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Community Rounds Workshop Series

Expanding Harm Reduction Access in the US for Rural and Other Underserved Populations

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Disclosures

There is nothing to disclose for this UVM CORA Community Rounds session.

Potential Conflict of Interest:

All potential conflicts of Interest have been resolved prior to the start of this program.

All recommendations involving clinical medicine made during this talk were based on evidence that is accepted within the profession of medicine as adequate justification for their indications and contraindications in the care of patients.

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Objectives

- Discuss the need for novel approaches for distributing harm reduction supplies
- Describe benefits and challenges regarding syringe service programs
- Outline specifics of programs that mail out harm reduction supplies, including naloxone
- Discuss the impact of such programs on members of rural and other underserved populations





The Study of Health and Harm Reduction Services for People who Use Drugs

- People who use drugs are incredibly stigmatized, especially within healthcare, with many avoiding medical services until it becomes severe---this is especially true with rural populations.
- My research has focused primarily on how to improve health services and harm reduction delivery to people who use drugs
- Much of my work is
 1. Understanding how health and harm reduction services are provided to people who use drugs
 2. Evaluating innovative ways of delivering services to improve engagement and experience, and
 3. Estimating associated economic costs and benefits of implementing these innovative services

Current Research Projects

- Characterize different types of health models at syringe services programs (SSPs)
- Determine what syringe service clients want when it comes to where and how they receive health services
- Expand access to harm reduction services
 - Overdose prevention centers
 - Mail-based harm reduction programs

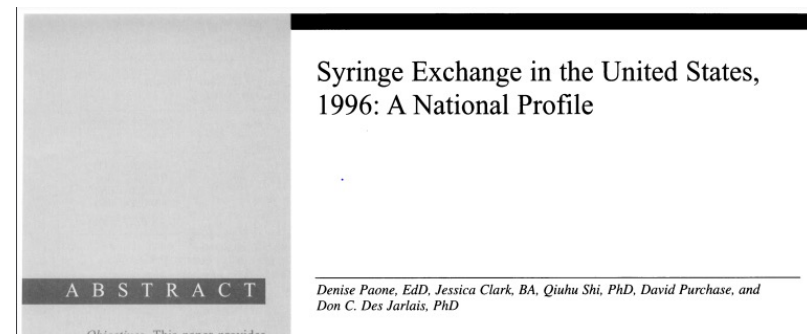




- In 1984: the CDC recommends avoiding injection drug use and reducing needle sharing to prevent HIV
- The first syringe services program was started in 1983 by Jon Stuen-Parker, a Yale student and person who formerly used heroin. He was arrested over 20 times for his work.
- The first legal programs (privately funded) began in 1991
- Provides new syringes, safe injection supplies, and naloxone to prevent HIV, Hepatitis c, and opioid overdose fatalities

Nearly 30 years of science shows....

- Syringe services are safe, effective, and cost-saving
- Doesn't increase illegal drug use or crime
- Reduces the transmission of HIV/AIDS, hepatitis c, and other infections
- Reduces opioid overdose fatalities
- Syringe exchange users are 5x more likely to enter drug treatment and 3x more likely to stop using drugs than people who don't use the program



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International Journal of Epidemiology 2014;43:235-248
doi:10.1093/ije/dyt243

HIV/AIDS

Are needle and syringe programmes associated with a reduction in HIV transmission among people who inject drugs: a systematic review and meta-analysis

Esther J Aspinall,^{1,2*} Dhanya Nambiar,³ David J Goldberg,² Matthew Hickman,⁴ Amanda Weir,^{1,2} Eva Van Velzen,² Norah Palmateer,² Joseph S Doyle,^{3,5,6} Margaret E Hellard^{3,5,6} and Sharon J Hutchinson^{1,2}

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Despite this evidence, many places do not have syringe services available

- Local policies can limit where and how syringe services programs can be established
 - Policies that limit opening SSPs to a certain city area usually impacts rural regions the most, with people in those areas having to drive long distances to urban city centers to receive harm reduction
 - For example, a state law in West Virginia was passed in 2021 that requires approval from the state and a “one-to-one” model of syringe distribution. Several programs subsequently closed.
- Funding restrictions are common barriers, with limitations on how funding can be used

Other challenges to syringe services

- NIMBY (“Not in my backyard”) attitudes from community members
 - Several studies in rural regions have shown that community members are likely to have negative views of harm reduction
- Lack of support from law enforcement
- Local policies that prevent carrying syringes (drug paraphernalia laws) can prevent the use of syringe exchange
 - Minnesota became the first state to legalize all forms of drug paraphernalia!



Harm Reduction in Rural Settings

- Research has traditionally shown that SSP access is low in rural settings, with most people obtaining supplies from pharmacy or through other means (i.e., friends, dealer ,etc).
 - Pharmacy access can be very unreliable
- Limited hours, disruptions to services (i.e., closures), lack of transportation/distance, fear of law enforcement, and/or stigma may prevent direct access to SSPs

Why do we need to improve harm reduction access in rural settings?

- Record high opioid overdose fatalities in US
- A study from 2016 identified 220 counties that were highest risk for HIV and HCV outbreaks resulting from injection drug use, and the majority were rural counties
 - From 2010-2018 there was a large proportional increase in HIV diagnoses of people who inject drugs in the 220 counties (167%)
 - We still see HIV outbreaks among people who inject drugs as recently as this past year

In West Virginia, an HIV outbreak persists as officials push back against containment efforts

Political winds in the state blow against efforts to control an expanding HIV outbreak

By TAYLOR SISK

PUBLISHED DECEMBER 19, 2022 4:34PM (EST)

Amid urban outbreaks, signs point to HIV spread in rural West Virginia

By Quenton King Mountain State Spotlight Apr 28, 2022

Van Handel MM, Rose CE, Hallisey EJ, et al. County-level vulnerability assessment for rapid dissemination of HIV or HCV infection among person who inject drugs, United States. *J Acquir Immune Defic Syndr.* 2016;73:323–331.

