

Acknowledgment from the Director

On behalf of the Opioid Response Coordination Office (ORCO) I am pleased to present our Tennessee (TN) High Impact Areas Program Bi-Annual Report. This report highlights some of the accomplishments our dedicated, compassionate, and resourceful public health staff have made towards improving the health and well-being of residents and communities in Tennessee.

We however do not carry out this work alone. The Opioid Response Coordination Office has many partnerships both internal and external, both formal and informal.

Achieving the goals of the Bi-Annual Report will enable Tennessee to strengthen communities, reduce substance use disorder and prevent deaths. Additionally, by focusing on prevention, removing barriers to essential support services, we can reduce unnecessary deaths and the impact of opioid use disorder on our communities.

Respectfully Submitted, Amy M. Murawski Director Opioid Response Coordination Office

Acknowledgments

This report and the High Impact Areas Program would not be possible without the support and work of many stakeholders. We express our sincere gratitude to the staff of the High Impact Areas Program, our team at the Opioid Response Coordination Office, the leadership in Regional and Local Department of Health, the Office of Informatics and Analytics, the Department of Mental Health & Substance Abuse Services, and the Center for Diseases and Prevention Control for your support and assistance.

Special thanks to the report contributors (in alphabetical order): Hector Carrasco, Shannon De Pont, Vindhya Kakarla, Amy Murawski and Kristen Zak.

This report was supported in part by the Overdose Data to Action Cooperative Agreement number 1NU17CE924981-01-00, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

Table of Contents

Acknowledgment from the Director Acknowledgments	3
Introduction Drug Addiction in the COVID-19 Landscape	5 7
Drug Overdose Trends in the High Impact Areas Middle HIA	9
Implementing the High Impact Areas Program during COVID-19 Middle HIA	15 17
HIA Projects Spotlight Davidson County Acute Overdose Outbreak Response Plan Knox Substance Use Multidisciplinary Task Force A Betor Way Syringes Services Program	20 20 21 22
High Impact Areas support model: Training, Technical Assistance and Resource Sharing	23
Technical Assistance Summary: Middle	23
Conclusion	25
References	26

Introduction

The Opioid Response Coordination Office (ORCO) was created in fall of 2018 to provide public health leadership in responding to the substance misuse epidemic across Tennessee. ORCO is charged with acting as an information hub on substance misuse trends, projects, funding and partnerships; informing strategy and effective practices; coordinating projects, partners, activities and funding; consistently following the addiction epidemic and serving as a communicator and advocate for addiction response efforts in Tennessee.

As ORCO began this journey, we became aware of the work, expertise, energy and passion in place across Tennessee communities in addressing substance use disorder. As the addiction crisis evolved across Tennessee, different communities have been impacted in different ways but no community was spared. And while the addiction crisis impacts all geographic areas and demographic groups, we know that there is disproportionate impact in underserved communities and addiction itself further exacerbates disparities in the social determinants of health. It became clear early on that effective response to the addiction epidemic would come from the local level.

ORCO's primary funding comes from the Centers for Disease Control and Prevention (CDC) Overdose Data to Action (OD2A) Cooperative Agreement. The CDC has also recognized the importance of local response and prioritized building local capacity as a major focus of the funding. In fact, CDC requires that at least 20% of states prevention budgets be allocated to local communities. ORCO made a commitment to addressing the epidemic locally early on and currently allocates about 60% of our prevention dollars to local response.

In determining how to allocate resources in the state, TDH leadership established certain goals to provide as much local support as possible, to have as much impact as possible and to focus on overdose prevention by prioritizing identifying those most at risk and intervening before the most adverse consequences of substance use disorder. To meet these goals, TDH decided to focus on those communities who were most highly impacted by the substance misuse epidemic to allocate enough resources to be able to make a real, measurable impact.

We examined a year of non-fatal overdose counts in order to identify highly impacted areas and engaged with Metro, regional and local public health leadership for further input on resource allocation. We then convened multi-sector workgroups to examine regional and local data, learn more about evidence-based interventions and build consensus on community priorities. Through these efforts, local communities determined which interventions to implement and how resources would be allocated. Out of these efforts came ORCO's High-Impact Area (HIA) program. The HIA program funds 5 distinct High-Impact Areas—3 established (East, Middle and West) and 2 newly forming (Southeast and Northeast). The program is committed to local control of effective response and interventions with support from ORCO in funding, monitoring and evaluation and technical assistance.

This report will be produced biannually and we hope you use this report to learn more about the High-Impact Areas and follow their efforts and progress as we work together to address the substance misuse epidemic in Tennessee.

Drug Addiction in the COVID-19 Landscape

Before COVID-19, drug addiction and overdose plagued many of our communities across the US and in Tennessee. From January 2019 to January 2020, drug-related-deaths in the country increased by eight percent, while Tennessee experienced an even greater increase of 15 percent. As COVID-19 spread in our communities and rightfully captured national attention, the drug overdose epidemic silently continued taking lives away in the shadows. In fact, during the pandemic, drug overdoses deaths are at an all-time high. According to estimates, in May 2020, the US experienced an 18.2% annual increase in drug overdoses, 27.5% in Tennessee.³

There are four leading explanations as to why drug overdoses are increasing so rapidly: lower access to treatment, social isolation, financial stress, and the availability of synthetic opioids.⁴⁻⁷

Due to the COVID-19 pandemic, treatment centers have had to close or significantly scale back. In May, a survey showed at least one in three individuals living with addiction reported changes or disruptions in accessing treatment or recovery support services.⁸ Exacerbating the issue, COVID-19 social distancing requirements make it less likely a bystander would be present during a drug overdose to call emergency medical services or administer the life-saving drug, Naloxone.⁷

Additionally, drug addiction thrives in social isolation. COVID-19 mitigation measures rightfully require that people remain physically distant from each other rendering family events, social support groups, and community events scarce. These social interactions are essential for everybody, but especially for people living with drug addiction. For the 28 percent of Americans who live alone, lockdowns meant little to no human contact for most of 2020.9 Some surveys suggest that within the first month of COVID-19, loneliness increased by 20 to 30 percent. Dy June 2020, a CDC survey found that during COVID-19, 40% of the US adults reported struggling with a mental health issue or substance use.

Moreover, the economic uncertainty engendered by COVID-19 adds to the third contributing factor — financial stress. From the start of the pandemic, there have been 939,311 unemployment claims in the state of Tennessee.¹² According to the

Aspen Institute, 35% of Tennesseans households were at risk of eviction in the fourth quarter of 2020.¹³ Economic stress and housing insecurity are both strongly correlated to drug addiction.¹⁴ Further, drug addiction also contributes to insecure housing and economic uncertainty through job loss, income displacement, the loss of social ties, and exacerbating other contributory factors (i.e., mental health problems). The well-known vicious cycle of drug addiction and poverty has been intensified during COVID-19.

Finally, 2020 recorded a dramatic rise in overdoses due to synthetic opioids, such as fentanyl. Compared with commonly used opioids, fentanyl is more likely to cause an overdose because of its lethal potency (100 times stronger than heroin). Comparing the 12-month period ending in May 2019 and 2020, respectively, synthetic opioid overdose deaths increased by 38.4% in the US — in Tennessee, the increase was above 50%.³

Compounded, lower access to treatment, isolation, financial stress, and a more dangerous form of opioids are the perfect storm intensifying the destructive nature of the addiction epidemic to its highest level ever recorded.

Drug Overdose Trends in the High Impact Areas

The current opioid epidemic is a national, state, and local public health crisis that has cost us thousands of lives and huge healthcare system costs. ^{15–16} The fact that the United States lost nearly as many lives to the opioid epidemic over the past 2 decades as we did to the COVID-19 pandemic to date indicates the gravity of the situation. ^{17–18} A dramatic increase in opioid overdose deaths occurred during the period from 1999 to 2014 in the form of three distinct waves of opioid overdose deaths. ¹⁹ The first wave in 1999 began with an increased prescription of opioids, the second wave in 2010 began with a spike in overdose deaths due to heroin, and the third wave from 2013 is associated with a rapid increase in overdose deaths from synthetic opioids such as fentanyl. ¹⁹ As a result, there was a threefold increase in opioid-related deaths between 1999 and 2014.

These waves have also similarly affected the state of Tennessee. The state has evidenced an increase in prescription opioid-related deaths during the late 1990s.²⁰ This was followed by an increase in overdose deaths from heroin and synthetic opioids after the year 2010 (Figure 2).²¹ As of 2018, Tennessee stands among the top 15 US states for opioid-related overdose deaths and among the top 3 US states for opioid prescription rates.²² CDC's OD2A cooperative agreement launched in 2019 recommends the implementation of community-level interventions in areas identified to have a higher opioid overdose burden as indicated by the state's surveillance data. Using Tennessee's non-fatal overdose counts for the year 2018, counties within the public health regions with higher than the state average of non-fatal overdoses were identified as "High Impact Areas" (HIAs).

Middle HIA

Davidson, Rutherford, Cheatham, and Montgomery counties comprise the High Impact Areas of the Middle Tennessee Region. While the HIAs were chosen based on non-fatal overdoses for 2018 alone, these areas also have a high mortality burden due to opioid overdose. Cheatham County recorded the highest rate of overdose deaths due to opioids among middle TN HIAs during the period 2015-2018.

Cheatham has seen an increase in opioid mortality rate from 33 per 100,000 individuals in 2016 to 59 per 100,000 in 2017 and stands at 54 per 100,000 as of 2018. Opioid mortality rate has further increased for the year 2019 in Cheatham and the rest of the middle HIA counties too (Figure 3). With a rate of 1004 per 1000 Tennesseans filling at least one opioid for pain prescription during 2019, Cheatham County also has the highest prescription opioids rates among the Middle HIA counties (this rate is also higher than the state's average), followed by Rutherford, Montgomery, and Davidson (these counties have rates less than the state's average).

Inpatient stay rates for all opioids (excluding Heroin) are the highest in Cheatham county followed by Montgomery, Davidson and Rutherford-the rates for Cheatham and Montgomery counties are higher than that of the state. Davidson evidenced a higher rate of inpatient stays due to heroin between 2015 and 2018. Cheatham reported higher rates of outpatient visits involving both Heroin and all opioids excluding Heroin. All four counties in the Middle Tennessee Region had a nearly equal to or higher than state rates for outpatient visits involving all opioid overdoses excluding heroin for the period 2015-2018, except for Montgomery in 2015. There has been an increase in outpatient visits in all four counties due to opioids overdoses (including Heroin) from 2018 to 2019 (Figures 4,5). While the inpatient stays due to opioids including heroin have increased in Davidson and Rutherford counties from 2018 to 2019, Cheatham county has seen a decrease in the number of inpatient stays due to opioid overdoses (excluding heroin) and no change in inpatient stays involving heroin overdoses. There is a decrease in the number of inpatient stays due to opioids (excluding heroin) and an increase in the number of inpatient stays due to heroin overdoses in Montgomery County during 2019 when compared to 2018.²,²³

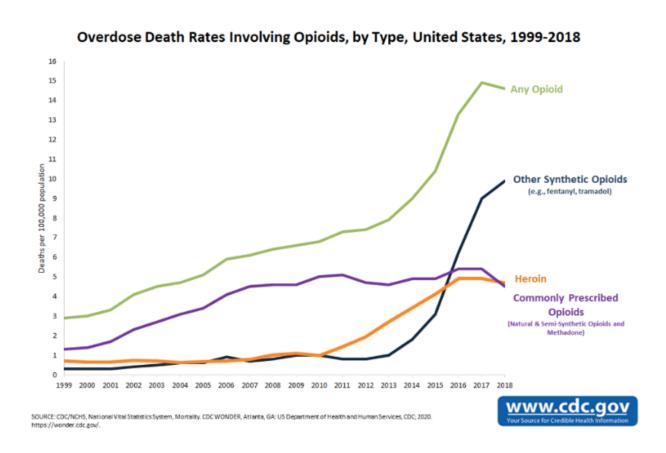


Figure 1. Overdose death rates in the United States during 1999-2018, by opioid-type.¹⁹

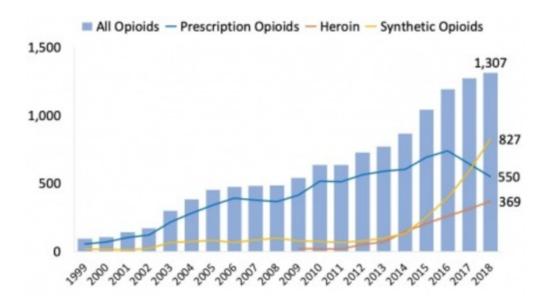


Figure 2. No. of overdose deaths involving opioids in Tennessee from 1999 to 2018.²²

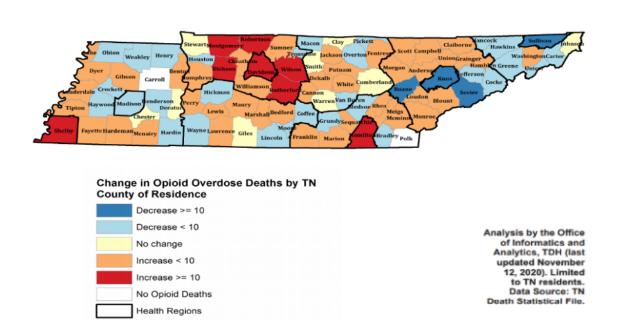


Figure 3. Change in the Number of All Opioid Overdose Deaths by TIN County of Residence, 2018-2019.²⁴

*TDH is aware of an undercount of overdose deaths in 2018, primarily those occurring in Shelby County. A higher number of deaths were reported with unknown causes in Shelby County, which resulted in a greater number of pending death investigations than in previous years, which were reported as undetermined by CDC while finalizing the coding process. Therefore, caution is advised in interpreting the downward trend in overdose deaths across all categories of drugs among Shelby County residents for 2018.

