



**ORANGE COUNTY
HIGH IMPACT OPIOID ABATEMENT
STRATEGIES
Funding Proposal Application Form
Application Due Date: February 21, 2025**

Applicant Agency: General Information				
Legal Name	University of North Carolina at Chapel Hill			
Address	104 Airport Drive, Suite 2200, Campus Box 1350, Chapel Hill, NC 27559-1350			
Type of Agency (check one)	<input type="checkbox"/> Government/ Public Authority	<input checked="" type="checkbox"/> Non-Profit	<input type="checkbox"/> For-Profit Business	
Telephone	919-966-3411			
Website	https://www.med.unc.edu/emergmed/			
Primary Contact Full Name	Penny Gordon-Larsen			
Title	Vice Chancellor for Research			
Email	SponsoredPrograms@unc.edu			
Telephone	919-966-3411			
Name of Project	Helping Hands: Opioid Use Prevention, Treatment, and Harm Reduction Strategies among North Carolina Emergency Medical Services			
Total Application Funding Requested		\$ 44,076		
Funding Period Requested (MM/DD/YYYY)	Start Date	07/01/2025	End Date	06/30/2026
Selected NC MOA Option A Strategy (Number and Name)	Strategy 1: Collaborative Strategic Planning			
Agency Mission and Vision Statements	Our mission is to provide outstanding emergency care through excellence in clinical care, education, research, administrative stewardship, and strategic initiatives. To provide, teach, and advance patient- and family-centered emergency care within the nation's leading public school of medicine. Our core values are			

	Collaboration, Innovation, Integrity, Service, and Transparency.
--	--

Use font size 12 throughout document.

As a **separate Excel file**, submit a completed **Budget Worksheet**.

Submit application to tstancil@orangecountync.gov with a subject line of – RFA: Opioid Settlement Funds – [Organization name]. Will receive Receipt of Application email upon submission. If email is not received within 24 business hours, reach out to Tonya Stancil, Harm Reduction Coordinator at tstancil@orangecountync.gov.

1. Proposal Summary *(no more than 250 words, required but not scored)*

Emergency Medical Services (EMS) provide prehospital emergency care, presenting the opportunity for “just-in-time” interventions for patients experiencing opioid use disorder (OUD). However, current use and effectiveness of OUD strategies among NC EMS remain unknown. This proposal’s objective is to identify opportunities for Orange County (OC) to implement prehospital OUD prevention, treatment, and harm reduction strategies.

The short-term purpose of this project is to compare current prehospital OUD strategies to future opportunities. The long-term purpose of this project is to gather these needs assessment and capacity/readiness data for future use in the development of an OUD implementation plan with clinicians, patients, and other stakeholders that is effective, acceptable, and feasible.

This project will use multiple data sources to define the scope and effectiveness of prehospital OUD strategies and contextualize the potential future implementation of strategies locally. This project will:

Aim 1: Describe the use and effectiveness of prehospital OUD prevention, treatment, and harm reduction strategies;

Aim 2: Enumerate missed opportunities for prehospital intervention in local opioid-related deaths;

Aim 3: Determine stakeholder support of prehospital OUD strategy implementation.

This study presents an opportunity to contribute to a broader effort to improve prehospital OUD response. Many NC counties lack the capacity to conduct such a comprehensive evaluation, leaving gaps in knowledge that could otherwise drive policy and funding decisions. By conducting this research, OC not only strengthens its approach to community-driven health programming, but also provides valuable data helping to shape local and statewide recommendations, guiding other jurisdictions toward more effective, evidence-based solutions.

2. Project Narrative

A. Assessment of Community Need (16 points, page limit: not to exceed 1 ½ pages)

OUD and opioid-related overdoses affect numerous OC residents each year. In 2023, approximately 32 people died of an opioid overdose, 21 of which involved illicit opioids. However, there were 89 emergency department visits and 507 Medicaid or uninsured patients who received formal OUD treatment ¹. In 2024, OC EMS responded to more than 17,000 9-1-1 calls, of which 262 indicated a potential “dispatch reason” of opioid overdose (data accessed in Biospatial by Ms. Julianne Cyr). With hundreds of opioid-related EMS calls each year and numerous opioid-overdose deaths each year, the prehospital environment offers a unique environment in which to deliver OUD interventions.

