

FY
24

UMSL | Addiction Science Team
University of Missouri–St. Louis

ANNUAL NALOXONE REPORT FISCAL YEAR 2024

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2025

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LETTER FROM LEADERSHIP

Rachel Winograd

Associate Professor, Ph.D., Principal Investigator, UMSL-MIMH Addiction Science Director, ASPIRE Lab
Director, UMSL-Psych Department



Over the past year, we've been grateful to see and feel substantial declines in fatal overdoses across Missouri. As we've shared via [statewide and regional reports](#)¹, drug involved deaths decreased in 2023 and the decreases picked up in the first half of 2024, spanning regions, drug types, and demographic groups. Missouri is not the only state to experience declines in overdose deaths (see this recent [UNC blog](#)² post describing nuances in the downward trends across the country), but we are unique in terms of the magnitude of our decreases and the fact that we've seen decreases among Black Missourians, specifically, whereas in most other states, the decreases were mostly or only evident among white people.

Speculations about what's causing the decreases range from changes in our drug supply, to changes in the populations of people using drugs, to expanded access to treatment and recovery services, to greater availability of and access to naloxone. Though any driver is difficult to "prove" empirically, we have indeed been able to show a robust effect of naloxone saturation in [St. Louis City](#)³, specifically, which has historically been the epicenter of our state's overdose crisis. This finding was a data-driven validation of two things we all know to be true: 1) Missouri's naloxone distribution efforts save lives, and 2) we rely on compassionate human beings to get that naloxone into the hands of those who need it most.

This report is a testament to those truths and a reminder that our lifesaving tools are only as effective as the people who get them out there. So, to all of you who have handed out naloxone kits in the last year, or reversed an overdose yourself, or been brought back from an overdose by someone who cared and then sought to pay that care forward... thank you. You are making a real difference, and we're fortunate you're out there.

LETTER FROM LEADERSHIP

Lauren Green

MSW, UMSL- MIMH
Director of Drug User Wellness



In fiscal year 2024, we made significant strides in expanding our programming, nearly doubling the amount of naloxone distributed from the previous year. This progress has been fueled by increased funding and a strong commitment to innovation. The decline in overdose deaths demonstrates our ongoing success with naloxone saturation across the state.

A key development that has contributed to this overwhelming success is the increased acceptance of intramuscular naloxone, which has allowed us to drastically increase the volume of naloxone distributed, stretching our dollars even further, and ensuring more individuals have access to this life-saving resource. Additionally, we continue to increase the volume of naloxone distributed through harm reduction programs, which has been instrumental in placing naloxone directly into the hands of people most likely to reverse an overdose which are people who use drugs (PWUD).

We have also seen an impressive rise in the uptake of leave-behind naloxone kits by emergency responders which allows naloxone to be left with individuals following an overdose event. Perhaps one of the most notable developments has been the increase in naloxone accessibility through innovative methods that don't rely on traditional service hours, locations, or requirements. From naloxone vending machines and community-based naloxone boxes to street outreach programs, secondary distribution, and mail-based distribution, we have removed barriers to access and made life-saving resources available whenever and wherever they are needed.

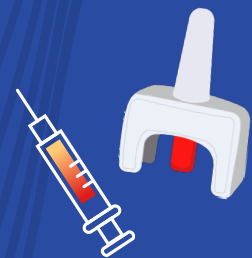
To continue expanding these critical efforts, we are excited to announce the addition of Casey Johnson, Assistant Director of Drug User Wellness. This new position will play a key role in supporting and advancing our distribution of harm reduction supplies, keeping our programs responsive and impactful in meeting the needs of those most at risk.

We are proud of the progress we've made, but we know there is still much to do. Our team is deeply committed to working with PWUD and the many partners who serve them across the state and we won't stop until naloxone is available and accessible to everyone who needs it. To all those who have played a role in distributing naloxone in your communities this past year, a heartfelt thank you--your work is saving lives!

BRIEF SUMMARY

From July 1, 2023 to June 30, 2024 (Fiscal Year 2024),
the UMSL-MIMH Addiction Science Team distributed...

