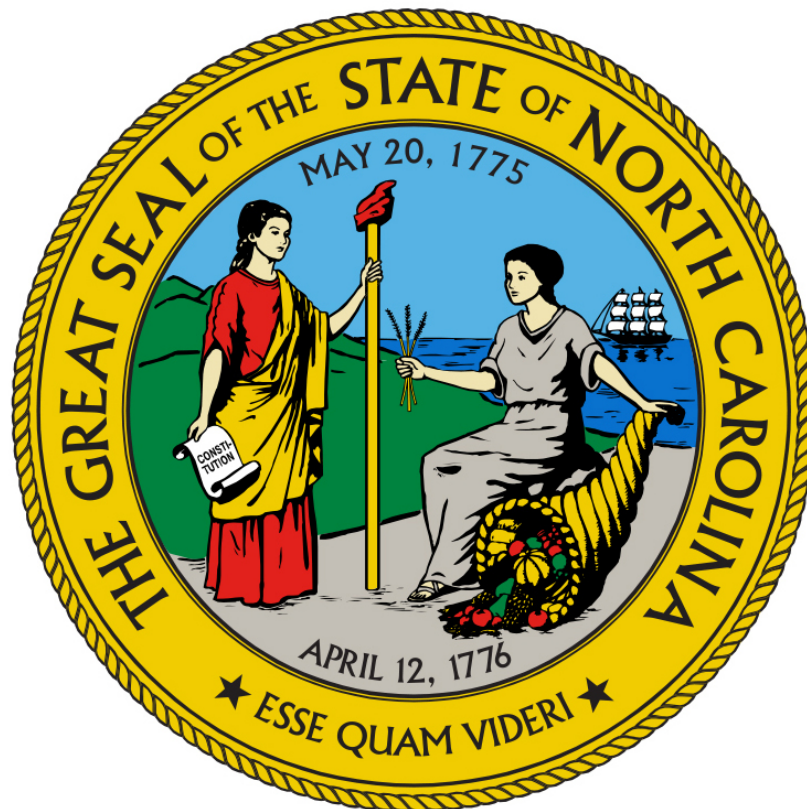


North Carolina Opioid Research Agenda

Outcome of a collaborative process between academic and non-profit researchers and the North Carolina Department of Health and Human Services



Introduction

Background

In June 2017, North Carolina (NC) released Version 1 of the [NC Opioid Action Plan](#). The purpose of the NC Opioid Action Plan is to identify specific, impactful strategies to reduce the burden of morbidity and mortality from the opioid epidemic in the state. The action plan organizes these strategies into seven key focus areas:

1. Creating a coordinated infrastructure
2. Reducing the oversupply of prescription drugs
3. Reducing the diversion and flow of illicit drugs
4. Increasing community awareness and prevention
5. Increasing naloxone availability and linkages to care
6. Expanding access to treatment and recovery
7. Measuring impact

Under Focus Area #7: Measuring impact, one of the strategic action items is to “establish an opioid research consortium and a research agenda among state agencies and research institutions to inform future work and evaluate existing work.”

The Role of Research in North Carolina’s Opioid Epidemic Response

Research institutions play a vital role in North Carolina’s coordinated response to the opioid epidemic.

Research institutions can identify critical gaps in knowledge and discover new information and emerging trends needed to respond to a quickly shifting epidemic. This knowledge can then inform the programs, policies, and interventions that are used to respond to the epidemic. Research institutions are critical to the development of prevention and intervention strategies and accessible, effective treatments for substance use disorder. Furthermore, research institutions can evaluate policies and interventions to identify more effective responses to the opioid epidemic.

Goal of North Carolina Opioid Research Agenda

North Carolina has a large community of academic and non-profit research institutions. Many organizations are currently conducting novel research, designing interventions, and evaluating efforts in a wide range of topics and fields related to the opioid epidemic.

The goal of the NC Opioid Research Agenda was, through a collaborative process with research partners, practitioners, and DHHS representatives, to identify a prioritized list of questions that were feasible to answer in the short-term and would return impactful, tangible information to strengthen North Carolina’s response to the opioid epidemic.