Prior research with stakeholders indicates the distinct benefits to exploring barriers and facilitators to accessing and using OUD services. People with lived experience (PWLE) using opioids indicates (PWLE) who received emergency department care for OUD have previously indicated the need for user-center harm reduction strategies ², while healthcare clinicians identified distinct opportunities to promote positive clinical change ³. Furthermore, implementing post-overdose response teams (PORTs) to individuals after opioid overdose care delivered by EMS clinicians is associated with a decline in opioid overdose fatalities ⁴. However, the depth and breadth of prehospital strategies are both vast and unique to each EMS System designing health programs.

OC has taken significant steps to address OUD through a combination of harm reduction, treatment, and prevention strategies. These efforts include syringe service programs, public access naloxone kits, targeted education and outreach efforts, and alternative destination transport for individuals experiencing substance use crises. In addition, OC has recently begun incorporating prehospital EMS strategies to reach community members with OUD. One of the most recent prehospital programs includes the Post Overdose Response Team (PORT), which launched on July 1, 2024. The PORT is a specialized unit within Orange County EMS dedicated to supporting individuals after an opioid overdose. Rather than simply reviving patients and moving on, PORT provides a bridge to recovery, offering field-based Suboxone induction, harm reduction resources, and direct referrals to treatment programs. By following up with patients, connecting them to services, and addressing barriers like housing or employment, PORT works to reduce overdose recurrence and support long-term recovery. Operating at the intersection of EMS, public health, and social services, the team embodies a proactive, compassionate approach to the opioid crisis. While many of these programs have had a measurable impact⁴, there are still unanswered questions regarding their effectiveness and reach for our local community. Ultimately, to understand the impact of OUD programs locally, we must: determine whether programs are connecting with the populations most in need; compare OC’s OUD response and harm reduction efforts to those of other NC counties; and determine what effective and ineffective OUD practices have been adopted across other NC EMS systems.

EMS systems often operate in silos, with each county developing its response to OUD and other health crises based on locally available resources and local needs. This decentralized approach creates challenges in defining best practices, standardizing care, sharing knowledge, and measuring impact across the state. Without a comprehensive understanding of which prehospital strategies are in place and which are most effective, counties, including OC, risk missing opportunities to refine and improve their interventions.

This research study proposes evaluating the availability and effectiveness of prehospital OUD response initiatives by analyzing and comparing local prehospital data, statewide prehospital data, and OUD stakeholder impressions. By systematically cataloging and assessing the reach and impact of programs such as field-based Medication-Assisted Treatment, peer support integration, crisis intervention models, and alternative transport options, OC's OUD stakeholders will be empowered with the data needed to determine next steps in prehospital and other intervention modalities to reach community members affected by OUD.

Complete References Cited

1. North Carolina Department of Health and Human Services. North Carolina Overdose Epidemic Data. Interactive Overdose Data. Accessed February 18, 2025. <https://www.dph.ncdhhs.gov/programs/chronic-disease-and-injury/injury-and-violence-prevention-branch/north-carolina-overdose-epidemic-data#data-dashboard>
2. Westafer LM, Beck SA, Simon C, Potee B, Soares WE, Schoenfeld EM. Barriers and facilitators to harm reduction for opioid use disorder: A qualitative study of people with lived experience. *Ann Emerg Med.* 2024;83(4):340-350. doi:10.1016/j.annemergmed.2023.11.020
3. Forchuk C, Serrato J, Scott L. Identifying barriers and facilitators for implementing harm reduction strategies for methamphetamine use into hospital settings. *FrontHealth Serv.* 2023;3:1113891. doi:10.3389/frhs.2023.1113891
4. Xuan Z, Yan S, Formica SW, et al. Association of implementation of postoverdose outreach programs with subsequent opioid overdose deaths among Massachusetts municipalities. *JAMA Psychiatry.* 2023;80(5):468-477. doi:10.1001/jamapsychiatry.2023.0109
5. North Carolina Department of Health and Human Services. North Carolina's Opioid & Substance Use Action Plan: Menu of Local Actions. January 9, 2021.
6. Barefoot EH, Cyr JM, Brice JH, et al. Opportunities for emergency medical services intervention to prevent opioid overdose mortality. *Prehosp Emerg Care.* 2021;25(2):182-190. doi:10.1080/10903127.2020.1740363