300,230
NALOXONE KITS
across
1,295
UNIQUE PARTNERS
in
111
MISSOURI COUNTIES



The UMSL-MIMH Addiction Science Team partners with the Missouri Department of Mental Health and Department of Health and Senior Services to operate as central hub for naloxone distribution across the state. Funding for naloxone efforts are supported through the State Opioid Response (SOR) grant, Prevention Prescription Drug/Opioid Overdose-related Deaths (PDO/ENACT) grant, First Responders-Comprehensive Addiction and Recovery Act (FR-CARA/MO-CORPS) grants, CDC Overdose Data 2 Action (OD2A) and Opioid Settlement (NORTH) grants.*

A NOTE ON FUNDING

DMH/DHSS JOINT FUNDED PROJECTS:

Opioid Settlement Grant -- This is a collaborative effort between Missouri Department of Mental Health and Missouri Department of Health and Senior Services. Funding for this effort is supported through Opioid Settlement dollars recently awarded to the state as part of the attorney general's settlement with opioid pharmaceutical distributors. This project aims to reduce overdose fatalities through increased overdose education training and saturation of naloxone across the state of Missouri specifically among the following sectors: substance use and mental health treatment providers, criminal justice settings, faith-based organizations, housing providers, universities/colleges, federally qualified health centers, local public health agencies, and vending machines.

DMH FUNDED PROJECTS:

DOTS+MOBILE: The Drug Overdose Trust & Safety + Mobile -- This project is a project funded through the Missouri Department of Mental Health through opioid settlement dollars that empowers first responders to reduce opioid overdose deaths through EMS field initiation of buprenorphine and naloxone distribution.

State Opioid Response (SOR) -- This is a SAMHSA funded grant, focused on prevention, treatment, and recovery from opioid use. Naloxone distribution through this effort targets harm reduction, outreach, social service, and recovery organizations

Prescription Drug Overdose (PDO) -- Expanding Naloxone Access and Community Treatment (ENACT) -- This is a SAMHSA funded grant, focused on the expansion of mail-based naloxone distribution across Missouri as well as training and education

DHSS FUNDED PROJECT:

First Responder-Comprehensive Addiction and Recovery Acts Grant (FR-CARA) -- Coordinating Overdose Response Partnerships and Support (MO-CORPS) -- This is a SAMHSA funded project focused on naloxone distribution to law enforcement officers and emergency responders.

NALOXONE BY THE NUMBERS

145,105 additional kits
were distributed in
FY24 vs FY23



522 additional
organizations were
supplied in
FY24 vs FY23



Top Naloxone Distributors:

1. MONetwork.....	28,490
2. Confluence.....	27,684
3. KC CARE Health Center.....	13,608
4. AIDS Project of the Ozarks.....	10,639
5. The T.....	10,035
6. PreventEd.....	8,528
7. Care Beyond the Boulevard.....	5,256
8. KC Harm Reduction Coalition (supported by First Call)	4,698
9. MO Department of Corrections.....	4,560
10. Central Ozarks Medical Center.....	3,660

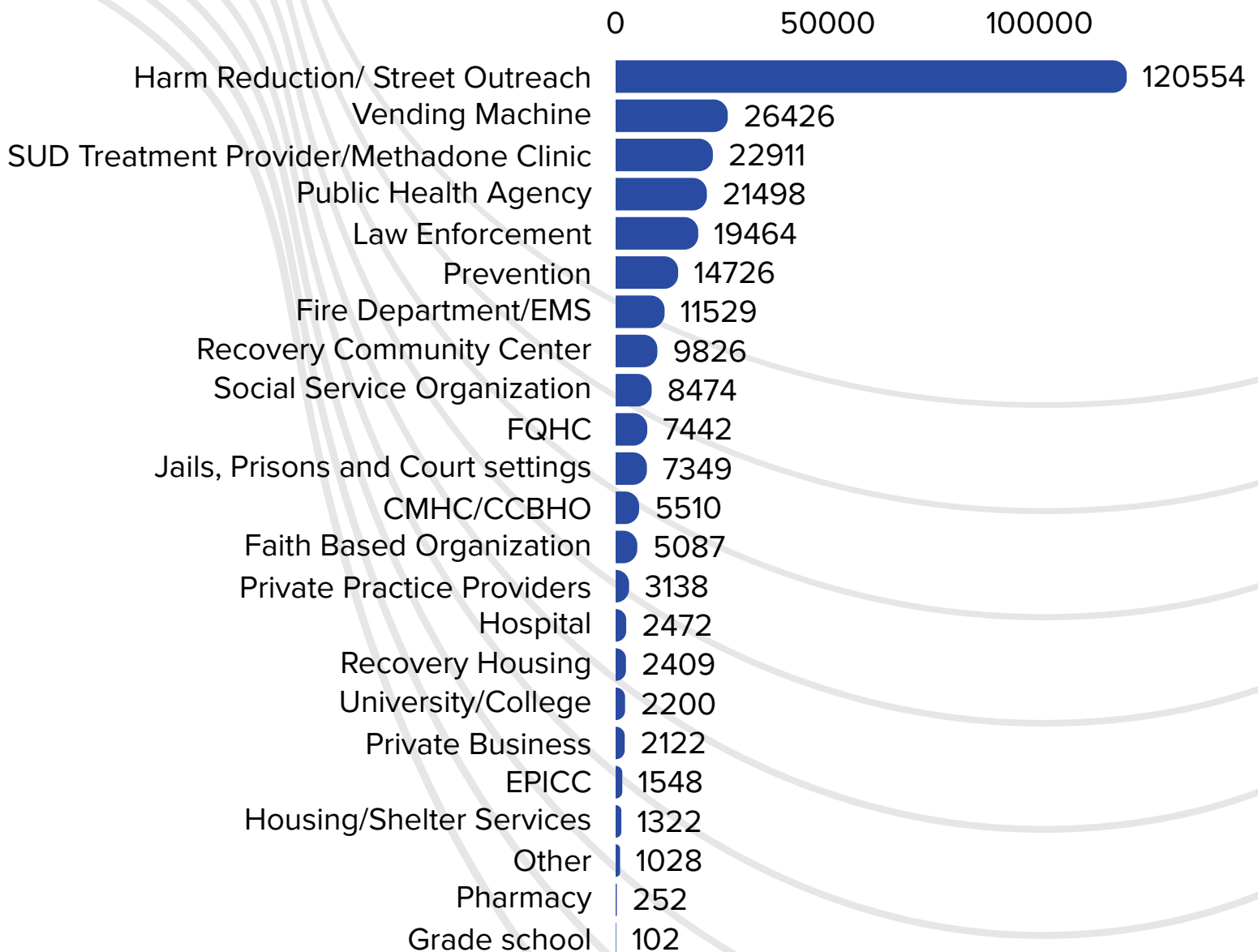
**The Addiction Science Team continues to foster
partnerships with organizations across Missouri.**

