2022), and the WA DOH, Washington Tracking Network Opioid Prescriptions Dashboards (2022).

Data Analysis. Datasets for surveys and publicly available data was downloaded into Excel and imported into SPSS for analysis. In order to analyze differences based on county size, rural/urban county classification for counties was coded based on the Washington DOH's categorization of counties (DOH, 2017). Counties were also coded by implementation date, e.g. new vs grandfathered counties. ArcGIS Pro was used to map resources and data.

Limitations. The request for survey participation by local health jurisdictions was communicated through DOH staff, rather than directly by evaluators. Only four individuals responded to the local health jurisdiction survey; therefore, feedback by this group was not included in data analysis. Due to inaccuracies and lack of specificity in the contact lists, such as clinic directors listed as providers in the contact lists, response rates were not calculated for survey respondents.

Survey Respondent Characteristics

Statewide Residents

2,001 Washington residents ages 18 and over completed the survey. The average age of respondents was just over 47 years old and 62.6% identified as female. Eighty two percent identified as White alone or in combination with another race and 7.1% reported Hispanic/Latino/Latina/Latinx ethnicity. Almost 50% had earned an Associate's degree or higher degree and 42.1% reported a household income less than $50,000. See Table 1 for sociodemographic characteristics of statewide survey respondents.

Table 1: Sociodemographic characteristics for community survey respondents

	%	n
Gender		
Male	35.6	711
Female	62.6	1,249
Non-binary / third gender	1.2	23
Other	0.7	13
Race and Ethnicity*		
American Indian/Alaskan Native	4.7	93
Asian/Asian American	6.9	136
Black/African American	5.6	112
Native Hawaiian/Pacific Islander	1.5	30
White/Caucasian	82.0	1,627
Hispanic/Latino/Latina/Latinx	7.1	140
Other	2.8	56
Educational Attainment		
Elementary school (grades k-8)	0.5	10
Some high school	2.6	51
High school graduate or GED	20.6	408
Some college or technical school	26.6	529
Associate degree	12.6	251
Bachelor's degree	23.8	473
Graduate degree	13.2	263
Annual Household Income		
Less than $25,000	16.6	329
$25,000 to $34,999	11.3	225
$35,000 to $49,999	14.1	279
$50,000 to $74,999	18.4	364

	%	n
$75,000 to $99,999	11.9	236
$100,000 to $124,999	7.0	139
$125,000 to $149,999	5.8	115
$150,000 or more	9.4	187
Refused	5.4	106
	Mean	SD
Age	47.1	16.8
Household Size	2.7	1.5
Number of children in the household under age 18	0.6	1.1

*Respondent could choose more than one answer

Source: 2022 Statewide Resident Survey

Health and Law Enforcement Professionals

The last section of the survey for all professionals included sociodemographic information. Not all respondents completed this section.

Most of the respondents to the health professional surveys were female; 78.3% of veterinarians, 61.5% of healthcare providers, and 64.2% of pharmacists identified as female. Eighty-five percent of law enforcement professionals identified as male. Over three quarters of respondents across all professional survey types identified as White alone or in combination with another race and/or ethnicity. Over 13% pharmacists, 8.9% of providers, and 5.8% of veterinarians identified as Asian/Asian American alone or in combination with another race and/or ethnicity.

The surveys for veterinarians, healthcare providers, and pharmacists included additional questions about the highest degrees earned, area of specialization, and characteristics of their primary practice.

The majority of veterinarians, 65.0%, reported working as a companion animal veterinarian while 8.8% specialized in livestock, food, and large animal veterinary medicine. Sixty-two percent reported working in private practice and 22.3% in a corporate/group practice.

Among 726 healthcare providers who answered the question on type of provider, 43.6% were MDs or DOs (n=335), 25.4% were Nurse Practitioners (n=195), and 7.0 % (n=54) were Physician Assistants. Providers represented a large diversity in specialties with 39.2% (n=248 of 633 who responded to the question) identifying as primary care practitioners, e.g., general pediatrics, internal medicine, family medicine, and/or geriatrics. Over 57% worked in an outpatient practice.

The majority of pharmacists, 56.2%, who completed the demographic section of the survey, held a PharmD degree and 21.4% had additional education in the form of a residency or fellowship. Forty four percent worked in a community pharmacy and 20.0% worked in an outpatient clinic/health center pharmacy. See Table 2 for sociodemographic data for health and law enforcement professionals.

*Table 2: Sociodemographic characteristics of professional respondents**

	Veterinarians (n=120)		Healthcare Providers (n=685)		Pharmacists (n=226)		Law Enforcement (n=20)	
	%	n	%	n	%	n	%	n
Gender								
Male	17.5	21	34.2	234	33.2	75	85.0	17
Female	78.3	94	61.5	421	64.2	145	5.0	1
Non-binary/third gender	0.8	12.5	1.0	7	-	0	-	-
Other	-	0	0.3	2	-	0	-	-
Prefer not to say	3.3	4	3.1	21	2.7	6	10	2
	Veterinarians (n=124)		Healthcare Providers (n=677)		Pharmacists (n=237)		Law Enforcement (n=19)	
	%	n	%	n	%	n	%	n
Race and Ethnicity†								
American Indian/Alaskan Native	0.8	1	1.3	9	1.8	4	4.5	1
Asian/Asian American	5.8	7	8.9	61	13.2	30	-	0
Black/African American	0.8	1	2.2	15	2.2	5	4.5	1
Hispanic/Latino/Latina	0.8	1	3.8	26	2.2	5	-	0
Native Hawaiian/Pacific Islander	-	0	0.6	4	-	0	-	0
White/Caucasian	88.3	106	79.1	544	79.3	180	77.3	17
Other	1.7	2	2.6	18	1.8	4	-	0
Prefer Not to Say	5.0	6	4.0	9	6.0	41	-	0
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age	46.2	12.8	52.5	13.1	47.9	13.3	55.1	5.8
Years in Practice (Health Prof)	18.0	12.3	20.0	13.3	21.8	13.4	-	-

*Percentages based on the number of participants who responded to each question

†Participants could select more than one category

Source: 2022 Surveys of Law Enforcement, Pharmacists, Veterinarians, and Healthcare Providers

Survey Respondents by County

Respondents from the statewide survey of residents came from every county in the state (see table 3). In contrast, four rural counties--Garfield, Klickitat, Skamania, and Wahkiakum—were not represented in the survey responses from veterinarians, healthcare providers, pharmacists, or law enforcement professionals.

Table 3: Percent of survey respondents by survey type and county, 2022

	Community Members		Veterinarians		Healthcare Providers		Pharmacists		Law Enforcement		All Respondents	
	%	n	%	n	%	n	%	n	%	n	%	n
Adams	1	20	0.00	0	0.2	1	0.5	1	0	0	0.7	22
Asotin	1	20	0.00	0	0.2	1	0.0	0	0	0	0.7	21
Benton	1	20	1.85	2	3.6	22	2.9	6	0	0	1.7	50
Chelan	1	20	0.93	1	0.8	5	1.4	3	5.0	1	1.0	30
Clallam	5	100	1.85	2	1.5	9	1.4	3	5.0	1	3.9	115
Clark	1	20	5.56	6	5.5	34	9.6	20	5.0	1	2.7	81
Columbia	1	20	1.85	2	0.2	1	0.0	0	0.0	0	0.8	23
Cowlitz	1	20	0.93	1	0.6	4	1.4	3	0.0	0	0.9	28
Douglas	1	20	0.00	0	0.2	1	0.5	1	0.0	0	0.7	22
Ferry	1	20	0.93	1	0	0	0.0	0	0.0	0	0.7	21
Franklin	1	20	0.93	1	0.3	2	1.0	2	0.0	0	0.8	25
Garfield	1	20	0.00	0	0	0	0.0	0	0.0	0	0.7	20
Grant	1	20	0.00	0	0.5	3	0.5	1	5.0	1	0.8	25
Grays Harbor	1	20	0.00	0	1	6	1.0	2	0.0	0	0.9	28
Island	1	20	0.93	1	0.6	4	0.5	1	0.0	0	0.9	26
Jefferson	1	20	0.93	1	0.6	4	1.0	2	5.0	1	0.9	28
King	20	400	34.26	37	37.2	229	38.3	80	0.0	0	25.3	746
Kitsap	5	100	4.63	5	3.1	19	1.4	3	15.0	3	4.4	130
Kittitas	1	30	0.00	0	0.6	4	0.5	1	5.0	1	1.2	36
Klickitat	1	20	0.00	0	0	0	0.0	0	0.0	0	0.7	20
Lewis	1	20	0.93	1	1	6	0.5	1	5.0	1	1.0	29
Lincoln	1	20	0.00	0	0.3	2	0.5	1	5.0	1	0.8	24
Mason	1	20	0.00	0	0.3	2	1.4	3	0.0	0	0.8	25
Okanogan	1	21	1.85	2	0.3	2	0.0	0	0.0	0	0.8	25
Pacific	1	20	0.00	0	0.3	2	1.9	4	0.0	0	0.9	26
Pend Orielle	1	20	0.00	0	0.2	1	0.0	0	5.0	1	0.7	22
Pierce	20	400	10.19	11	8.9	55	7.2	15	10.0	2	16.4	483

	Community Members		Veterinarians		Healthcare Providers		Pharmacists		Law Enforcement		All Respondents	
	%	n	%	n	%	n	%	n	%	n	%	n
San Juan	1	20	0.00	0	0	0	0.5	1	0.0	0	0.7	21
Skagit	5	100	1.85	2	2.1	13	0.5	1	0.0	0	3.9	116
Skamania	1	20	0.00	0	0	0	0.0	0	0.0	0	0.7	20
Snohomish	5	100	12.04	13	5.2	32	6.2	13	15.0	3	5.5	161
Spokane	2	40	3.70	4	10.4	64	8.6	18	5.0	1	4.3	127
Stevens	1	30	0.00	0	0.2	1	1.0	2	0.0	0	1.1	33
Thurston	1	20	6.48	7	4.9	30	1.9	4	5.0	1	2.1	62
Wahkiakum	1	20	0.00	0	0	0	0.0	0	0.0	0	0.7	20
Walla Walla	1	20	0.00	0	1.6	10	1.0	2	0.0	0	1.1	32
Whatcom	5	100	2.78	3	4.2	26	2.4	5	0.0	0	4.5	134
Whitman	2	40	0.93	1	1	6	1.4	3	0.0	0	1.7	50
Yakima	1	20	3.70	4	2.4	15	3.3	7	5.0	1	1.6	47

Sources: 2022 Surveys of Law Enforcement, Pharmacists, Veterinarians, and Healthcare Providers and 2022 Statewide Resident Survey

3

Overarching Findings

The following section includes findings for Approved Evaluation Plan.

Evaluation Questions

Evaluation Question 1: Are educational and outreach materials appropriate for target audience?

Educational and outreach materials are clearly written using plain language and are available in multiple languages. Effective outreach to professionals has been mixed with few veterinarians and healthcare providers reporting receipt of outreach materials and/or contact with the program.

Evidence:

- Med-Project Brochure Clear Communication Index (CCI) Score: 42.9 of 90 points

  The Med-Project Brochure was scored using the Clear Communication Index. Messages presented in the brochure are clearly written plain language in active voice, and describe specific behaviors for proper disposal and storage of medication. The brochure is well-organized using headings and formatting important messages in larger font. Graphics are appropriate, for example an illustration of a padlock in the section titled “store safely”.

  Two issues affected the total index score, resulting in a lower over score. The brochure includes two messages, safe storage of medication and appropriate disposal of unwanted medication. The CCI recommends that each health literacy material should address only one message. In addition, the brochure did not explain why safe storage and disposal of medication are important.

- Education and outreach materials are available in multiple languages.