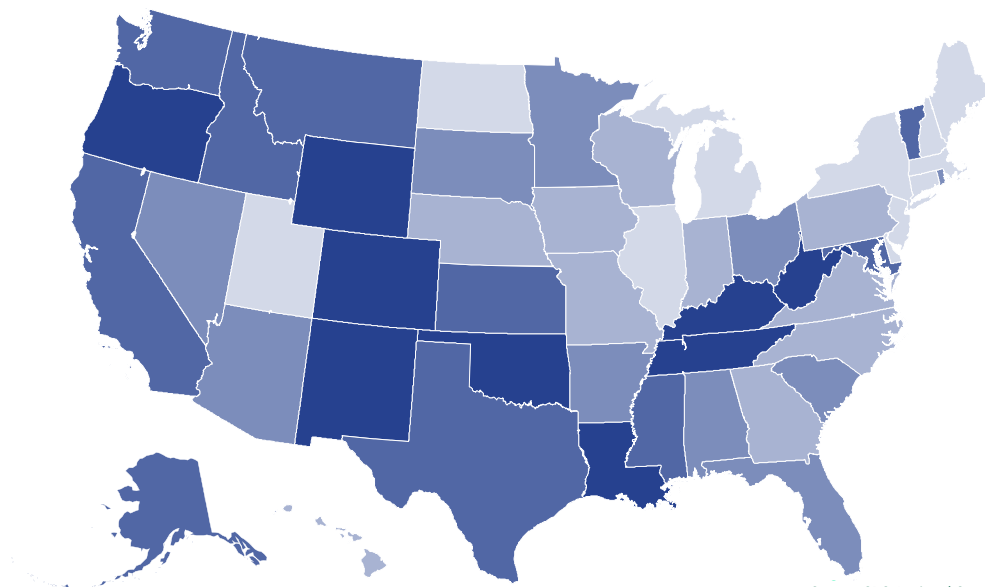
Lyss, Sheryl B. MD, MPH^{a,b}; Zhang, Tianchi MPH^c; Oster, Alexandra M. MD^{a,b}. Brief Report: HIV Diagnoses Among Persons Who Inject Drugs by the Urban-Rural Classification—United States, 2010–2018. *JAIDS Journal of Acquired Immune Deficiency Syndromes* 88(3):p 238-242, November 1, 2021. | DOI: 10.1097/QAI.0000000000002769



Why do we need to improve harm reduction access in rural settings? (Cont.)

- From 2016 to 2020, the rate of acute HCV incidence in rural areas has increased by approx. 30%
- Acute HCV incidence remains higher for rural regions than urban regions as of 2020 (1.7 per 100,000 vs. 1.4 per 100,000)

Rates* of death with hepatitis C virus infection listed as a cause of death† among residents, by state or jurisdiction United States, 2020



Cases/100,000 Population

- 0.00–2.34
- 2.35–2.65
- 2.66–3.50
- 3.51–5.54
- 5.55–10.28

Color Key	Death/100,000 Population	State or Jurisdiction
	0.00–2.34	IL, DE, CT, NH, NJ, ME, NY, MA, MI, UT, ND
	2.35–2.65	IA, GA, PA, MO, WI, NE, IN, VA, HI, NC
	2.66–3.50	AL, NV, SD, MN, OH, FL, SC, AZ, AR, RI
	3.51–5.54	KS, MD, ID, MS, TX, WA, CA, VT, AK, MT
	5.55–10.28	LA, WV, TN, CO, KY, WY, NM, OR, DC, OK

* Rates are age-adjusted per 100,000 US standard population in 2000 using the following age group distribution (in years): <1, 1–4, 5–14, 15–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, and ≥85. For age-adjusted death rates, the age-specific death rate is rounded to one decimal place before proceeding to the next step in the calculation of age-adjusted death rates for NCHS Multiple Cause of Death on CDC WONDER. This rounding step may affect the precision of rates calculated for small numbers of deaths. Missing data are not included.

† Cause of death is defined as one of the multiple causes of death and is based on the International Classification of Diseases, 10th Revision (ICD-10) codes B17.1, and B18.2 (hepatitis C).

Source: CDC, National Center for Health Statistics, Multiple Cause of Death 1999–2020 on CDC WONDER Online Database. Data are from the 2016–2020 Multiple Cause of Death files and are based on information from all death certificates filed in the vital records offices of the fifty states and the District of Columbia through the Vital Statistics Cooperative Program. Deaths of nonresidents (e.g., nonresident aliens, nationals living abroad, residents of Puerto Rico, Guam, the Virgin Islands, and other US territories) and fetal deaths are excluded. Numbers are slightly lower than previously reported for 2016 due to NCHS standards which restrict displayed data to US residents. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on January 13, 2022. CDC WONDER dataset documentation and technical methods can be accessed at <https://wonder.cdc.gov/wonder/help/mcd.html>.

Centers for Disease Control and Prevention. Viral Hepatitis Surveillance Report – United States, 2020. <https://www.cdc.gov/hepatitis/statistics/2020surveillance/index.htm>. Published September 2022.