7. Centers for Disease Control and Prevention. Achieving Health Equity Around Overdoses. May 8, 2024. Accessed February 18, 2025. <https://www.cdc.gov/overdose-prevention/health-equity/achieving-health-equity-around-overdoses.html>
8. DeJonckheere M, Vaughn LM. Semistructured interviewing in primary care research: a balance of relationship and rigour. *Family Med Commun Hlth*. 2019;7(2):e000057. doi:10.1136/fmch-2018-000057
9. Meyers DC, Durlak JA, Wandersman A. The quality implementation framework: a synthesis of critical steps in the implementation process. *Am J Community Psychol*. 2012;50(3-4):462-480. doi:10.1007/s10464-012-9522-x
10. Orange County Emergency Services. Post-Overdose Response Team Operating Guidelines. Published online June 28, 2024. Accessed February 18, 2025. <https://www.orangecountync.gov/DocumentCenter/View/28127/EMS---Post-Overdose-Response-Team-SOG-PDF?bidId=>
11. Orange County Government. Harm Reduction Resources in Orange County. Accessed February 18, 2025. <https://www.orangecountync.gov/2853/Harm-Reduction-Resources-in-Orange-Count>
12. Peterson A, Charles V, Yeung D, Coyle K. The Health Equity Framework: A Science and Justice-Based Model for Public Health Researchers and Practitioners. *Health Promot Pract*. 2021;22(6):741-746. doi:10.1177/1524839920950730

B. Project Description and Program Sustainability (28 points, page limit: not to exceed 3 pages)

Our objective is to identify and evaluate opportunities for prehospital OUD prevention, treatment, and harm reduction strategies. This proposal addresses NC MOA's *Strategy 1, "Collaborative Strategic Planning"*, through its evaluation of invaluable stakeholder data from multiple sources. Each project aim is described below.

Aim 1: Describe the use and effectiveness of prehospital OUD prevention, treatment, and harm reduction strategies. To thoroughly describe prehospital OUD prevention, treatment, and harm reduction strategies, the EMS Director of each NC EMS System will be surveyed. This survey will assess current and past (≤ 2 years) implementation of OUD strategies, the reach (# patients affected by) of each current strategy, the barriers and facilitators to strategy use, and reasons for strategy termination. This project concept has been discussed with the statewide Office of EMS to assess their support and discuss best practices for engaging with NC EMS Directors.

Surveys will be finalized in month 1 by Ms. Cyr, a public health researcher and implementation scientist trained in mixed methods research, and a TBD Graduate Research Assistant (GRA) enrolled in UNC-CH Master of Public Health program with prehospital experience. Confidential surveys will take ≤ 20 minutes, use Qualtrics XM, and be emailed to all NC EMS Directors (n=100). Non-respondents will be emailed at 2 weeks and called at 1 month of the survey date to encourage participation. EMS Director contact information will be gathered using publicly available online information.

Surveys will be emailed in months 2-3 and data analyzed in months 3-4. Analysis will be completed by Ms. Cyr and GRA and will consist of descriptive and qualitative data summarization. To promote use of consistent language and definition, strategies identified by survey participants will be consolidated and aligned with the strategies outlined by NC Opioid and Substance Use Action Plan "Menu of Local Actions"⁵. Rurality and region will be determined using NC Rural Center and NC Secretary of State's Office definitions.

Statistical analysis will describe EMS strategy use by EMS System rurality and region and the reach of strategies (e.g., total # patients served under strategy, total # patients at-risk for OUD served under strategy). Qualitative analysis will use an exploratory thematic ethnographic approach³ to identify, code, and develop themes for barriers and facilitators to EMS implementation of identified strategies. By purposefully including EMS Systems with different rural and regional representations, we will understand not only the full breadth of strategies used, but we will be able to understand which barriers and facilitators are more common for communities of differing demographics. The results of this survey will provide invaluable insight into the most effective prehospital strategies, and which barriers and facilitators affect program implementation. Furthermore, this provides necessary community needs assessment data for stakeholder engagement and decision-making in future work.

