

# NATIONAL ACADEMY OF MEDICINE

## ACTION COLLABORATIVE ON COUNTERING THE U.S. OPIOID EPIDEMIC

### RESEARCH AGENDA

## PREVENTION, TREATMENT, AND RECOVERY SERVICES

Improving the availability, accessibility, and quality of prevention, treatment, and recovery services for patients with OUD is integral to combating the opioid crisis. Access to these services has been consistently inadequate, which continues to perpetuate the opioid crisis and cause preventable patient morbidity and mortality (Schieber et al., 2019). To strengthen prevention, treatment, and recovery care, the curation and dissemination of best practices and integrated approaches with guidance for how to implement, scale, and sustain these approaches is needed. Such efforts should apply a health equity approach, particularly as the COVID-19 pandemic has further exacerbated challenges in accessing high-quality care and has disproportionately impacted BIPOC (SAMHSA, n.d.). Data collection relevant to diverse populations suffering from OUD and SUD must be prioritized to better understand and respond to the needs of these patients.

Current work on OUD prevention primarily focuses on reducing opioid supply and demand. Initiatives include developing health system-wide best practices for opioid prescribing, integration of alternative methods for pain management into standards of care, and efforts to reduce adolescent exposure to opioids (NSTC, 2018). Although there is strong evidence that medications such as methadone, buprenorphine, and extended-release naltrexone should be the central component in the treatment of OUD, many patients are unable to access these therapies and other evidence-based care (NASEM, 2019a). Thus, recent research has investigated strategies to overcome OUD and other related SUD treatment barriers, including institutional policies, interpersonal stigma, and financial constraints, and to develop best practices for treatment to achieve remission and maintain long-term recovery (ASAM, 2020; Madras et al., 2020). Yet, there is still a need for continued research and investment to strengthen and expand the evidence base for SUD prevention and treatment strategies.

Harm reduction and recovery support services also play important roles in the continuum of care for SUD. There is strong evidence demonstrating how harm reduction services such as needle exchanges and naloxone rescue can minimize the negative consequences of substance use and promote the importance of recovery support services in establishing and maintaining long-term recovery. In addition to the existing evidence base, opportunities exist to develop innovative harm reduction and recovery support services in response to the evolving nature of the opioid epidemic.

Additionally, these services can be strengthened through increased care coordination and integration with health care delivery, sustainable funding and programs, and stigma reduction efforts (Haffajee et al., 2018). Despite progress, further research is still needed to assess remaining gaps in accessing quality care as well as identifying critical changes to practice and policy that can address barriers in transitions between levels of care (Waller et al., 2021). Implementation of identified best practices and dissemination of lessons learned can help improve treatment outcomes and quality of life for diverse patient populations.

## RESEARCH, DATA, AND METRICS NEEDS

### **Priority: Collect and Assess Data on Demographics, Social Determinants of Health, Special Populations, and Outcomes**

- **Collect granular data on opioid-related deaths to better understand the relationships between opioid overdose and contributing factors** (e.g., SUDs, pain treatment, recreational use of all substances, and other demographic and health factors) (HHS, 2019).
- **Investigate the impact of socioeconomic factors (e.g., income level, education, and access to health care) on the prevalence of SUD and outcomes related to overdose rescue**, including the use of overdose-reversal medications and long-term treatment and recovery success (NSTC, 2018).
- **Capture data on the experiences of high-risk populations with SUDs**, including BIPOC, rural, tribal, incarcerated, homeless, and pregnant people to gather insights on barriers to obtaining treatment (HHS, 2019). Potential areas of focus should include persisting issues related to accessing treatment and recovery services; disparities and mortality numbers; and social determinants of health (SDOH) such as housing, food, and transportation access (Cantor and Thorpe, 2018).
- **Explore effective intervention strategies targeting SDOH that contribute to the development and perpetuation of SUDs and pain-related health disparities**, including poverty, housing instability, food insecurity, and limited access to health care services (Thornton et al., 2016).
- **Evaluate the impact of health system-based interventions that address SDOH on the prevention and treatment of SUDs and pain management outcomes**, including identifying effective approaches to recognizing patients with SDOH needs and tailoring interventions appropriately, as well as evaluating the effectiveness of multidisciplinary care teams in addressing SDOH-related challenges (Gurewich et al., 2020).