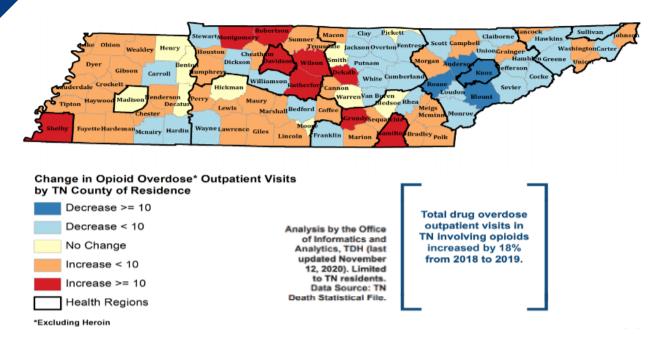


Figure 4a. Change in the Number of Opioid Overdose (Excluding Heroin) Outpatient Visits by TN County of Residence, 2018-2019.²⁴

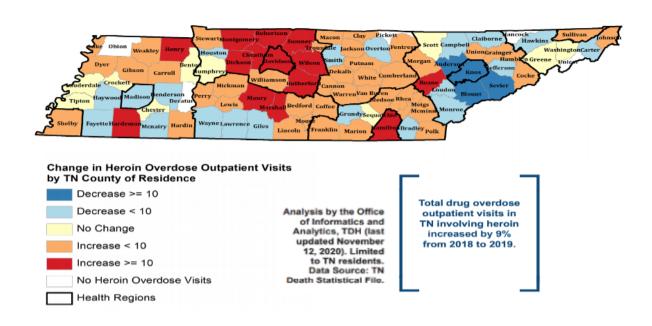


Figure 4b. Change in the Number of Heroin Overdose Outpatient Visits by TN County of Residence, 2018-2019.²⁴

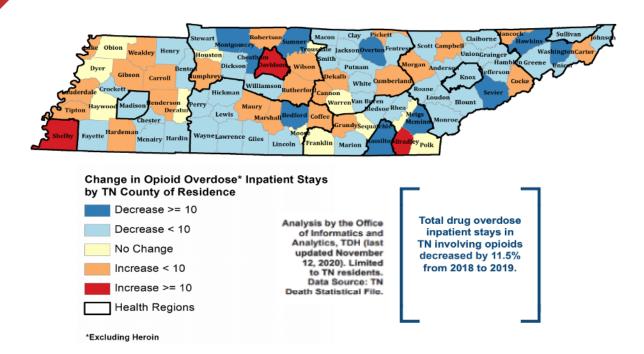


Figure 5a. Change in the Number of Opioid Overdose (Excluding Heroin) Inpatient Stays by TN County of Residence, 2018-2019.²⁴

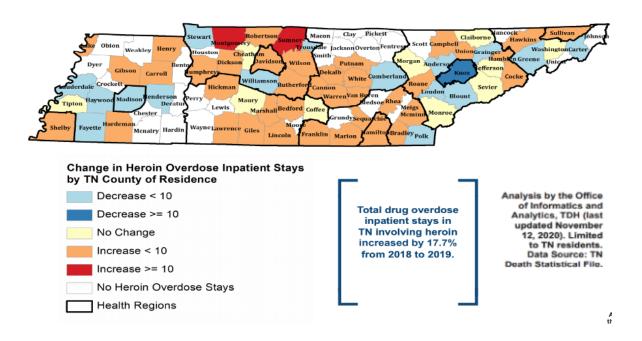


Figure 5b. Change in the Number of Heroin Overdose Inpatient Stays by TN County of Residence, 2018-2019.²⁴

Implementing the High Impact Areas Program during COVID-19

Prior to the pandemic, the TN Department of Health launched the High Impact Area Program (HIA). The program is supported by the Centers of Disease Control and Prevention's (CDC) cooperative agreement, Overdose Data to Action, with the purpose of strengthening capacity in local communities with a high burden of drug overdoses. The program relies heavily on timely and relevant data to inform public health interventions aimed at reducing overdose at the local level. High Impact areas were determined by examining non-fatal overdoses across the state and gauging the interest and expertise of local stakeholders.

During the initial 2019 phase, ten counties in three health regions in the state (East, Middle and West) were chosen. In the subsequent 2020 and 2021 phases, the program is expanding to the Northeast and Southeast Regions of the state.

The HIA Program encourages communities to utilize the granted resources by implementing evidence-based public health interventions recommended by CDC. The CDC endorsed project list includes a broad range of multidisciplinary interventions such as developing multi-sector task forces and creating overdose outbreak community response plans, introducing Medications for Opioid Use Disorders in correctional settings, developing criminal justice diversion and syringes services programs, launching drug use prevention education campaigns, and implementing navigation programs for patients at high risk of drug overdose.

Listed below the right is a table of the current projects implemented in each HIA.

	East	Middle	West
Activities	Knox, Cocke, Jefferson, Roane, and Sevier	Davidson, Montgomery, Cheatham, and Rutherford	Shelby
HIAs Taskforce	>	⊘	⊘
HIAs Overdose Response Plan	⊘	⊘	⊘
Prevention activities	(⊘	
Navigate patients to receive treatment	>	⊘	⊘
Emergency Department Discharge protocol	⊘		
Syringes Services Program expansion	>		⊘
Medications for Opioid Use Disorder access in Jefferson County Jail			

Despite the hard work of the Opioid Response Coordination Office and the regional departments of health to remain focused on project implementation, the COVID-19 pandemic has affected the HIA Program in at least three important ways: 1) staff hiring has been delayed due to hiring freezes and lack of capacity , 2) gathering events, which are required to advance many of the projects, were curtailed due to COVID-19 mitigation measures, and 3) staff devoted to the HIA Program often needed to be diverted to support COVID-19 testing, contact tracing and vaccination efforts. However, despite these barriers the HIA team has made significant advancements in many of the projects. In the following section we describe each of the projects and highlight some major achievements.

Middle HIA

The High Impact Area (HIA) program in the Middle TN Region was launched in 2020 and it covers four counties: Rutherford, Montgomery, Cheatham, and Davidson.

HIAs Task Force: The Task Force organizes relevant community representatives from multiple sectors to respond effectively to the current drug addiction epidemic in their communities. The Task Force includes law enforcement and EMS agencies, school administrators, elected officials, faith-based organizations, non-governmental organizations, treatment providers, substance use prevention-related coalitions, and people and families affected by addiction. In 2020, the team focused on relationship-building, started developing county-based working groups, and is planning to launch the Middle TN multidisciplinary task force in April 2021.

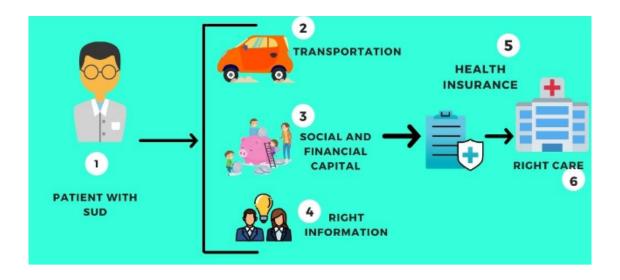
HIAs Overdose Response Plan: This project uses daily drug overdose surveillance across available overdose databases to assess unusual activity and spearhead an effective community response when overdoses surpass expected estimates. Because of this project, Davidson County has developed a comprehensive plan to respond to acute overdose outbreaks. This community response plan has been activated four times so far and received the attention of the local press as well.²⁵ It will soon be adapted for use in Rutherford, Cheatham, and Montgomery counties.

Life Skills Training in Rutherford County Schools: Life Skills is an evidence-based training that helps to prevent drug use in adolescents. This project will offer Life Skills training in Elementary, Middle, and High Schools in Rutherford County along with a drug prevention summit that is expected to reach hundreds of teenagers. Because of the disruptions to in-person schooling due to the COVID-19 pandemic, this project has been postponed until the 2021-22 school year.

Emergency Departments Discharge Protocol for Patients with Substance Use Disorder: Evidence has shown that having a standardized protocol to discharge patients after a drug overdose from emergency departments significantly increased engagement in addiction treatment, reduced self-reported illicit opioid use, and reduces subsequent overdoses.²⁷,²⁸

The Middle TN HIA team committed to developing an evidence-based protocol to guide local hospitals' discharges for patients with Substance Use Disorder (SUD). The team has started working on a literature review and it is having multiple meetings with key stakeholders in local hospitals to ensure wide adoption of the protocol. The protocol is expected to be ready by August 2021.

Linkage to Care in Health Department Clinics: Many people with SUD come from underserved communities, have low educational attainment and socioeconomic status (many being people without a home),²⁹ and lack access to healthcare.³⁰ Further, many don't have the social capital to navigate the U.S. healthcare and behavioral health systems to access the treatment they need.³⁰ Following its commitment to equity, the Middle TN team has developed a community health worker position to help people with SUD navigate the health system to receive the services they need. The social worker implementing this endeavor rotates between Metro Public Health Department clinics to identify patients with SUD and refer them to the appropriate health or social services.



Linkage to care with the Mental Health Cooperative: Metro Nashville Fire-EMS responds to approximately 5,800 suspected overdose incidents per year, and this number is steadily increasing. Like the Linkage to Care in Health Department Clinics, this project links patients with a history of drug overdose to the Mental Health Cooperative Crisis Treatment Center. This center has extensive experience working in crisis response and diversion and has the infrastructure and personnel to provide treatment and other needed services to people with SUD.

The Fire Captain in charge of implementing this project is based in the Fire-EMS office and acts as a bridge between patients who suffered a recent drug overdose and the Mental Health Cooperative Crisis Treatment Center and other resources available.

HIA Projects Spotlights

In this section we will describe some projects that exemplify the ideals and work of the High Impact Areas program.

Acute Overdose Response Plan

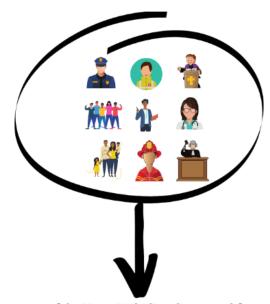
In analyzing the sustained increase of drug overdoses, since 2020 the Davidson County team has integrated and utilized multiple data sources to develop an intelligence system that enables them to respond to drug overdoses more effectively. The integrated data systems contain data from local hospitals, medical examiners and forensic centers, EMS, and fire departments. Relying on their integrated data system, Davidson County team has launched an alert system that informs important stakeholders such as the Tennessee Department of Health, EMS, fire departments and community-based organizations while also providing resources to respond to the outbreak. The overdose outbreak response plan has been featured in important reports such as the Overdose Mapping Application Program: A Guide to the ODMAP Platform and Community Application from The High Intensity Drug Trafficking Area program, local media and have been invited to present at national events.



HIA Task Force of East Tennessee

Since the start, the East Tennessee regional team knew that the key for success was collaboration. With that idea in mind, the team started recruiting members from across sectors to their task force. During the quarterly task force meetings, the members assess progress of the multiple projects they oversee, discuss challenges and develop new plans of action. The meetings are infused with a spirit of collaboration and inclusive participation which enables productive conversations that get translated into useful actions.

Today, the HIA Task Force of East Tennessee has more than 42 members that represent more than 10 sectors including public safety, anti-drug coalitions, Federally Qualified Health Clinics, harm reduction, hospitals, public health, judicial, behavioral health, EMS, and Substance Use Disorder treatment providers. In 2021 the task force has plans to ensure they have even further diverse representation in striving to make their projects accountable to the population they serve, their task force also includes persons with lived experience with substance use disorder and mental illness.



Functions of the Knox Multidisciplinary taskforce:

- Assess resources
 Organize community efforts
 Prioritize and implement projects
- Oversee activities

A Betor Way Syringes Services Program

Shelby County Health Department has joined hands with A Betor Way organization in an effort to expand harm reduction services offered to individuals in Shelby County. Known for being the first official Syringe Service Program (SSP) in West Tennessee, A Betor Way operates with the mission "to be a source of assistance to addicts and those affected by addiction, to advocate for improved treatment options and to erase the stigma associated with substance abuse, and to eliminate barriers for anyone seeking help with addiction."³⁷ This organization has been providing individuals with an opportunity to gain access to clean, unused syringes, in addition to providing naloxone, free wound and health assessments, and educational material on possible treatment options and preventive health measures. During August 2020-January 2021 alone, A Betor Way served 2660 individuals, collected over 85,000 syringes, and distributed 95,000 syringes. It is through the passion and efforts of organizations such as A Betor Way that hope is able to thrive and a paradigm shift is introduced and we are able to fight the opioid epidemic by meeting individuals where they are in their journey to recovery.

High Impact Areas support model: Training, Technical Assistance and Resource Sharing

Technical Assistance Summary: Middle

The Opioid Response Coordination Office (ORCO) assists Middle HIA with their technical assistance needs by conducting bi-weekly touch-base meeting in which ORCO's HIA Director and HIA Technical Assistance Coordinator meets with staff from each HIA in order to discuss progress, establish goals, guide efforts as well as provide support and clarity regarding program activities.

Influenced by discussions during the touch-base meetings, ORCO has taken steps to provide technical assistance to the Middle HIA including the creation of a resource sharing portal which contains relevant documents in one centralized location. Resources found in the shared portal are related to program specific activities and include overdose outbreak response plan templates, task force best practices documents, onboarding guides and data source links.

Further, ORCO has assisted the HIA Programs by advocating for data expansion efforts and requesting data related trainings, facilitated Learning Collaboratives: convening and sharing lessons and bridging expertise from outside the state, Coordinator Meetings: networking, resource sharing, group support and the HIA Monthly Meetings: discussing project progress and addressing implementation challenges. ORCO consistently seeks out feedback to develop meaningful collaborative relationships to best serve the HIAs through our technical assistance efforts.

Individualized technical assistance provided to Middle HIA includes initiating and coordinating data training from the Office of Informatics and Analytics and finding and sharing national models for ED discharge protocol and linkage to care.

Meeting	Touch-Base	Reporting	Coordinator	Learning Collaborative
Participants	HIA Program Coordinators (Metro and Region)	All stakeholders involved within the HIAs	HIA Program Coordinators (Metro and Region)	All stakeholders involved within the HIAs
Purpose	To create a space for coaching, troubleshooting, and to discuss day-to-day implementation challenges	To discuss performance and address implementation challenges that require ORCO, Region and Metro leadership involvement	To create a space for resource sharing, learning and networking	To share learn from subject matter experts, share best practices and resources, and celebrate achievements
Frequency	Weekly/bi- monthly	Monthly	Quarterly	Quarterly

Conclusion

Drug addiction is a multifaceted public health issue that has proven hard to mitigate. For drug addiction, there are no quick fixes or one-approach-fits-all. It is the combination of organized communities, overdose outbreak response plans, SSPs, access to treatment, behavioral and navigation services, and drug use prevention and anti-stigma campaigns which is going to decrease the drug addiction epidemic in Tennessee and elsewhere.

Multidisciplinary interventions with a strong public health component — like the Tennessee High Impact Areas — are exactly the type of programs that should be expanded, implemented and strengthened in times of hopelessness and increasing drug overdoses.

We have a golden opportunity to improve wellbeing and save lives by reversing the trends on drug addiction. Let's continue giving our best to fulfill our commitment to a healthier and more prosperous Tennessee.