Process for Developing the Research Agenda

Planning Committee

Planning committee members included the NC Division of Public Health, the NC Department of Health and Human Services (DHHS), the Duke University Margolis Center for Health Policy, the University of North Carolina (UNC) at Chapel Hill Injury Prevention Research Center (IPRC), and NC Translational and Clinical Sciences Institute (NC TraCS).

Research Agenda Meeting

The planning committee worked to convene a one-day, in-person meeting to brainstorm questions that would support the goals of the research agenda. The research agenda meeting was held in the Research Triangle Park, NC on May 16, 2018. The participants of the meeting were asked to develop research questions that were:

- 1) *Impactful*: The questions, if answered, would directly improve North Carolina's response to the opioid epidemic; and
- 2) *Feasible*: The questions could be answered in the next 1-2 years.

To foster a collaborative discussion for the research agenda meeting, over 70 participants were invited from academic and non-profit research institutions as well as from across NC DHHS. Experts from a variety of research institutions were invited based on their work in the subject area.

Four topical workgroups were used to structure the brainstorm discussion: Prevention, Dynamic Use and Misuse, Harm Mitigation, and Treatment. To help convey the scope for each workgroup, the planning committee developed a conceptual model that was presented to attendees (Appendix A). Each attendee was able to participate in two of the four working groups of their choice as part of the meeting.

Structure of Meeting

Given the number of anticipated attendees for the meeting, the planning committee had developed pre-established criteria to facilitate the brainstorm discussions. Furthermore, knowledgeable facilitators ensured that each discussion workgroup accomplished the intended objective of the meeting. The facilitators were provided with a research question template and a facilitator's guide of key points to keep in mind during the workgroup discussions (Appendix B).

All of the questions identified in the one-day meeting were compiled by planning committee members, and the planning committee used the same criteria of feasibility and impact to refine the list. Questions that already had known answers or were not feasible to answer were eliminated, and questions that were identified as most pertinent to directly inform response efforts were prioritized. Planning committee members consulted experts for prioritization where necessary by topic area. The final prioritized list of questions for the research agenda is

presented below. In addition, a short list of key data sources and contacts was created (Appendix C).

Researchers, students and others can use this list of questions as topical areas to consider for research projects and grant application proposals. The goal of creating this research agenda is for state and research partners to have guidance on state priorities as they pertain to the opioid epidemic.