  In 2020 and 2021, education and outreach materials (brochures, posters, MED-Project website, etc.) were available in English, Spanish, Chinese, Vietnamese, Russian, and Tagolog. With the addition of the seven counties grandfathered into the program in 2021, the Med-Project website, toll-free number and outreach materials were added in 3 additional languages: Korean, Khmer, Pujabi

- Health/veterinary professionals reported low rates of receiving outreach materials.

  Among those aware of the program, the majority of veterinarians and healthcare providers, 73.3% and 64.5%, respectively, reported that they had not received any outreach materials.

  Of the 17 law enforcement respondents who reported being aware of the program, over half, 52.9% were contacted by the program through personal communication, e.g. email or phone, and 47.1% through program brochures or flyers.

*Table 4: Percent of law enforcement and health/veterinary professionals reporting receiving each type of outreach material**

	Law Enforcement (n=17)		Pharmacists (n=165)		Veterinarians (n=45)		Healthcare Providers (n=276)	
	%	n	%	n	%	n	%	n
Brochures or Flyers	47.1	8	23.6	39	8.9	4	7.2	20
Poster	29.4	5	18.2	30	4.4	2	3.6	10
Personal Communication	52.9	9						
Email			26.7	44	4.4	2	18.8	52
In-person/phone			20.6	34	0	0	2.2	6
Have not received any material			41.2	68	73.3	33	64.5	178

*Respondents could choose more than one response

Sources: 2022 Surveys of Law Enforcement, Pharmacists, Veterinarians, and Healthcare Providers

- Law enforcement professionals reported effective outreach to both their department/agency and to the overall community.

  Over forty-six percent of law enforcement professionals who were aware of the medication take-back program reported that outreach by the program operator was “extremely effective” or “somewhat effective”. Over half, 53.4%, of law enforcement professionals reported that outreach to the community by the program operator was “extremely effective” or “somewhat effective”.

Table 5: Percent and number of law enforcement professionals reporting effectiveness of outreach to department/agency and community (n=17)

	Not at all effective	Somewhat ineffective	Neutral	Somewhat effective	Extremely effective
Department/Agency	20% (3)	6.7% (1)	26.7% (4)	40% (6)	6.7% (1)
Community	13.3% (2)	6.7% (1)	26.7% (4)	46.7% (7)	6.7% (1)

Source: 2022 Law Enforcement Survey

Evaluation Question 2: Are educational and outreach materials accessible to target audience (program reach)?

The program conducted statewide media campaigns at the end of 2020 and throughout 2021 to inform the public about the WA Drug Safe Medication Return Program. Education and outreach materials, including media campaigns, have raised awareness of the program among residents of the state.

Data on hotline calls were not reported by the program operator.

Evidence:

- Outreach increased from 2020 to 2021.

  2020: On November 21, 2020, Med-Project released a press release.

  Outreach to the target audience included the following activities in 2020:

  - Digital Media Campaigns: 2 lasting 4-weeks each
  - Radio Campaigns: 1 lasting 4-weeks
  - TV Campaigns: 1 lasting 4-weeks
  - Promotional materials: distributed to 137 sites

  2021: Med-Project conducted outreach throughout 2021 and included media campaigns in Spanish, Chinese, Khmer, Korean, Punjabi, Russian, Tagalog, and Vietnamese.

  Outreach to the target audience included the following activities in 2021:

  - Social Media: 59 posts on Facebook/Twitter
  - Emails: 2 emails announcing the program to 191 recipients
  - Digital Media Campaigns: 3 lasting 4-weeks each
  - Radio Campaigns: 3 lasting 4-weeks each
  - TV Campaigns: 3 lasting 4-weeks each
  - Digital News: 5
  - Print: 4
  - Print Publication Promotions: 25
  - Promotional materials: distributed to 107 sites

- Residents throughout the state reported learning about the program through media campaigns and contact with health professionals.

2,001 Washington residents completed the statewide survey with half reporting awareness of the program.

Of the 1,006 respondents to the statewide resident survey who were aware of the program, 31% reported seeing the television reports and 28% reported seeing social media posts about the program.

Table 6: Residents reporting awareness through public outreach campaigns and communication with health professionals, percent, and frequency

	%	n
Poster	14.9	150
Billboard	7.3	73
Social Media	28.2	284
Website	15.9	160
TV	30.9	311
Radio	13.2	133
Health professionals	38.5	382

Source: 2022 Statewide Resident Survey

- Promotional materials were distributed to 107 pharmacies, healthcare facilities, law enforcement agencies, and libraries throughout the state.

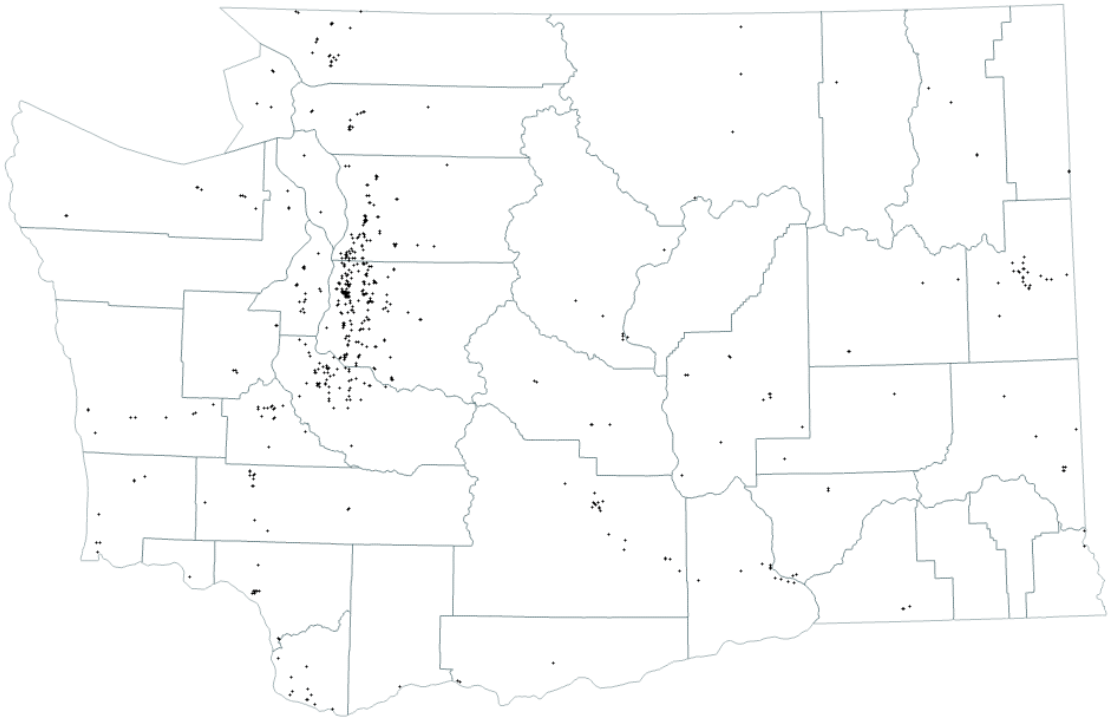


FIGURE 1: 2021 PROMOTIONAL MATERIAL DISTRIBUTION

- In 2021, emails were sent to 191 recipients throughout the state. Recipients included veterinary clinics, medical clinics, pharmacies, law enforcement agencies, in addition to other businesses and organizations.

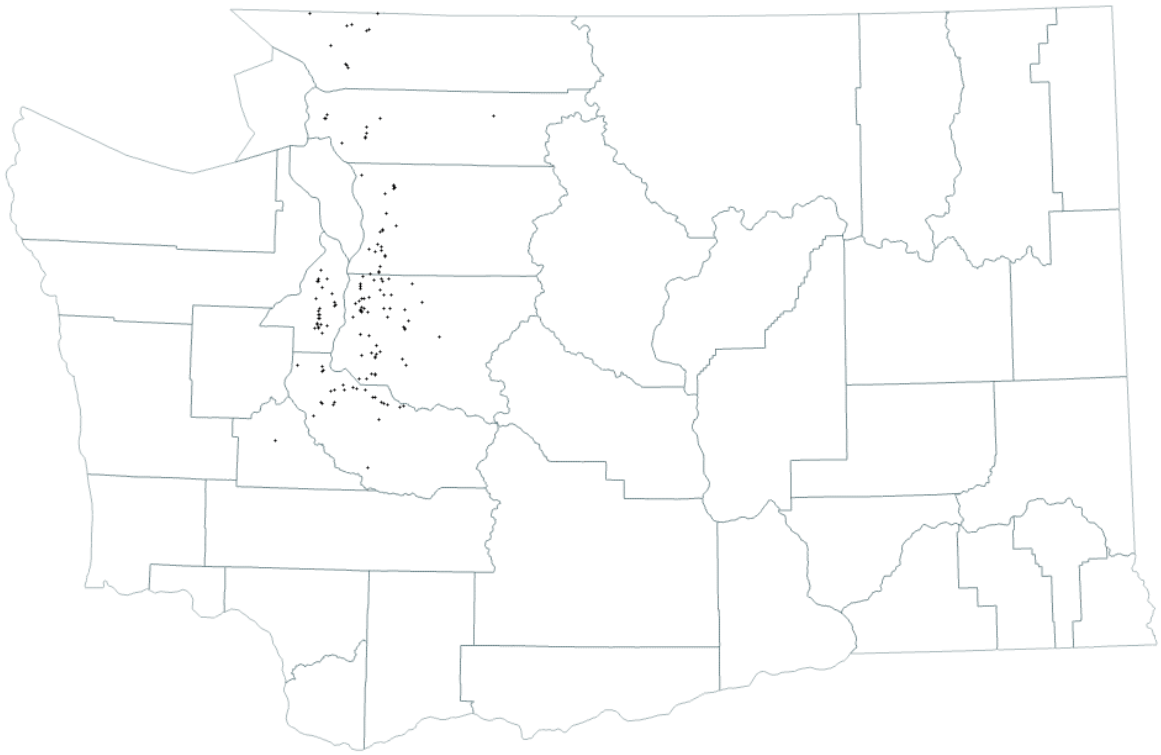


FIGURE 2: 2021 EMAIL OUTREACH

Evaluation Question 3: Are stakeholders aware of the drug take-back program?

Health professionals are largely unaware or unsure of the existence of local or state guidance regarding safe disposal of medication and of the WA Safe medication Return Program. Awareness of the program itself is mixed with only 50% of the general public being aware the program. In contrast, a majority of healthcare providers and veterinarians, 64.0% and 66.7% respectively, were unaware of the program.

Evidence:

- Between 24.1% and 41.7% of health professionals were unsure of whether there was any guidance regarding safe medication disposal.

  Fifty-three to seventy-one percent of health professionals were aware of local or state guidance for disposal of unwanted medications. Awareness of local or state guidance regarding proper disposal of medications was highest among pharmacists at 71%.

  Over ninety percent of law enforcement respondents were aware of local or state guidance for disposal of unwanted medications.

Table 7: Percent of respondents reporting awareness of local or state guidance regarding proper disposal of unused or expired medications

	Pharmacists (n=241)		Veterinarians (n=135)		Healthcare Providers (n=765)		Law Enforcement (n=22)	
	%	n	%	n	%	n	%	n
Aware	71.0	171	53.3	72	52.5	402	90.9	20
Not Aware	5.0	12	7.4	10	5.8	44	4.6	1
Unsure	24.1	58	39.3	53	41.7	319	4.6	1

Sources: 2022 Surveys of Law Enforcement, Pharmacists, Veterinarians, and Healthcare Providers

- Awareness of the program was low among veterinarians and healthcare providers.

  Half of the residents who responded to the statewide survey were unaware of the program. Pharmacists reported more awareness of the Safe Medication Program compared to other health professionals.

