

Attachment B: Evidence Base for Proposed Interventions

Expanded Access to Naloxone

Distributing naloxone within the community for free, particularly among individuals at high risk for overdose, is an evidence-based strategy. Naloxone, an opioid antagonist, can rapidly reverse the effects of an overdose if administered in a timely manner. Therefore, increasing naloxone access in the community, particularly among those closely associated with persons at elevated overdose risk, is a crucial step to reducing mortality as such measures increase the likelihood of timely naloxone administration.¹ Persons who use drugs may face barriers to accessing naloxone. They are less likely to possess medical insurance and more likely to have a lower socioeconomic status, which may make it more difficult to afford the copays associated with prescriber visits or medication costs.² The out-of-pocket cost of naloxone can range from \$30 to \$100 or more, which can be a barrier to its use. For various reasons, including negative personal experiences and fear of provider stigma, drug use may delay or avoid engagement with the healthcare system.³ These concerns may prevent people who use drugs from discussing their drug use, requesting a naloxone prescription, or returning to request additional supplies if they use the naloxone.⁴ Furthermore, for those who do not have a primary care provider, establishing care may delay access.

Prevention

Primary prevention efforts—designed to stop use before it starts—can interrupt the pathways to addiction and overdose. Intensive school and family-based programs are especially well-supported.⁵ Youth primary prevention reduces the risk of substance use and lessens other negative outcomes, including low educational status, under- and unemployment, unintended parenthood, and an increased risk of death from various causes. Youth prevention programs also have a very favorable return on investment—\$18 dollars for every dollar spent by one estimate.⁶

Warm-Handoffs/Recovery Supports

Studies have shown providing additional support following an overdose, such as connections to treatment and supportive services—such as recovery housing and peer recovery support—is an effective approach to reducing future overdose risk. Housing, specifically, is highly associated with overdose mortality.^{7,8} People who use drugs often face additional barriers to this critical protective factor, such as abstinence requirements for entry into recovery housing. Housing First models—in which individuals who use substances are placed in supportive housing (which may include access to case management and other services) without conditions related to sobriety—have shown to be effective.^{9,10}

The evidence base for peer recovery support is well-documented, with research demonstrating that peer support improves client engagement in recovery treatment for opioid use disorder.¹¹ Additionally, research suggests that the use of trained peer recovery coaches for substance use disorders is associated with reduced substance use, increased school enrollment, and increased rates of employment.¹² Evaluations of multiple post-overdose response programs utilizing peer support have been promising.^{13,14,15} One such program (which utilizes a warm handoff to a team consisting of a peer recovery coach and a case management navigator) reports that 77% of overdose survivors engaged with the program initially, and 33.6% received ongoing treatment services.¹⁶ Comparatively, estimates suggest that around 25% of people would normally seek treatment following an overdose event.¹⁷

Mobile Outreach

The time immediately following a drug overdose is a critical touchpoint for connecting individuals with support services and promoting engagement in treatment programs.¹⁸ Although there is a need for a

more rigorous evaluation of post-overdose response teams, results have been promising regarding the rate of contact with survivors, treatment engagement, and retention.¹⁹ One intensive outreach program, for example, reports that 91 % of individuals reached through the program attended their first treatment appointment,²⁰ while results from another EMS and peer-led program (which utilizes 911 call data to locate overdose survivors who were not transported to the emergency department) suggests a treatment retention rate of 88% at 30 days.^{21,22} Initial evaluations of peer-specialist-led outreach programs are promising, with reports of an in-person contact rate of 60.7% and an engagement rate of 80% (compared to a contact rate of 54–60% associated with police and EMS team outreach).²³

¹ Bennett, A. S., Bell, A., Doe-Simkins, M., Elliott, L., Pouget, E., & Davis, C. (2018). From Peers to Lay Bystanders: Findings from a Decade of Naloxone Distribution in Pittsburgh, PA. *Journal of psychoactive drugs*, 50(3), 240–246. <https://doi.org/10.1080/02791072.2018.1430409>

² Baptiste-Roberts, K., & Hossain, M. (2018). Socioeconomic Disparities and Self-reported Substance Abuse-related Problems. *Addiction & health*, 10(2), 112–122. <https://doi.org/10.22122/ahj.v10i2.561>