**This dedication and collaboration is essential to increasing
access to naloxone and other harm reduction resources leading
to a safer and healthier Missouri.**

Thank you to all of our partners.

NALOXONE BY THE NUMBERS

OF KITS SUPPLIED BY AGENCY TYPE

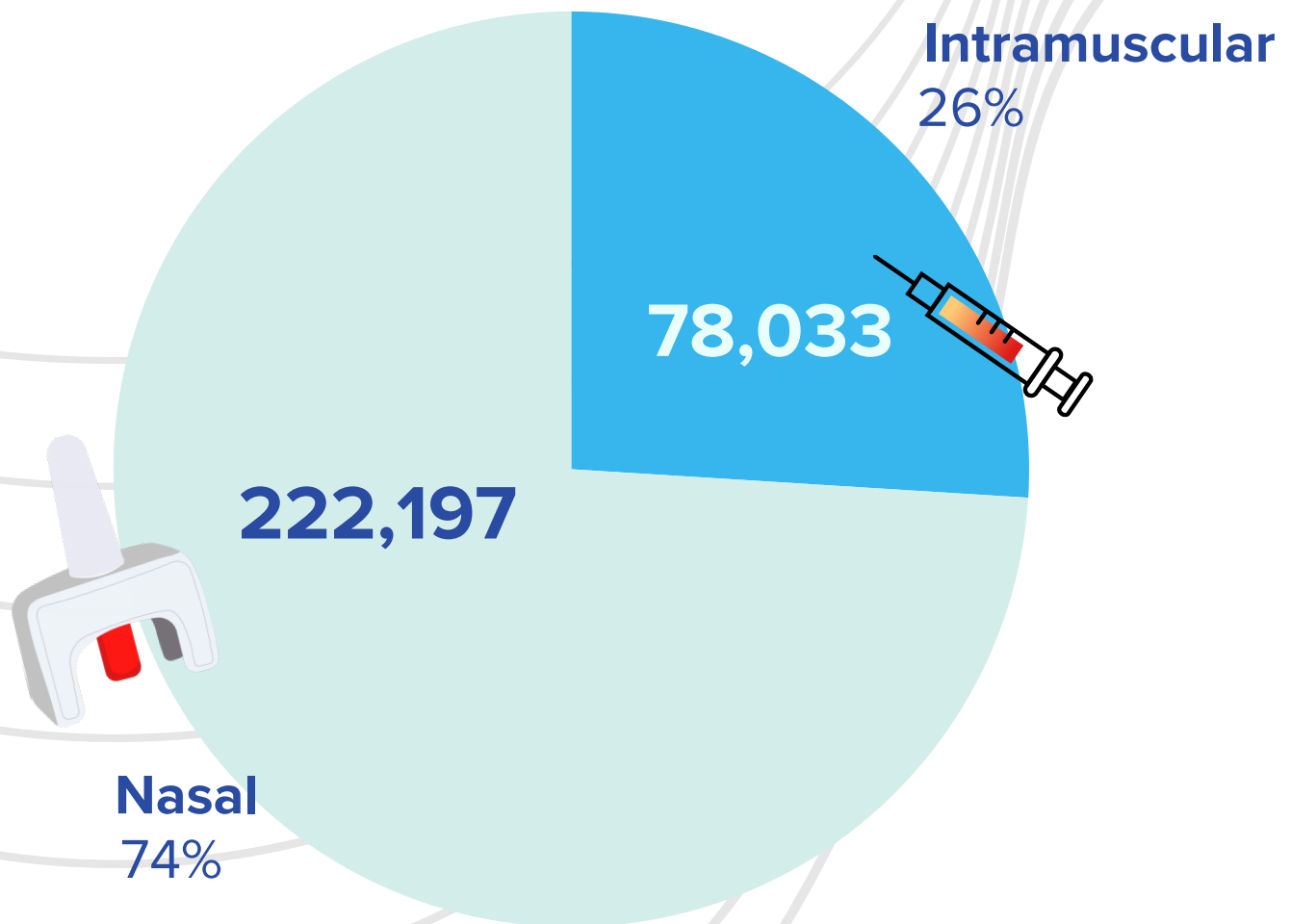


* Harm reduction organizations and street outreach efforts are best positioned to be able to put naloxone into the hands of those most likely to utilize it.

* Partnering with a diverse range of organizations and agencies allows for expansion of coverage to ensure we're meeting people where they are.

NALOXONE BY THE NUMBERS

OF KITS SUPPLIED BY NALOXONE TYPE



- * Available in both 4 mg and 3 mg formulations, more than 70% of naloxone supplied in FY24 was nasal naloxone.
- * Intramuscular naloxone made up an increasing percentage of the naloxone distributed in FY24, aligning with goals set to increase the types of naloxone available for partners and participants to choose from.

NALOXONE BY THE NUMBERS

OF KITS SUPPLIED BY GRANT

Note: graphics are interactive. Hover to reveal more information.

● Opioid Settlement (DMH)- DOTS+MOBILE

● PDO

● Opioid Settlement (DMH)

● SOR

● Opioid Settlement (DHSS)

● FR-CARA

Opioid Settlement (DHSS)
11.2%

PDO
4.2%

SOR
38.7%

Opioid Settlement (DMH)
42.1%

Grant	Kits
Opioid Settlement (DHSS)	39,426
Opioid Settlement (DMH) DOTS + MOBILE	5,208
PDO (ENACT)	14,855
FR-CARA (MO-CORPS)	8,136
SOR	136,406
Opioid Settlement (DMH)	96,199