Table 8: Percent of respondents reporting awareness of WA Safe Medication Return Program

	Statewide Residents (2001)		Pharmacists (n=242)		Veterinarians (n=135)		Healthcare Providers (n=767)		Law Enforcement (n=22)	
	%	n	%	n	%	n	%	n	%	n
Aware	50.0	1006	68.2	165	33.3	45	36.0	276	77.3	17
Not Aware	50.0	995	31.8	77	66.7	90	64.0	491	22.7	5

Sources: 2022 Surveys of Statewide Residents, Law Enforcement, Pharmacists, Veterinarians, and Healthcare Providers

- Most health professionals who were aware of the program learned about it from colleagues, employers, and licensing organizations rather than through program outreach and media campaigns.

  Among health professionals, pharmacists reported the highest rate of awareness of the program with 30.2% learning about the program from their employers, 17.8% from colleagues, 15.7% from professional societies, and 12.4% from licensing organizations. Both veterinarians and healthcare providers reported low awareness and little communication about the program from colleagues, employers, and professional societies.

*Table 9: How did you become aware of the Washington Safe Medication Return Program?**

	Pharmacists (n=165)		Veterinarians (n=45)		Healthcare Providers (n=277)	
	%	n	%	n	%	n
Poster	12.7	21	13.3	6	9.8	27
Billboard	3.6	6	0.0	0	1.1	3
Social Media	6.1	10	6.7	3	8.7	24
Website	12.7	21	13.3	6	15.6	43
TV	6.1	10	8.9	4	9.4	26
Colleagues	26.1	43	20.0	9	24.2	67
Employer	44.8	74	6.7	3	21.7	60
Professional Society	23.0	38	11.1	5	22.0	61
Licensing Organizations	18.2	30	2.2	1	13.0	36

*Respondents could choose more than one response

Sources: 2022 Surveys of Law Enforcement, Pharmacists, Veterinarians, and Healthcare Providers

- Veterinarians and healthcare providers reported little knowledge about the program's medication return methods. Respondents in all professions had low awareness of medication return mailers.

  Of health profession respondents who were aware of the program, pharmacists reported higher rates of awareness of kiosks, mailers, and take-back events. Only 26.8% of healthcare providers and 17.5% of veterinarians were aware of kiosks and 9.1% and 2.2%, respectively, reported awareness of medication return mailers.

  In contrast, 100% of law enforcement professionals were aware of kiosks.

Table 10: Percent of respondents reporting awareness of each component of the WA Safe Medication Return Program

	Pharmacists (n=242)		Veterinarians (n=137)		Healthcare Providers (n=794)		Law Enforcement (n=20)	
	%	n	%	n	%	n	%	n
Kiosks	60.7	147	17.5	24	26.8	213	100	20
Mailers	32.6	79	2.2	3	9.1	72	25.0	5
Take-back Events	49.2	119	16.8	23	16.2	129		

Sources: 2022 Surveys of Law Enforcement, Pharmacists, Veterinarians, and Healthcare Providers

Evaluation Question 4: How accessible are the collection sites?

Collection sites are available throughout the state. Residents reported that the medication return drop-boxes were accessible, easily to use, and would use them again.

Evidence:

- Residents were aware of the medication return kiosks and would use them again.

  Slightly over half, 54% (n=1,069), of all respondents to the statewide survey reported knowing where to take expired or unused medications to dispose of them properly.

  Of the 1,006 respondents to the statewide survey who were aware the program, 39.7% (n=399) having used a Safe Medication Return Drop-Box.

  78% (n=312) of the respondents to the statewide resident survey reported that they were able to easily locate a Safe Medication Return Program drop-box or mailer.

  The majority of residents who used the program were satisfied. 63% (n=250) of residents reported that they liked using the program. 66% (n=265) of residents reported that they would use the program again.

*Table 11: Residents' experiences with using the program**

	%	n
Easy to locate a Safe Medication Return Program drop-box or mailer	78.0	312
Liked using the Safe Medication Return Program	63.0	250
Would use the Safe Medication Return Program again	66.0	265
None of the above	4.0	16

*Respondents could choose more than one response

Source: 2022 Statewide Resident Survey

Most residents reporting using medication return kiosks located at pharmacies. Few respondents, between 3.8% and 5.3%, used drop-boxes located at dental offices, substance use disorder treatment programs, or long-term care facilities.

*Table 12: Location of drop-boxes that residents reported using**

	%	n
Pharmacy	64.2	256
Medical Center or Clinic	28.1	112
Hospital	23.3	93
Police Department	26.8	107
Dental office	3.8	15
Substance use disorder treatment program	5.3	21
Long-term care facility	4.3	17

*Respondents could choose more than one response

Source: 2022 Statewide Resident Survey

- Collection sites are available throughout the state.

  The number of collection sites increased from 162 in 2020 to 600 in 2021.

FIGURE 3: LOCATION OF MEDICATION RETURN KIOSKS, 2021

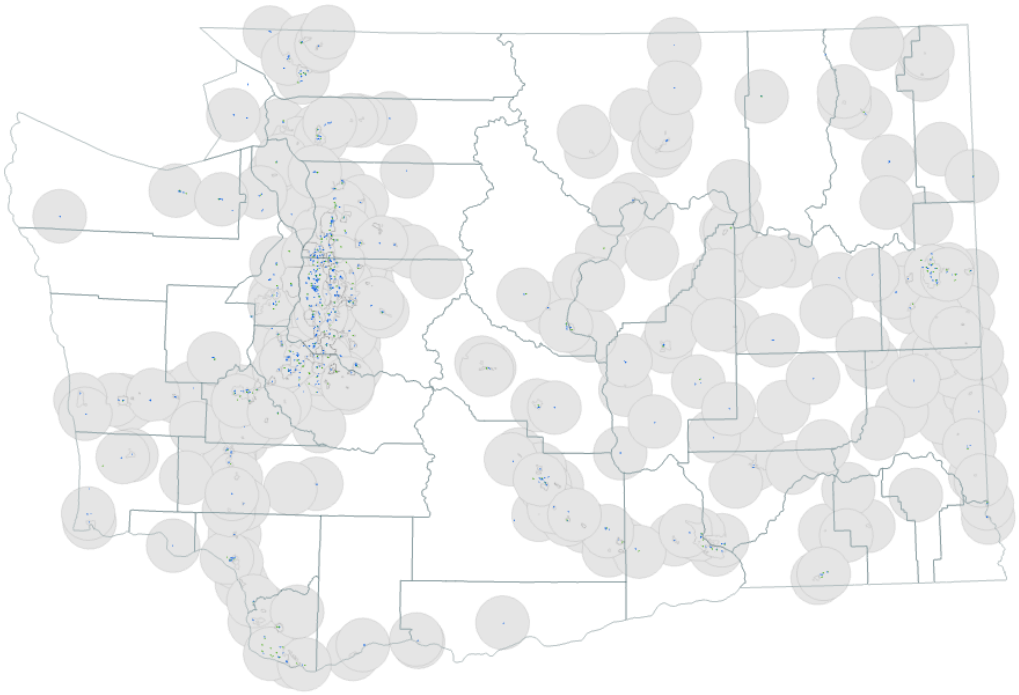


FIGURE 4: LOCATION OF MEDICATION RETURN KIOSKS WITHIN A 10-MILE RADIUS OF POPULATION CENTERS, 2021

Evaluation Question 5: Are retail, clinic, and hospital pharmacies and law enforcement agencies serving as authorized collectors?

The number of law enforcement agencies participating as authorized collectors in 2021 was low, at 55.5%. Over eighty-seven percent of pharmacies were authorized collection sites in 2021.

Evidence:

- The number of authorized collection sites increased between 2020 and 2021.

  There were 162 authorized collection sites in 2020 and 600 in 2021. The number of sites increased across all categories from 2020 to 2021.

Table 13: Authorized collection sites by type and year

	2020	2021
Law Enforcement	41	126
Pharmacies	121	474
Total	162	600

Sources: 2020 and 2021 Program Operator Reports

- The participation rate of authorized sites in 2021 was higher among law enforcement agencies as compared to pharmacies.

  In 2021, there were 1469 pharmacies and 227 law enforcement agencies in the state that could serve as authorized collectors.

  Based on the number of law enforcement agencies and pharmacies in the state in 2021, 55.5% of law enforcement and 32.2% of pharmacies participated as collection sites that year.

Table 14: Authorized collection sites, 2021

	Law Enforcement	Pharmacies
Authorized Collection Site	126	474
Potential Collection Site	227	1469
Percent Serving as Authorized Collection Sites	55.1%	32.2%

Source: 2021 Program Operator Report

FIGURE 5: POTENTIAL AUTHORIZED COLLECTORS, 2021

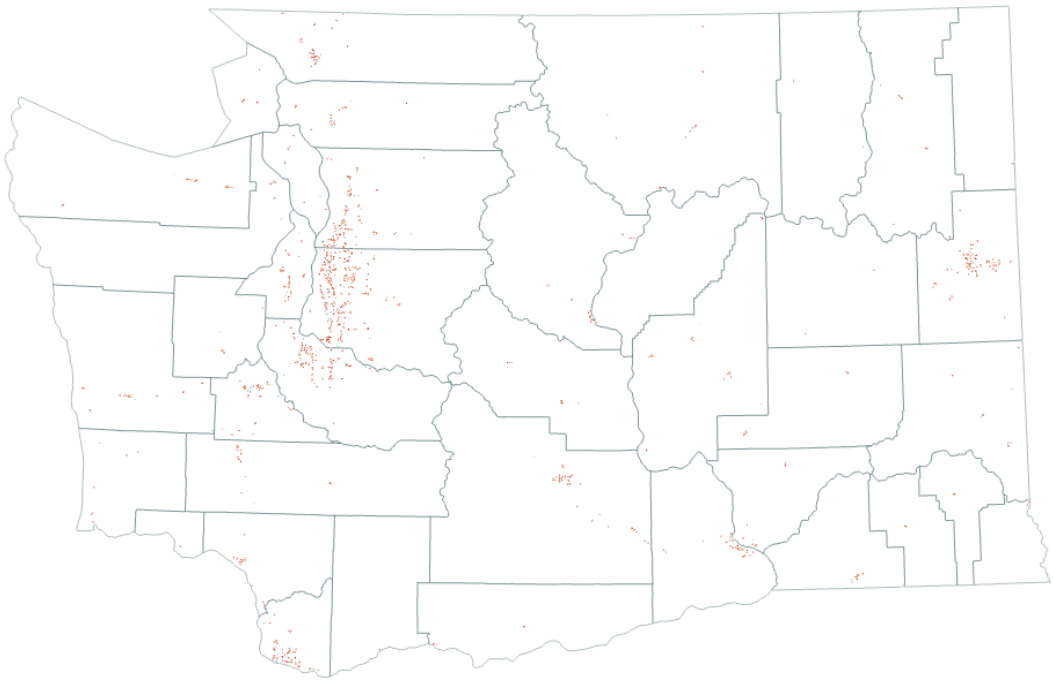
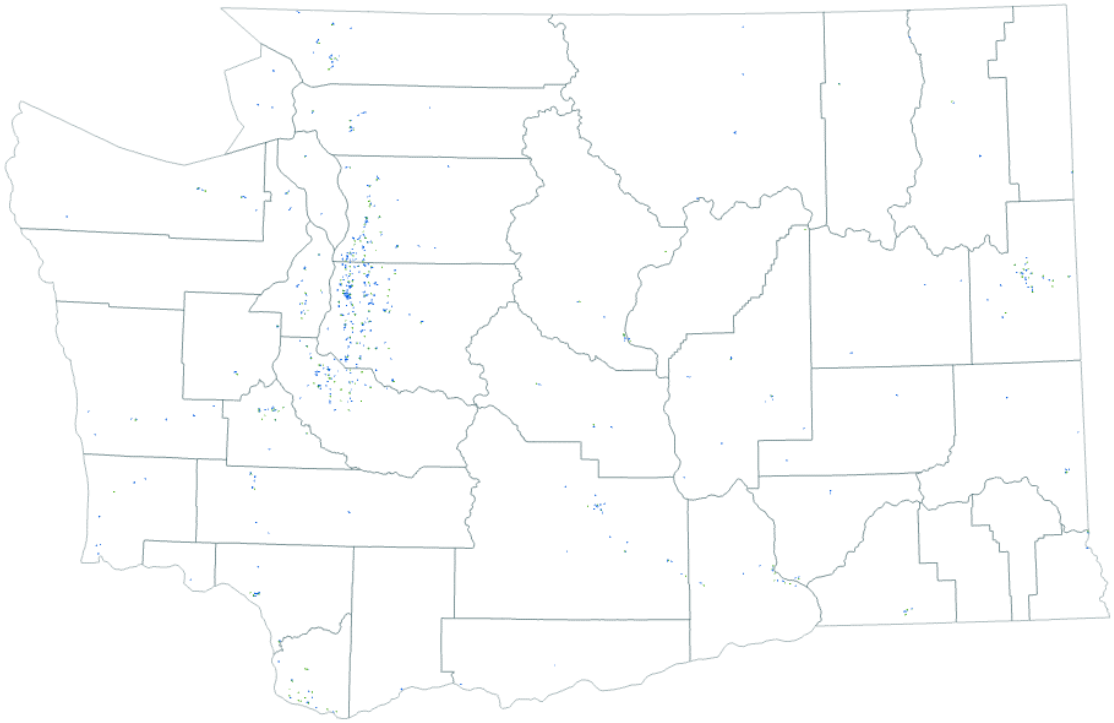