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Current Research on Syringe Services in Rural Settings

The Study

Overall Goal:

Describe and evaluate innovative models of health service delivery at Syringe Service Programs (SSPs)



1. Describe **current models and recent trends** of HIV and HCV care (including PrEP), medications for opioid use disorder (MOUD), primary care (including vaccinations), and mental health care delivered by SSPs nationally.
2. Assess the **feasibility of expanding SSP health services models from SSP program perspectives.**
3. Identify **preferences for different SSP health services models from SSP client perspectives.**

Overview of the Dave Purchase Memorial Survey

- The Dave Purchase Memorial (DPM) survey is the oldest and longest running national survey of SSPs in the U.S.
- Started in 1995 by Don Des Jarlais
- Administered and done in collaboration with the North American Syringe Exchange Network (NASEN)
- Critical in collecting information about SSPs to inform the SSP community at large as well as shape policy reforms



Background on Survey

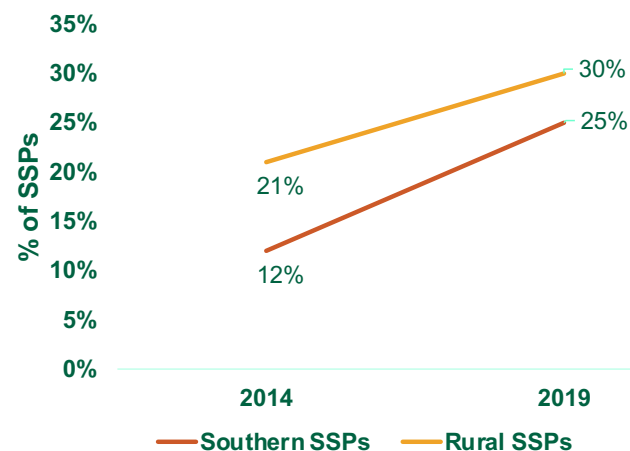
- Conducted the Dave Purchase Survey in Fall 2020 of 2019 services and service impact at the time of the survey.
 - Surveys are sent to the list of SSPs part of the North American Syringe Exchange Network, where 85-95% of SSPs in the US are estimated to be represented.
 - SSP directors complete the survey, which asks about harm reduction and health services provided as well as organizational characteristics.
 - SSP directors identified if their SSP was in a rural, suburban, or urban area

Methods

- **153 SSPs responded** out of 211 eligible SSPs (**73% response rate**)
 - Eligible SSPs offered services for 3+ months in 2019 and participated in NASEN Buyers' Club in 2019 or 2020
- We have published descriptive data, but we've also been doing work to describe health models at SSPs with the 2019 data.
 - We also have information from an updated survey in 2022 and qualitative interviews of SSP directors that are ongoing

Harm Reduction in Rural Settings

- Syringe services programs have been steadily increasing by 20% per year with the highest levels achieved in 2019 right before COVID-19 hit
- In 2019, rural SSPs had grown to comprise 30% of the SSP sample compared to 21% in 2014
- This growth may not mean that people in rural regions have their full SSP needs met



Behrends CN, Lu X, Corry GJ, LaKosky P, Prohaska SM, Glick SN, Kapadia SN, Perlman DC, Schackman BR, Des Jarlais DC. Harm reduction and health services provided by syringe services programs in 2019 and subsequent impact of COVID-19 on services in 2020. *Drug Alcohol Depend.* 2022 Mar 1;232:109323.

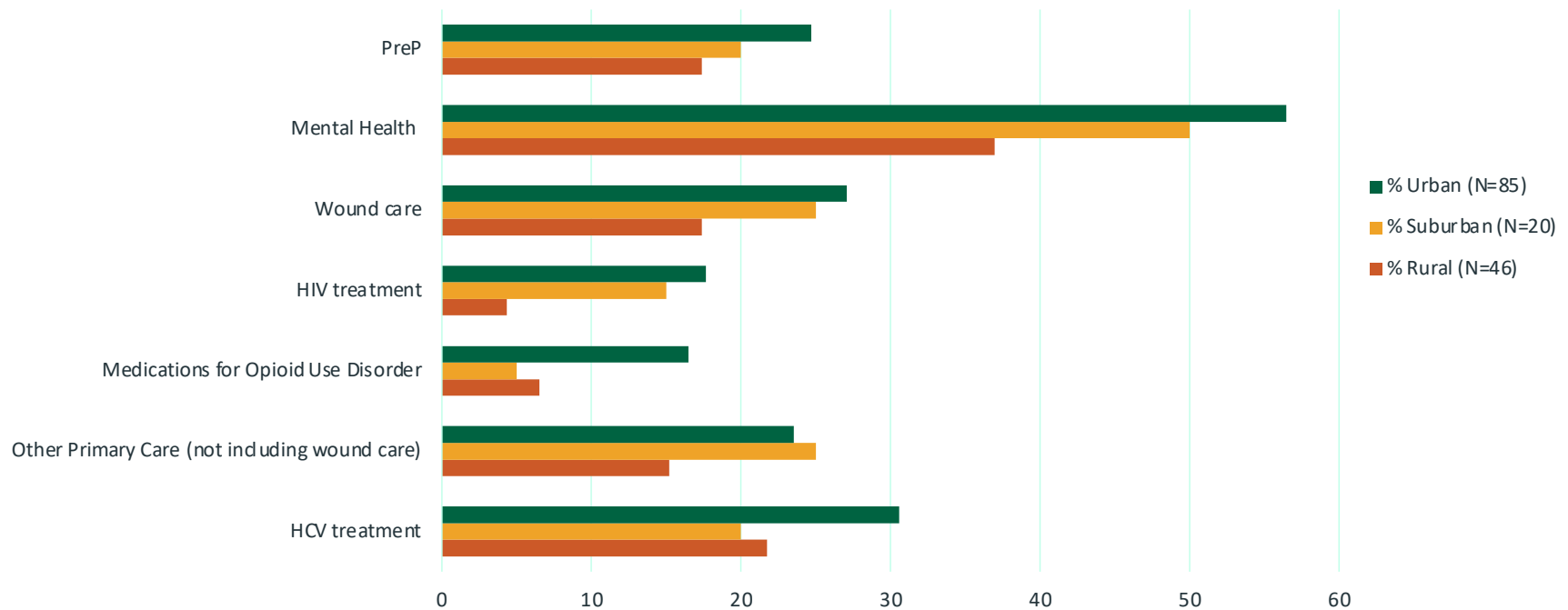
doi: 10.1016/j.drugalcdep.2022.109323. Epub 2022 Jan 20. PMID: 35124386; PMCID: PMC8772135.