PDO
12612

Opioid Settlement (DHSS)
39236

NASAL

SOR
86664

Opioid Settlement (DMH)
70151

PDO
2243

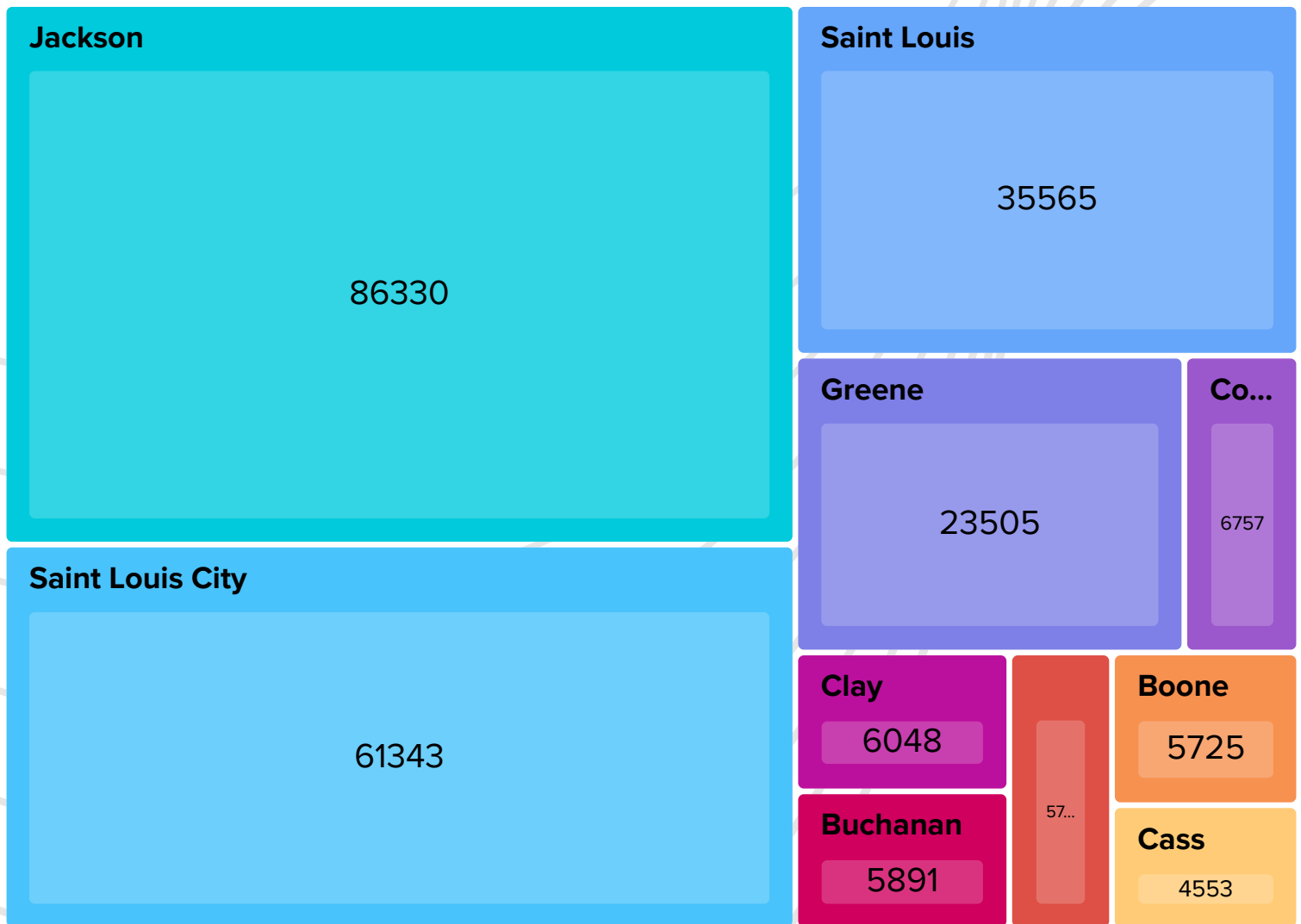
Opioid Settlement (DMH)
26048

IM

SOR
49742

NALOXONE BY THE NUMBERS

OF KITS SUPPLIED BY COUNTY

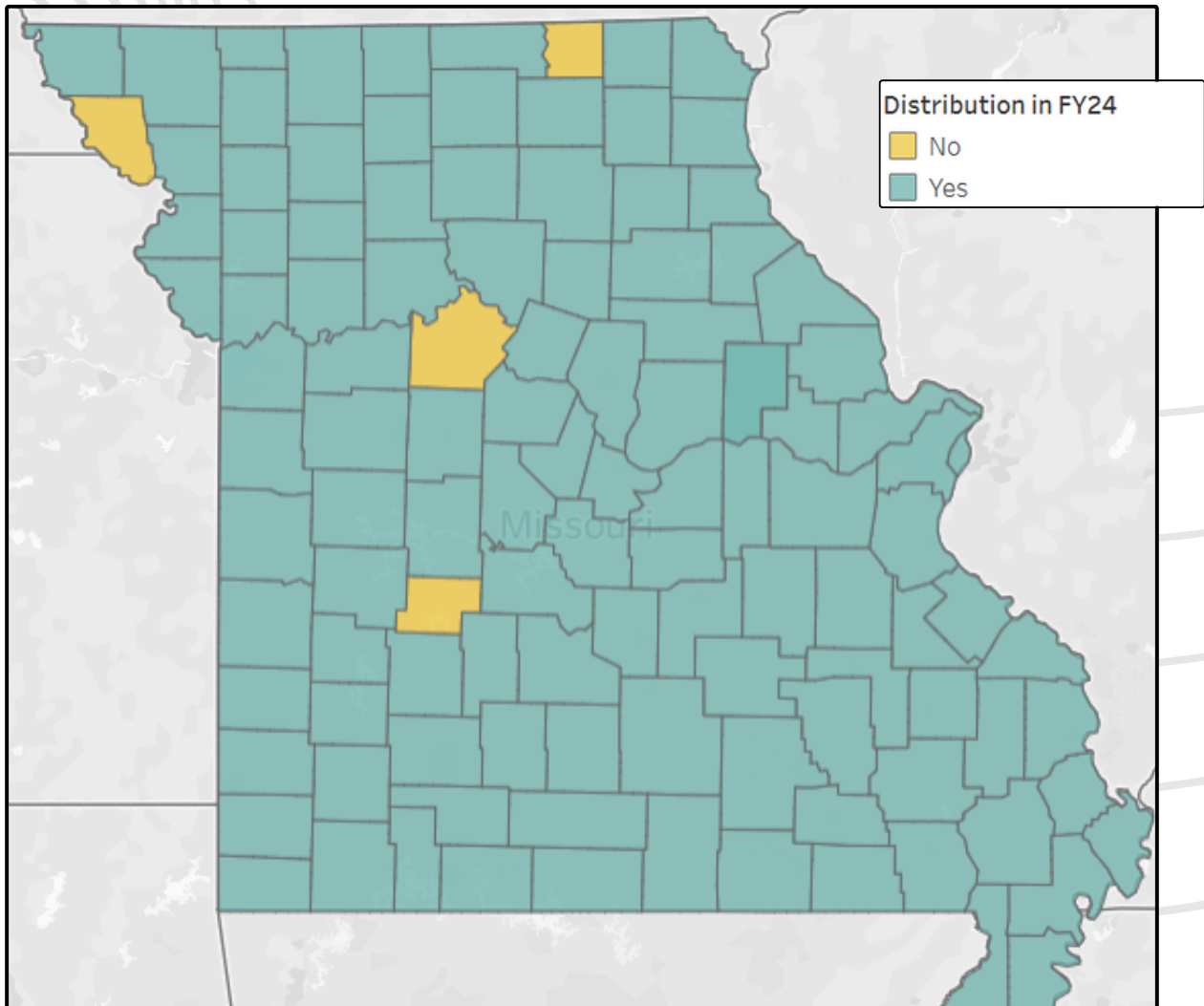


Note: graphic is interactive. Click a box to enlarge and reveal more information

- * Naloxone reached 111 Missouri counties out of 115 counties total.
- * While counties in urban areas make up a majority of distribution efforts, expanding distribution to and in rural areas is prioritized. Equal access continues to be a guiding principle in Missouri naloxone distribution efforts.

NALOXONE BY THE NUMBERS

DISTRIBUTION BY COUNTY



- ✱ Naloxone distribution efforts reached 99.4% of the population of Missouri⁴ in FY24.
- ✱ Through intentional outreach to create and foster partnerships, the Addiction Science Team connects with areas wherein naloxone has not historically been made available.



PARTNER HIGHLIGHT: CONFLUENCE



NALOXONE EFFORTS

“We currently distribute naloxone in three ways: through our outreach van, which visits 30+ encampments each week; through our home delivery program, which brings naloxone to the doorstep of anyone who requests it in the greater Kansas City metropolitan area through our weekly delivery routes; and via the mail to people who use drugs who are living rurally across the state.”

SUCCESS IN THEIR WORDS

“Every week we learn about overdoses that were successfully reversed using naloxone we have distributed. Our conversations with our participants about these overdoses also help inform our knowledge of the changing drug supply and city-wide trends. Our participants constantly underscore the importance of both having lots of naloxone on hand and knowing that they will be able to get more.”