³ Biancarelli, D. L., Biello, K. B., Childs, E., Drainoni, M., Salhaney, P., Edeza, A., Mimiaga, M. J., Saitz, R., & Bazzi, A. R. (2019). Strategies used by people who inject drugs to avoid stigma in healthcare settings. *Drug and alcohol dependence*, 198, 80–86. <https://doi.org/10.1016/j.drugalcdep.2019.01.037>

⁴ Green, T. C., Case, P., Fiske, H., Baird, J., Cabral, S., Burstein, D., Schwartz, V., Potter, N., Walley, A. Y., & Bratberg, J. (2017). Perpetuating stigma or reducing risk? Perspectives from naloxone consumers and pharmacists on pharmacy-based naloxone in 2 states. *Journal of the American Pharmacists Association: JAPhA*, 57(2S), S19–S27.e4. <https://doi.org/10.1016/j.japh.2017.01.013>

⁵ Haegerich, T. M., Jones, C. M., Cote, P. O., Robinson, A., & Ross, L. (2019). Evidence for state, community and systems-level prevention strategies to address the opioid crisis. *Drug and Alcohol Dependence*, 204, 107563. <https://doi.org/10.1016/j.drugalcdep.2019.107563>

⁶ Miller, T., & Hendrie, D. (2008). *Substance abuse prevention dollars and cents: A cost-benefit analysis* (Report No. SMA 07-4298). Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration. <https://www.samhsa.gov/sites/default/files/cost-benefits-prevention.pdf>

⁷ Doran, K.M., Fockele, C.E., & Maguire, M. (2022). Overdose and homelessness—why we need to talk about housing. *JAMA Network Open*, 5(1), e2142685. <https://doi.org/10.1001/jamanetworkopen.2021.42685>

⁸ Fine, D.R., Dickins, K.A., Adams, L.D., De Las Nueces, D., Weinstock, K., Wright, J., Gaeta, J.M., & Baggett, T.P. (2022). Drug overdose mortality among people experiencing homelessness, 2003 to 2018. *JAMA Network Open*, 5(1), e2142676. <https://doi.org/10.1001/jamanetworkopen.2021.42676>

⁹ Doran, K.M., Fockele, C.E., & Maguire, M. (2022). Overdose and homelessness—why we need to talk about housing. *JAMA Network Open*, 5(1), e2142685. <https://doi.org/10.1001/jamanetworkopen.2021.42685>

¹⁰ Shinn, M., & Khadduri, J. (2020). *In the midst of plenty: homelessness and what to do about it*. Wiley Blackwell.

¹¹ Zuccarini, M. M., & Stiller, C. (2022). The effect of peer support on treatment engagement for opioid use disorder. *Journal of the American Psychiatric Nurses Association*, 10783903221128062. Advance online publication. <https://doi.org/10.1177/10783903221128062>

¹² Cos, T.A., LaPollo, A.B., Aussendorf, M., Williams, J.M., Malayter, K., & Festinger, D.S. (2020). Do peer recovery specialists improve outcomes for individuals with substance use disorder in an integrative primary care setting? A program evaluation. *Journal of Clinical Psychology in Medical Settings*, 27(4), 704–715. <https://doi.org/10.1007/s10880-019-09661-z>

¹³ Dahlem, C.H.G., Scalera, M., Anderson, G., Tasker, M., Ploutz-Snyder, R., McCabe, S.E., & Boyd, C.J. (2021). Recovery opioid overdose team (ROOT) pilot program evaluation: A community-wide post-overdose response strategy. *Substance Abuse*, 42(4), 423–427. <https://doi.org/10.1080/08897077.2020.1847239>

¹⁴ Ray, B., McCarthy-Nickila, J., Richardson, N., & Maahs, J. (2023). Post-overdose follow-up in the community with peer recovery specialists: The Lake Superior Diversion and Substance Use Response Team. *Drug and Alcohol Dependence Reports*, 6, 100139. <https://doi.org/10.1016/j.dadr.2023.100139>