Acknowledgements

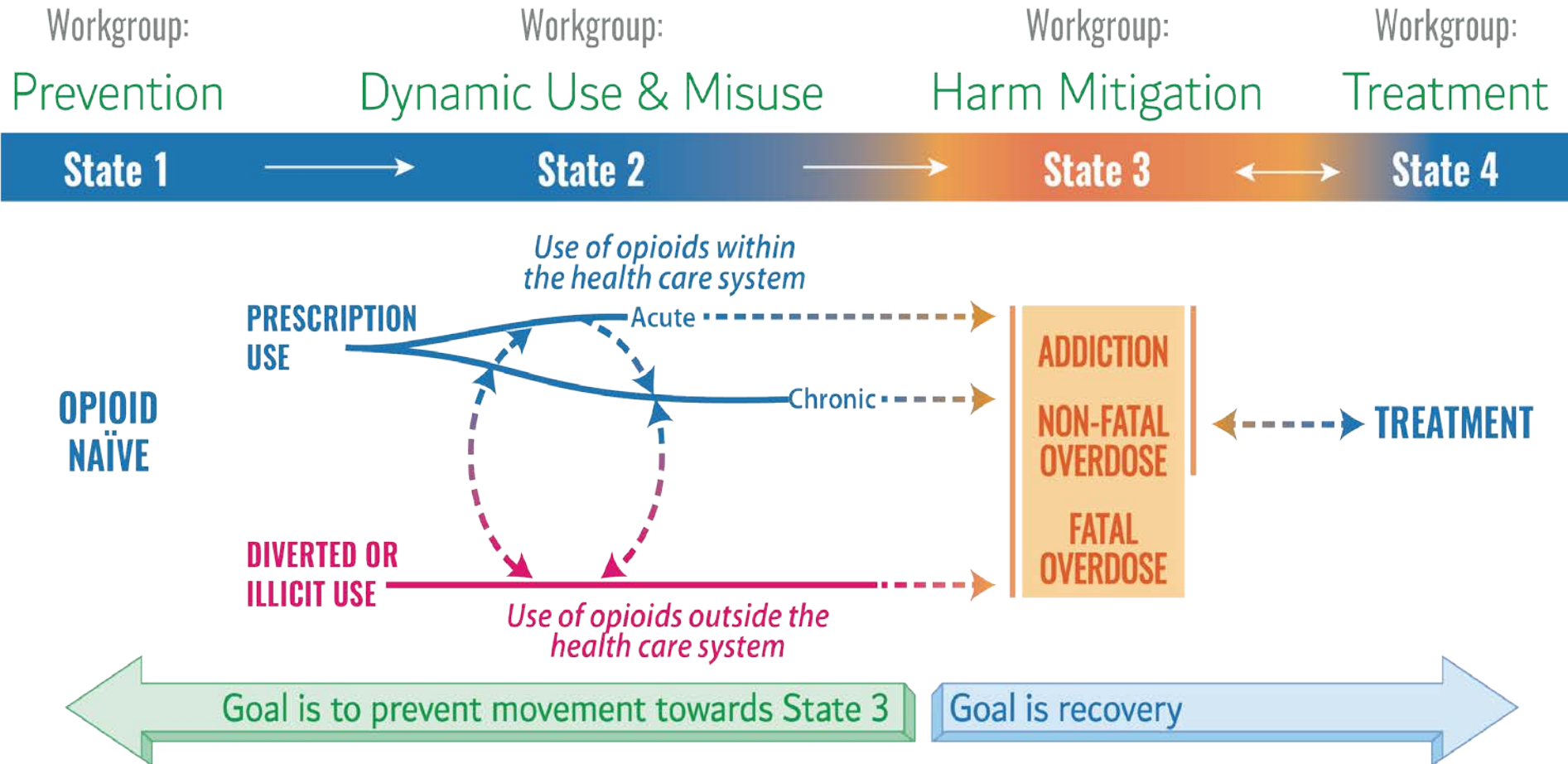
We would like to extend a large thank you to the planning committee, Aaron McKethan, Hilary Campbell, Susan Kansagra, Scott Proescholdbell, Steve Marshall, Toska Cooper, Karen Demby, Christin Daniels, Amy Patel, and Elyse Powell; speakers, Governor Roy Cooper, Secretary Mandy Cohen, Melissa McPheeters, and Jeffrey Talbert; panelists, Marisa Domino, Emily Pfaff, Larry Greenblatt, and Phillip Graham; research agenda meeting facilitators and assistants, Walker Wilson, Shabbar Ranapurwala, Rebecca Naumann, Noel Mazade, Mike Dolan Fliss, Tim Carey, Josie Caves, and planning committee members; the 70+ research agenda meeting participants (See Appendix D); consulted experts, Robert Childs, Lauren Brinkley-Rubinstein, Lillie Armstrong, and Nidhi Sachdeva; the RTP Conference Center staff; and everyone involved in the development of the NC Opioid Research Agenda.