FIGURE 6: AUTHORIZED COLLECTORS, 2021



Evaluation Question 6: Are mail-back distribution locations available in underserved areas?

Mail-back distribution locations are available in moderately underserved areas but regions with the highest need have few mail-back distribution locations.

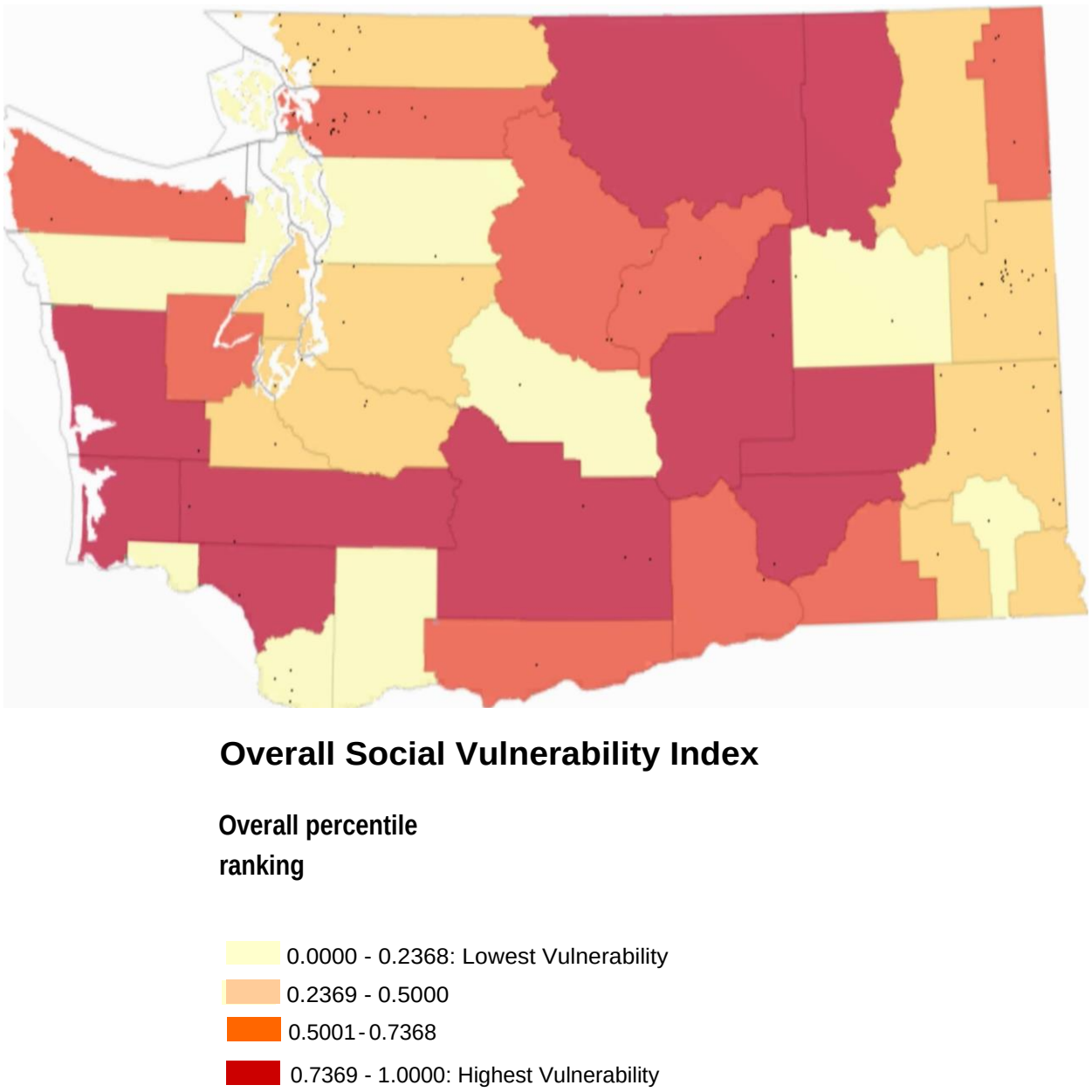
Evidence:

The social vulnerability index is a measure to identify the level of disadvantage within a community (CDC, 2022). The index is a composite score of 15 factors within four themes, socioeconomic status, household composition and disability status, minority status and limited-English-proficient populations, housing and transportation.

The figure below displays the mail-back distribution locations and the social vulnerability index by county. Distribution locations are represented by a circle. The social vulnerability index scores are displayed with color variations on the map. The darker the color, the higher the social vulnerability of the area.

Counties with higher overall social vulnerability index scores had less access to mail distribution centers. Communities in the southern part of the state--Skamania, Klickitat, and Yakima counties--and the northern part of the state--Chelan, Okanogan, and Whatcom—had less access to the mail-back distribution centers. Other areas, on the coast and eastern Washington, also had less access.

Figure 7: Mail-back Distribution Locations by Social Vulnerability, 2021



Sources:
Centers for Disease Control and Prevention/ Agency for Toxic Substances and Disease Registry/ Geospatial Research, Analysis, and Services Program. CDC/ATSDR Social Vulnerability Index 2018 Database Washington
https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html. Accessed on August 30, 2022.
2021 Program Operator Report

Evaluation Question 7: How many mail-back materials were distributed?

The number of mail-back materials distributed to residents increased from 2020 to 2021.

Evidence:

- **Mail-back distribution increased from 2020 to 2021.**

  In 2021, distribution of mail-back materials was largely sent directly to covered entities.

Table 15: Number of mail-back materials distributed by recipient and year

	Residents	Retail Pharmacies	Mail-back Distribution Locations	Total
2020	231	-	809	1040
2021	46200	676	2516	49392

Source: 2020 and 2021 Program Operator Reports

Evaluation Question 8: Are at least 2 collection events/year being held in underserved collection areas not served by supplemental mail-back distribution locations?

No collection events were reported by the program operator in 2020 or 2021.

Evaluation Question 9: What collection methods are people using?

Both collection sites and mail-back packages were used for disposal in 2020 and 2021. No collection events occurred during either year.

Evidence:

- The number of collection sites and mail back packages increased from 2020-2021

Table 16: Disposal methods and pounds collected by year

	Collection Sites		Mail Back Packages	
	# Sites	Lbs	# Packages	Lbs
2020	162	5,405.5	35	10.9
2021	600	158897.2	6858	2878.1

Source: 2020 and 2021 Program Operator Reports

Evaluation Question 10: What safety and security problems occurred during collection, transportation, or disposal of medications?

One safety and security problem has been reported since 2020.

Evidence:

- 1 kiosk security problem was reported by the program operator in 2021.

No safety and security problems were reported by the program operator in 2020. Ones suspected collection receptacle break-in at retail pharmacy was reported in February 2021 by the program operator.

Impact and Outcome Measures

Impact and Outcome Measures will be included in the 2025 evaluation (Tables 4 and 5 of the Measurement Table). These measures assess changes in knowledge, awareness, attitudes, and behaviors of covered entities, in addition to program-related measures, such as changes in program cost, collection and disposal of covered drugs, and overall changes in rates of drug abuse/misuse, overdose, and prescriptions of controlled substances. Baseline data for each indicator is described below.

Evaluation Question 11: Have consumers' knowledge about the risk of abuse, poisonings, and overdoses changed?

Evaluation Question 12: Have consumers' attitudes about the risk of abuse, poisonings, and overdoses changed?

At baseline, assessment of consumers' knowledge about drug abuse/misuse/overdoses were included in the context of the Safe Medication Return Program.

In 2022, residents reported that the medication return program prevented medication misuse, abuse, accidental poisonings and protected children, pets, and the environment.

*Table 17: Residents' knowledge and beliefs about the Washington's Safe Medication Return Program at baseline**

	%	n
It helps prevent medication misuse	78	782
It helps prevent drug abuse	66	660
It helps protect the environment	73	733
It helps decrease medication theft	57	575
It helps prevent accidental poisoning	71	718
It helps keep children and pets safer	76	762
I do not believe the Safe Medication Return Program is important	1	13

*Respondents could choose more than one response
Source: 2022 Statewide Resident Survey

Evaluation Question 13: Have consumers' drug storage behaviors changed?

Baseline data concerning residents' medication storage behaviors are included in the table below.

Table 18: Percent of residents who report safe medication storage behavior, 2022

	Never		Sometimes		Usually	
	%	n	%	n	%	n
Lock up controlled substance prescription medications	49.1	979	20.1	400	30.8	615
Lock up other prescription medications	55.2	1103	23.4	467	21.4	427
Lock up over the counter medications	64.9	1297	20.0	399	15.1	302

Source: 2022 Statewide Resident Survey

Evaluation Question 14: Have consumers' drug disposal behaviors changed?

Evaluation Question 15: Are residents aware of how to safely store medications in the home?

Baseline data concerning residents' medication disposal behaviors are included in the table below.

Table 19: Type of medication disposal reported by residents over the last 12 months (n=1382)

	%	n
Flushed them down the toilet or sink	14.2	196
Mixed them with undesirable substances	13.2	183
Discarded them in garbage without mixing with undesirable substance	25.6	354
Used Safe Medication Return drop-boxes or mailers	28.9	400
Used another drug take-back program	9.8	136
Kept them in an unlocked location	26.3	363
Kept them in a locked and secure location	14.9	206
Gave them to a relative/friend	2.5	35

Source: 2022 Statewide Resident Survey

Evaluation Question 16: Are residents reporting safe medication storage?

Baseline data concerning residents' medication storage behaviors are included in the table below.

Table 20: Percent of residents who report safe medication storage behavior, 2022

	Never		Sometimes		Usually	
	%	n	%	n	%	n
Lock up controlled substance prescription medications	49.1	979	20.1	400	30.8	615
Lock up other prescription medications	55.2	1103	23.4	467	21.4	427
Lock up over the counter medications	64.9	1297	20.0	399	15.1	302

Source: 2022 Statewide Resident Survey

Evaluation Question 17: Has the amount of covered drugs collected increased?

Data for amount of medication collected in 2020 and 2021 are included in the table below.