¹⁵ Wayne, K. M., Goyer, J., Dettor, D., Mahoney, L., Samuels, E. A., Yedinak, J. L., & Marshall, B. D. L. (2019). Implementing peer recovery services for overdose prevention in Rhode Island: An examination of two outreach-based approaches. *Addictive Behaviors*, 89, 85–91. <https://doi.org/10.1016/j.addbeh.2018.09.027>

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- ¹⁶ Dahlem, C.H.G., Scalera, M., Anderson, G., Tasker, M., Ploutz-Snyder, R., McCabe, S.E., & Boyd, C.J. (2021). Recovery opioid overdose team (ROOT) pilot program evaluation: A community-wide post-overdose response strategy. *Substance Abuse*, 42(4), 423-427. <https://doi.org/10.1080/08897077.2020.1847239>
- ¹⁷ White, M.D., Perrone, D., Watts, S., & Malm, A. (2021). Moving beyond narcan: a police, social service, and researcher collaborative response to the opioid crisis. *American Journal of Criminal Justice*, 46, 626–643. <https://doi.org/10.1007/s12103-021-09625-w>
- ¹⁸ Larochelle, M. R., Bernstein, R., Bernson, D., Land, T., Stopka, T. J., Rose, A. J., Bharel, M., Liebschutz, J. M., & Walley, A. Y. (2019). Touchpoints - Opportunities to predict and prevent opioid overdose: A cohort study. *Drug and Alcohol Dependence*, 204, 107537. <https://doi.org/10.1016/j.drugalcdep.2019.06.039>
- ¹⁹ Ray, B., Richardson, N. J., Attaway, P. R., Smiley-McDonald, H. M., Davidson, P., & Kral, A. H. (2023). A national survey of law enforcement post-overdose response efforts. *The American Journal of Drug and Alcohol Abuse*, 1–7. Advance online publication. <https://doi.org/10.1080/00952990.2023.2169615>
- ²⁰ Carter, A., Soucier, D. S., Haram, E., Mazerolle, S., Sauschuck, M., & Coutu-Farrell, K. (2022). Maine's Overdose Prevention Through Intensive Outreach, Naloxone and Safety (OPTIONS) Initiative. *Journal of Public Health Management and Practice : JPHMP*, 28(Suppl 6), S326–S329. <https://doi.org/10.1097/PHH.0000000000001598>
- ²¹ Langabeer, J. R., Persse, D., Yatsco, A., O'Neal, M. M., & Champagne-Langabeer, T. (2021). A framework for EMS outreach for drug overdose survivors: A case report of the Houston Emergency Opioid Engagement System. *Prehospital Emergency Care*, 25(3), 441–448. <https://doi.org/10.1080/10903127.2020.1755755>
- ²² Langabeer, J., Champagne-Langabeer, T., Lubber, S. D., Prater, S. J., Stotts, A., Kirages, K., Yatsco, A., & Chambers, K. A. (2020). Outreach to people who survive opioid overdose: Linkage and retention in treatment. *Journal of Substance Abuse Treatment*, 111, 11–15. <https://doi.org/10.1016/j.jsat.2019.12.008>
- ²³ Ray, B., McCarthy-Nickila, J., Richardson, N., & Maahs, J. (2023). Post-overdose follow-up in the community with peer recovery specialists: The Lake Superior Diversion and Substance Use Response Team. *Drug and Alcohol Dependence Reports*, 6, 100139. <https://doi.org/10.1016/j.dadr.2023.100139>

Attachment C: Additional Documentation of Need

Emergency department visits due to unintentional drug overdose increased between 2019 and 2022 in all four partner jurisdictions, as shown in *Table 1*.

Table 1: Emergency Department Visits for Unintentional Drug Overdoses for all drugs per 10,000 ED Visits

Locality	2019	2020	2021
Chesterfield County	16.0	20.4	24.8
Colonial Heights City	52.6	67.4	71.4
Petersburg City	54.9	64.7	60.2
Powhatan County	71.7	38.0	54.8

SOURCE: [Virginia Department of Health](#)

Youth Prevention Need

Table 2 below shows the percentage of juveniles that have used cigarettes, alcohol, marijuana, and illicit substances annually based on surveys administered to 8th and 12th graders. The Chesterfield data was collected from a survey administered in 2016, while the Colonial Heights data was collected in 2020.