North Carolina Opioid Research Agenda

1. Which risk factors are the most immediately intervenable to prevent substance use disorder and to prevent an opioid overdose? Are these risk factors different in special populations, including youth, justice-involved persons, and people with non-problematic drug use?
2. What percentage of people with opioid use disorder currently initiated with prescription opioids versus illicit opioids? How has the source of opioid initiation changed over time? What causes people to transition to illicit opioid use?
3. What is the current use of “opioid sparing” (non-opioid pharmacological and non-pharmacologic) pain treatments in North Carolina? What are the outcomes associated with these prescribing and referral behaviors for different conditions? How does an individual’s insurance status change the likelihood that they will receive opioid sparing pain treatments?
4. What are considered good opioid prescribing benchmarks for specific conditions? How many prescribers currently conform to these prescribing benchmarks? What are the most effective policies and interventions to conform to these prescribing benchmarks?
5. What has been the impact of each major component of the STOP Act (e.g., opioid prescribing and reporting protocols, CSRS use, naloxone distribution)?
6. What has been the impact of existing and emerging harm-reduction based strategies on the health of people who use drugs? What has been the impact of the legalization of Syringe Exchange Programs in North Carolina? What is the current unmet need for syringe exchange programs? How does access to syringe exchange programs impact rates of overdose, HIV and Hepatitis C? Evaluate strategies for building community capacity to adopt harm reduction-based interventions. Evaluate best practices and emerging strategies used to improve health literacy, investment, and coordination among people who use drugs, social and medical service providers, law enforcement, and communities as a whole.
7. Does screening for substance use disorders in primary care settings increase the number of people receiving treatment? What is the current rate of screening for substance use disorders in primary care settings? What percentage of individuals identified as having a substance use disorder through a primary care screening are referred to treatment, harm reduction, and/or recovery support services? Does increased screening for substance use disorder in primary care settings increase the number of people who initiate these services? Are individuals that are referred to treatment through a primary care screening more or less likely to be retained in treatment than the general treatment population?
8. What is the current treatment demand and capacity in North Carolina? How does this demand vary across counties and other localities? In which areas does the demand furthest exceed the treatment capacity?
9. What is the current state of buprenorphine prescribing in North Carolina? What is the distribution of dosages (mg/day) and length of time that patients are being prescribed buprenorphine? What is the current rate of co-prescription of buprenorphine with opioid pain medication, benzodiazepines, or other risky co-prescriptions?

10. What is the current statewide rate of referral to treatment and/or harm reduction services for patients who: Are hospitalized for opioid use disorder? Visit the emergency department (ED) for an opioid overdose? Receive emergency medical services (EMS) for an opioid overdose? How frequently are people who receive medical care for a disease associated with injection drug use (e.g. sepsis, endocarditis, hepatitis, HIV) screened for substance use disorder and referred to treatment and/or harm reduction services? What interventions have been effective in increasing the rate of referral to treatment and harm reduction services for those who have received clinical services and have an opioid use disorder?
11. What risk factors are most predictive of a relapse at the start of treatment? What are the most effective forms of treatment and recovery supports to reduce the likelihood of a relapse after beginning treatment? What are the most effective forms of treatment and recovery supports after a relapse occurs? Which patients best benefit from each type of treatment and counseling/psychosocial supports? What are the most effective recovery supports in different populations, including youth, justice-involved persons, and pregnant women?
12. What are the policies/protocols that effectively improve access to medication-assisted treatment (MAT) for people involved in the criminal justice system (incarcerated/after release)? What are the outcomes of these policies/protocols on overdose? On recidivism? On treatment adherence?
13. What is the risk of neonatal abstinence syndrome (NAS) associated with opioid use during pregnancy? To what extent does Eat, Sleep and Console improve NAS outcomes compared to other more traditional treatment approaches (e.g., the Finnegan scoring system)? What are the best methods for supporting parents and/or caregivers in caring for a baby diagnosed with NAS to improve outcomes? What has been the impact of the Plan of Safe Care on children, their families and the systems who support them? What are the maternal, fetal and neonatal effects of naloxone overdose reversal during pregnancy? What are the maternal, fetal and neonatal effects of naltrexone during pregnancy?
14. How often are co-morbidities with opioid use disorder identified? Given that co-morbidities may be treated independently from a substance use disorder, how can clinical care be better coordinated for patients? What is the set of information and services to address co-morbidities that most effectively reduces negative outcomes for patients with opioid use disorder?

Appendix A: Conceptual Model to Guide Workgroup Discussion



Model credit: McKethan A., Powell E., Patel A., Daniels C., Campbell H., Marshall S., & Proescholdbell S.