Aim 2: Enumerate missed opportunities for prehospital intervention in local opioid-related deaths. Prior research highlighted missed opportunities for EMS intervention prior to OUD-related deaths in Wake County, NC⁶. To provide evidence of the need for strategy review, the impact of missed EMS intervention opportunities must be defined in OC. OC EMS has agreed to fully participate.

Data Use Agreements will be signed with NC State Center for Health Statistics (NCSCHS) and OC EMS to access decedent and EMS data in months 1-2. Following the methods of previous Wake County study, Ms. Cyr will retrieve OC decedent data for January 1-December 31, 2024 from NCSCHS in months 1-2. By month 3, these data will be presented to OC EMS's Quality Assurance Team who will match decedent data to their prehospital records. EMS encounters for the year prior to each death date will be matched using fuzzy name and date of birth matches.

Ms. Cyr and Ms. Emma Johnson, a research assistant trained in mixed methods research, will analyze matched data between months 4-6. Analysis will include: # EMS interactions prior to death/decedent; EMS offer of OUD strategies; patient receipt of

OUD strategies; and patient demographics. Associations between demographics (e.g., race, homelessness) and offer/receipt of OUD services will be explored.

These data will provide evidence of whether OC community members experiencing OUD could benefit from targeted EMS strategies to prevent future opioid use-related deaths. By using OC EMS data for a year, all patients who have been affected by opioid overdose in the community and for whom 9-1-1 was called will be represented, including historically disadvantaged minorities who are more affected by OUD⁷. Furthermore, these data will serve as the basis of a community needs assessment for local stakeholders to determine next steps in OUD strategy development to counter the opioid epidemic.

Aim 3: Determine stakeholder support of prehospital OUD strategy implementation. The design of community-based programs not only benefits from but requires stakeholder collaboration. In addition to OC EMS, other stakeholders involved in the receipt (i.e., PWLE) and delivery of OUD prevention (e.g., Alice Aycok Poe Center for Health Education), treatment (e.g., Psychiatric Emergency Services of UNC-CH), and harm reduction (e.g., NC Harm Reduction Coalition) strategies in OC will be interviewed. Semi-structured interviews allow for the use of pre-defined questions while allowing flexibility and development of emerging themes from participants⁸. Semi-structured interviews will be developed in months 1-2 by Ms. Cyr and Ms. Johnson. Up to 15 interviews, considered a sufficient sample size for meaningful data collection⁸, will be conducted with stakeholders to understand the breadth and depth of opinions on EMS-delivered OUD strategies. Expected participation includes OC EMS leadership (n=2) and clinicians (n=3), PWLE (n=4), and members of local OUD prevention, treatment, and harm reduction organizations (n=6). Interviews will be performed by Ms. Cyr, who has extensive experience in conducting interviews, in months 7-8. Ms. Cyr has been in contact with numerous organizations and received several letters of support from organizations interested in participating in this program. Ms. Cyr plans to use connections with these organizations to identify PWLE who are in remission from OUD for interview participation.

Interview data will be analyzed by Ms. Cyr and Ms. Johnson between months 8-11 using an exploratory thematic ethnographic approach³. This approach allows for the development of open-ended codes based on the experiences of stakeholders. Themes related to OUD intervention strategy preference will be developed from the data and subanalysis will be performed to identify affiliation-based (e.g., PWLE, healthcare, community-based services) preferences among stakeholders and perceptions on how well these services reach underserved, marginalized residents.

Results of this work will be developed into a report and disseminated to local and statewide stakeholders, including all participating organizations and OC government in months 10-12. Additionally, at the conclusion of this project, Ms. Cyr will submit program results conferences and peer-reviewed journals to increase dissemination of results.

Program Overview

Each aim contributes invaluable information toward the development of a community-based prehospital OUD plan. The scope of the proposed project is guided by the Quality Implementation Framework (QIF), an implementation science framework comprised of 4 phases emphasizing the importance of stakeholder collaboration⁹. Specifically, this proposal addresses QIF Phase 1 by collecting community needs assessment data, building stakeholder buy-in, and promoting capacity-building through evidence development. The results of this work will inform community preferences for prehospital OUD strategies. Future work will utilize QIF's Phase 2 to develop a detailed implementation plan with stakeholders, Phase 3 to implement the plan, and Phase 4 to evaluate the effectiveness of the OUD plan.