- **Investigate the impact of payment policies that incentivize health systems and providers to address the impact of SDOH on patient outcomes, as well as the effectiveness of SDOH interventions supported by these policies** (Crook et al., 2021).
- **Evaluate the effectiveness of peer-based prevention, treatment, and recovery strategies for adolescents with SUD**, including those involved in the juvenile justice system (Blanco et al., 2020; HHS, 2019; Gatchel et al., 2014). A potential area of focus should include the impact of strategies that involve patient peers and family members on rates of successful recovery and quality of life.
- **Evaluate the effectiveness and impact of anti-stigma interventions on reducing stigma against people with SUD and/or who are prescribed MOUD and identify strategies to scale and sustain these interventions across different health care settings** (Salman et al., 2022).
- **Develop a standardized framework and methodology for studying the stigma of SUD**, including its impact on individuals, families, communities, criminal-legal and child welfare workers, medical personnel, and policy makers. Evaluate interventions aimed at reducing stigma, with a focus on their effectiveness within health care systems (Crook et al., 2021).
- **Evaluate the impact of structural racism and discrimination on SUD prevention, treatment, and recovery**, including understanding how these pressures affect access to care, treatment outcomes, and health disparities (ASAM, 2020).
- **Establish comprehensive data systems to monitor and take steps to prevent a rise in dangerous recreational drug use, SUD, and overdoses**, including the collection and analysis of data on prescribing practices of controlled substances, overdose deaths and emerging drugs of abuse, substance use treatment utilization, and other relevant indicators (Fishbein and Sloboda, 2023). These data systems should be designed to identify at-risk populations and geographic areas and inform targeted prevention and intervention strategies.

### **Priority: Better Understand Key Challenges in Care Transitions for Patients with OUD**

- **Evaluate adherence to and use of care plans when patients with OUD are moving between care settings**, including a comprehensive mapping of OUD journeys with a focus on understanding the barriers to effective care handoffs and the role of family engagement in supporting care transitions (Madras et al., 2020).
- **Identify, implement, and evaluate strategies to increase patient engagement and motivation to receive and stay committed to OUD treatment**, including interventions that improve patient-provider communication, address SDOH, and leverage peer support (Madras et al., 2020).

- **Gather data to monitor patient journeys**, including assessing patient engagement and follow-up throughout the treatment process, evaluating interventions to increase treatment effectiveness, and identifying factors that contribute to treatment failure, particularly among subpopulations at increased risk for OUD and overdose (Madras et al., 2020).
- **Identify obstacles that stop hospitals from facilitating streamlined entry into treatment after rescue and best practices to do so**, including methods used to successfully move patients into treatment, reasons for failing to move patients into treatment, and data stratified by subpopulations (e.g., age, race, ethnicity) (NSTC, 2018).
- **Investigate effective strategies for engaging and supporting individuals who have experienced a non-fatal overdose**, including MOUD initiation, transition to recovery programs, and addressing barriers to continued care (Bagley et al., 2019).
- **Reexamine and refine best practices for transitioning and treating patients with OUD after incarceration**, including evaluating the effectiveness of MOUD, behavioral therapy, and peer support programs in reducing relapse and recidivism rates (Santo et al., 2021).
- **Investigate effective strategies for improving care coordination and outcomes for pregnant people and families affected by OUD and other related SUDs**, including integration of child welfare and health organizations and postpartum care (Martin et al., 2022).
- **Study the impact of standardized care delivery levels and compliance requirements on improving outcomes for patients with OUD and other related SUDs** (Waller et al., 2021).

### **Priority: Evaluate Policies and Initiatives that May Facilitate Greater Access to Prevention, Treatment, and Recovery Care**

- **Better understand how specific federal-level and other relevant policies can improve implementation of, or remove barriers to, effective SUD and pain management care** (NSTC, 2018). Potential areas of focus should include the suspension rather than termination of Medicaid eligibility when incarcerated, promotion of interprofessional continuing education through policy incentives and investments, and reimbursement for telehealth or non-pharmacological pain treatment.
- **Examine the impact of federal and state-level policies and regulations on the provision of evidence-based treatment for OUD and other related SUDs**, specifically MOUD, with a focus on medically unnecessary requirements, payment policies, care team composition, and supervision requirements (Pessar et al., 2021; Saloner and Maclean, 2020).
- **Investigate the potential for DEA waivers, SAMHSA standards, and CMS payment models to promote preemptive approaches to addressing OUD and other related SUDs, and reducing the risk of overdose**, including exploration of the impact of these approaches on early intervention, timely access to treatment, and harm reduction strategies (NASEM, 2022).