PARTNER HIGHLIGHT: RESTORATIVE JUSTICE MOVEMENT



NALOXONE EFFORTS

“The RJM outreach team divides Saint Louis into four quadrants conducting assessments, while discovering new unhoused encampments to understand the unique challenges plagued by Saint Louis opioid saturation. Throughout the month, our outreach team organizes events such as harm reduction packing parties, workshops, health fairs, and informational sessions to raise awareness about opioid use, naloxone and fentanyl test strip use.”

SUCCESS IN THEIR WORDS

“The positive impact is evident by the knowledge our community members and partners have about naloxone when randomly asked, the accessibility to naloxone we are able to provide, and the lives saved in real-time due to the accessibility to naloxone and the knowledge of how to administer when needed.”

PARTNER HIGHLIGHT: AIDS PROJECT OF THE OZARKS



NALOXONE EFFORTS

“As APO covers a wide service area in southwest Missouri, it felt vital to get naloxone saturation in as many of our counties as possible to counterbalance the ever-present possibility of fatal overdose events. APO HRP actively coordinated with a variety of community shareholders, from recovery groups and MAT facilities to law enforcement and regional Division of Youth Services, as well as various unhoused drop-in centers and cold weather shelters. Through scheduled supply pick-ups, staff road trips, and outreach events, APO HRP is getting naloxone to our community.”