Comparison of Rural SSP Setup for Delivering Harm Reduction Services in 2019 vs. 2020

Physical Setup of SSP	2019	2020
Brick and mortar building/storefront	29	28
Mobile unit	20	25
Temporary locations	8	10
Home delivery	13	18
Backpack delivery	8	9
Mail order	6	7
Syringe vending machine	0	0
Other	4	4

On-site Health Services Provided at SSPs in 2019 by Location





Offer of one or more medical services on-site at SSPs in 2019

	No services** (N=52) n (%)	1 or more service*** (N=99) n (%)	Chi-Square P value
Location			0.039
Rural	21 (41.2)	23 (23.5)	
Suburban	8 (15.7)	12 (12.2)	
Urban	22 (43.1)	63 (64.3)	
Public Funding (50% or more)	15 (28.9)	61 (63.5)	<0.001
Budget Size			0.001
<\$25,000	28 (53.8)	23 (24.2)	
\$25,000-\$100,000	8 (15.4)	30 (31.6)	
>\$100,000	16 (30.8)	42 (44.2)	

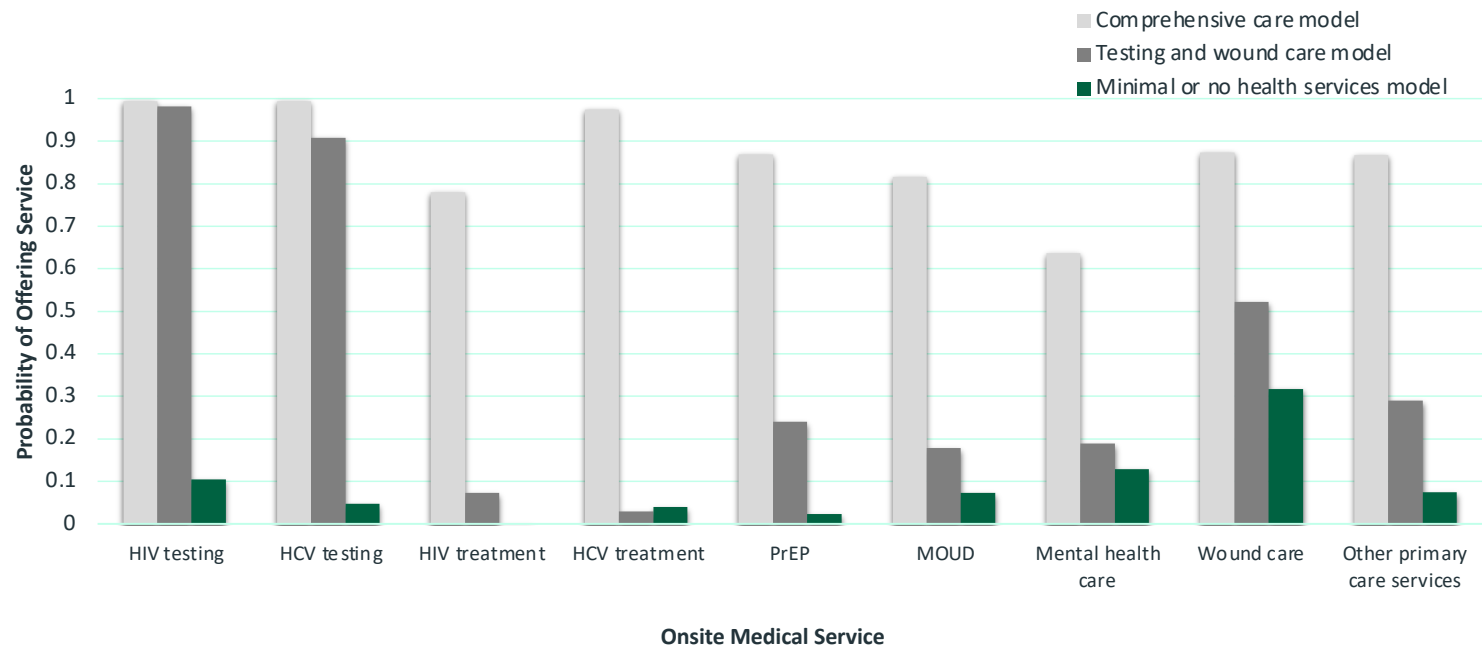
*Includes HIV treatment, HCV treatment, PrEP, medications for opioid use disorder, mental health services, wound care, and other primary care services

**44.2% offered HIV and/or HCV testing on site (n=23)

***85.9% offered HIV and/or HCV testing on site (n=85)



Latent Class Analysis of On-Site Provision of Health Services at SSPs



Predictors of Health Model Membership

- SSPs receiving over 50% of funding from public funds had higher odds of a comprehensive care model (OR=9.1, 95% CI:1.1, 78.2) and a testing and wound care model (OR=5.9; 95% CI:1.1, 33.6) than a minimal health model.
- Rural SSPs had lower odds of having a comprehensive health service model than a minimal service model (OR=0.08; 95% CI:0.01, 0.93).
- **Expanding robust health services delivery at SSPs may require additional resources for rural SSPs and SSPs with less public funding.**
- **Rural regions likely have a greater need for more comprehensive health services available at SSPs.**



Rural Access to Harm Reduction and Health Services

- While more comprehensive health services at rural SSPs may be needed, SSP clients may not want to use them
 - We are working on understanding SSP client preferences with a survey out in the field currently, and we're also doing qualitative work to discuss these health models with SSPs
- Preliminarily, there may be some issues for rural SSP clients that may prevent the use or offer of health services at those SSPs





SSP clients in rural regions face unique challenges

“They [SSP clients] are afraid to be in the office for any longer than it take to get their safer syringe supplies and take a HIV test. They are SCARED they will be arrested. Our clients in [redacted] are very scared of law enforcement. We have a real strict judicial system in [redacted state]. Our clients are in and out as fast as they can go.”