Table 2: Percentage of Students Who Report Using Drugs Annually

Drug	Chesterfield 2016	Colonial Heights 2020
Cigarettes/E-cigarettes	16.9%	31.3%
Alcohol	37.6%	38.6%
Marijuana	22.8%	21.3%
Cocaine	1.8%	0.2%
Inhalants	5.0%	1.8%
Hallucinogens	4.3%	3.5%
Heroin	0.6%	0.8%
Ecstasy	1.8%	1.5%

Area of Persistent Poverty and Historically Disadvantaged Communities

Ninety percent (90%) of residents living in the City of Petersburg live in an Area of Persistent Poverty (10 out of 11 census tracts), and six (6) out of eleven (11) census tracts are designated as BOTH an Area of Persistent Poverty and a Historically Disadvantaged Community.¹ An 'Area of Persistent Poverty' is defined as any Census Tract with a poverty rate of at least 20 percent as measured by the 2014–2018 5-year data series available from the American Community Survey of the Bureau of the Census.² A Historically Disadvantaged Community is a community that has historically suffered from discrimination and has not had equal access to public or private economic benefits due to race, ethnicity, gender, geography, language preference, immigrant or citizen status, sexual orientation, gender identity, socioeconomic status, or disability status of its members.³

¹ U.S. Department of Transportation DOT Data Hub. Areas of Persistent Poverty Project (APP) and Historically Disadvantaged Community (HDC) List. <https://datahub.transportation.gov/stories/s/tsyd-k6ij>

² Ibid.

³ <https://www.lawinsider.com/dictionary/historically-marginalized-or-disadvantaged-community>

Qualified Opportunity Zones

Four (4) census tracts in Chesterfield County and three (3) census tracts in the City of Petersburg include census tracts designated as Qualified Opportunity Zones. Qualified Opportunity Zones are nominated by the governor and are comprised of low-income census tracts. Virginia had 901 eligible census tracts in 2018. Virginia nominated the maximum number of census tracts allotted. Opportunity Zones are a federal economic development and community development tax benefit established as part of the 2017 Tax Cuts and Jobs Act available to investors with capital gains designed to encourage long-term private investment in low-income urban, suburban, and rural census tracts. The designations are permanent until Dec. 31, 2028.⁴

Free School Lunch Program Eligibility

In Chesterfield County, 48% of students are eligible for a free or reduced lunch. In Colonial Heights, 85% are eligible, and in the City of Petersburg, 100% of students are eligible. In Powhatan County, 28% of students are eligible for free or reduced lunch.⁵

Children in Poverty

In the City of Petersburg, 36% of children live in poverty, 71% of children are living in single-parent households, and 70% of children receive TANF. In Chesterfield County, 9% of children live in poverty, 30% of children are living in single-parent households, and 72% of children receive TANF.⁶ In 2020, 38.6% of children living in the City of Petersburg experienced food insecurity.⁷

Additional Relevant Data

According to the Robert Wood Johnson Foundation and the University of Wisconsin's Population Health, which ranks the length and quality of American lives and the factors that influence them, Petersburg is Virginia's least healthy locality. Residents of Petersburg, where the median household income is among the lowest in the state, face a life expectancy of only 66.2 years, the lowest in the state and 10 years worse than the national average. Petersburg has ranked as the state's least healthy locality in eight of the past 10 years.

Locality	Health Outcomes Ranking (1-133) 1 is the highest ranking, 133 is the lowest ranking
Chesterfield County	27
Colonial Heights City	97
Petersburg City	133
Powhatan County	16

SOURCE: <https://www.countyhealthrankings.org/explore-health-rankings/virginia?year=2022>

⁴ <https://dhcd.virginia.gov/opportunity-zones-oz>

⁵ Virginia Department of Education. 2022-2023 School Nutrition Program Statistics and Reports. <https://www.doe.virginia.gov/programs-services/school-operations-support-services/school-nutrition/program-statistics-reports>

⁶ The Annie E. Casey Foundation Kids Count Data Center. Virginia Indicators. <https://datacenter.kidscount.org/data#VA/2/0/char/0>

⁷ Ibid.