This research proposal will be led by Ms. Cyr, a public health researcher whose interests lie in co-development of community programs and reducing the impact of health disparities. The results of this proposal will promote UNC-CH Emergency Medicine (EM) Department's vision of advancing patient- and family-centered emergency care and our mission to provide outstanding care through research and strategic initiatives. By increasing community access to OUD interventions, UNC-CH EM hopes to improve health equity and reduce the impact of the opioid epidemic locally. Additionally, OC EMS' "Community Health and Safety" bureau employs preventive, education, referral, and outreach to improve health equity locally. Their "Post-Overdose Response Team" (PORT) focuses on connecting people at risk of OUD with resources. The results of this project will inform future practices of the PORT team.

No other funding will be used to supplement this proposal. However, additional funds will be sought in the future (e.g., opioid settlement funds, federal grants) to complete an implementation-effective trial assessing uptake of selected OUD strategies and community outcomes. OC EMS is excited to use the results of this research to evaluate its current OUD strategies and work with the community to improve services.

Providing community members at risk of OUD options for prevention, treatment, and harm reduction when they need them the most, even in the back of an ambulance, is the next step in combating opioid overdose morbidity and mortality.

C. Equity Impact (8 points, page limit: not to exceed ¾ page) **Equity Impact Draft**

The opioid crisis disproportionately affects historically marginalized populations. Housing instability, unemployment, lack of transportation, and food insecurity, are major risk factors for initial substance use and treatment retention⁷. Furthermore, harm reduction strategies are underutilized, particularly among marginalized groups, due to numerous barriers. PWLE experience systemic barriers, such as stigma from healthcare providers, lack of harm reduction knowledge, and difficulty accessing emergency treatment².

OC provides harm reduction and treatment programs, such as PORT¹⁰, public access naloxone kits, syringe service programs, and peer support integration¹¹. However, no studies comprehensively assess how EMS harm reduction strategies align with broader health equity goals. Without data on the effectiveness of these services

and their ability to reach at-risk populations, critical inequities may persist. This research study directly address these gaps in knowledge by identifying how EMS Systems deliver prevention, treatment, and harm reduction OUD resources for vulnerable populations and how OC can improve its delivery of prehospital interventions to reduce health disparities.

This study is the beginning of a larger OC effort to improve equitable access to OUD interventions. This work is informed by the Health Equity Framework, which acknowledges the impact of processes that promote access to health resources (*Systems of Power*), the importance of reaching people to maximize informed decision-making (*Physiological Pathways*), and the necessity of community connections to promote health equity (*Relationships and Networks*)¹². Our project is guided by the QIF⁹, which promotes identifying community needs, collaborative data review, and collaborative design of health programs for community-driven change. The proposed project targets the first QIF phase. Using OC decedent data, we will identify where and for whom prehospital interventions were missed. Using statewide prehospital survey data, we will identify the OUD services, along with their associated barriers, facilitators, reach, and sustainability, in use among EMS. Finally, we will interview local stakeholders familiar with delivering OUD prevention, treatment, and harm reductions strategies to identify opportunities for OC prehospital improvement and stakeholder collaborative efforts to strengthen health programming. Future QIF phases will work directly with the broader stakeholder community, including PWLE, to drive prehospital intervention design and delivery.

D. Organizational Readiness (20 points, page limit: not to exceed 3 pages)

Fiscal Agent's Capacity

The Department of Emergency Medicine (DEM) is supported by UNC-CH's Office of Finance and Business Operations. The office serves over 300 internal departments, centers, and institutes. Services offered include support with pre-award grants, clinical trial submissions, analysis of financial operations, budgeting, business planning consultation, and strategic planning guidance. Our research team will utilize services from the office to ensure timely submission of all fiscal and reporting requirements of this grant.

Subcontractors

No subcontracts will be used for this project.

Cultural Sensitivity

Central to the UNC DEM's mission is strategic pillar of creation of "an environment of inclusion for persons from diverse backgrounds, cultures, and abilities." One of the strategic initiatives of this department is "Inclusive Excellence" to best serve and meet the needs of all patients across NC. UNC DEM is home to the PES team, which provides dedicated physicians, nurses, and staff to care patients in psychiatric

crisis. The PES team has previously hired Peer Support Specialists (PSS) for patients with OUD, the funding for which was lost during the COVID-19 pandemic. However, the return PSS is a top priority for the PES team, as DEM understands the value of employing PWLE to provide support to patients. DEM has been involved in the research and delivery of buprenorphine to patients affected by OUD, delivery of resources to patients affected by geriatric abuse, staffing of Sexual Assault Nurse Examiners for survivors of sexual assault, among other social support services to at-risk populations. DEM is home to the Division of Health Equity, which promotes health equity at the local and global level. Ms. Cyr is a member of this division and, in this role, drives connections with local organizations to promote sharing of resources and outreach to communities in need.