-SSP director from a rural region

- For one SSP, these challenges were what had motivated mailing harm reduction supplies and at-home HIV test kits



Expansion of Mail-Delivered Harm Reduction Services in the U.S.



Syringe services programs (SSPs), while very effective, have limitations to their reach

- Limited hours, disruptions to services (i.e., closures), lack of transportation/distance, fear of law enforcement, and/or stigma may prevent direct access to SSPs
- On average, SSPs tend to serve older, white males---and so other populations may be better served with different distribution models (e.g., women, young adults, people of color)



Mail-based Harm Reduction Services

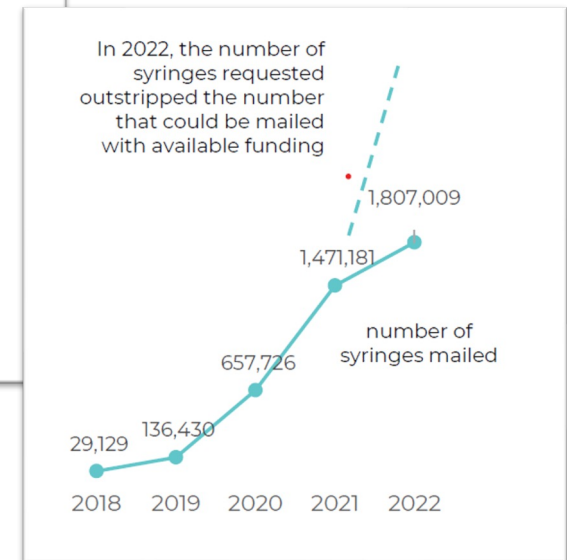
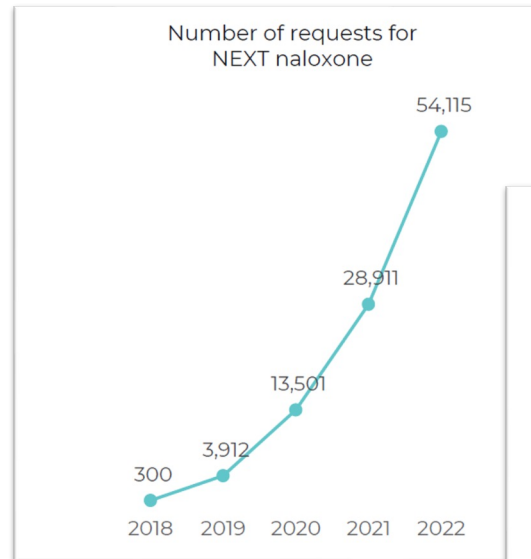
- Mail-based harm reduction services are programs that mail supplies that a more traditional SSP would distribute (e.g., injection equipment, naloxone, etc)
- Mail can be reached anywhere in the country and so it removes geographic barriers
- Smartphones and wireless Internet is largely accessible (although there may be challenges in some rural settings).
- Online ordering and mail delivery also ensures better privacy and confidentiality

Hayes BT, Favaro J, Davis CS, Gonsalves GS, Beletsky L, Vlahov D, Heimer R, Fox AD. Harm Reduction, By Mail: the Next Step in Promoting the Health of People Who Use Drugs. *J Urban Health*. 2021 Aug;98(4):532-537. doi: 10.1007/s11524-021-00534-1. Epub 2021 Mar 12. PMID: 33710493; PMCID: PMC7953942.