References

- 1. Centers For Disease Control and Prevention. Vital Statistics Rapid Release Provisional Drug Overdose Data. https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm (2021).
- 2. Office of Informatics and Analytics. Tennessee Department of Health. Tennessee's Annual Overdose Report 2020: Report on Epidemiologic Data and Projects to Address the Overdose Epidemic. 142 (2020).
- 3. Centers For Disease Control and Prevention. Increase in Fatal Drug Overdoses Across the United States Driven by Synthetic Opioids Before and During the COVID-19 Pandemic. https://emergency.cdc.gov/han/2020/han00438.asp (2020).
- 4. American Medical Association. As COVID-19 surges, AMA sounds alarm on nation's overdose epidemic. *American Medical Association* https://www.ama-assn.org/delivering-care/opioids/covid-19-surges-ama-sounds-alarm-nation-s-overdose-epidemic.
- 5. Kempler, C. & Health, J. B. S. of P. Recommendations for the Overdose Epidemic in the COVID-19 Pandemic. *Johns Hopkins Bloomberg School of Public Health* https://www.jhsph.edu/news/news-releases/2020/recommendations-for-the-overdose-epidemic-in-the-covid-19-pandemic.html.
- 6. National Institute of Health. The COVID-19 Pandemic Is Fueling the Opioid Crisis! 4.
- 7. Niles, J. K., Gudin, J., Radcliff, J. & Kaufman, H. W. The Opioid Epidemic Within the COVID-19 Pandemic: Drug Testing in 2020. *Popul. Health Manag.* 24, S-43 (2020).
- 8. Addiction Policy. Survey: COVID-19 Affecting Access to Addiction Treatment and Key Services. *APF* https://www.addictionpolicy.org/post/survey-covid-19-affecting-access-to-addiction-treatment-and-key-services (2020).
- 9. Bureau US Census. One-Person Households on the Rise. The United States Census Bureau https://www.census.gov/library/visualizations/2019/comm/one-person-households.html.

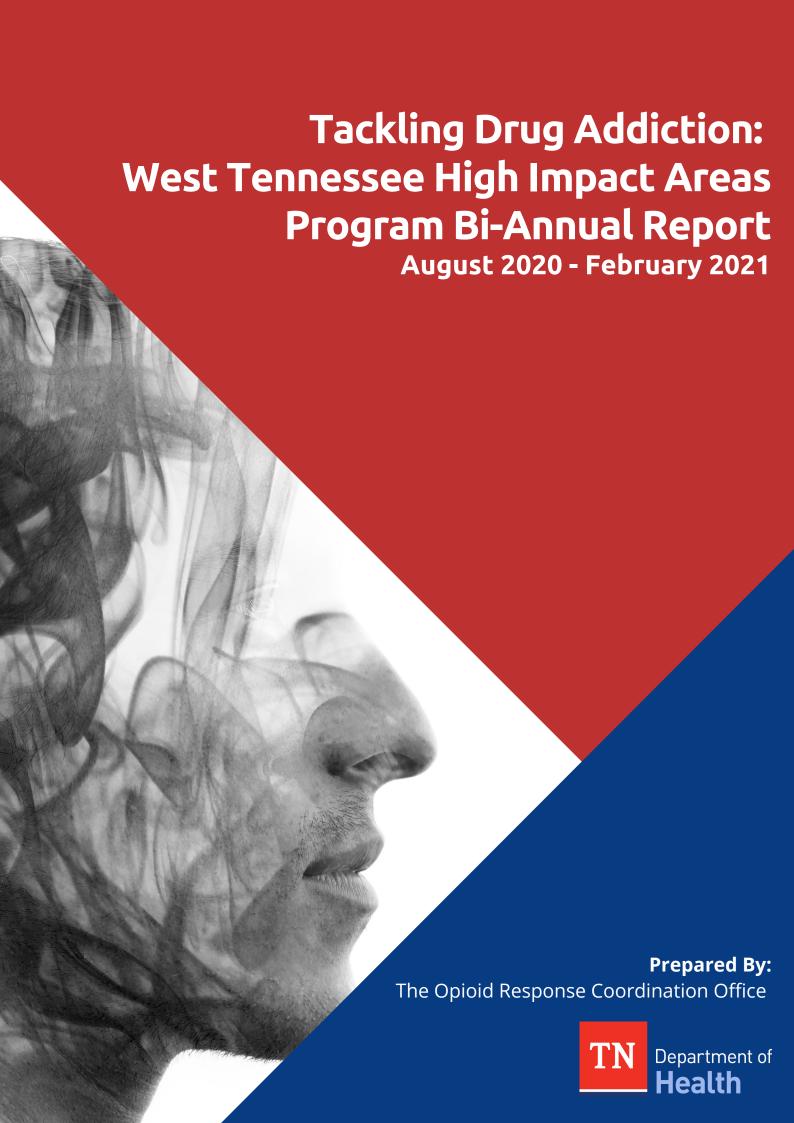
- 10. Report: Loneliness and Anxiety During Lockdown. *SocialPro* https://socialpronow.com/loneliness-corona/.
- 11. Czeisler, M. É. Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic United States, June 24–30, 2020. *MMWR Morb. Mortal. Wkly. Rep.* 69, (2020).
- 12. Tennessee Unemployment Claims Data. https://www.tn.gov/workforce/general-resources/news/2020/12/10/tennessee-unemployment-claims-data.html.
- 13. Aspen Institute. *COVID-19 EVICTION DEFENSE PROJECT AND THE ASPEN INSTITUTE FINANCIAL SECURITY PROGRAM*. (2020).
- 14. Spooner, C. & Hetherington, K. *Social determinants of drug use*. (National Drug and Alcohol Research Centre, University of New South Wales, 2005).
- 15. National Institute on Drug. Opioid Overdose Crisis. *National Institute on Drug Abuse* https://www.drugabuse.gov/drug-topics/opioids/opioid-overdose-crisis (2021).
- 16. Lyden, J. & Binswanger, I. A. The United States opioid epidemic. *Semin. Perinatol.* 43, 123–131 (2019).
- 17. Centers For Disease Control and Prevention. COVID Data Tracker. *Centers for Disease Control and Prevention* https://covid.cdc.gov/covid-data-tracker (2020).
- 18. National Institute on Drug. Overdose Death Rates. *National Institute on Drug Abuse* https://www.drugabuse.gov/drug-topics/trends-statistics/overdose-death-rates (2021).
- 19. Understanding the Epidemic | Drug Overdose | CDC Injury Center. https://www.cdc.gov/drugoverdose/epidemic/index.html (2020).
- 20. Executive office of the President of the United States. TENNESSEE DRUG CONTROL UPDATE. https://obamawhitehouse.archives.gov/sites/default/files/docs/state_profile_-_tennessee_0.pdf (2012).

- 21. National Institute on Drug. Tennessee: Opioid-Involved Deaths and Related Harms. *National Institute on Drug Abuse* https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state/tennessee-opioid-involved-deaths-related-harms (2020).
- 22. National Institute on Drug. Opioid Summaries by State. *National Institute on Drug Abuse* https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state (2020).
- 23. Office of Informatics and Analytics. Tennessee Department of Health. Data Dashboard. TN. https://www.tn.gov/health/health-program-areas/pdo/pdo/data-dashboard.html.
- 24. Office of Informatics and Analytics. Tennessee Department of Health. *Tennessee's Annual Overdose Report 2021: R*eport on Epidemiologic Data and Projects to Address the Overdose Epidemic. https://www.tn.gov/content/dam/tn/health/documents/pdo/2021%20TN%20Annual%20Overdose%20Report.pdf
- 25. Metro working to launch system that maps out overdoses in real time. https://www.newschannel5.com/news/metro-working-to-launch-system-that-maps-out-overdoses-in-real-time.
- 26. Botvin, G. Preventing Adolescent Drug Abuse through Life Skills Training: Theory, Evidence of Effectiveness, and Implementation Issues. (1998).
- 27. D'Onofrio, G. *et al.* Emergency department-initiated buprenorphine/naloxone treatment for opioid dependence: a randomized clinical trial. *JAMA* 313, 1636–1644 (2015).
- 28. National Council for Behavioral Health, O. R. N. ADDRESSING OPIOID USE DISORDER IN EMERGENCY DEPARTMENTS: EXPERT PANEL FINDINGS. (2020).
- 29. Wilson, N., Kariisa, M., Seth, P., Iv, H. S. & Davis, N. L. Drug and Opioid-Involved Overdose Deaths United States, 2017–2018. 69, 8 (2020).

- 30. Jennifer Klein. Key Facts about Uninsured Adults with Opioid Use Disorder. *KFF* https://www.kff.org/uninsured/issue-brief/key-facts-about-uninsured-adults-with-opioid-use-disorder/ (2019).
- 31. Marsden, J. *et al.* Does exposure to opioid substitution treatment in prison reduce the risk of death after release? A national prospective observational study in England. *Addiction* 112, 1408–1418 (2017).
- 32. Westerberg, V. S., McCrady, B. S., Owens, M. & Guerin, P. Community-Based Methadone Maintenance in a Large Detention Center is Associated with Decreases in Inmate Recidivism. *J. Subst. Abuse Treat.* 70, 1–6 (2016).
- 33. Carroll, J., Green, T. & Noonan, R. *Evidence-Based Strategies for Preventing Opioid Overdose: What's Working in the United States, 2018.* 40 https://www.cdc.gov/drugoverdose/pdf/pubs/2018-evidence-based-strategies.pdf (2018).
- 34. Committee on Valuing Community-Based, N.-C. P. P., Practice, B. on P. H. and P. H. & Medicine, I. of. *Community-Based Prevention*. *An Integrated Framework for Assessing the Value of Community-Based Prevention* (National Academies Press (US), 2012).
- 35. Saloner, B. *et al.* A Public Health Strategy for the Opioid Crisis. *Public Health Rep.* 133, 24S-34S (2018).
- 36. Aliese Alter & Kristin Stainbrook. Overdose Mapping Application Program: A Guide to the ODMAP Platform and Community Application. http://www.odmap.org/Content/docs/training/general-info/ODMAP-Platform-and-User-Guide.pdf (2020).
- 37. A Betor Way Website. A Betor Way https://abetorway.org/.

Contact Us

Tennessee Department of Health Opioid Response Coordination Office High Impact Areas HIA Director: Hector.Carrasco@tn.gov HIA Technical Assistance Coordinator: Shannon.DePont@tn.gov



Acknowledgment from the Director

On behalf of the Opioid Response Coordination Office (ORCO) I am pleased to present our Tennessee (TN) High Impact Areas Program Bi-Annual Report. This report highlights some of the accomplishments our dedicated, compassionate, and resourceful public health staff have made towards improving the health and well-being of residents and communities in Tennessee.

We however do not carry out this work alone. The Opioid Response Coordination Office has many partnerships both internal and external, both formal and informal.

Achieving the goals of the Bi-Annual Report will enable Tennessee to strengthen communities, reduce substance use disorder and prevent deaths. Additionally, by focusing on prevention, removing barriers to essential support services, we can reduce unnecessary deaths and the impact of opioid use disorder on our communities.

Respectfully Submitted, Amy M. Murawski Director Opioid Response Coordination Office

Acknowledgments

This report and the High Impact Areas Program would not be possible without the support and work of many stakeholders. We express our sincere gratitude to the staff of the High Impact Areas Program, our team at the Opioid Response Coordination Office, the leadership in Regional and Local Department of Health, the Office of Informatics and Analytics, the Department of Mental Health & Substance Abuse Services, and the Center for Diseases and Prevention Control for your support and assistance.

Special thanks to the report contributors (in alphabetical order): Hector Carrasco, Shannon De Pont, Vindhya Kakarla, Amy Murawski and Kristen Zak.

This report was supported in part by the Overdose Data to Action Cooperative Agreement number 1NU17CE924981-01-00, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

Table of Contents

Acknowledgment from the Director Acknowledgments	3
Introduction Drug Addiction in the COVID-19 Landscape	5 7
Drug Overdose Trends in the High Impact Areas West HIA	9 9
Implementing the High Impact Areas Program during COVID-19 West HIA	15 17
HIA Projects Spotlight Davidson County Acute Overdose Outbreak Response Plan Knox Substance Use Multidisciplinary Task Force A Betor Way Syringes Services Program	19 19 20 21
High Impact Areas support model: Training, Technical Assistance and Resource Sharing	23
Technical Assistance Summary: West	23
Conclusion	24
References	25

Introduction

The Opioid Response Coordination Office (ORCO) was created in fall of 2018 to provide public health leadership in responding to the substance misuse epidemic across Tennessee. ORCO is charged with acting as an information hub on substance misuse trends, projects, funding and partnerships; informing strategy and effective practices; coordinating projects, partners, activities and funding; consistently following the addiction epidemic and serving as a communicator and advocate for addiction response efforts in Tennessee.

As ORCO began this journey, we became aware of the work, expertise, energy and passion in place across Tennessee communities in addressing substance use disorder. As the addiction crisis evolved across Tennessee, different communities have been impacted in different ways but no community was spared. And while the addiction crisis impacts all geographic areas and demographic groups, we know that there is disproportionate impact in underserved communities and addiction itself further exacerbates disparities in the social determinants of health. It became clear early on that effective response to the addiction epidemic would come from the local level.

ORCO's primary funding comes from the Centers for Disease Control and Prevention (CDC) Overdose Data to Action (OD2A) Cooperative Agreement. The CDC has also recognized the importance of local response and prioritized building local capacity as a major focus of the funding. In fact, CDC requires that at least 20% of states prevention budgets be allocated to local communities. ORCO made a commitment to addressing the epidemic locally early on and currently allocates about 60% of our prevention dollars to local response.

In determining how to allocate resources in the state, TDH leadership established certain goals to provide as much local support as possible, to have as much impact as possible and to focus on overdose prevention by prioritizing identifying those most at risk and intervening before the most adverse consequences of substance use disorder. To meet these goals, TDH decided to focus on those communities who were most highly impacted by the substance misuse epidemic to allocate enough resources to be able to make a real, measurable impact.

We examined a year of non-fatal overdose counts in order to identify highly impacted areas and engaged with Metro, regional and local public health leadership for further input on resource allocation. We then convened multi-sector workgroups to examine regional and local data, learn more about evidence-based interventions and build consensus on community priorities. Through these efforts, local communities determined which interventions to implement and how resources would be allocated. Out of these efforts came ORCO's High-Impact Area (HIA) program. The HIA program funds 5 distinct High-Impact Areas—3 established (East, Middle and West) and 2 newly forming (Southeast and Northeast). The program is committed to local control of effective response and interventions with support from ORCO in funding, monitoring and evaluation and technical assistance.