Research faculty at UNC have access to a variety of services and organizations to promote cultural sensitivity. The North Carolina Translational and Clinical Sciences Institute (NC TraCS) provides services for building community partnerships, engagement, and trust in health research. Their staff aid ongoing research projects through additional funding opportunities, education and training, and data analysis. NC TraCS also has an Implementation Science Methods Unit, which supports community-engaged research by aiding in the development and integration of frameworks, methods, and metrics.

The Center for Excellence in Community Mental Health is housed within the Department of Psychiatry at UNC SOM. The mission of this center is to conduct and advise on psychiatric mental health care in NC. Within this center is the Community Outcomes Research and Evaluation Center (COREC), which specifically focuses on program evaluation and intervention research to improve outcomes for people living with mental health conditions. COREC provides technical assistance and program evaluation to researchers working in this field.

Within the UNC is the Center for Health Equity Research. This center aims to promote health equity by developing research and interventions to address health disparities in underserved and at-risk populations. By utilizing community-based participatory research, researchers are able to give community members a voice, ensuring interventions that are developed address the needs of the communities. There are currently 6 active studies, with three focusing on developing healthcare implementations for rural North Carolina communities. The center utilizes funding from the National Institutes of Health, UNC, Robert Wood Johnson Foundation, as well as other funding agencies to improve the health of underserved and rural communities.

Service to Prioritized Populations

As a public hospital, UNC's Medical Center, home of the DEM, serves patients from across the state. Specifically, the DEM endeavors to provide care to all patients, regardless of their race, ethnicity, gender identity, or housing status, among other demographics and identities. Furthermore, the 1986 Congressional Law "Emergency Medical Treatment and Labor Act" provides a safety net for all patients seeking care at the emergency department, ensuring screening of any requesting patient, treatment of

all emergency patients to stabilization, and transfer of all patients requiring further care. Furthermore, DEM utilizes social workers to promote access to housing, nutrition services, follow-up care, among other resources.

The lead of this project, Ms. Cyr, endeavors to create a more equitable world in access to and receipt of health. Ms. Cyr works with local organizations to identify community-based health problem and develop solutions with key stakeholders. She has developed patient- and family-centered education for EMS education to promote cultural humility and consideration of diverse patient populations. To promote access to more appropriate care, Ms. Cyr worked with stakeholders to develop the prehospital transport program of behavioral health patients to WakeBrook Behavioral Health Campus in lieu of emergency departments. She is currently working with UNC-CH to develop a program to decriminalization and destigmatized the law enforcement-based interfacility transport of psychiatric patients requiring care. Ms. Cyr is working with Coastal Horizons, Inc. in Southeastern NC to identify the barriers and facilitators to Black, Indigenous, and People of Colors' access to OUD services in hopes of improving access and reducing stigma. Running several student education and research opportunities for those from high school through medical residency, Ms. Cyr promotes the development of health disparities and community participatory research skills. Finally, she received her Diversity, Equity & Inclusion Training Certificate at UNC-CH in 2023.

E. Evidence of Collaborations/Partnerships (10 points, page limit: not to exceed 1 ¼ pages)

Cross-stakeholder Collaboration

This project uses the voices of the stakeholders who matter the most – the community members who have died as a direct result of opioid overdose (Aim 2) and PWLE (Aim 3), the prehospital agencies (Aims 1 & 3) and clinicians (Aim 3) who treat OUD patients, and the local organizations who provide services to combat the opioid epidemic (Aim 3). By bridging these experiences and opinions together, and sharing the results with local and state stakeholders, this project aims to increase capacity to provide evidence-based, community-driven prehospital OUD strategies. Furthermore, these data provide the basis of future stakeholder engagement to co-create prehospital OUD programs that work for our community.