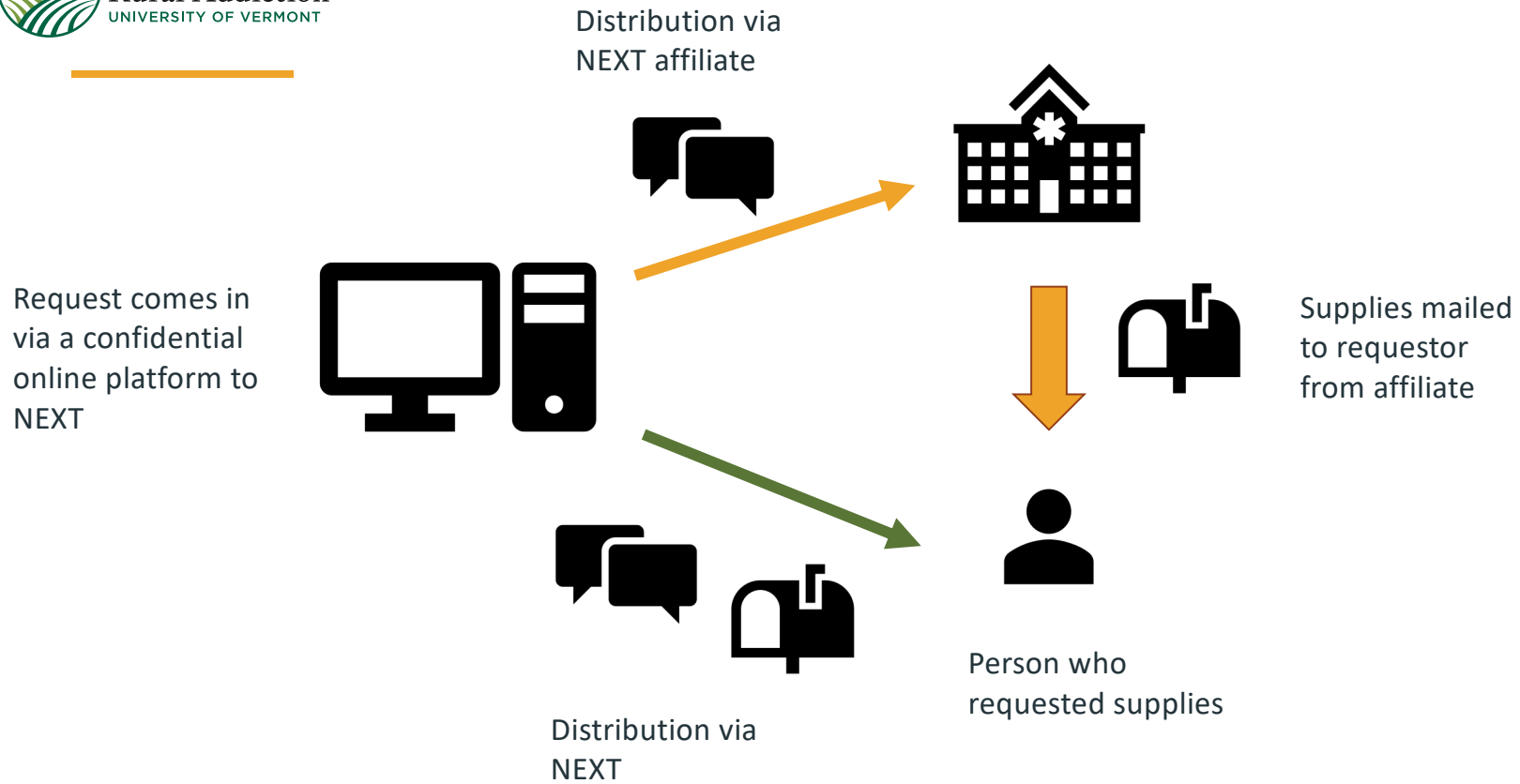


NEXT Distro

- NEXT Distro is a confidential, online-based harm reduction program that mails syringes, sharps containers, safe smoking supplies, safer sex supplies, naloxone, and more
 - Began mailing supplies in Feb 2018
 - Partners with health departments and SSPs to provide expanded access to harm reduction supplies (affiliates)

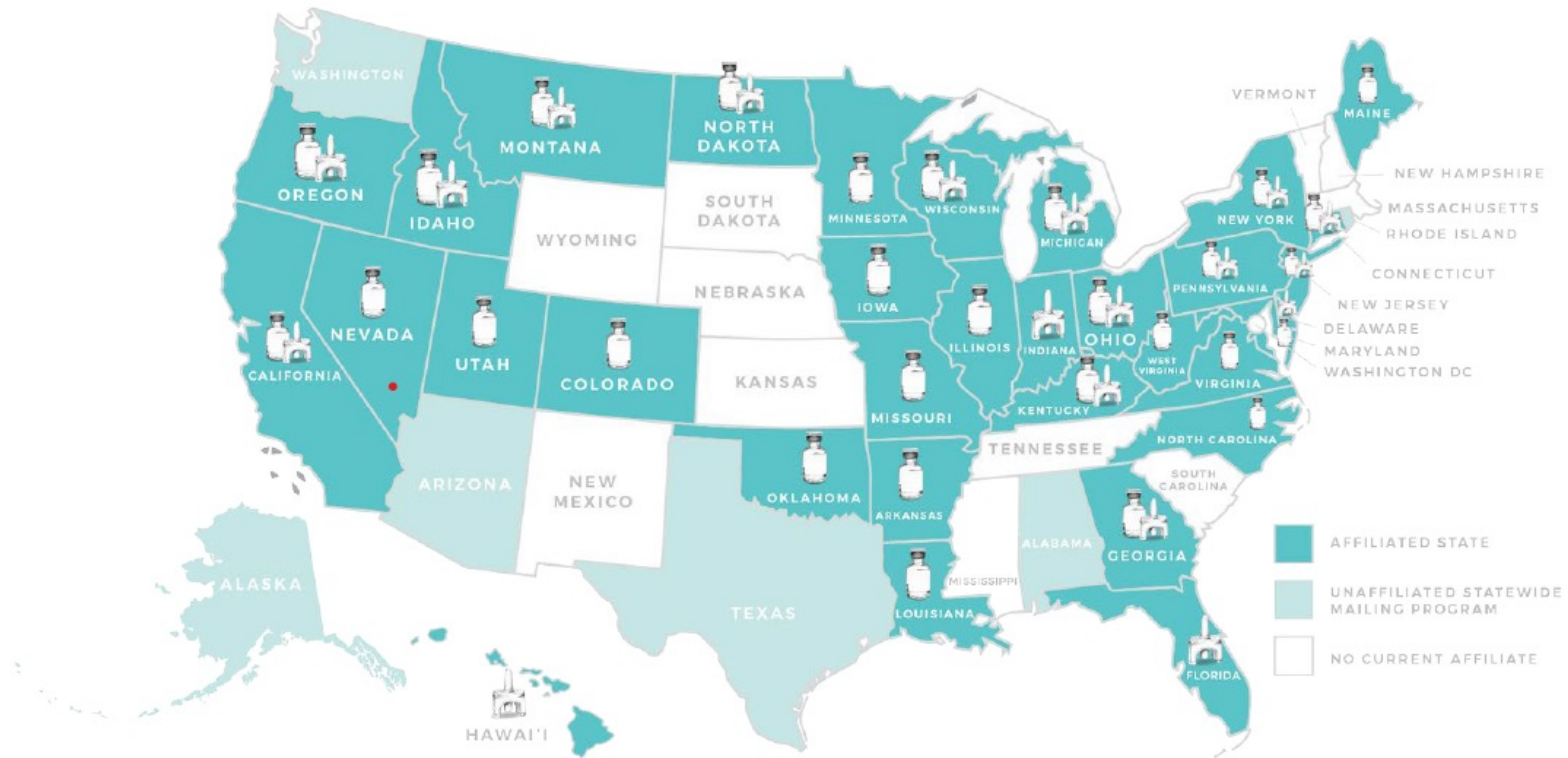


The Process



34 syringe service programs were added as affiliate partners

46 states (and Puerto Rico) were reached with NEXT harm reduction kits





Why Mail-Based Harm Reduction Distribution?