This report will be produced biannually and we hope you use this report to learn more about the High-Impact Areas and follow their efforts and progress as we work together to address the substance misuse epidemic in Tennessee.

Drug Addiction in the COVID-19 Landscape

Before COVID-19, drug addiction and overdose plagued many of our communities across the US and in Tennessee. From January 2019 to January 2020, drug-related-deaths in the country increased by eight percent, while Tennessee experienced an even greater increase of 15 percent. As COVID-19 spread in our communities and rightfully captured national attention, the drug overdose epidemic silently continued taking lives away in the shadows. In fact, during the pandemic, drug overdoses deaths are at an all-time high. According to estimates, in May 2020, the US experienced an 18.2% annual increase in drug overdoses, 27.5% in Tennessee.³

There are four leading explanations as to why drug overdoses are increasing so rapidly: lower access to treatment, social isolation, financial stress, and the availability of synthetic opioids.⁴⁻⁷

Due to the COVID-19 pandemic, treatment centers have had to close or significantly scale back. In May, a survey showed at least one in three individuals living with addiction reported changes or disruptions in accessing treatment or recovery support services.⁸ Exacerbating the issue, COVID-19 social distancing requirements make it less likely a bystander would be present during a drug overdose to call emergency medical services or administer the life-saving drug, Naloxone.⁷

Additionally, drug addiction thrives in social isolation. COVID-19 mitigation measures rightfully require that people remain physically distant from each other rendering family events, social support groups, and community events scarce. These social interactions are essential for everybody, but especially for people living with drug addiction. For the 28 percent of Americans who live alone, lockdowns meant little to no human contact for most of 2020.9 Some surveys suggest that within the first month of COVID-19, loneliness increased by 20 to 30 percent. Dy June 2020, a CDC survey found that during COVID-19, 40% of the US adults reported struggling with a mental health issue or substance use.

Moreover, the economic uncertainty engendered by COVID-19 adds to the third contributing factor — financial stress. From the start of the pandemic, there have been 939,311 unemployment claims in the state of Tennessee.¹² According to the

Aspen Institute, 35% of Tennesseans households were at risk of eviction in the fourth quarter of 2020.¹³ Economic stress and housing insecurity are both strongly correlated to drug addiction.¹⁴ Further, drug addiction also contributes to insecure housing and economic uncertainty through job loss, income displacement, the loss of social ties, and exacerbating other contributory factors (i.e., mental health problems). The well-known vicious cycle of drug addiction and poverty has been intensified during COVID-19.

Finally, 2020 recorded a dramatic rise in overdoses due to synthetic opioids, such as fentanyl. Compared with commonly used opioids, fentanyl is more likely to cause an overdose because of its lethal potency (100 times stronger than heroin). Comparing the 12-month period ending in May 2019 and 2020, respectively, synthetic opioid overdose deaths increased by 38.4% in the US — in Tennessee, the increase was above 50%.³

Compounded, lower access to treatment, isolation, financial stress, and a more dangerous form of opioids are the perfect storm intensifying the destructive nature of the addiction epidemic to its highest level ever recorded.

Drug Overdose Trends in the High Impact Areas

The current opioid epidemic is a national, state, and local public health crisis that has cost us thousands of lives and huge healthcare system costs. ¹⁵, ¹⁶ The fact that the United States lost nearly as many lives to the opioid epidemic over the past 2 decades as we did to the COVID-19 pandemic to date indicates the gravity of the situation. ^{17–18} A dramatic increase in opioid overdose deaths occurred during the period from 1999 to 2014 in the form of three distinct waves of opioid overdose deaths. ¹⁹ The first wave in 1999 began with an increased prescription of opioids, the second wave in 2010 began with a spike in overdose deaths due to heroin, and the third wave from 2013 is associated with a rapid increase in overdose deaths from synthetic opioids such as fentanyl. ¹⁹ As a result, there was a threefold increase in opioid-related deaths between 1999 and 2014.

These waves have also similarly affected the state of Tennessee. The state has evidenced an increase in prescription opioid-related deaths during the late 1990s.²⁰ This was followed by an increase in overdose deaths from heroin and synthetic opioids after the year 2010 (Figure 2).²¹ As of 2018, Tennessee stands among the top 15 US states for opioid-related overdose deaths and among the top 3 US states for opioid prescription rates.²² CDC's OD2A cooperative agreement launched in 2019 recommends the implementation of community-level interventions in areas identified to have a higher opioid overdose burden as indicated by the state's surveillance data. Using Tennessee's non-fatal overdose counts for the year 2018, counties within the public health regions with higher than the state average of non-fatal overdoses were identified as "High Impact Areas" (HIAs).

West HIA

With a population of 936,365 in 2018, Shelby County is the only HIA county in the West Tennessee Region. Though the population of Shelby County is higher than that of Davidson in the middle and Knox in the East, Shelby County reported relatively lower rates of both fatal and non-fatal overdoses for the period 2015-2018. The number of opioid-related deaths for Shelby County did not show much variation during this period (135 in 2015, 123 in 2018).

The number of inpatient stays due to all opioids (excluding heroin) did not change much between 2015 and 2018, so did the number of inpatient stays due to heroin (at around 140 and 45 respectively due to opioids excluding heroin and due to heroin). However, the number of outpatient visits involving all opioid (excluding heroin) overdoses and also heroin overdoses have increased during this period. Shelby County has seen an increase in fatal and non-fatal opioid overdoses during the year 2019 when compared to 2018 (Figures 3, 4, 5). Rates of opioid prescription for pain have seen a downward trend from 725 prescriptions for 1000 population to 497 per 1000 during the years 2016-2019.²

**TDH is aware of an undercount of overdose deaths in 2018, primarily those occurring in Shelby County. A higher number of deaths were reported with unknown causes in Shelby County, which resulted in a greater number of pending death investigations than in previous years, which were reported as undetermined by CDC while finalizing the coding process. Therefore, caution is advised in interpreting the downward trend in overdose deaths across all categories of drugs among Shelby County residents for 2018.

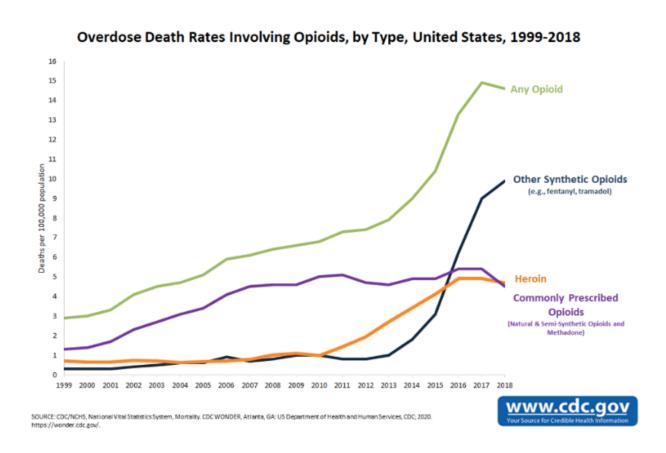


Figure 1. Overdose death rates in the United States during 1999-2018, by opioid-type.¹⁹

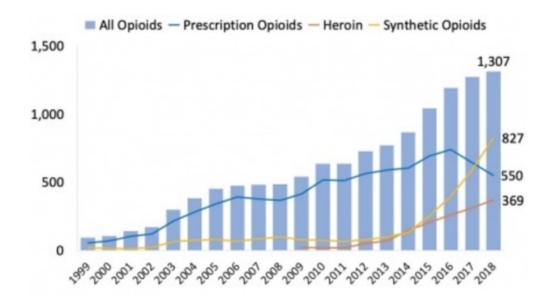


Figure 2. No. of overdose deaths involving opioids in Tennessee from 1999 to 2018.²²

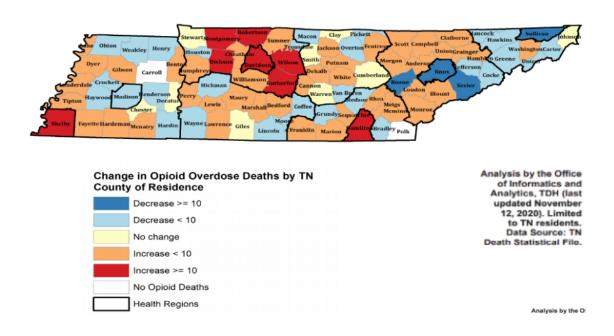


Figure 3. Change in the Number of All Opioid Overdose Deaths by TN County of Residence, 2018-2019.²⁴

*TDH is aware of an undercount of overdose deaths in 2018, primarily those occurring in Shelby County. A higher number of deaths were reported with unknown causes in Shelby County, which resulted in a greater number of pending death investigations than in previous years, which were reported as undetermined by CDC while finalizing the coding process. Therefore, caution is advised in interpreting the downward trend in overdose deaths across all categories of drugs among Shelby County residents for 2018.

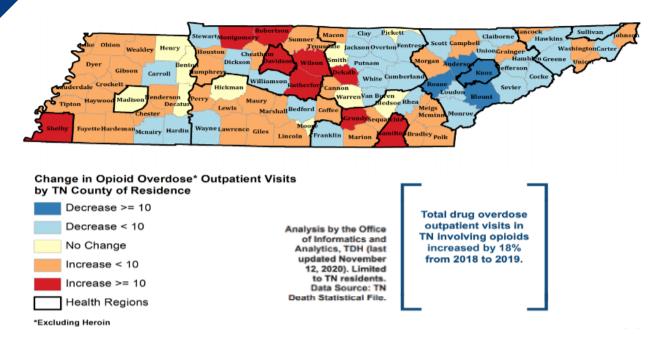


Figure 4a. Change in the Number of Opioid Overdose (Excluding Heroin) Outpatient Visits by TN County of Residence, 2018-2019.²⁴

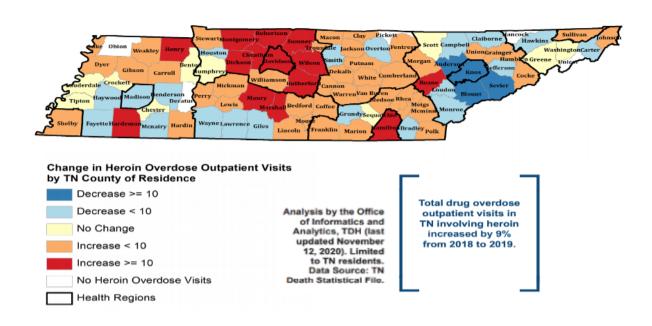


Figure 4b. Change in the Number of Heroin Overdose Outpatient Visits by TN County of Residence, 2018-2019.²⁴

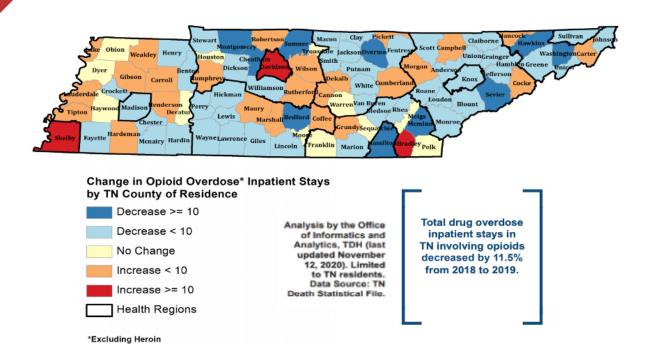


Figure 5a. Change in the Number of Opioid Overdose (Excluding Heroin) Inpatient Stays by TN County of Residence, 2018-2019.²⁴

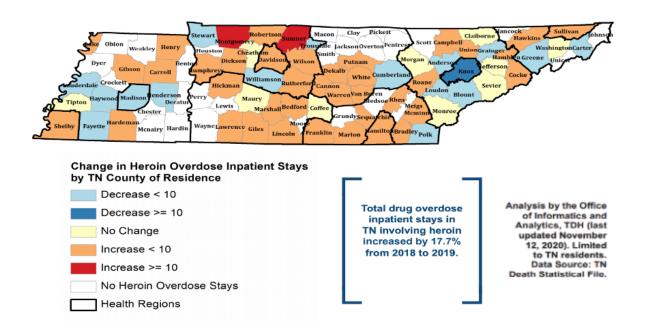


Figure 5b. Change in the Number of Heroin Overdose Inpatient Stays by TN County of Residence, 2018-2019.²⁴

Implementing the High Impact Areas Program during COVID-19

Prior to the pandemic, the TN Department of Health launched the High Impact Area Program (HIA). The program is supported by the Centers of Disease Control and Prevention's (CDC) cooperative agreement, Overdose Data to Action, with the purpose of strengthening capacity in local communities with a high burden of drug overdoses. The program relies heavily on timely and relevant data to inform public health interventions aimed at reducing overdose at the local level. High Impact areas were determined by examining non-fatal overdoses across the state and gauging the interest and expertise of local stakeholders.

During the initial 2019 phase, ten counties in three health regions in the state (East, Middle and West) were chosen. In the subsequent 2020 and 2021 phases, the program is expanding to the Northeast and Southeast Regions of the state.

The High Impact Area Program encourages communities to utilize the granted resources by implementing evidence-based public health interventions recommended by CDC. The CDC endorsed project list includes a broad range of multidisciplinary interventions such as developing multi-sector task forces and creating overdose outbreak community response plans, introducing Medications for Opioid Use Disorders in correctional settings, developing criminal justice diversion and syringes services programs, launching drug use prevention education campaigns, and implementing navigation programs for patients at high risk of drug overdose.

Listed below the right is a table of the current projects implemented in each HIA.

	East	Middle	West
Activities	Knox, Cocke, Jefferson, Roane, and Sevier	Davidson, Montgomery, Cheatham, and Rutherford	Shelby
HIAs Taskforce	>	⊘	⊘
HIAs Overdose Response Plan	⊘	⊘	⊘
Prevention activities	(⊘	
Navigate patients to receive treatment	>	⊘	⊘
Emergency Department Discharge protocol	⊘	\bigcirc	
Syringes Services Program expansion	>		⊘
Medications for Opioid Use Disorder access in Jefferson County Jail			

Despite the hard work of the Opioid Response Coordination Office and the regional departments of health to remain focused on project implementation, the COVID-19 pandemic has affected the HIA Program in at least three important ways: 1) staff hiring has been delayed due to hiring freezes and lack of capacity , 2) gathering events, which are required to advance many of the projects, were curtailed due to COVID-19 mitigation measures, and 3) staff devoted to the HIA Program often needed to be diverted to support COVID-19 testing, contact tracing and vaccination efforts. However, despite these barriers the HIA team has made significant advancements in many of the projects. In the following section we describe each of the projects and highlight some major achievements.