Table 21: Pounds of covered drugs collected

Year	2020	2021
Pounds Collected	5,416.40	161,775.30

Sources: 2020 Med-Project Annual Report, 2021 Med-Project Annual Report

Evaluation Question 18: Are drugs being diverted from disposal in wastewater or solid waste?

Data on the pounds of drugs collected each year and residents' disposal behaviors are included in the tables below.

Table 22: Pounds of covered drugs collected

Year	2020	2021
Pounds Collected	5,416.40	161,775.30

Sources: 2020 Med-Project Annual Report, 2021 Med-Project Annual Report

Table 23: Percent of residents who disposed of medications in wastewater or solid waste over the last 12 months (n=1382)

	%	n
Flushed them down the toilet or sink	14.2	196
Mixed them with undesirable substances	13.2	183
Discarded them in garbage without mixing with undesirable substance	25.6	354

Source: 2022 Statewide Resident Survey

Evaluation Question 19: Are residents more aware of how to safely store medications in the home?

Evaluation Question 20: Are residents reporting safer medication storage?

Baseline data on residents' medication storage behaviors is included in the table below.

Table 24: Percent of residents who report safe medication storage behavior, 2022

	Never		Sometimes		Usually	
	%	n	%	n	%	n
Lock up controlled substance prescription medications	49.1	979	20.1	400	30.8	615
Lock up other prescription medications	55.2	1103	23.4	467	21.4	427
Lock up over the counter medications	64.9	1297	20.0	399	15.1	302

Source: 2022 Statewide Resident Survey

Evaluation Question 21: What is the rate of youth reporting use of prescription drugs not prescribed to them?

Data from the 2021 Washington Healthy Youth Survey are displayed in the table below. The 2025 Evaluation Report will include data for the 2023 WHYS and analysis of changes over time.

Table 25: Use prescription drugs not prescribed to you

	Grade 8 % (± CI) (n=3,552)	Grade 10 % (± CI) (n=8,413)	Grade 12 % (± CI) (n=5,091)
None	98.6% (±0.4)	98.5% (±0.3)	98.1% (±0.5)
1-2 days	1.0% (±0.4)	1.1% (±0.3)	1.1% (±0.5)
3-5 days	0.1% (±0.1)	0.3% (±0.2)	0.4% (±0.3)
6-9 days	0.1% (±0.1)	0.1% (±0.1)	0.2% (±0.2)
10 or more days	0.1% (±0.1)	0.0% (±0.0)	0.2% (±0.2)
Any use in past 30 days	1.4% (±0.4)	1.5% (±0.3)	1.9% (±0.5)

Source: Washington Healthy Youth Survey, 2021

Evaluation Question 22: What is the rate of you reporting use of pain killers (opioids) to get high?

Table 26: Use a pain killer to get high.

	Grade 8 % % (± CI) (n=6,982)	Grade 10 % (± CI) (n=8,413)	Grade 12 % (± CI) (n=5,091)
None	99.0% (±0.3)	99.0% (±0.2)	98.7% (±0.3)
1-2 days	0.6% (±0.2)	0.6% (±0.2)	0.6% (±0.2)
3-5 days	0.2% (±0.1)	0.2% (±0.1)	0.4% (±0.2)
6-9 days	0.1% (±0.1)	0.1% (±0.1)	0.2% (±0.1)
10 or more days	0.1% (±0.1)	0.1% (±0.1)	0.1% (±0.1)
Any use in past 30 days	1.0% (±0.3)	1.0% (±0.2)	1.3% (±0.3)

Source: Washington Healthy Youth Survey, 2021

Evaluation Question 23: Are residents reporting a reduction in prescription psychotherapeutic misuse?

Data from the 2019-2020 National Survey on Drug Use and Health are displayed in the table below. 2021 data is not available at this time.

Table 27: Misuse of prescription pain medication among people aged 12 or older in Washington; by age group, average estimated numbers (in thousands), 2019 and 2020

	12+	12-17	18-25	26+	18+
Past year prescription pain reliever misuse	267	11	29	228	256

Source: National Survey on Drug Use and Health

Evaluation Question 24: Is there a reduction in rates of reported misuse, abuse and overdoses of prescription and non-prescription medications?

2020 and 2021 data are unavailable. The most current data for overdose hospitalization and overdose death, are from 2017 and 2018, respectively.

Evaluation Question 25: Is there in a reduction in the number of controlled substance users?

2020 and 2021 data on opioid prescriptions is presented in the table below.

Table 28: Opioid prescriptions in the state of Washington by indicator and year.

PMP Indicator	Year	
	2020	2021
Patients Prescribed Any Opioid (Age Group: All Ages)	1,810,983	1,785,490
Patients Prescribed Chronic Opioids (Age Group: All Ages)	531,145	490,830
Patients Prescribed High-dose Chronic Opioids: 120 MME/day (Age Group: All Ages)	45,810	38,616
Patients Prescribed Any Opioid and Sedatives (Age Group: All Ages)	280,090	250,070
New Opioid Patients with Chronic Opioids (Age Group: All Ages)	18,796	16,610

Source: Washington Department of Health, Prescription Monitoring Program

Evaluation Question 26: Is there a reduction in the total amount of controlled substances dispensed?

The number of controlled substances dispensed per year is detailed in the table below.

Table 29: Controlled substances dispensed per year

	2020	2021
Opioids	4798433	4622838
Benzodiazepines	1688472	1636683
Sedatives	625313	559053
Central Nervous System Stimulants	1861157	2083440
Anabolic Stimulants	296085	244481
Other Controlled Substances	294671	328132

Source: Washington Department of Health, Prescription Monitoring Program

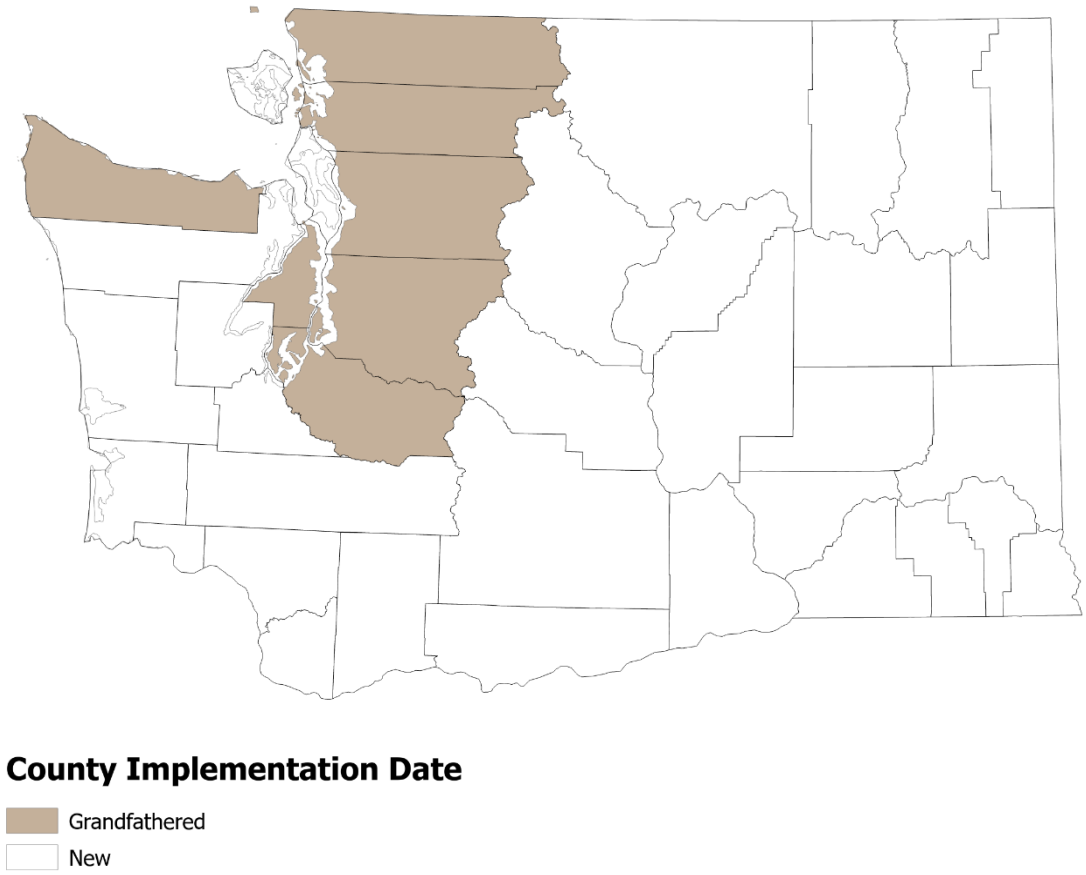
4

Impact and Accessibility of the Program in Grandfathered/New Counties

Grandfathered/New Counties

Chapter 69.48 RCW established the program for 32 counties in 2019 and the remaining seven counties with grandfathered ordinances began operating under the statewide program on November 21, 2021. This chapter addresses differences in program promotion, implementation, accessibility, and impact in counties by implementation date.

Figure 8: Counties by Implementation Date



Program Awareness

Awareness of the program was low among all survey respondents with little variation by county implementation date and type of respondent, with the number of respondents who reported awareness of the program ranging from 40% to 54%.

Evidence:

- Health/vet professionals were less aware of the program as compared to residents.

  Less than half of health/vet professional respondents were aware of the program, regardless of county implementation date. Forty seven percent of professionals from grandfathered counties were aware of the program compared to 40.3 of professionals from new counties.

  Fifty four percent of residents from the new counties were aware of the program and less than half, 48.2%, of respondents residing in the grandfathered counties were aware of the program.

Table 30: Percent of health and veterinary professionals and residents aware of WA Safe Medication Return Program by program implementation date.

	Health/Vet Professionals (n=417)		Residents (n=1006)	
	%	n	%	n
Grandfathered	47.4	273	48.2	627
New	40.3	144	54.1	379

Sources: 2022 Surveys of Pharmacists, Veterinarians, and Healthcare Providers, 2022 Statewide Resident Survey

The Media and Outreach Campaigns were less effective in creating awareness of the program than professional or personal communications.

Among professionals and residents from both grandfathered and new counties, media campaigns were not the primary method that respondents learned about the program.

Evidence:

- Employers and colleagues were the most common source of communication about the program for professionals from both the grandfathered and new counties.

  Thirty three percent of professionals from the new counties and 28.9% of those in the grandfathered counties reported learning about the program from communication with their employers.

  Health professionals' awareness of the program from outreach and media campaigns was low across all counties, regardless of county implementation date, ranging from 2.1% to 14.7%.

*Table 31: Percent of health/veterinary professionals reporting awareness of the program by communication source and program implementation date.**

	Grandfathered n=273		New n=144	
	%	n	%	n
Poster	11.7	32	13.2	19
Billboard	1.8	5	2.1	3
Social Media	7.7	21	8.3	12
Website	14.7	40	13.9	20
TV	8.1	22	6.3	9
Colleagues	24.9	68	22.2	32
Employer	28.9	79	32.6	47
Professional Society	23.8	65	19.4	28
Licensing Organizations	12.8	35	13.9	20

*Respondents could choose more than one response

Sources: 2022 Surveys of Pharmacists, Veterinarians, and Healthcare Providers

- Approximately 60% of professionals in both the grandfathered and new counties reported that they had not received any personal communication or program materials from outreach campaigns.