- **NEXT Distro has been more successful in reaching some underserved populations than traditional SSPs:**
 - ~ 57% of clients are women (vs. 36% at SSPs).
 - 55% of NEXT clients are homeless or unstably housed
 - Over 80% of naloxone recipients reported that it was the first time they had received naloxone despite 76% having witnessed an overdose.
 - Very few clients had previously obtained syringes exclusively from safe sources, such as SSPs or pharmacies (28%), and more commonly reported sharing or reusing syringes.
- **Mail-delivered harm reduction services may overcome known barriers to access and better reach some underserved populations.**

Hayes BT, Favaro J, Coello D, Behrends CN, Jakubowski A, Fox AD. Participants of a mail delivery syringe services program are underserved by other safe sources for sterile injection supplies. *Int J Drug Policy*. 2022 Jan;99:103474. doi: 10.1016/j.drugpo.2021.103474. Epub 2021 Oct 5. PMID: 34619446; PMCID: PMC8755579.



Research Questions/Aims

- 1) What are the legal barriers to adoption and expansion of mail-based syringe services?**
 - Aim 1: Describe policy barriers to national expansion of mail-based syringe services.

- 2) Do mail-based harm reduction services have greater uptake and retention for some underserved populations?**
 - Aim 2: Conduct a national longitudinal, observational cohort study to determine predictors of uptake and retention of mail-delivered harm reduction.

- 3) What are the preferences of mail-based harm reduction clients in receiving add-on services?**
 - Aim 3: Assess the add-on harm reduction and health services preferences of mail delivery clients





Research Questions/Aims

Aim 1: What are the legal barriers to adoption and expansion of mail-based syringe services?

- **Rationale:** Some potential affiliate adopters are worried about legal ramifications of mailing drug paraphernalia. Expansion of this model would require clear guidance on state policies.
- **We will conduct a systematic legal review of state paraphernalia and syringe service laws in U.S. to develop a taxonomy of policies impacting mail delivered services**
- **Qualitative Assessment of Policy:** We will interview 20 potential adopters of mail-based syringe delivery (i.e. health depts and SSPs)
 - Goal is to assess policy concerns, including understanding local policies that may prevention adoption
 - We plan to also interrogate barriers and facilitators to adopting mail-based harm reduction services



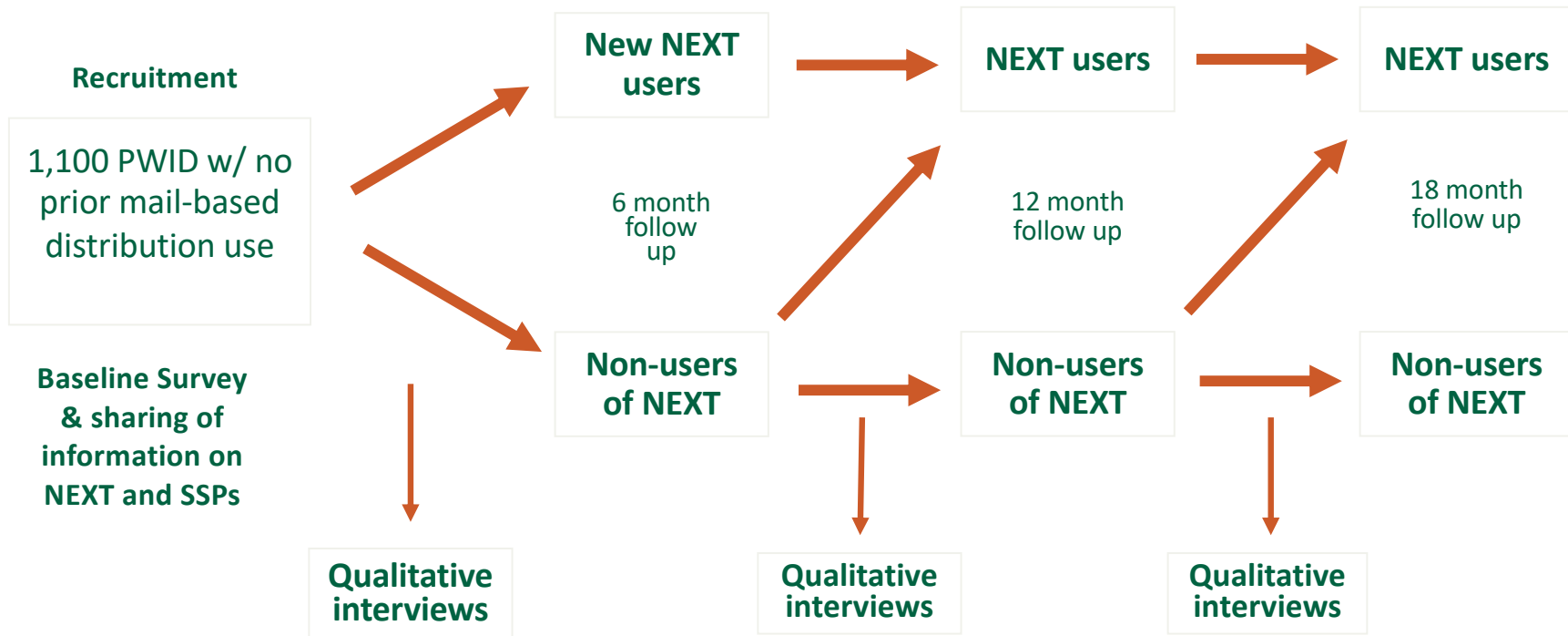


Research Questions/Aims

Aim 2: Do mail-based harm reduction services have greater uptake and retention for some underserved populations?