SUCCESS IN THEIR WORDS

“People who previously had not carried naloxone (good Samaritans) are stepping up not only for friends or family in crisis but ‘just in case’ they come across strangers who are in the midst of overdose... In the course of discussing naloxone, individually and at outreach events, it is inevitable that a community member relates that they have lost a friend, peer or family member to overdose. Hearing those stories of loss is a solemn reminder of why we push so hard for naloxone saturation and uptake in unlikely places or collaborations. Thankfully, it is becoming just as common to hear from folks who are returning to APO’s HRP to pick up a new supply of naloxone, that their previous supply has been exhausted and has saved someone’s life!”

PARTNER HIGHLIGHT: KC HARM REDUCTION COALITION



NALOXONE EFFORTS

“We are committed to increasing access to harm reduction strategies promoting public health and safety. The naloxone comes directly to us!

We are the people most likely to reverse an overdose and we're the people most likely to know where naloxone is needed. We hold monthly meetings at the Kansas City Public Library and we hold weekly 'office hours' there too where our friends know they can come and grab supplies like naloxone.”

SUCCESS IN THEIR WORDS

“We applied for a grant in partnership with Confluence, a boots-on-the-ground harm reduction organization here in KC (and got it!). We joined forces with the Homeless Union and we've been releasing press releases about harm reduction best practices. We've been advocating for: trauma informed care for people who use drugs, increased access to safe disposal of sharps, access to xylazine test strips, and legal protections for mobile needle exchanges. RIP Lou Lou, we'll keep making you proud!”



PARTNER HIGHLIGHT: JEFFERSON COUNTY HEALTH DEPT



NALOXONE EFFORTS

“Our focus has been to get Naloxone out to underserved populations in Jefferson County. This has been done through organized Community Outreach Events that provide essential services/resources to the unhoused population or those at risk of becoming unhoused. [We also] get Naloxone to the community through our nursing staff (identify needs during their exams), front desk employees, or through our mobile wellness vans.”

SUCCESS IN THEIR WORDS

“By taking the time to learn people’s stories and offer Naloxone to EVERYONE, we have broken down barriers by earning their trust and also destigmatizing use... It is making a difference!”



INITIATIVE INSIGHT: FIRST RESPONDER, ON-OFFICER, AND LEAVE- BEHIND NALOXONE



“I've experienced multiple drug epidemics throughout my career. We are finally armed with a tool to combat this crisis. With naloxone, we are not only able to help our citizens, but MIMH has also provided us with resources, training, and the ability to connect with those who were often forgotten. MIMH has empowered us to help others reintegrate into our community.”

- Officer Dan Armbruster, Eureka PD



INITIATIVE INSIGHT: PROJECT PACK



Funded through Missouri's State Opioid Response (SOR) grant, Project Pack is an initiative that pays community organizations in return for packing naloxone and fentanyl test strip kits.

Every week members of the UMSL-MIMH Addiction Science team gather to pack kits with harm reduction resources to provide to the community, an internal assembly we refer to as "Packing Parties." To help assist in the growing need for harm reduction education and supplies, we created a low-barrier application for organizations to apply to help pack harm reduction kits. Of the applicants, 6 organizations were selected and Project Pack officially launched! The organizations we work with rave about the community-building and learning brought forth through kit packing and how their participants look forward to the activity! From this initiative alone, we have received and distributed over 50,000 kits throughout 2024! We continue to see the benefits of the relationship-building that happens in such a partnership, *as well as the significant contribution to naloxone and harm reduction resource distribution throughout the state.*

NALOXONE TYPES

SUPPLIED BY UMSL-MIMH ADDICTION SCIENCE



4 mg Nasal Naloxone

Narcan is the nasal naloxone spray most commonly recognized. While 4 mg is the original prescription strength dosage, when naloxone became available over-the-counter in 2024, many 4 mg generics entered the market such as Padagis and Teva (shown here). UMSL-MIMH supplies Narcan, Padagis, and Teva 4 mg nasal naloxone sprays.

3 mg Nasal Naloxone

RiVive 3 mg nasal naloxone spray is a compassionate dose naloxone product. RiVive is strong enough to save lives with the lowest dose of over-the-counter nasal naloxone available in the United States, and it reduces the risk of precipitated withdrawal. It's also manufactured by the only 501(c)(3) non-profit pharmaceutical company that manufactures naloxone and is available through UMSL-MIMH.