*Table 32: Percent of health/veterinary professionals reporting receiving each type of outreach material by program implementation date. **

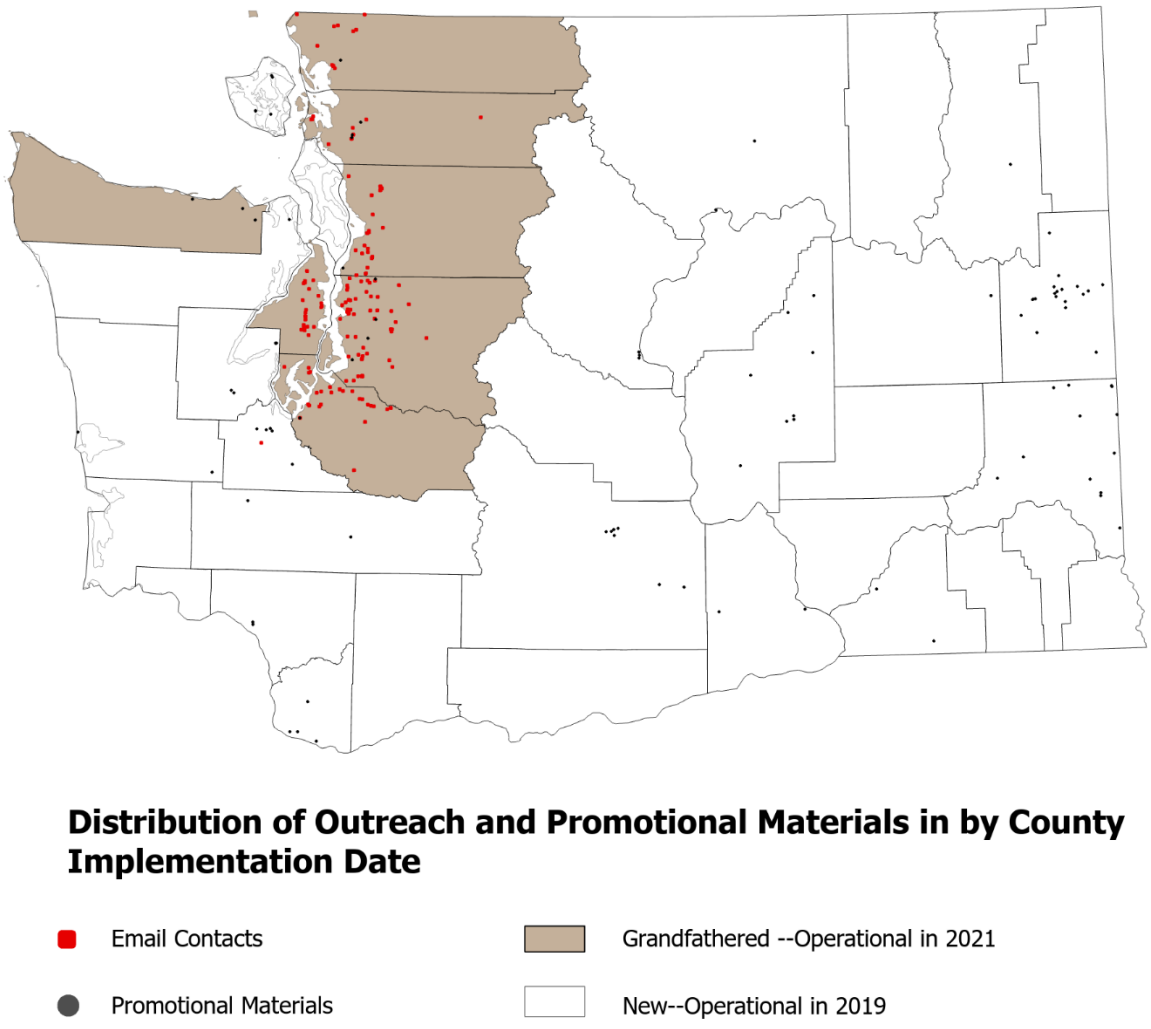
	Grandfathered n=273		New n=144	
	%	n	%	n
Brochures or flyers	14.3	39	13.2	19
Poster	8.8	24	9.7	14
Email	21.4	58	16.8	27
In-person/phone	8.4	23	11.8	17
Have not received any material	59.0	161	60.4	87

*Respondents could choose more than one response

Sources: 2022 Surveys of Pharmacists, Veterinarians, and Healthcare Providers

- Of the 107 locations that were sent promotional materials by the program operator in 2021, 10.3%, or 11, were located in grandfathered counties.
- **Of the 67 email contacts made with healthcare and veterinary locations, all were in grandfathered counties.**

Figure 9: Distribution of Outreach and Promotional Materials by County Implementation Date



Residents from both grandfathered and new counties became aware of the program from a variety of sources. Residents reported that health professionals were the most common source of communication about the program.

Evidence

- Twenty percent of residents from new counties and 18.6% from grandfathered counites reported they had heard about the program from a health professional.
- The number of respondents who reported awareness of the program from the public outreach campaign ranged from 3.0% to 15.2% for those from grandfathered counties compared to 4.9% to 16.3% for those from new counties.
- Social media and TV were the most common modes of campaign outreach that respondents reported.
- 21.9% (285) of respondents from grandfathered counties and 21.3% (149) from new counties indicated awareness of the program from only one of the public outreach campaigns.
- Only 4.6% (n=60) grandfathered and 4.9% (n=34) reported hearing about the program from both media campaigns and health professionals.

*Table 33: Residents reporting awareness through public outreach campaigns and communication with health professionals, percent, and frequency by county implementation date**

	Grandfathered n=273		New n=144	
	%	n	%	n
Poster	5.7	74	10.8	76
Billboard	3.0	39	4.9	34
Social Media	13.1	170	16.3	114
Website	8.5	110	7.1	50
TV	15.2	198	16.1	113
Radio	5.3	69	9.1	64
Family or friend	10.2	133	12.6	88
Health professionals	18.6	242	20.7	145

*Respondents could choose more than one response

Sources: 2022 Statewide Resident Survey

Health and veterinary professionals in the new counties reported less awareness of the program components compared to their peers in the grandfathered counties.

*Table 34: Percent of health/veterinary professionals reporting awareness of each component of the WA Safe Medication Return Program by county implementation date**

	Grandfathered n=273		New n=144	
	%	n	%	n
Kiosks	69.0	243	31.0	109
Mailers	65.7	94	34.3	49
Take-back Events	64.9	159	35.1	86

*Respondents could choose more than one response
Sources: 2022 Statewide Resident Survey

Program Utilization

Residents from counties categorized by implementation date did not differ in their utilization of the program but residents from the new counties who had used the program reported lower satisfaction and lower intention to use the program in the future.

Evidence

- 38.8% of respondents in the grandfathered counties and 41.2% of respondents in the new counties reported that they had used the Program.
- Of those respondents who had disposed of medications in kiosks, mailers, or at take-back events, 66.3% of respondents from the grandfathered counties and 57.1% of respondents from the new counties reported that they liked the program.
- Of respondents who had used the program, 71.2% of respondents from the grandfathered counties and 59.0% of respondents from the new counties reported that they would use it again.

*Table 35: Residents' experiences with using the program by county implementation date**

	Grandfathered n=243		New n=156	
	%	n	%	n
Easy to locate a Safe Medication Return Program drop-box or mailer	78.2	190	78.2	122
Liked using the Safe Medication Return Program	66.3	161	57.1	89
Would use the Safe Medication Return Program again	71.2	173	59.0	92

*Respondents could choose more than one response
Source: 2022 Statewide Resident Survey

Respondents from both grandfathered and new counties reported higher utilization of kiosks located at pharmacies. Respondents from new counties reported higher utilization of kiosks at police departments and medical clinics compared to respondents from the other counties.

Evidence

- 24.3% of respondents from grandfathered counties and 30.8% of respondents from new counties reported using kiosks at police departments.
- 30.5% of respondents from grandfathered counties and 24.4% of respondents from new counties reported using kiosks at medical centers or clinics.

*Table 36: Location of drop-boxes that residents reported using by county implementation date**

	Grandfathered n=243		New n=156	
	%	n	%	n
Pharmacy	66.3	161	60.9	95
Medical Center or Clinic	30.5	74	24.4	38
Hospital	22.6	55	24.4	38
Police Department	24.3	59	30.8	48
Dental office	2.9	7	5.1	8
Substance use disorder treatment program	6.6	16	3.2	5
Long-term care facility	4.9	12	3.2	5

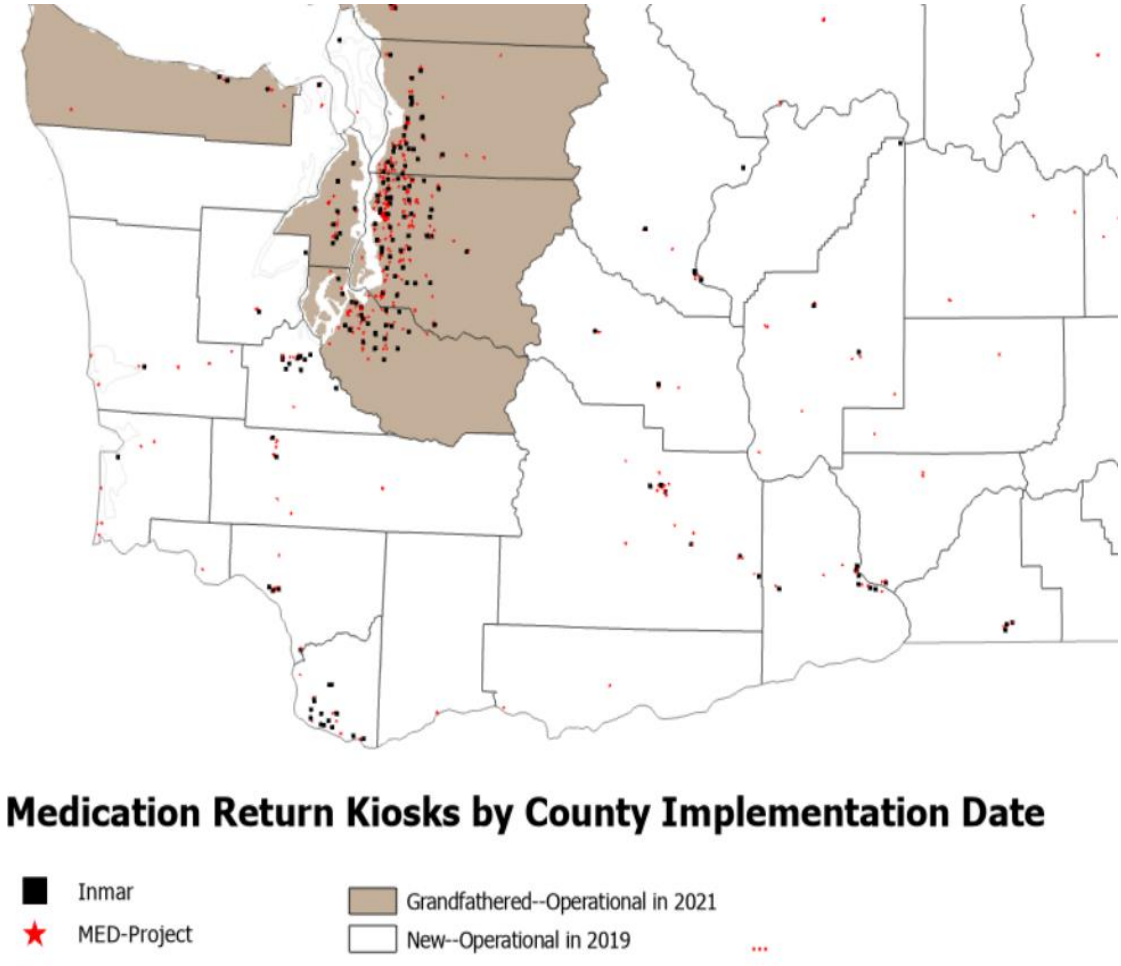
*Respondents could choose more than one response
Source: 2022 Statewide Resident Survey

Most of the kiosks were in grandfathered counties.

Evidence

- 66.1% of kiosks were located in grandfathered counties.
- Two new counties, Garfield and Columbia, did not have any kiosks.