Prehospital Emergency Medical Services

This project will utilize data from EMS agencies across the state to identify the most effective OUD prevention, treatment, and harm reduction strategies. Ms. Cyr has discussed this project with the Medical Director (Dr. J. Tripp Winslow) and the Chief (Mr. Tom Mitchell) of NC OEMS; they are aware of and supportive of this research to identify the barriers and facilitators to OUD strategy implementation in the prehospital environment. Furthermore, this project includes extensive cooperation from OC EMS, who will assist with pulling and matching patient records and encouraging participation

in interviews with leaders and clinicians. Not only will local and statewide EMS benefit from these data, but the long-term impact of this program will benefit patients at risk of OUD by promoting access to OUD resources through “just-in-time” interventions.

Hospital-based Psychiatric Emergency Services

UNC-CH EM provides care to patients from across NC. The PES team, led by Dr. Angela Strain, works exclusively with patients in psychiatric crisis through evaluation, care, and sharing of local resources. As the local hospital-based emergency medical team receiving psychiatric patients, PES interacts with patients who are cared for and transported by EMS. This provides PES with a deep understanding of the prehospital care process. Interviewing PES clinicians about prehospital OUD strategies provides the opportunity for this stakeholder group to share their knowledge on what resources OUD patients may need before they reach the hospital. Ms. Cyr and Dr. Strain share goals to improve access to and receipt of appropriate care for mental health patients. As an internal change agent dedicated to this field, Dr. Strain has signed a letter of support indicating PES’ intention to participate in this project.

Community-based Organizations

Ms. Cyr has reached out to several local organizations (e.g., NC Harm Reduction Coalition, Alice Aycock Poe Center for Health Education, National Alliance on Mental Illness – OC Chapter) to increase stakeholder engagement. Ms. Cyr continues to reach out to organizations and is working with Ms. Elizabeth Brewington, Manager of Health Programs at the NC Association of County Commissioners, to identify additional OUD stakeholders.

Program Originality and Innovation

Ms. Cyr has worked closely with OC EMS and NC OEMS to ensure this project provides meaningful data and direction to local and statewide EMS. Through conversations with these organizations, these data will assist clinicians who are vested in delivering community-based, community-directed care to their patients. OC EMS intends to use these data to inform their “Community Health and Safety” bureau and PORT response teams in delivering evidence-based patient-centered care.

EMS Systems across the US have utilized a variety of strategies to treat overdose among patients (e.g. naloxone administration and distribution programs) and reduce harm from OUD (e.g., peer support, crisis intervention teams). However, the use of OUD prevention strategies among prehospital programs is relatively unknown and the utilization of stakeholder-driven co-development of OUD strategies is severely limited.

F. Performance Measures and Program Evaluation *(18 points, page limit: not to exceed 1 page)*

Aim 1: Describe the use and effectiveness of prehospital OUD prevention, treatment, and harm reduction strategies. First, strategies will be defined by NC Opioid and

Substance Use Action Plan “Menu of Local Actions”. Descriptive statistics will summarize the following results by EMS System rurality, region, system operation status, and type of OUD strategy (i.e. prevention, treatment, harm reduction): # strategies in use; # patients served by strategy last year; and # barriers/facilitators to strategy use. Furthermore, we will qualitatively describe barriers/facilitators to deploying current strategies and reasons for termination of former strategies.

These statewide data will inform which prehospital OUD strategies are/are not working and what threats exist to deploying each strategy based on real world experience of EMS Systems.

Aim 2: Enumerate missed opportunities for prehospital intervention in local opioid-related deaths. The prehospital encounters of OC residents who died in 2024 due to opioids will be described. Specifically, we will describe the # decedents for whom there were 0 EMS encounters, ≥ 1 EMS encounters, and ≥ 1 EMS drug-related encounters. Decedents’ will be further categorized by age groups (e.g., <25 years, 25-25 years), sex (e.g., Female), race (e.g., Black/African American), ethnicity (e.g., Hispanic/Latinx), residential status (e.g., homelessness) and whether OC EMS documented an offer to provide OUD strategies during previous encounters.

These data will highlight the impact of current prehospital OUD strategies in our local OC community and elucidate any missed opportunities and health inequities in accessing OUD services. Missed opportunities, defined as OC residents who died from an opioid overdose and were not previously offered an OUD strategy during an EMS encounter, highlight the impact of “just-in-time” interventions.