Intramuscular (IM) Naloxone

The vials of injectable naloxone UMSL-MIMH supplies are 0.4mg/1ml, which means there is 0.4mg of naloxone suspended in 1ml of fluid. This is 1/10th the amount of naloxone in Narcan and generics by Padagis and Teva which contain 4 mgs of Naloxone in 0.1ml of fluid. IM naloxone is also considered a compassionate dose naloxone product and is often preferred by people who use drugs because of its ability to be titrated.



NALOXONE TYPES

SUPPLIED BY UMSL-MIMH ADDICTION SCIENCE

TYPE & DOSAGE

IM NALOXONE 0.4MG/1ML



BENEFITS

- Lowest dose needed
- Least withdrawal symptoms
- Ability to titrate doses
- Often preferred by people who use drugs
- Higher bioavailability than nasal naloxone
- Adaptable kits (as many doses as requested)
- Inexpensive
- Preparing injection creates natural pause between dosing, decreasing the chance of excessive administration of naloxone
- Available through ethical low-barrier, harm reduction-informed distribution source
- Underscores need for safe disposal of syringes

CHALLENGES

- IM kits require multiple components and assembly
- Stigma and paraphernalia laws can make carrying injectable medication riskier for people who use drugs
- Requires more training for individuals new to IM naloxone vs nasal
- Provider bias and misinformation re: injectable form of naloxone
- Vials are glass and can be subject to breakage
- Lack of access to safe disposal of syringes
- Can feel clinical or medical and be intimidating to laypersons

3 MG NASAL NALOXONE



- Pre-packaged and labeled kits
- No assembly required
- Easy to use with little instruction
- Compassionate dose
- Less of a chance of causing problematic, precipitated withdrawal that can complicate overdose reversal
- Less stigma than IM naloxone
- Extensive input from harm reductionists including on package design
- Available through ethical low-barrier, harm reduction-informed distribution source

- High cost per 2 dose box
- Cost prohibitive for scaling to saturation
- Participant preference for IM
- Newer nasal naloxone on the market; unfamiliarity
- Cannot titrate, less autonomy
- Opportunity for excessive administration
- Plastic applicator can be subject to breakage or other damage

Naloxone is an over-the-counter medication which can be administered as a nasal spray or by intramuscular injection and is effective in rapidly reversing overdose from both legal and illegal forms of opioids. Naloxone can be administered by first responders such as law enforcement officers and paramedics, or by friends, family or bystanders and is the standard treatment for opioid overdose.

The ideal dose of naloxone is one that restores breathing without inducing withdrawal.

NALOXONE TYPES

SUPPLIED BY UMSL-MIMH ADDICTION SCIENCE

TYPE & DOSAGE

4 MG NARCAN NASAL NALOXONE



BENEFITS

- Pre-packaged and labeled kits
- No assembly required
- Most commonly recognized
- Easy to use with little instruction
- Less stigma than IM naloxone
- Widely available

CHALLENGES

- High cost per 2 dose box
- Cost prohibitive for scaling to saturation
- Participant preference for IM naloxone
- Participant preference for compassionate dose nasal naloxone spray
- Cannot titrate, less autonomy
- Opportunity for excessive administration
- Plastic applicator can be subject to breakage or other damage

4 MG GENERIC (PADAGIS & TEVA) NASAL NALOXONE



- Pre-packaged and labeled kits
- No assembly required
- Easy to use with little instruction
- Less stigma than IM naloxone
- Widely available

- High cost per 2 dose box
- Cost prohibitive for scaling to saturation
- Participant preference for IM naloxone
- Participant preference for compassionate dose nasal naloxone spray
- Unfamiliarity with generic(s)
- Cannot titrate, less autonomy
- Opportunity for excessive administration
- Plastic applicator can be subject to breakage or other damage

All formulations and potencies of naloxone take 1-3 minutes on average to begin to take effect and any form of naloxone may require a subsequent dose after the first few minutes, depending on the overdose. If you give 4 doses of nasal naloxone spray (16 mgs) in rapid succession during an overdose, it does not make it work any faster than if you give 1 dose of nasal naloxone spray (4mg) or 1 dose of injectable naloxone (0.4mg), wait, perform rescue breathing, and administer additional dose(s), if needed after several minutes.

The ideal dose of naloxone is one that restores breathing without inducing withdrawal.

CONTACT US



To request naloxone:
getmissourinaloxone.com

To request test strips:
testmissouridrugs.com

Visit our website:
www.mimhaddisci.org
Email us:
nomodeaths@mimh.edu

Follow us:
[@mimh_addisci](https://twitter.com/mimh_addisci)





*In solidarity and service,
The Addiction Science Team*

EXTRAS

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