West HIA

The High Impact Area (HIA) Program in the West Region consisting of Shelby County was launched in 2020.

HIA Task Force: This activity focuses on strengthening the existing partnerships, building new relationships as well as aligning and leveraging new resources to address Substance Use Disorder (SUD) in Shelby County. In 2017, the Shelby County Opioid Task Force was convened by the Shelby County Board of Commissioners, to develop a comprehensive local opioid response plan to be overseen and implemented through the Shelby County Health Department (SCHD) and the Shelby County Opioid Response Coalition (SCORC). Facilitation of the task force as well as documentation of the plan were completed by the SCHD. This task force created a rigorous Opioid Epidemic Response Plan for Shelby County which includes five pillars: 1) Data Usage and Integration, 2) Prevention and Education, 3) Treatment and Recovery, 4) First Responders and Law Enforcement, and 5) Harm Reduction.

HIA Overdose Response Plan: Though Shelby County has been using daily drug overdose surveillance across available overdose databases to assess unusual activity and spearhead an effective community response when overdoses surpass expected estimates, they have not formally drafted the plan. Despite facing some major challenges due to the COVID-19 pandemic, SCHD has made some significant progress in drafting a meticulous Overdose Outbreak Response Plan for the Region which is currently awaiting leadership approval.

Substance Use Prevention Education: Prevention and education are key components of mitigating any public health issue that has an adverse impact on a community.34 The overarching goal of prevention education is to encourage healthy behaviors by individuals and groups within their respective spheres of influence. Thus far, messages have highlighted Tennessee Redline services, the undiscriminating nature of opioid use disorder such as asking for other treatment options for pain management and never taking opioids in higher amounts or greater frequencies than prescribed.

SCHD continues to explore and implement innovative solutions that reduce stigma and highlight harm reduction by hosting state-wide trainings. They have also worked to identify young individuals who can present to peers at the speaker bureaus to widen the reach of these education programs.

Syringe Services Program Expansion: According to the CDC, SSPs are a key component of overdose prevention strategies, because they can facilitate access to and uptake of services and interventions for reducing overdose, reduce the risk of blood-borne infections enhance health and wellbeing, and improve public health and public safety.^{1,35} A Betor Way and Memphis Area Prevention Coalition are the two agencies approved by the State of Tennessee Department of Health to operate as SSP. These agencies provide services to PWID, such as distribution and exchange of syringes, proper disposal of needles, naloxone distribution, condoms and referrals for blood-borne pathogen screening, for example, HIV, hepatitis A, B and C. Between August 2020 and january 2021, A Betor Way has served over 1700 individuals needing one of these services in the region while the Memphis Area Prevention Coalition has served nearly 1570 individuals. SCHD partners with both the local SSPs to assist in adding capacity and purchase of allowable supplies.

Linkage to Care in Health Departments: As the result of a successful partnership with all seven municipalities in Shelby County, SCHD captures timely non-fatal and fatal overdose occurrences through quantitative data gathered from ODMAP, ESSENCE, and the West Tennessee Regional Forensic Center. While quantitative data presents a great understanding of the epidemic, qualitative data brings additional information that provides a better understanding of the trending patterns of PWID and evolution of the local epidemic. With this in mind, SCHD has begun the development of a case review assessment tool. The goal is to interview people who have experienced non-fatal overdoses and close contacts of individuals who have experienced a fatal overdose. Those interviewed then receive referral to available community resources and are offered follow-up by Prevention Coalition partners. Data obtained from the interviews adds a great value in shaping the County's opioid response to meet regional needs..

HIA Projects Spotlights

In this section we will describe some projects that exemplify the ideals and work of the High Impact Areas program.

Davidson County Acute Overdose Outbreak Response Plan

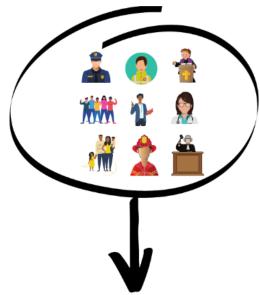
In analyzing the sustained increase of drug overdoses, since 2020 the Davidson County team has integrated and utilized multiple data sources to develop an intelligence system that enables them to respond to drug overdoses more effectively. The integrated data systems contain data from local hospitals, medical examiners and forensic centers, EMS, and fire departments. Relying on their integrated data system, Davidson County team has launched an alert system that informs important stakeholders such as the Tennessee Department of Health, EMS, fire departments and community-based organizations while also providing resources to respond to the outbreak. The overdose outbreak response plan has been featured in important reports such as the Overdose Mapping Application Program: A Guide to the ODMAP Platform and Community Application from The High Intensity Drug Trafficking Area program, local media²⁵ and have been invited to present at national events.



HIA Task Force of East Tennessee

Since the start, the East Tennessee regional team knew that the key for success was collaboration. With that idea in mind, the team started recruiting members from across sectors to their task force. During the quarterly task force meetings, the members assess progress of the multiple projects they oversee, discuss challenges and develop new plans of action. The meetings are infused with a spirit of collaboration and inclusive participation which enables productive conversations that get translated into useful actions.

Today, the HIA Task Force of East Tennessee has more than 42 members that represent more than 10 sectors including public safety, anti-drug coalitions, Federally Qualified Health Clinics, harm reduction, hospitals, public health, judicial, behavioral health, EMS, and Substance Use Disorder treatment providers. In 2021 the task force has plans to ensure they have even further diverse representation in striving to make their projects accountable to the population they serve, their task force also includes persons with lived experience with substance use disorder and mental illness.



Functions of the Knox Multidisciplinary taskforce:

- Assess resources
 Organize community efforts
 Prioritize and implement projects
- Oversee activities

A Betor Way Syringes Services Program

Shelby County Health Department has joined hands with A Betor Way organization in an effort to expand harm reduction services offered to individuals in Shelby County. Known for being the first official Syringe Service Program (SSP) in West Tennessee, A Betor Way operates with the mission "to be a source of assistance to addicts and those affected by addiction, to advocate for improved treatment options and to erase the stigma associated with substance abuse, and to eliminate barriers for anyone seeking help with addiction." This organization has been providing individuals with an opportunity to gain access to clean, unused syringes, in addition to providing naloxone, free wound and health assessments, and educational material on possible treatment options and preventive health measures. During August 2020-January 2021 alone, A Betor Way served 2660 individuals, collected over 85,000 syringes, and distributed 95,000 syringes. It is through the passion and efforts of organizations such as A Betor Way that hope is able to thrive and a paradigm shift is introduced and we are able to fight the opioid epidemic by meeting individuals where they are in their journey to recovery.

High Impact Areas support model: Training, Technical Assistance and Resource Sharing

Technical Assistance Summary: West

The Opioid Response Coordination Office (ORCO) provided technical assistance to West HIA including the creation of a resource sharing portal which contains relevant documents in one centralized location. Resources found in the shared portal are related to program specific activities and include overdose outbreak response plan templates, task force best practices documents, onboarding guides and data source links.

Further, ORCO has assisted the HIA Programs by advocating for data expansion efforts and requesting data related trainings, facilitated Learning Collaboratives: convening and sharing lessons and bridging expertise from outside the state, Coordinator Meetings: networking, resource sharing, group support and the HIA Monthly Meetings: discussing project progress and addressing implementation challenges. ORCO consistently seeks out feedback to develop meaningful collaborative relationships to best serve the HIAs through our technical assistance efforts.

Meeting	Touch-Base	Reporting	Coordinator	Learning Collaborative
Participants	HIA Program Coordinators (Metro and Region)	All stakeholders involved within the HIAs	HIA Program Coordinators (Metro and Region)	All stakeholders involved within the HIAs
Purpose	To create a space for coaching, troubleshooting, and to discuss day-to-day implementation challenges	To discuss performance and address implementation challenges that require ORCO, Region and Metro leadership involvement	To create a space for resource sharing, learning and networking	To share learn from subject matter experts, share best practices and resources, and celebrate achievements
Frequency	Weekly/bi- monthly	Monthly	Quarterly	Quarterly

Conclusion

Drug addiction is a multifaceted public health issue that has proven hard to mitigate. For drug addiction, there are no quick fixes or one-approach-fits-all. It is the combination of organized communities, overdose outbreak response plans, SSPs, access to treatment, behavioral and navigation services, and drug use prevention and anti-stigma campaigns which is going to decrease the drug addiction epidemic in Tennessee and elsewhere.

Multidisciplinary interventions with a strong public health component — like the Tennessee High Impact Areas — are exactly the type of programs that should be expanded, implemented and strengthened in times of hopelessness and increasing drug overdoses.

We have a golden opportunity to improve wellbeing and save lives by reversing the trends on drug addiction. Let's continue giving our best to fulfill our commitment to a healthier and more prosperous Tennessee.

References

- 1. Centers For Disease Control and Prevention. Vital Statistics Rapid Release Provisional Drug Overdose Data. https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm (2021).
- 2. Office of Informatics and Analytics. Tennessee Department of Health. Tennessee's Annual Overdose Report 2020: Report on Epidemiologic Data and Projects to Address the Overdose Epidemic. 142 (2020).
- 3. Centers For Disease Control and Prevention. Increase in Fatal Drug Overdoses Across the United States Driven by Synthetic Opioids Before and During the COVID-19 Pandemic. https://emergency.cdc.gov/han/2020/han00438.asp (2020).
- 4. American Medical Association. As COVID-19 surges, AMA sounds alarm on nation's overdose epidemic. *American Medical Association* https://www.ama-assn.org/delivering-care/opioids/covid-19-surges-ama-sounds-alarm-nation-s-overdose-epidemic.
- 5. Kempler, C. & Health, J. B. S. of P. Recommendations for the Overdose Epidemic in the COVID-19 Pandemic. *Johns Hopkins Bloomberg School of Public Health* https://www.jhsph.edu/news/news-releases/2020/recommendations-for-the-overdose-epidemic-in-the-covid-19-pandemic.html.
- 6. National Institute of Health. The COVID-19 Pandemic Is Fueling the Opioid Crisis! 4.
- 7. Niles, J. K., Gudin, J., Radcliff, J. & Kaufman, H. W. The Opioid Epidemic Within the COVID-19 Pandemic: Drug Testing in 2020. *Popul. Health Manag.* 24, S-43 (2020).
- 8. Addiction Policy. Survey: COVID-19 Affecting Access to Addiction Treatment and Key Services. *APF* https://www.addictionpolicy.org/post/survey-covid-19-affecting-access-to-addiction-treatment-and-key-services (2020).
- 9. Bureau US Census. One-Person Households on the Rise. The United States Census Bureau https://www.census.gov/library/visualizations/2019/comm/one-person-households.html.

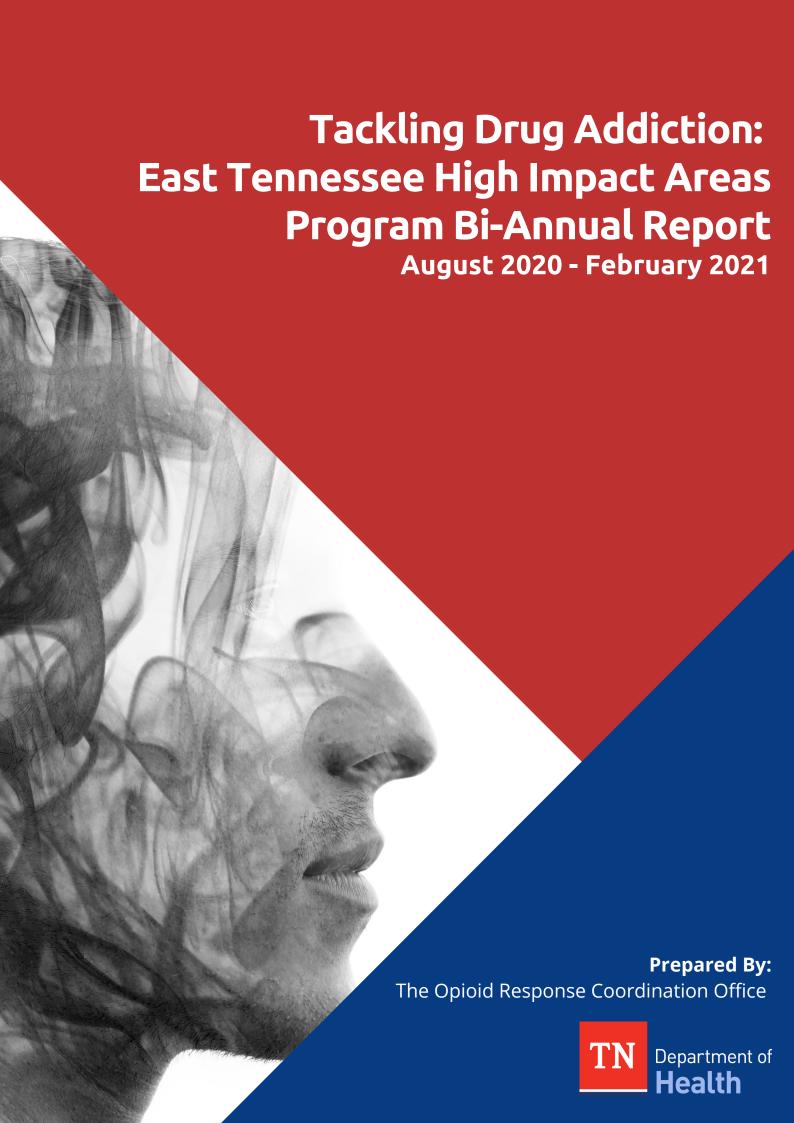
- 10. Report: Loneliness and Anxiety During Lockdown. *SocialPro* https://socialpronow.com/loneliness-corona/.
- 11. Czeisler, M. É. Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic United States, June 24–30, 2020. *MMWR Morb. Mortal. Wkly. Rep.* 69, (2020).
- 12. Tennessee Unemployment Claims Data. https://www.tn.gov/workforce/general-resources/news/2020/12/10/tennessee-unemployment-claims-data.html.
- 13. Aspen Institute. *COVID-19 EVICTION DEFENSE PROJECT AND THE ASPEN INSTITUTE FINANCIAL SECURITY PROGRAM*. (2020).
- 14. Spooner, C. & Hetherington, K. *Social determinants of drug use*. (National Drug and Alcohol Research Centre, University of New South Wales, 2005).
- 15. National Institute on Drug. Opioid Overdose Crisis. *National Institute on Drug Abuse* https://www.drugabuse.gov/drug-topics/opioids/opioid-overdose-crisis (2021).
- 16. Lyden, J. & Binswanger, I. A. The United States opioid epidemic. *Semin. Perinatol.* 43, 123–131 (2019).
- 17. Centers For Disease Control and Prevention. COVID Data Tracker. *Centers for Disease Control and Prevention* https://covid.cdc.gov/covid-data-tracker (2020).
- 18. National Institute on Drug. Overdose Death Rates. *National Institute on Drug Abuse* https://www.drugabuse.gov/drug-topics/trends-statistics/overdose-death-rates (2021).
- 19. Understanding the Epidemic | Drug Overdose | CDC Injury Center. https://www.cdc.gov/drugoverdose/epidemic/index.html (2020).
- 20. Executive office of the President of the United States. TENNESSEE DRUG CONTROL UPDATE. https://obamawhitehouse.archives.gov/sites/default/files/docs/state_profile_-_tennessee_0.pdf (2012).