Aim 3: Determine stakeholder support of prehospital OUD strategy implementation. We will capture and qualitatively analyze the opinions and experiences of stakeholders involved in the delivery or receipt of OUD strategies to our OC community. Thematic analysis of interview data will provide community guidance on how EMS can best work with other stakeholders to reduce the impact of OUD by improving strategy delivery. Subanalysis will identify potential stakeholder affiliation preferences. Furthermore, data will highlight opportunities for stakeholders collaboration to increase service access.

These data, combined with the aforementioned program evaluation results, will be developed into a final report and provided to all stakeholders engaged in this program. To increase dissemination of results, results will be presented at local (e.g., Southeastern Summit for Behavioral Health) and national (e.g. National Association of EMS Physicians) conferences and submitted to peer-reviewed journals (e.g., Journal of Community Health, Prehospital Emergency Care) for publication. Ms. Cyr, the Primary Investigator, will monitor progress throughout the project by: 1. Hosting weekly team meetings to discuss project progress; 2. Completing a mid-month review each month to ensure timeline (See: Project Description) is met; and 3. Completing reports and check-ins with Orange County as needed to ensure transparency and project completion.

Include in the same PDF document as this form, after the Certifications section below, the following required documents. If an item is not applicable to your organization, please indicate this by an "N/A" and explain why it is not applicable.

- 3. Letters of Commitment and/or Support (Up to 5 letters)**
- 4. Latest Audited Financial Statements**, including Management letter (Attach letter of explanation if unable to provide)
- 5. Documentation of Tax Identification Number** (can be IRS Determination Letter for non-profit agencies)
- 6. Certificate of Insurance**
- 7. For non-profit agencies only:**
 - A.** IRS Determination Letter: provide a copy of an IRS determination letter which states that your organization has been granted exemption from federal income tax under section 501(c)(3) of the Internal Revenue Code. The organization's name on the letter must match your current organization's name and address. This IRS determination letter can also satisfy the documentation requirement of your organization's tax identification number (TIN).
 - B.** Verification of 501(c)(3) Status Form: If applicable, an Authorized Representative must annually submit verification that the organization remains a qualified 501(c)(3) tax-exempt organization.
 - C.** Copy of Form 990 Federal Tax return filed for latest fiscal year.
 - D.** Agency organizational chart.
 - E.** Current Board of Directors Roster with names, addresses, office terms (with dates), and professional and/or community affiliations.
- 8. For-profit agencies only:** N/A; University of North Carolina at Chapel hill is not a For-profit organization
 - A.** Current Board of Directors Roster with names, addresses, office terms (with dates), and professional and/or community affiliations.
 - B.** Appropriate tax form filed with IRS filed for latest fiscal year.
 - C.** Agency organizational chart.

9. Certifications and Required Forms

A. Application Certification

I have reviewed this application for accuracy.

I understand that Opioid Abatement funds are intended to address specific remediation activities as identified under the NC Memorandum of Agreement (MOA) for the Opioid Settlement Funds.

I understand that these opioid settlement funds are subject to State laws and regulations, and I have read the MOA and agree to the requirements.

I certify that the requested funds will be used in compliance with these requirements and with all requirements outlined in the Orange County High Impact Opioid Abatement Strategies RFA.

I agree to submit invoices and other relevant documentation to Orange County to pay or be reimbursed, as well as quarterly status reports, by the date stated in the contract.

I understand that **Orange County** requires agencies with receipts less than \$500,000 that do not have a financial audit (or a financial report), prepared by a certified public accountant (CPA) to complete schedule of Receipts and Expenditures form. An agency does not need to complete this form if it has a prepared audit/report it can submit for the calendar year ending December 31, 2022 or the fiscal year ending June 30, 2023. Agencies with receipts totaling \$500,000 or more, from any source, must submit a CPA-certified financial audit.

financial statements for each year that opioid settlement funding is provided to my organization, and that Orange County may monitor the program during the award period.

Agency Authorized Official (print name)	Julie Cook
Signature	 Digitally signed by Julie Cook Date: 2025.02.20 14:03:06 05'00'
Title	Principal Sponsored Projects Officer, Office of Sponsored Research
Date	2/20/2025