Appendix B: Materials used in Workgroups

Assistant's Template to Track Discussion of Each Proposed Research Question

CIRCLE/HIGHLIGHT NAME OF BREAKOUT GROUP:

Session 1 Session 2

Prevention Dynamic Use/Misuse Harm Mitigation Treatment

RESEARCH QUESTION:

IMPORTANCE:

METHODS/FEASIBILITY:

BRIEF REVIEW OF DATA NEEDED:

POLICY IMPACT:

KEY PARTNERS:

OTHER NOTES:

Guidance for Facilitators & Assistants

Overall Goal of Workgroups: To compile a series of timely and compelling Research Questions that, if answered, would move the needle on our state's ability to have a positive impact on the opioid crisis. Questions should be feasible and return impactful information in the near term.

1. Tips for Facilitating the Breakout Groups:

- Begin with a rapid round of introductions. Names and job titles only, not lengthy statements.
- Getting the ball rolling: Individuals brainstorm a list of their most compelling Research Questions – in private and independently – then go around the group and have each person state their full list of proposed Research Question(s). Or else, just invite people to start throwing ideas out.
- Invite the group sharing ideas by stating **a Research Question to be answered and its importance to the state** (rather than by stating a data source or agency!).
- Invite group discussion to get verbal feedback to each proposed question. Try to involve the whole group and avoid any one person dominating discussion.
- Try to discuss and develop ideas that have broad appeal within the group.
- Don't get bogged down on any one research idea or section of the research template.
- Facilitators should help guide discussion and prioritization; remind the group of goals; and keep it moving.
- Assistants should keep track of the key information discussed and populate one template for each Research Question. They should let the Facilitators know if there are missing or unclear items in template for any of Research Questions (preferably before the Facilitators move to another Research Question!)

2. What's Included in the Template:

(1) RESEARCH QUESTION:

- Clear, concise research question
- Answerable with existing data (even if not currently available)
- Feasible to answer within a reasonable timeframe

(2) IMPORTANCE:

- Why is answering this question important
- What is the tangible information gain
- How state partners might use this information

(3) METHODS/FEASIBILITY:

- Brief, high-level overview only
- What is the feasibility and timeframe
- *Don't let this section become a time sink. It should be a high-level overview, or can be left blank if needed*

(4) BRIEF REVIEW OF DATA NEEDED:

- If known, what existing data sources would help answer this question?
- What additional data sources may be needed to fill any gaps to answering the question?
- Do we need new data linkages and/or new bridges between existing data resources?

(5) POLICY IMPACT:

- What specific policies would this question inform?

(6) KEY PARTNERS:

- Does this question fit into any partner's current or planned scope of work? If so, who?
- Which partners are needed to make relevant data sources available?
- Who else should be engaged for follow up on answering this research question?

Appendix C: Existing key state data resources and contacts

Data source	Data Steward	Access	Email
NC Medicaid Claims Data	NC Medicaid Division of Health Benefits (MDHB)	Limited to public health & academic researchers. Submit data request/data use agreement	patrick.doyle@dhhs.nc.gov
NC Controlled Substance Reporting System (CSRS)	NC DMH/DD/SAS	Limited to public health & academic researchers. Submit data request/data use agreement	sonya.brown@dhhs.nc.gov
NC Vital Records (death certificate data)	NC DPH	Public Access/Public record. Submit data request/data use agreement	SCHSInfo@dhhs.nc.gov
NC Office of the Chief Medical Examiner (OCME) (death data)	NC DHHS	Public Access/Public record. Submit data request	ocme.data.request@dhhs.nc.gov
NC DETECT (Emergency Department Data)	NC DPH	Limited to public health & academic researchers. Submit data request/data use agreement	ncdetect@listserv.med.unc.edu
NC DETECT (EMS Data)	NC DPH	Limited to public health & academic researchers. Submit data request/data use agreement	ncdetect@listserv.med.unc.edu
NC Hospital Discharge Data (Hospital Admissions)	NC Healthcare Association (NCHA)	Limited to public health & academic researchers. Submit data request/data use agreement via UNC SHEPS or SCHS	ahaydon@email.unc.edu
NC Poison Control Center	Carolina Poison Control (CPC)	Limited to public health & academic researchers. Submit data request/data use agreement	anna.dulaney@carolinashealthcare.org

Appendix D: List of Participants

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*Developing a Research Agenda for Addressing the Opioid Epidemic in North Carolina
Wednesday, May 16, 2018 | RTP Conference Center*

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