- 21. National Institute on Drug. Tennessee: Opioid-Involved Deaths and Related Harms. *National Institute on Drug Abuse* https://www.drugabuse.gov/drugtopics/opioids/opioid-summaries-by-state/tennessee-opioid-involved-deaths-related-harms (2020).
- 22. National Institute on Drug. Opioid Summaries by State. *National Institute on Drug Abuse* https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state (2020).
- 23. Office of Informatics and Analytics. Tennessee Department of Health. Data Dashboard. TN. https://www.tn.gov/health/health-program-areas/pdo/pdo/data-dashboard.html.
- 24. Office of Informatics and Analytics. Tennessee Department of Health. *Tennessee's Annual Overdose Report 2021:* Report on Epidemiologic Data and Projects to Address the Overdose Epidemic. https://www.tn.gov/content/dam/tn/health/documents/pdo/2021%20TN%20Annual%20Overdose%20Report.pdf
- 25. Metro working to launch system that maps out overdoses in real time. https://www.newschannel5.com/news/metro-working-to-launch-system-that-maps-out-overdoses-in-real-time.
- 26. Botvin, G. Preventing Adolescent Drug Abuse through Life Skills Training: Theory, Evidence of Effectiveness, and Implementation Issues. (1998).
- 27. D'Onofrio, G. *et al.* Emergency department-initiated buprenorphine/naloxone treatment for opioid dependence: a randomized clinical trial. *JAMA* 313, 1636–1644 (2015).
- 28. National Council for Behavioral Health, O. R. N. ADDRESSING OPIOID USE DISORDER IN EMERGENCY DEPARTMENTS: EXPERT PANEL FINDINGS. (2020).
- 29. Wilson, N., Kariisa, M., Seth, P., Iv, H. S. & Davis, N. L. Drug and Opioid-Involved Overdose Deaths United States, 2017–2018. 69, 8 (2020).

- 30. Jennifer Klein. Key Facts about Uninsured Adults with Opioid Use Disorder. *KFF* https://www.kff.org/uninsured/issue-brief/key-facts-about-uninsured-adults-with-opioid-use-disorder/ (2019).
- 31. Marsden, J. *et al.* Does exposure to opioid substitution treatment in prison reduce the risk of death after release? A national prospective observational study in England. *Addiction* 112, 1408–1418 (2017).
- 32. Westerberg, V. S., McCrady, B. S., Owens, M. & Guerin, P. Community-Based Methadone Maintenance in a Large Detention Center is Associated with Decreases in Inmate Recidivism. *J. Subst. Abuse Treat.* 70, 1–6 (2016).
- 33. Carroll, J., Green, T. & Noonan, R. *Evidence-Based Strategies for Preventing Opioid Overdose: What's Working in the United States, 2018.* 40 https://www.cdc.gov/drugoverdose/pdf/pubs/2018-evidence-based-strategies.pdf (2018).
- 34. Committee on Valuing Community-Based, N.-C. P. P., Practice, B. on P. H. and P. H. & Medicine, I. of. *Community-Based Prevention*. *An Integrated Framework for Assessing the Value of Community-Based Prevention* (National Academies Press (US), 2012).
- 35. Saloner, B. *et al.* A Public Health Strategy for the Opioid Crisis. *Public Health Rep.* 133, 24S-34S (2018).
- 36. Aliese Alter & Kristin Stainbrook. Overdose Mapping Application Program: A Guide to the ODMAP Platform and Community Application. http://www.odmap.org/Content/docs/training/general-info/ODMAP-Platform-and-User-Guide.pdf (2020).
- 37. A Betor Way Website. A Betor Way https://abetorway.org/.

Contact Us

Tennessee Department of Health Opioid Response Coordination Office High Impact Areas HIA Director: Hector.Carrasco@tn.gov HIA Technical Assistance Coordinator: Shannon.DePont@tn.gov



Acknowledgment from the Director

On behalf of the Opioid Response Coordination Office (ORCO) I am pleased to present our Tennessee (TN) High Impact Areas Program Bi-Annual Report. This report highlights some of the accomplishments our dedicated, compassionate, and resourceful public health staff have made towards improving the health and well-being of residents and communities in Tennessee.

We however do not carry out this work alone. The Opioid Response Coordination Office has many partnerships both internal and external, both formal and informal.

Achieving the goals of the Bi-Annual Report will enable Tennessee to strengthen communities, reduce substance use disorder and prevent deaths. Additionally, by focusing on prevention, removing barriers to essential support services, we can reduce unnecessary deaths and the impact of opioid use disorder on our communities.

Respectfully Submitted, Amy M. Murawski Director Opioid Response Coordination Office

Acknowledgments

This report and the High Impact Areas Program would not be possible without the support and work of many stakeholders. We express our sincere gratitude to the staff of the High Impact Areas Program, our team at the Opioid Response Coordination Office, the leadership in Regional and Local Department of Health, the Office of Informatics and Analytics, the Department of Mental Health & Substance Abuse Services, and the Center for Diseases and Prevention Control for your support and assistance.

Special thanks to the report contributors (in alphabetical order): Hector Carrasco, Shannon De Pont, Vindhya Kakarla, Amy Murawski and Kristen Zak.

This report was supported in part by the Overdose Data to Action Cooperative Agreement number 1NU17CE924981-01-00, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

Table of Contents

Acknowledgment from the Director Acknowledgments	3
Introduction Drug Addiction in the COVID-19 Landscape	5 7
Drug Overdose Trends in the High Impact Areas East HIA	9
Implementing the High Impact Areas Program during COVID-19 East HIA	15 17
HIA Projects Spotlight Davidson County Acute Overdose Outbreak Response Plan Knox Substance Use Multidisciplinary Task Force A Betor Way Syringes Services Program	21 21 22 23
High Impact Areas support model: Training, Technical Assistance and Resource Sharing	24
Technical Assistance Summary: East	24
Conclusion	26
References	27

Introduction

The Opioid Response Coordination Office (ORCO) was created in fall of 2018 to provide public health leadership in responding to the substance misuse epidemic across Tennessee. ORCO is charged with acting as an information hub on substance misuse trends, projects, funding and partnerships; informing strategy and effective practices; coordinating projects, partners, activities and funding; consistently following the addiction epidemic and serving as a communicator and advocate for addiction response efforts in Tennessee.

As ORCO began this journey, we became aware of the work, expertise, energy and passion in place across Tennessee communities in addressing substance use disorder. As the addiction crisis evolved across Tennessee, different communities have been impacted in different ways but no community was spared. And while the addiction crisis impacts all geographic areas and demographic groups, we know that there is disproportionate impact in underserved communities and addiction itself further exacerbates disparities in the social determinants of health. It became clear early on that effective response to the addiction epidemic would come from the local level.

ORCO's primary funding comes from the Centers for Disease Control and Prevention (CDC) Overdose Data to Action (OD2A) Cooperative Agreement. The CDC has also recognized the importance of local response and prioritized building local capacity as a major focus of the funding. In fact, CDC requires that at least 20% of states prevention budgets be allocated to local communities. ORCO made a commitment to addressing the epidemic locally early on and currently allocates about 60% of our prevention dollars to local response.

In determining how to allocate resources in the state, TDH leadership established certain goals to provide as much local support as possible, to have as much impact as possible and to focus on overdose prevention by prioritizing identifying those most at risk and intervening before the most adverse consequences of substance use disorder. To meet these goals, TDH decided to focus on those communities who were most highly impacted by the substance misuse epidemic to allocate enough resources to be able to make a real, measurable impact.

We examined a year of non-fatal overdose counts in order to identify highly impacted areas and engaged with Metro, regional and local public health leadership for further input on resource allocation. We then convened multi-sector workgroups to examine regional and local data, learn more about evidence-based interventions and build consensus on community priorities. Through these efforts, local communities determined which interventions to implement and how resources would be allocated. Out of these efforts came ORCO's High-Impact Area (HIA) program. The HIA program funds 5 distinct High-Impact Areas—3 established (East, Middle and West) and 2 newly forming (Southeast and Northeast). The program is committed to local control of effective response and interventions with support from ORCO in funding, monitoring and evaluation and technical assistance.

This report will be produced biannually and we hope you use this report to learn more about the High-Impact Areas and follow their efforts and progress as we work together to address the substance misuse epidemic in Tennessee.

Drug Addiction in the COVID-19 Landscape

Before COVID-19, drug addiction and overdose plagued many of our communities across the US and in Tennessee. From January 2019 to January 2020, drug-related-deaths in the country increased by eight percent, while Tennessee experienced an even greater increase of 15 percent. As COVID-19 spread in our communities and rightfully captured national attention, the drug overdose epidemic silently continued taking lives away in the shadows. In fact, during the pandemic, drug overdoses deaths are at an all-time high. According to estimates, in May 2020, the US experienced an 18.2% annual increase in drug overdoses, 27.5% in Tennessee.

There are four leading explanations as to why drug overdoses are increasing so rapidly: lower access to treatment, social isolation, financial stress, and the availability of synthetic opioids.⁴⁻⁷

Due to the COVID-19 pandemic, treatment centers have had to close or significantly scale back. In May, a survey showed at least one in three individuals living with addiction reported changes or disruptions in accessing treatment or recovery support services.⁸ Exacerbating the issue, COVID-19 social distancing requirements make it less likely a bystander would be present during a drug overdose to call emergency medical services or administer the life-saving drug, Naloxone.⁷

Additionally, drug addiction thrives in social isolation. COVID-19 mitigation measures rightfully require that people remain physically distant from each other rendering family events, social support groups, and community events scarce. These social interactions are essential for everybody, but especially for people living with drug addiction. For the 28 percent of Americans who live alone, lockdowns meant little to no human contact for most of 2020.9 Some surveys suggest that within the first month of COVID-19, loneliness increased by 20 to 30 percent. Dune 2020, a CDC survey found that during COVID-19, 40% of the US adults reported struggling with a mental health issue or substance use.

Moreover, the economic uncertainty engendered by COVID-19 adds to the third contributing factor — financial stress. From the start of the pandemic, there have been 939,311 unemployment claims in the state of Tennessee.¹² According to the

Aspen Institute, 35% of Tennesseans households were at risk of eviction in the fourth quarter of 2020.¹³ Economic stress and housing insecurity are both strongly correlated to drug addiction.¹⁴ Further, drug addiction also contributes to insecure housing and economic uncertainty through job loss, income displacement, the loss of social ties, and exacerbating other contributory factors (i.e., mental health problems). The well-known vicious cycle of drug addiction and poverty has been intensified during COVID-19.

Finally, 2020 recorded a dramatic rise in overdoses due to synthetic opioids, such as fentanyl. Compared with commonly used opioids, fentanyl is more likely to cause an overdose because of its lethal potency (100 times stronger than heroin). Comparing the 12-month period ending in May 2019 and 2020, respectively, synthetic opioid overdose deaths increased by 38.4% in the US — in Tennessee, the increase was above 50%.³

Compounded, lower access to treatment, isolation, financial stress, and a more dangerous form of opioids are the perfect storm intensifying the destructive nature of the addiction epidemic to its highest level ever recorded.

Drug Overdose Trends in the High Impact Areas

The current opioid epidemic is a national, state, and local public health crisis that has cost us thousands of lives and huge healthcare system costs. ¹⁵, ¹⁶ The fact that the United States lost nearly as many lives to the opioid epidemic over the past 2 decades as we did to the COVID-19 pandemic to date indicates the gravity of the situation. ¹⁷⁻¹⁸ A dramatic increase in opioid overdose deaths occurred during the period from 1999 to 2014 in the form of three distinct waves of opioid overdose deaths. ¹⁹ The first wave in 1999 began with an increased prescription of opioids, the second wave in 2010 began with a spike in overdose deaths due to heroin, and the third wave from 2013 is associated with a rapid increase in overdose deaths from synthetic opioids such as fentanyl. ¹⁹ As a result, there was a threefold increase in opioid-related deaths between 1999 and 2014.

These waves have also similarly affected the state of Tennessee. The state has evidenced an increase in prescription opioid-related deaths during the late 1990s.²⁰ This was followed by an increase in overdose deaths from heroin and synthetic opioids after the year 2010 (Figure 2).²¹ As of 2018, Tennessee stands among the top 15 US states for opioid-related overdose deaths and among the top 3 US states for opioid prescription rates.²² CDC's OD2A cooperative agreement launched in 2019 recommends the implementation of community-level interventions in areas identified to have a higher opioid overdose burden as indicated by the state's surveillance data. Using Tennessee's non-fatal overdose counts for the year 2018, counties within the public health regions with higher than the state average of non-fatal overdoses were identified as "High Impact Areas" (HIAs).

East HIA

The HIAs in the East Tennessee Region include Knox, Cocke, Jefferson, Roane, and Sevier counties. While the HIAs were chosen based on non-fatal overdoses for 2018 alone, these areas also have a high mortality burden due to opioid overdose. Knox, Roane, and Sevier counties had a consistently higher rate of drug overdose deaths involving opioids during the period 2015-2018 when compared to the state's mortality rate. Knox County also reported a higher rate of heroin deaths,

and inpaient stays and outpatient visits for heroin overdose during 2015-2018 when compared to the state. In addition to Knox, Roane, and Cocke counties also had higher rates of inpatient and outpatient visits for heroin overdose during this period.