Figure 10: Locations of Medication Return Kiosks by Implementation Date



Communication of Safe Medication Disposal and Storage Methods

The majority of respondents from both grandfathered and new counties reported that no health professionals had discussed medication disposal or storage with them. Pharmacists were identified as most often provided disposal/storage information to respondents from all counties with respondents from grandfathered counties reporting higher frequencies of communication as compared to respondents from new counties.

Evidence

- 68.3% of respondents from grandfathered counties and 69.5% of respondents from new counties reported that they had not received any information about medication disposal from a health professional.
- 61.4% of respondents from grandfathered counties and 55.9% of respondents from new counties reported that they had not received any information about medication storage from a health professional.
- 30.7% of respondents from grandfathered counties reported that a pharmacist had discussed safe medication storage methods, compared to 24.2% of respondents from new counties.

*Table 37: Community respondents who reported that a health professional communicated with them about medication disposal by county implementation date.**

	Grandfathered n=1300		New n=701	
	%	n	%	n
Health care provider	15.9	207	19.5	137
Pharmacist	21.0	273	20.0	140
Veterinarian	2.5	33	2.6	18
Have not received any information	68.3	615	69.5	765

*Respondents could choose more than one response
Source: 2022 Statewide Resident Survey

*Table 38: Community respondents who reported that a health professional communicated with them about medication storage county implementation**

	Grandfathered		New	
	%	n	%	n
Health care provider	19.6	255	22.1	155
Pharmacist	30.7	399	24.2	240
Veterinarian	4.4	57	4.4	31
Have not received any information	61.4	798	55.9	392

*Respondents could choose more than one response
Source: 2022 Statewide Resident Survey

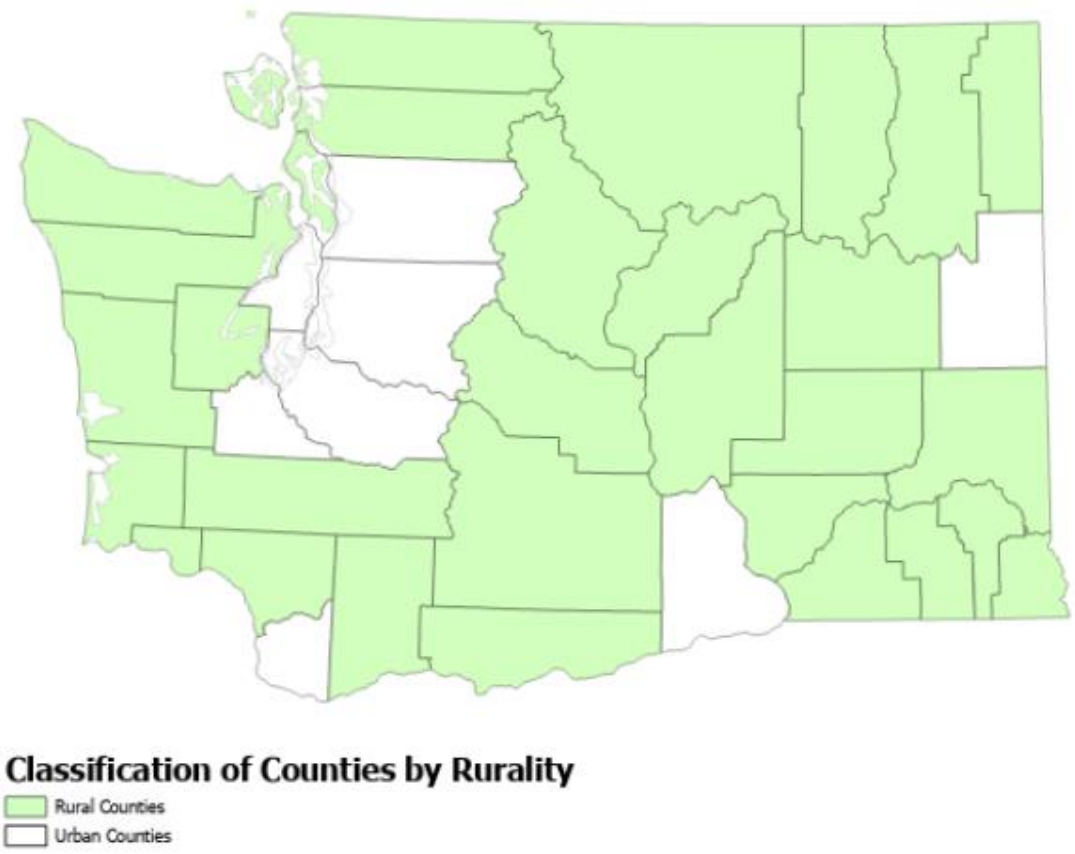
5

Impact and Accessibility of the Program in Rural/Urban Counties

Rural/Urban Differences

In order to analyze differences based on county size, rural/urban county classification for counties was coded based on the Washington DOH's categorization of counties (DOH, 2017). Of the 39 counties in Washington, 31 were categorized as rural and eight were categorized as urban.

Figure 11: Rural and Urban Counties



Program Awareness

Awareness of the program was low among all survey respondents with little variation by county rurality and type of respondent, with the number of respondents who reported awareness of the program ranging from 44% to 52%.

Evidence:

- Health/vet professionals were less aware of the program as compared to residents.

  Less than half of health/vet professional respondents were aware of the program, regardless of county rurality.

  Fifty two percent of residents from rural counties were aware of the program and less than half, 48.8%, of respondents residing in the urban counties were aware of the program.

Table 39: Percent of health and veterinary professionals and residents aware of WA Safe Medication Return Program by county rurality.

	Health/Vet Professionals (n=417)		Residents (n=1006)	
	%	n	%	n
Urban	44.2	322	48.8	537
Rural	46.6	95	52.1	469

Sources: 2022 Surveys of Pharmacists, Veterinarians, and Healthcare Providers, 2022 Statewide Resident Survey

The Media and Outreach Campaigns were less effective in creating awareness of the program than professional or personal communications.

Among professionals and residents from both rural and urban counties, media campaigns were not the primary method that respondents learned about the program. Professionals in rural counties reported awareness of the program through posters.

Evidence:

- Employers and colleagues were the most common source of communication about the program for professionals from both urban and rural counties.

  Thirty-two percent of professionals from the urban counties and 25.3% of those from rural counties reported learning about the program from communication with their employers.

  Fewer respondents in rural counties, 15.8%, reported learning about the program professional organizations, compared to 24.2% of respondents in urban counties.

  Health professionals' awareness of the program from outreach and media campaigns was low across all counties, regardless of county rurality, ranging from 0 to 16.8%

Seventeen percent of health/veterinary professionals from rural counties reported awareness of the program from posters compared to 10.9% of respondents from urban counties.

*Table 40: Percent of health/veterinary professionals reporting awareness of the program by communication source and program by county rurality.**

	Urban n=322		Rural n=95	
	%	n	%	n
Poster	10.9	24	16.8	16
Billboard	2.5	8	0	0
Social Media	8.1	26	7.4	7
Website	14.6	47	13.7	13
TV	9.0	29	2.1	2
Colleagues	24.5	79	22.1	21
Employer	31.7	102	25.3	24
Professional Society	24.2	78	15.8	15
Licensing Organizations	12.7	41	14.7	14

*Respondents could choose more than one response

Sources: 2022 Surveys of Pharmacists, Veterinarians, and Healthcare Providers

- Rural respondents to the health/veterinary professionals surveys reported receiving fewer outreach materials compared to those from urban counties.

*Table 41: Percent of health/veterinary professionals reporting receiving each type of outreach material county rurality **

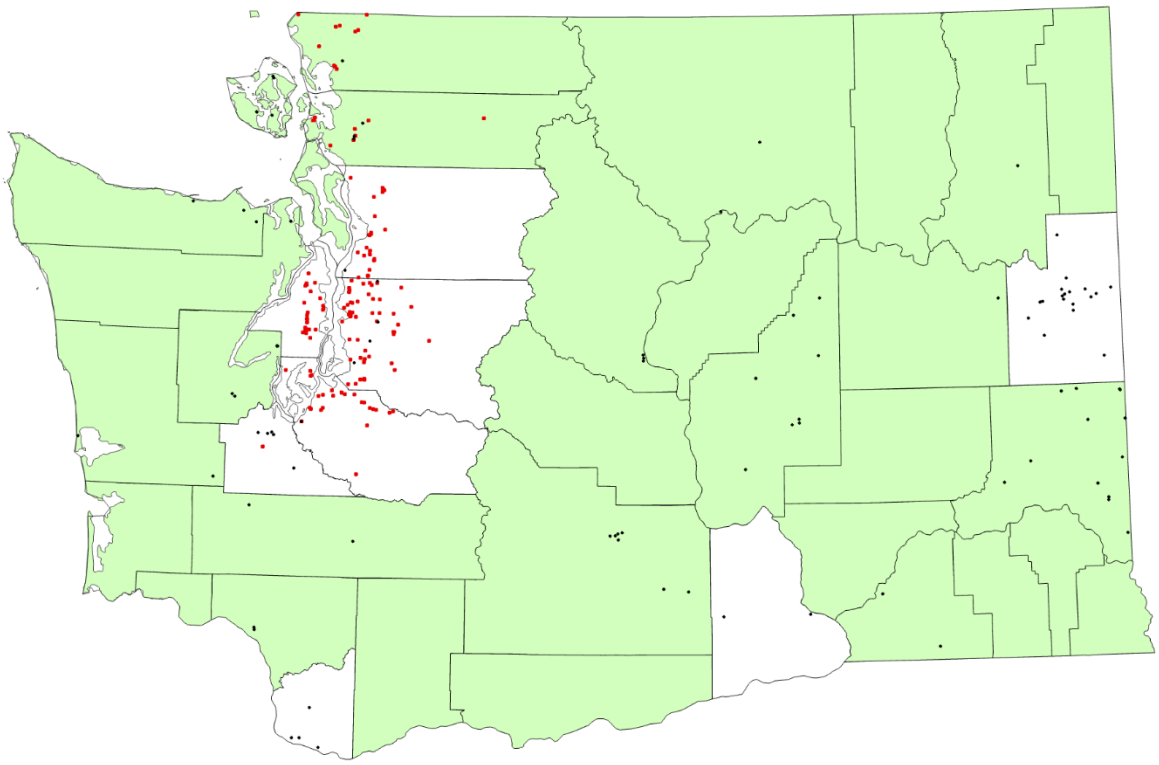
	Urban n=322		Rural n=95	
	%	n	%	n
Brochures or Flyers	13.4	43	15.8	15
Poster	8.7	28	10.5	10
Email	21.4	69	16.8	16
In-person/phone	7.8	25	15.8	15
Have not received any material	60.6	195	55.8	53

*Respondents could choose more than one response

Sources: 2022 Surveys of Pharmacists, Veterinarians, and Healthcare Providers

- Of the 107 locations that were sent promotional materials by the program operator in 2021, 64.5% or 69 were in rural counties.
- **Of the 191 email contacts made with all types of organizations, including government agencies, health/veterinary clinics and hospitals, and others, only 25, or 13.1% were in rural counties.**

Figure 11:



Residents from both urban and rural counties became aware of the program from a variety of sources. Residents reported that health professionals were the most common source of communication about the program. Rural residents reported awareness of the program from posters more frequently than urban residents. Web-based campaigns, e.g. website and social media, were reported by both rural and urban residents as sources of information about the program.

Evidence

- Thirty-eight percent of residents from urban counties and 38.6% from rural counies reported they had heard about the program from a health professional.
- Social media, TV, and posters were the most common modes of communication from the outreach campaign that rural residents reported at 29.4%, 28.6%, and 18.1%, respectively.
- TV, social media, and websites were the most common modes of communication from the outreach campaign that urban residents reported at 33.0%, 27.2%, and 18.2% respectively.