- **Rationale:** We want to fully understand *who* uses mail-delivered services (and what populations do not use NEXT and why) and *how* these services are being used over time (is it as a supplement to other harm reduction services or the primary source of supplies?).
- **We will conduct a national longitudinal, observational cohort study with 1,100 PWID over 18 months to determine predictors of uptake and retention of mail-delivered harm reduction.**
 - Using internet-based recruitment (incl. social media marketing)--- a method that has not been used much with recruiting PWID into cohort studies
 - We hypothesize that women, people living in rural regions, and people with no regular sources of syringes will be more likely to initiate and retain in NEXT services.

Study Design



Research Questions/Aims

Aim 3: What are the preferences of mail-based harm reduction clients in receiving add-on services?

- **Rationale:** How can mail-based harm reduction services be expanded to meet the needs of its clients better?
- **We will design and implement a discrete choice experiment (DCE) survey with 400 NEXT clients to determine preferences for 1) additional services and 2) how they receive those services.**
- **The DCE method has several advantages over traditional survey methods to assess preferences for individual attributes or service models.**
 - Simulates the choices and decisions that individuals face in real world service settings
 - Less biased

Figure 3: Example choice set and attributes for HIV/STD Testing

Here are two different ways of getting tested for HIV/sexually transmitted infections.

Which option do you prefer, **Option A** or **Option B**?

(3 of 12)

Features	Option A	Option B
Where you get your test	You receive a referral to get tested in-person at a local clinic	You receive a referral to get tested in-person at a local clinic
Out of pocket cost	\$20 out of pocket	\$20 out of pocket
How you receive your test results	You receive your test results through a secure online portal	You receive your test results over the phone
Information you receive after you get your test results	You receive additional information from a healthcare provider over the phone	You receive additional information from a website
	Select	Select



Research Questions/Aims

What are the preferences of mail-based harm reduction clients in receiving add-on services? (Part 2)

- **Qualitative interviews with NEXT users prior to DCE will help inform what major service areas of interest and attributes to include**
- **Potential areas of focus will be:**
 - **Harm reduction service** add-ons and/or delivery approaches
 - **Medical services** (e.g., telehealth offerings vs. local referrals to in person services, mix of services available, etc)
 - **HIV and STD testing** (e.g., home testing vs. local referrals, cost, etc)
- We will be looking at respondents by geography (rural vs. urban locations) to determine if there are differences in desired services.



Future work

- Characterize whether NEXT Distro is reaching low access regions and what the geographical makeup of those areas are (rural vs. urban).
- Disseminate policy information to provide clear guidance on legality of mailing harm reduction supplies by state and to identify potential local policies that have been barriers for areas with high need for mail-based services
- Determine what populations are likely to use NEXT distro and describe harm reduction use trajectory over 18 months (including people living in rural regions, women, young adults, unstably housed people, and people of color)
- Understand what reasons motivate use of mail-based harm reduction services over in person services
- Assess preferences for new services or changes in services for NEXT Distro clients





Potential Barriers to Expansion

- While we are examining the feasibility of expanding mail-based harm reduction services in the US, there are some identified barriers to expansion
 - **Funding:** not enough supply/staffing to meet the demand and mailing supplies is expensive
 - **Legal barriers:** clearly stated laws that prevent mail-based distribution can limit expansion without policy change
 - **Access by unhoused individuals:** NEXT clients have used the USPS services that allows people without a permanent address to receive mail at a designated post office, but ensuring this works for everyone is important to understand

Barnett BS, Wakeman SE, Davis CS, Favaro J, Rich JD. Expanding Mail-Based Distribution of Drug-Related Harm Reduction Supplies Amid COVID-19 and Beyond. *Am J Public Health*. 2021 Jun;111(6):1013-1017. doi: 10.2105/AJPH.2021.306228. PMID: 33950718; PMCID: PMC8101586.

Rural Implications

- Understanding whether mail-based harm reduction services are filling in harm reduction access gaps for rural people who inject drugs (PWID) can guide future harm reduction efforts
- Further work regarding health service preferences of rural SSP clients is also important for understanding how to better meet the health needs of rural PWID

Three Rural Centers of Excellence (RCOEs)



University of Vermont

- Expanding evidence-based treatment and harm reduction for OUD and other SUDs via education, technical assistance, and resources
- Patient focused approaches serving the needs of rural populations through innovative technology and telehealth strategies
- VT, NH, ME, Northern NY

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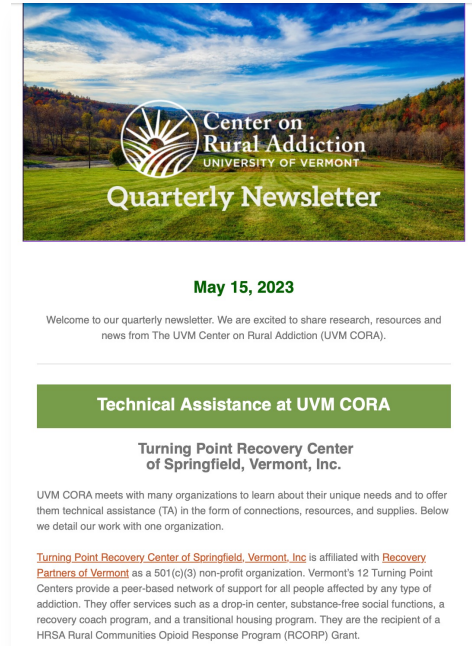
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- Rural Recovery Ecosystem Support Services: Employment, Housing, Transportation
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Questions?**



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