When compared to 2018, all 5 counties in the East HIA have reported a decrease in the number of deaths due to opioid overdose in 2019 (Figure 3). Knox County has seen a decrease in the number of both outpatient visits and inpatient stays due to opioids from 2018 to 2019 (Figures 4, 5). Jefferson, Roane and Sevier have noted a decrease in outpatient visits due to all opioids (including heroin) and inpatient stays due to opioids (excluding heroin). While there has been a decrease in the number of outpatient visits due to opioid overdose (excluding heroin) in Cocke county from 2018 to 2019, the number of outpatient visits due to heroin and the number of inpatient stays due to opioid overdoses (including heroin) have increased. Roane, Cocke, and Jefferson counties had higher than the state rates for opioid prescriptions filled during the period 2016-2019.²

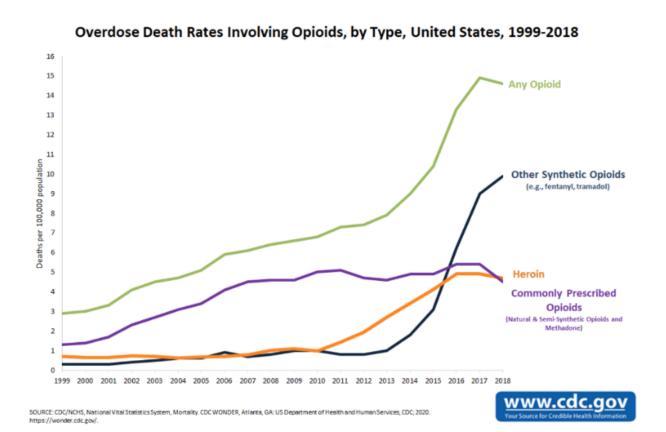


Figure 1. Overdose death rates in the United States during 1999-2018, by opioid-type.¹⁹

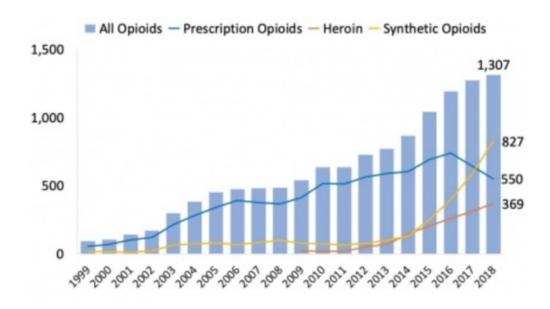


Figure 2. No. of overdose deaths involving opioids in Tennessee from 1999 to 2018.²²

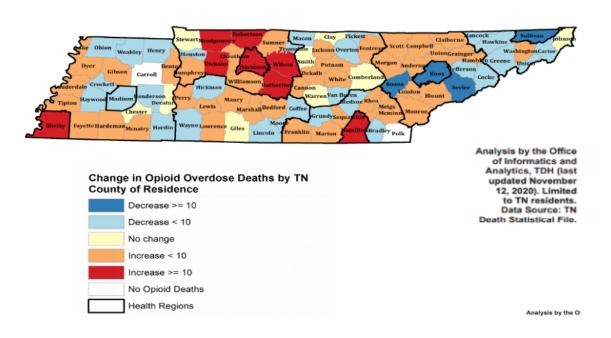


Figure 3. Change in the Number of All Opioid Overdose Deaths by TN County of Residence, 2018-2019.²⁴

*TDH is aware of an undercount of overdose deaths in 2018, primarily those occurring in Shelby County. A higher number of deaths were reported with unknown causes in Shelby County, which resulted in a greater number of pending death investigations than in previous years, which were reported as undetermined by CDC while finalizing the coding process. Therefore, caution is advised in interpreting the downward trend in overdose deaths across all categories of drugs among Shelby County residents for 2018.

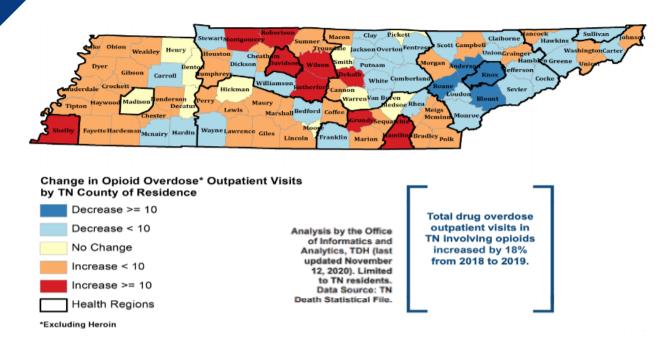


Figure 4a. Change in the Number of Opioid Overdose (Excluding Heroin) Outpatient Visits by TN County of Residence, 2018-2019.²⁴

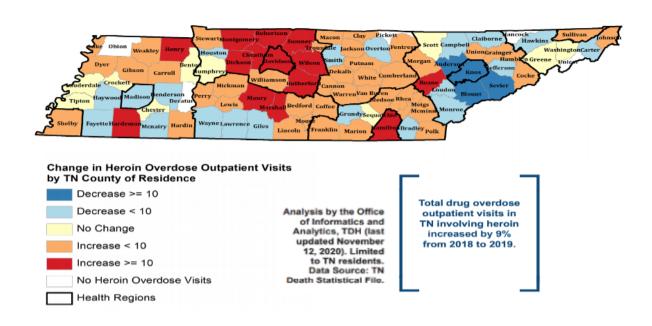


Figure 4b. Change in the Number of Heroin Overdose Outpatient Visits by TN County of Residence, 2018-2019.²⁴

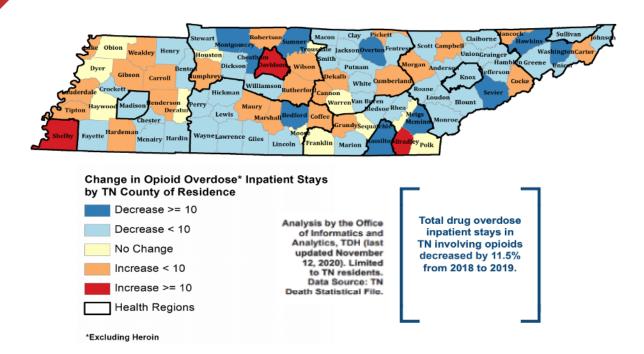


Figure 5a. Change in the Number of Opioid Overdose (Excluding Heroin) Inpatient Stays by TN County of Residence, 2018-2019.²⁴

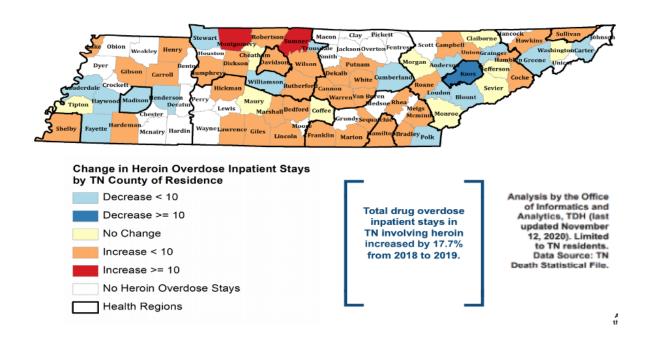


Figure 5b. Change in the Number of Heroin Overdose Inpatient Stays by TN County of Residence, 2018-2019.²⁴

Implementing the High Impact Areas Program during COVID-19

Prior to the pandemic, the TN Department of Health launched the High Impact Areas Program (HIAs). The program is supported by the Centers of Disease Control and Prevention's (CDC) cooperative agreement, Overdose Data to Action, with the purpose of strengthening capacity in local communities with a high burden of drug overdoses. The program relies heavily on timely and relevant data to inform public health interventions aimed at reducing overdose at the local level. High Impact areas were determined by examining non-fatal overdoses across the state and gauging the interest and expertise of local stakeholders.

During the initial 2019 phase, ten counties in three health regions in the state (East, Middle and West) were chosen. In the subsequent 2020 and 2021 phases, the program is expanding to the Northeast and Southeast Regions of the state.

The High Impact Area Program encourages communities to utilize the granted resources by implementing evidence-based public health interventions recommended by CDC. The CDC endorsed project list includes a broad range of multidisciplinary interventions such as developing multi-sector task forces and creating overdose outbreak community response plans, introducing Medications for Opioid Use Disorders in correctional settings, developing criminal justice diversion and syringes services programs, launching drug use prevention education campaigns, and implementing navigation programs for patients at high risk of drug overdose.

Listed below the right is a table of the current projects implemented in each HIA.

	East	Middle	West
Activities	Knox, Cocke, Jefferson, Roane, and Sevier	Davidson, Montgomery, Cheatham, and Rutherford	Shelby
HIAs Taskforce	>	⊘	⊘
HIAs Overdose Response Plan	Ø	⊘	⊘
Prevention activities	(⊘	
Navigate patients to receive treatment	>	⊘	⊘
Emergency Department Discharge protocol	lacksquare		
Syringes Services Program expansion	(Ø
Medications for Opioid Use Disorder access in Jefferson County Jail			

Despite the hard work of the Opioid Response Coordination Office and the regional departments of health to remain focused on project implementation, the COVID-19 pandemic has affected the HIAs Program in at least three important ways: 1) staff hiring has been delayed due to hiring freezes and lack of capacity , 2) gathering events, which are required to advance many of the projects, were curtailed due to COVID-19 mitigation measures, and 3) staff devoted to the HIA program often needed to be diverted to support COVID-19 testing, contact tracing and vaccination efforts. However, despite these barriers the HIA team has made significant advancements in many of the projects. In the following section we describe each of the projects and highlight some major achievements.

East HIA

The High Impact Area (HIA) Program in the East Tennessee was launched in 2020, and it covers five counties: Sevier, Roane, Cocke, Knox and Jefferson.

HIA Task Force: This project strives to organize a myriad of relevant community representatives to respond effectively to the current drug addiction epidemic in their communities. The Task Force includes law enforcement and EMS agencies, school administrators, elected officials, faith-based organizations, nongovernmental organizations, treatment providers, substance use prevention-related coalitions, and people and families affected by drug addiction. In 2020, the team established several partnerships including Choice Health Network, Covenant hospital system, EMS, Metro Drug Coalition, Substance Abuse Prevention (ASAP) of Anderson County, Rescue 180, and the 7th Judicial Drug Task Force. Through the 7th Judicial Drug Task Force to partnership, received several referrals and have successfully linked clients to treatment and other services. These collaborative efforts increased participation activity planning and will be valuable in continued partnerships.

HIA Overdose Response Plan: East HIA drafted their Acute Overdose Outbreak Response plan in order to engage relevant community stakeholders in organizing local response to acute overdose events. East HIA utilized their Task Force, consisting of stakeholders from various sectors, to conduct five focus group meetings for stakeholder input. Stakeholder input helped guide East HIA's understanding of their pool of external partners as well as identify assets, gaps, protocols and perspectives which helped form the first draft of their Acute Overdose Outbreak Community Response plan.

The Knox team has distributed the plan to internal leadership and stakeholders for feedback with plans to circulate the final plan in early 2021. Other counties in the East HIA are developing their own acute response plans in 2021.

Substance Use Prevention Education: Prevention Coalitions have established and well-documented success in galvanizing community to address substance use disorder. Utilizing the existing Task Force, East HIA is collaborating with well-established Prevention Coalitions such as Metro Drug Coalition (MDC) to create a mentoring toolkit to help new Prevention Coalitions take shape. During 2021, the East HIA in collaboration with MDC will utilize the mentoring toolkit to help form Prevention Coalitions in three counties (Campbell, Cocke and Morgan). Additionally, MDC and their partners will assist new Prevention Coalitions in implementing substance use prevention strategies to address opioid abuse among people ages nine to twenty-four.

Medications for Opioid Use Disorder (MOUD) in Jefferson County Jail: Evidence has proven that people with Opioid Use Disorder (OUD) who were receiving Medications for Opioid use Disorder (MOUD) were 75 percent less likely to die, and 85 percent less likely to die due to drug overdose, in the first month after release from incarceration.31 Further, people who receive treatment using buprenorphine have lower rates of re-arrest methadone and reincarceration.³² East HIA is helping to develop the first of its kind in the state MOUD program in a correctional setting in Jefferson County. The program will provide treatment continuity for patient inmates being treated for OUD prior to incarceration as well as induction for patient inmates diagnosed with OUD upon incarceration at the Jefferson County Detention Center. All three FDA-approved medications for OUD will be administered in the program overseen by an opioid treatment program in collaboration with the correctional medical provider. As part of the program, TDH funded a Corrections Navigator who will develop the MOUD treatment protocol in collaboration with corrections and medical professionals and work directly with patient inmates to ensure continuity of care prior to release. The program is planned to start in April 2021.

Emergency Department Discharge Protocol for Patients with Substance Use Disorder: The evidence has shown that having a standardized protocol to discharge patients after a drug overdose from emergency departments significantly increased engagement in addiction treatment, reduced self-reported illicit opioid use, and reduces subsequent overdoses.^{27–28}

In keeping with the evidence, East HIA is working with Covenant Hospital System to create emergency department (ED) discharge protocols for people with Substance Use Disorder (SUD) and their families with a focus on preventing drug overdose deaths. Covenant Hospital will develop a standard response protocol for all non-fatal overdose ED patients. To support these efforts, the Health Department will provide medical personnel throughout the East Region with guidance and education on the science of addiction, as well as best practices for supporting Persons Who Use Drugs (PWUD). This training includes effective practices for post overdose discharge planning to include linkage to in/out-patient drug treatment, harm reduction services, MOUD, mental health care, and other resources as well as access to life-saving Naloxone Additionally, OD2A is providing funding to support the hiring of Certified Peer Recovery Specialists (CPRS) to provide immediate evidence-based personalized linkage to care services to those who have overdosed and other PWUD. The program is led by a Clinical Nurse Educator who will assist in the development of protocols and provide training with EDs. Additionally, the Clinical Nurse Educator is overseeing a Covenant Health workgroup tasked with the oversight of the overdose discharge protocols and the placement of peer navigators at Fort Sanders Regional Medical Center (Covenant Health System) in Knox County.

Linkage to Care in Knox Health Department: Utilizing input from people with experience living with SUD and community partners, Knox County Health Department (KCDH) created a Harm Reduction Navigator (HRN) position to vide SUD screening and linkage to care services. These services are provided to internal health department clients and external overdose surveillance contacts in Knox County who are at risk for the consequences of substance misuse. Services include non-judgmental support for current drug users, overdose prevention, harm reduction education, referrals to services including Hepatitis C treatment, syringe services, naloxone distribution, in-patient and out-patient substance abuse treatment, MOUD, mental health care, and social services. In 2020, KCHD partnered with the 7th Judicial Task Force, a drug and violent crimes task force in Anderson County Tennessee, yielding several referrals and linkages for clients at risk for overdose.