*Table 42: Residents reporting awareness through public outreach campaigns and communication with health professionals, percent, and frequency by county rurality**

	Urban n=537		Rural n=469	
	%	n	%	n
Poster	12.1	65	18.1	85
Billboard	6.9	37	7.7	36
Social Media	27.2	146	29.4	138
Website	18.2	98	13.2	62
TV	33.0	177	28.6	134
Radio	11.4	61	15.4	72
Family or friend	21.6	116	22.4	105
Health professionals	38.4	206	38.6	181

*Respondents could choose more than one response
Sources: 2022 Statewide Resident Survey

Less than a quarter of health/veterinary professionals in rural counties reported awareness of any component of the program.

Table 43: Percent of health/veterinary professionals reporting awareness of each component of the WA Safe Medication Return Program by county rurality

	Urban		Rural	
	%	n	%	n
Kiosks	78.1	275	21.9	77
Mailers	83.2	119	16.8	24
Take-back Events	75.9	186	24.1	59

*Respondents could choose more than one response
Sources: 2022 Statewide Resident Survey

Program Utilization

More respondents from rural counties reported using the program as compared to those from urban counties. Residents from rural counties reported less satisfaction with the program and less intention to use it again compared to those from urban counties.

Evidence

- 43.3% of rural residents and 36.5% of urban residents reported that they had used the program.
- Of those respondents who had disposed of medications in kiosks, mailers, or at take-back events, 56.2% of respondents from rural counties and 69.4% of respondents from urban counties reported that they liked the program.
- Of respondents who had used the program, 60.6% of respondents from rural counties and 72.4% of respondents from urban counties reported that they would use it again.

*Table 44: Residents' experiences with using the program by county rurality**

	Urban n=203		Rural n-196	
	%	n	%	n
Easy to locate a Safe Medication Return Program drop-box or mailer	79.3	151	77.0	161
Liked using the Safe Medication Return Program	69.4	136	56.2	114
Would use the Safe Medication Return Program again	72.4	142	60.6	123

*Respondents could choose more than one response
Source: 2022 Statewide Resident Survey

Respondents from both urban and rural counties reported higher utilization of kiosks located at pharmacies. Respondents from rural counties reported higher utilization of kiosks at police departments compared to respondents from the other counties.

Evidence

- 71.4% of respondents from urban counties and 57.1% of those from rural counties reported using kiosks at pharmacies.
- 34.5% of respondents from rural counties and 18.9% of respondents from urban counties reported using kiosks at police departments.
- 32.7% of respondents from urban counties and 23.6% of respondents from rural counties reported using kiosks at medical centers or clinics.

*Table 45: Location of drop-boxes that residents reported using by county rurality**

	Urban		Rural	
	%	n	%	n
Pharmacy	71.4	140	57.1	116
Medical Center or Clinic	32.7	64	23.6	48
Hospital	24.5	48	22.2	45
Police Department	18.9	37	34.5	70
Dental office	3.1	6	4.4	9
Substance use disorder treatment program	8.7	17	2.0	4
Long-term care facility	5.1	10	3.4	7

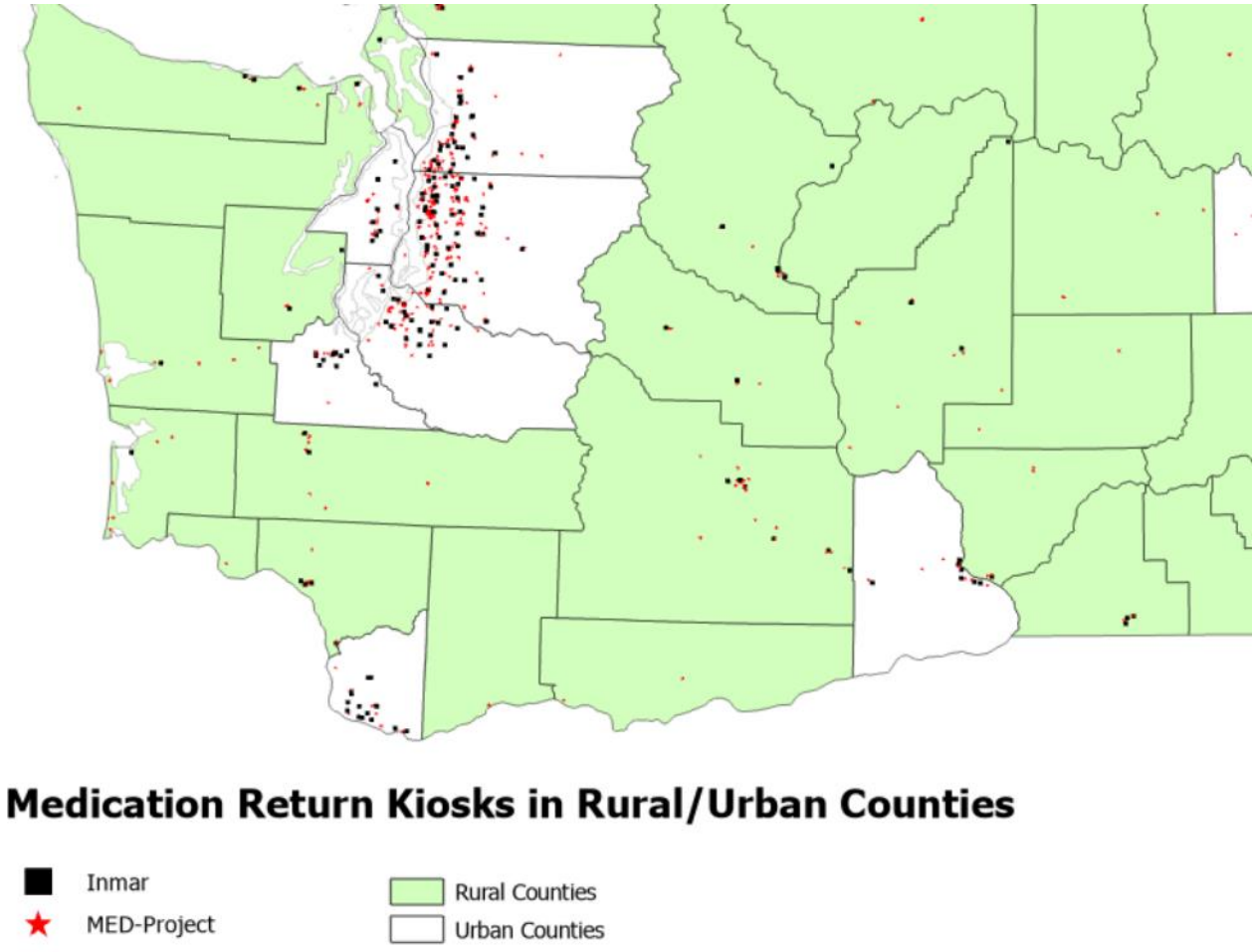
*Respondents could choose more than one response
Source: 2022 Statewide Resident Survey

Fewer kiosks were in rural counties.

Evidence:

- 32.3% of kiosks were in rural counties.
- Two rural counties, Garfield and Columbia, did not have any kiosks.

Figure 12: Locations of Medication Return Kiosks by County Rurality



Communication of Safe Medication Disposal and Storage Methods

The majority of respondents from both urban and rural counties reported that no health professionals had discussed medication disposal or storage with them. Pharmacists were identified as most often provided disposal/storage information to respondents from both rural and urban counties.

Evidence

- 69.5% of respondents from urban counties and 68.3% of respondents from rural counties reported that they **had not received** any information about medication disposal from a health professional.
- 60.6% of respondents from urban counties and 58.0% of respondents from rural counties reported that they had not received any information about medication storage from a health professional.
- 32.6% of respondents from rural counties reported that a pharmacist had discussed safe medication storage methods, compared to 31.4% of respondents from urban counties.

*Table 46: Community respondents who reported that a health professional communicated with them about medication disposal by county rurality.**

	Urban n=110		Rural n=901	
	%	n	%	n
Health care provider	17.0	187	17.4	157
Pharmacist	21.0	231	20.2	182
Veterinarian	2.7	30	2.3	21
Have not received any information	69.5	765	68.3	615

*Respondents could choose more than one response
Source: 2022 Statewide Resident Survey

*Table 47: Community respondents who reported that a health professional communicated with them about medication storage by county rurality**

	Urban		Rural	
	%	n	%	n
Health care provider	19.7	217	21.4	193
Pharmacist	31.4	345	32.6	294
Veterinarian	4.5	49	4.3	39
Have not received any information	60.6	667	58.0	523

*Respondents could choose more than one response
Source: 2022 Statewide Resident Survey

6

Conclusions and Recommendations

Summary

Lack of Awareness about the Program

Awareness of the Washington Safe Medication Return Program was low among most respondents. Healthcare providers and veterinarians reported being largely unaware of the Washington Safe Medication Return Program with 33.3% and 36.0%, respectively, indicating that they were aware of the program. Half of the respondents to the survey of residents reported that they were unaware of the program.

Veterinarians and healthcare providers reported less awareness of program components. Only 26.8% of healthcare providers and 17.5% of veterinarians were aware of kiosks and 9.1% and 2.2%, respectively, reported awareness of medication return mailers.

Professional and Patient-Provider Communication as Sources of Information

Communication with peers and professionals were the most important sources of information about the program rather than public media and professional outreach campaigns with 38.5% of residents reporting that they heard about the program from health professionals and 21.7% to 44.8% of pharmacists and healthcare providers reporting that they heard about the program from a colleague or employer.

Despite outreach campaigns to pharmacists, veterinarians, and healthcare providers, between 41.2% and 73.3% of respondents reported not receiving written materials from the program operator. Outreach through emails and distribution of promotional materials have been focused on the grandfathered counties and in urban counties.

Residents reported that they became aware of the program from a health professional, yet among all respondents to the statewide survey, both those who had heard of the program and those who had not, few reported that they had received information about medication storage or disposal from a health or veterinary professions.

Health professionals and veterinarians are important sources of information for residents, yet they reported low rates of awareness of the program and its components. In addition, 62.7% of veterinarians and 55.9% of health providers reported that they never or rarely provide information to patients about appropriate methods for medication disposal and 52.1% and 44.2%, respectively, never or rarely provide to patients/pet owners about disposal of controlled substances.

Pharmacists as Information Messenger

Residents reported that pharmacists were the health professionals who discussed safe medication storage and disposal with them more often than any other professional, 31.9% and 20.6%, respectively. In addition, among those who had used a medication return kiosk, 64.2% of residents reported using one at a pharmacy.

The Program is Accessible but Varies by County Implementation Date and Rurality

Collection sites are available throughout the state. Residents reported that the medication return drop-boxes were accessible, easily to use, and would use them again. Slightly more than thirty-three percent of kiosks were located in new counties and 32.3% were in rural counties. Counties with higher overall social vulnerability index scores had less access to mail distribution centers. Communities in the southern part of the state--Skamania, Klickitat, and Yakima counties--and the northern part of the state--Chelan, Okanogan, and Whatcom—had less access to the mail-back distribution centers. Other areas, on the coast and eastern Washington, also had less access.

Although residents report access to kiosks, 32.2% of pharmacies and 55.1% of law enforcement agencies were authorized collection sites in 2021.

Lower Satisfaction among Residents from New Counties and Rural Counties

Of those respondents who had disposed of medications in kiosks, mailers, or at take-back events, 57.1% of respondents from the new counties reported that they liked the program and 59.0% said that they would use it again. Among rural respondents, 56.2% reported that they liked using the program and 60.6% reported that they would use it again.

Recommendations

- Conduct targeted outreach to health providers and veterinarians to increase dissemination of information about the Washington Safe Medication Return Program.
- Focus on rural areas and new counties.
- Increase the number of authorized sites throughout the states.

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