Linkage to Care in East Region Health Department: Once identified via Local Health Departments, community referral or emergency medical services (EMS) partners, individuals with OUD will be linked to care by Linkage to Care Coordinators based in Roane and Sevier Counties. As a part of this collaborative initiative, EMS will establish a process of sharing resource brochures to be used to educate and refer linkage to care services at point of service for people who have experienced a drug overdose.

Syringe Services Program Expansion: According to the CDC, Syringe Services Programs (SSPs) are a key component of overdose prevention strategies, because they can facilitate access to and uptake of services and interventions for reducing overdose, reduce risk of blood-borne infections, enhance health and wellbeing, and improving public health and public safety.33 Established Community Based Organization, Choice Health Network (CHN), has conducted a successful SSP in Knox County resulting in proven positive outcomes and community integration. CHN has identified residents from outlying rural counties who are traveling to Knoxville on a weekly basis for syringe services. Piloting the program in an outlying rural county (Cocke) has allowed both CHN and the East Region to explore the possibility of expanding the program into other rural counties to expand linkage to care and community referral services. As part of the Syringe Services program, CHN also provides HIV testing and counseling, STI screening, MOUD referrals, Pre-Exposure Prophylaxis (PrEP) and Post-Exposure Prophylaxis (PEP) services, Hepatitis C education and outreach, on-site laboratory testing and peer navigator services. From October through December 2020, CHN has served 112 unique clients and collected over 9,000 syringes while providing over 17,000 new syringes to clients as well as distributing 750 naloxone doses with a reported 62 overdose reversal.

HIA Projects Spotlights

In this section we will describe some projects that exemplify the ideals and work of the High Impact Area Program.

Davidson County Acute Overdose Outbreak Response Plan

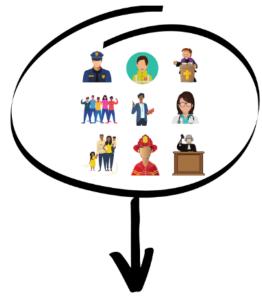
In analyzing the sustained increase of drug overdoses, since 2020 the Davidson County team has integrated and utilized multiple data sources to develop an intelligence system that enables them to respond to drug overdoses more effectively. The integrated data systems contain data from local hospitals, medical examiners and forensic centers, EMS, and fire departments. Relying on their integrated data system, Davidson County team has launched an alert system that informs important stakeholders such as the Tennessee Department of Health, EMS, fire departments and community-based organizations while also providing resources to respond to the outbreak. The overdose outbreak response plan has been featured in important reports such as the Overdose Mapping Application Program: A Guide to the ODMAP Platform and Community Application from The High Intensity Drug Trafficking Area Program,³⁶ local media²⁵ and have been invited to present at national events.



HIA Task Force of East Tennessee

Since the start, the East Tennessee regional team knew that the key for success was collaboration. With that idea in mind, the team started recruiting members from across sectors to their task force. During the quarterly task force meetings, the members assess progress of the multiple projects they oversee, discuss challenges and develop new plans of action. The meetings are infused with a spirit of collaboration and inclusive participation which enables productive conversations that get translated into useful actions.

Today, the HIA Task Force of East Tennessee has more than 42 members that represent more than 10 sectors including public safety, anti-drug coalitions, Federally Qualified Health Clinics, harm reduction, hospitals, public health, judicial, behavioral health, EMS, and Substance Use Disorder treatment providers. In 2021 the task force has plans to ensure they have even further diverse representation in striving to make their projects accountable to the population they serve, their task force also includes persons with lived experience with substance use disorder and mental illness.



Functions of the Knox Multidisciplinary taskforce:

- Assess resources
 Organize community efforts
 Prioritize and implement projects
- Oversee activities

A Betor Way Syringes Services Program

Shelby County Health Department has joined hands with A Betor Way organization in an effort to expand harm reduction services offered to individuals in Shelby County. Known for being the first official Syringe Service Program (SSP) in West Tennessee, A Betor Way operates with the mission "to be a source of assistance to addicts and those affected by addiction, to advocate for improved treatment options and to erase the stigma associated with substance abuse, and to eliminate barriers for anyone seeking help with addiction."³⁷ This organization has been providing individuals with an opportunity to gain access to clean, unused syringes, in addition to providing naloxone, free wound and health assessments, and educational material on possible treatment options and preventive health measures. During August 2020-January 2021 alone, A Betor Way served 2660 individuals, collected over 85,000 syringes, and distributed 95,000 syringes. It is through the passion and efforts of organizations such as A Betor Way that hope is able to thrive and a paradigm shift is introduced and we are able to fight the opioid epidemic by meeting individuals where they are in their journey to recovery.

High Impact Areas support model: Training, Technical Assistance and Resource Sharing

Technical Assistance Summary: East

The Opioid Response Coordination Office (ORCO) assists East HIA with their technical assistance needs by conducting bi-weekly touch-base meeting in which ORCO's HIA Director and HIA Technical Assistance Coordinator meets with staff from each HIA in order to discuss progress, establish goals, guide efforts as well as provide support and clarity regarding program activities.

Influenced by discussions during the touch-base meetings, ORCO has taken steps to provide technical assistance to the East HIA including the creation of a resource sharing portal which contains relevant documents in one centralized location. Resources found in the shared portal are related to program specific activities and include overdose outbreak response plan templates, task force best practices documents, onboarding guides and data source links.

Further, ORCO has assisted the HIA Programs by advocating for data expansion efforts and requesting data related trainings, facilitated Learning Collaboratives: convening and sharing lessons and bridging expertise from outside the state, Coordinator Meetings: networking, resource sharing, group support and the HIA Monthly Meetings: discussing project progress and addressing implementation challenges. ORCO consistently seeks out feedback to develop meaningful collaborative relationships to best serve the HIA Programs through our technical assistance efforts.

Individualized technical assistance provided to East HIA includes active participation in Overdose Outbreak Response Planning, by HIA TA Coordinator participating and supporting workgroup and focus group efforts.

Meeting	Touch-Base	Reporting	Coordinator	Learning Collaborative
Participants	HIA Program Coordinators (Metro and Region)	All stakeholders involved within the HIAs	HIA Program Coordinators (Metro and Region)	All stakeholders involved within the HIAs
Purpose	To create a space for coaching, troubleshooting, and to discuss day-to-day implementation challenges	To discuss performance and address implementation challenges that require ORCO, Region and Metro leadership involvement	To create a space for resource sharing, learning and networking	To share learn from subject matter experts, share best practices and resources, and celebrate achievements
Frequency	Weekly/bi- monthly	Monthly	Quarterly	Quarterly

Conclusion

Drug addiction is a multifaceted public health issue that has proven hard to mitigate. For drug addiction, there are no quick fixes or one-approach-fits-all. It is the combination of organized communities, overdose outbreak response plans, SSPs, access to treatment, behavioral and navigation services, and drug use prevention and anti-stigma campaigns which is going to decrease the drug addiction epidemic in Tennessee and elsewhere.

Multidisciplinary interventions with a strong public health component — like the Tennessee High Impact Areas — are exactly the type of programs that should be expanded, implemented and strengthened in times of hopelessness and increasing drug overdoses.

We have a golden opportunity to improve wellbeing and save lives by reversing the trends on drug addiction. Let's continue giving our best to fulfill our commitment to a healthier and more prosperous Tennessee.

References

- 1. Centers For Disease Control and Prevention. Vital Statistics Rapid Release Provisional Drug Overdose Data. https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm (2021).
- 2. Office of Informatics and Analytics. Tennessee Department of Health. Tennessee's Annual Overdose Report 2020: Report on Epidemiologic Data and Projects to Address the Overdose Epidemic. 142 (2020).
- 3. Centers For Disease Control and Prevention. Increase in Fatal Drug Overdoses Across the United States Driven by Synthetic Opioids Before and During the COVID-19 Pandemic. https://emergency.cdc.gov/han/2020/han00438.asp (2020).
- 4. American Medical Association. As COVID-19 surges, AMA sounds alarm on nation's overdose epidemic. *American Medical Association* https://www.ama-assn.org/delivering-care/opioids/covid-19-surges-ama-sounds-alarm-nation-s-overdose-epidemic.
- 5. Kempler, C. & Health, J. B. S. of P. Recommendations for the Overdose Epidemic in the COVID-19 Pandemic. *Johns Hopkins Bloomberg School of Public Health* https://www.jhsph.edu/news/news-releases/2020/recommendations-for-the-overdose-epidemic-in-the-covid-19-pandemic.html.
- 6. National Institute of Health. The COVID-19 Pandemic Is Fueling the Opioid Crisis! 4.
- 7. Niles, J. K., Gudin, J., Radcliff, J. & Kaufman, H. W. The Opioid Epidemic Within the COVID-19 Pandemic: Drug Testing in 2020. *Popul. Health Manag.* 24, S-43 (2020).
- 8. Addiction Policy. Survey: COVID-19 Affecting Access to Addiction Treatment and Key Services. *APF* https://www.addictionpolicy.org/post/survey-covid-19-affecting-access-to-addiction-treatment-and-key-services (2020).
- 9. Bureau US Census. One-Person Households on the Rise. The United States Census Bureau https://www.census.gov/library/visualizations/2019/comm/one-person-households.html.

- 10. Report: Loneliness and Anxiety During Lockdown. *SocialPro* https://socialpronow.com/loneliness-corona/.
- 11. Czeisler, M. É. Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic United States, June 24–30, 2020. *MMWR Morb. Mortal. Wkly. Rep.* 69, (2020).
- 12. Tennessee Unemployment Claims Data. https://www.tn.gov/workforce/general-resources/news/2020/12/10/tennessee-unemployment-claims-data.html.
- 13. Aspen Institute. *COVID-19 EVICTION DEFENSE PROJECT AND THE ASPEN INSTITUTE FINANCIAL SECURITY PROGRAM*. (2020).
- 14. Spooner, C. & Hetherington, K. *Social determinants of drug use*. (National Drug and Alcohol Research Centre, University of New South Wales, 2005).
- 15. National Institute on Drug. Opioid Overdose Crisis. *National Institute on Drug Abuse* https://www.drugabuse.gov/drug-topics/opioids/opioid-overdose-crisis (2021).
- 16. Lyden, J. & Binswanger, I. A. The United States opioid epidemic. *Semin. Perinatol.* 43, 123–131 (2019).
- 17. Centers For Disease Control and Prevention. COVID Data Tracker. *Centers for Disease Control and Prevention* https://covid.cdc.gov/covid-data-tracker (2020).
- 18. National Institute on Drug. Overdose Death Rates. *National Institute on Drug Abuse* https://www.drugabuse.gov/drug-topics/trends-statistics/overdose-death-rates (2021).
- 19. Understanding the Epidemic | Drug Overdose | CDC Injury Center. https://www.cdc.gov/drugoverdose/epidemic/index.html (2020).
- 20. Executive office of the President of the United States. TENNESSEE DRUG CONTROL UPDATE. https://obamawhitehouse.archives.gov/sites/default/files/docs/state_profile_-_tennessee_0.pdf (2012).

- 21. National Institute on Drug. Tennessee: Opioid-Involved Deaths and Related Harms. *National Institute on Drug Abuse* https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state/tennessee-opioid-involved-deaths-related-harms (2020).
- 22. National Institute on Drug. Opioid Summaries by State. *National Institute on Drug Abuse* https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state (2020).
- 23. Office of Informatics and Analytics. Tennessee Department of Health. Data Dashboard. TN. https://www.tn.gov/health/health-program-areas/pdo/pdo/data-dashboard.html.
- 24. Office of Informatics and Analytics. Tennessee Department of Health. *Tennessee's Annual Overdose Report 2021: Report on Epidemiologic Data and Projects to Address the Overdose Epidemic. https://www.tn.gov/content/dam/tn/health/documents/pdo/2021%20TN%20Annual%20Overdose%20Report.pdf*
- 25. Metro working to launch system that maps out overdoses in real time. https://www.newschannel5.com/news/metro-working-to-launch-system-that-maps-out-overdoses-in-real-time.
- 26. Botvin, G. Preventing Adolescent Drug Abuse through Life Skills Training: Theory, Evidence of Effectiveness, and Implementation Issues. (1998).
- 27. D'Onofrio, G. *et al.* Emergency department-initiated buprenorphine/naloxone treatment for opioid dependence: a randomized clinical trial. *JAMA* 313, 1636–1644 (2015).
- 28. National Council for Behavioral Health, O. R. N. ADDRESSING OPIOID USE DISORDER IN EMERGENCY DEPARTMENTS: EXPERT PANEL FINDINGS. (2020).
- 29. Wilson, N., Kariisa, M., Seth, P., Iv, H. S. & Davis, N. L. Drug and Opioid-Involved Overdose Deaths United States, 2017–2018. 69, 8 (2020).

- 30. Jennifer Klein. Key Facts about Uninsured Adults with Opioid Use Disorder. *KFF* https://www.kff.org/uninsured/issue-brief/key-facts-about-uninsured-adults-with-opioid-use-disorder/ (2019).
- 31. Marsden, J. *et al.* Does exposure to opioid substitution treatment in prison reduce the risk of death after release? A national prospective observational study in England. *Addiction* 112, 1408–1418 (2017).
- 32. Westerberg, V. S., McCrady, B. S., Owens, M. & Guerin, P. Community-Based Methadone Maintenance in a Large Detention Center is Associated with Decreases in Inmate Recidivism. *J. Subst. Abuse Treat.* 70, 1–6 (2016).
- 33. Carroll, J., Green, T. & Noonan, R. *Evidence-Based Strategies for Preventing Opioid Overdose: What's Working in the United States, 2018.* 40 https://www.cdc.gov/drugoverdose/pdf/pubs/2018-evidence-based-strategies.pdf (2018).
- 34. Committee on Valuing Community-Based, N.-C. P. P., Practice, B. on P. H. and P. H. & Medicine, I. of. *Community-Based Prevention*. *An Integrated Framework for Assessing the Value of Community-Based Prevention* (National Academies Press (US), 2012).
- 35. Saloner, B. *et al.* A Public Health Strategy for the Opioid Crisis. *Public Health Rep.* 133, 24S-34S (2018).
- 36. Aliese Alter & Kristin Stainbrook. Overdose Mapping Application Program: A Guide to the ODMAP Platform and Community Application. http://www.odmap.org/Content/docs/training/general-info/ODMAP-Platform-and-User-Guide.pdf (2020).
- 37. A Betor Way Website. A Betor Way https://abetorway.org/.

Contact Us

Tennessee Department of Health Opioid Response Coordination Office High Impact Areas HIA Director: Hector.Carrasco@tn.gov HIA Technical Assistance Coordinator: Shannon.DePont@tn.gov