- **Investigate and develop effective monitoring and enforcement mechanisms for laws and regulations related to mental health and SUDs**, including but not limited to parity laws, Medicaid expansion, and federal and state regulations related to SUD treatment facilities (Waller et al., 2021).
- **Evaluate the effectiveness and feasibility of innovative approaches to methadone initiation, such as office-based methadone, to improve access to MOUD** (NASEM, 2022).
- **Collect comprehensive and long-term data on the effects of increased take-home dosing of methadone**, including its impact on treatment adherence, retention, overdose rates, and overall health outcomes of patients receiving this treatment approach (NASEM, 2022).
- **Collect and analyze data on the effectiveness of innovative harm reduction approaches**, such as supervised consumption and overdose prevention sites, in reducing overdose deaths and improving access to health care and social services for people using illicit drugs (Harocopos et al., 2022).
- **Evaluate the effectiveness of different diversion prevention strategies for opioids and other controlled substances**, including at-home disposal, drug take-back programs, and prescription drug monitoring programs (PDMPs) (Fan et al., 2019; Puac-Polanco et al., 2020).
- **Evaluate the effectiveness of SUD anti-stigma campaigns among various groups**, including health care providers, patients and families, the justice and family welfare system, and the public, and assess the impact of anti-stigma interventions on patient outcomes and access to evidence-based treatment (Haffajee et al., 2018).

### **Priority: Improve Standardization, Data Collection, and Evaluation Practices**

- **Develop and validate reliable and standardized process and outcomes metrics for evaluating the quality of SUD care across diverse settings and populations**, including the incorporation of patient partnership and person-centered and recovery-oriented measures (Waller et al., 2021).
- **Develop and implement standardized methods for external evaluation of clinical care for SUD treatment to ensure that all patients receive high-quality, evidence-based care regardless of where they seek treatment** (Waller et al., 2021).
- **Develop effective strategies and mechanisms for the timely dissemination of research findings to policy makers and stakeholders** and evaluate the impact of this dissemination on shaping policy related to SUD prevention, treatment, and recovery (Blanco et al., 2022a).

- **Develop innovative methods for collecting and integrating data from non-traditional sources to inform opioid and SUD research**, including health care provider systems and health plan claims data. Potential areas of focus should include identifying and addressing data quality issues, ensuring data privacy and security, and establishing partnerships with stakeholders outside the traditional health care system to enable access to and use of these data sources (Blanco et al., 2022b).
- **Determine the impact of clinical decision support tools on opioid screening and prescribing** (Spithoff et al., 2020).
- **Develop and evaluate strategies to increase the adoption and use of PDMPs**, including efforts to streamline access and integrate PDMP data into electronic health records. Evaluate the impact of increased PDMP usage on opioid prescribing practices, patient outcomes, and health care utilization (Larach et al., 2022).
- **Monitor and evaluate the impact of FDA-approved over-the-counter naloxone on opioid overdose deaths**, including factors that may influence its utilization and accessibility, such as cost, stigma, and education (FDA, 2023).
- **Collect data to assess the capacity and effectiveness of SUD treatment systems at the local level to better target policy and investment needs** (Waller et al., 2021). Potential areas of focus should include evaluating existing treatment facilities, workforce availability and training, access to evidence-based treatment, patient outcomes, and other factors that contribute to the overall effectiveness of the SUD treatment system.

### **Priority: Identify Barriers and Best Practices Relevant to Treatment and MOUD**

- **Evaluate the compliance of federally funded treatment programs with evidence-based best practices and the provision of MOUD**, including assessing factors that contribute to variation in program effectiveness and identifying opportunities to improve outcomes for patients with OUD (Madras et al., 2020).
- **Evaluate innovative models of treatment delivery that address SDOH and racial and geographic disparities in access to care and assess their effectiveness in improving health outcomes for underserved populations** (Madras et al., 2020). Potential areas of focus should include mobile clinics, telehealth, peer-led interventions, and community-based care models.
- **Evaluate the effectiveness of various treatment modalities in managing OUD in the context of polysubstance use**, including fentanyl, xylazine, and other prescribed and illicit substances (Britch and Walsh, 2022).

- **Investigate the reasons for the gap between evidence-based practice and clinical implementation of MOUD**, including barriers to optimal prescribing practices and strategies to promote evidence-based prescribing in clinical settings (Volkow, 2018). Potential areas of focus should include stigma and aversion to change by legacy treatment providers, evaluating the role of pharmacies in supporting access to MOUD, and examining programs that might expedite access to MOUD.
- **Investigate the systemic and structural barriers faced by opioid treatment programs in providing comprehensive and person-centered care** that addresses the medical, counseling, vocational, educational, and other needs of individuals with OUD (Madras et al., 2020).
- **Compare the ease of increasing MOUD access under different payment structures, including value-based payment arrangements** (Polsky et al., 2021).
- **Evaluate the impact of the removal the X-waiver requirement for clinicians seeking to prescribe buprenorphine for OUD treatment under the MATE Act of 2021**, including examining changes in the number of providers prescribing buprenorphine, patient outcomes, quality of care provided, and the reasons for lack of prescribing by providers (SAMHSA, 2023).
- **Develop standardized and modernized data collection methods to improve understanding of methadone treatment**, including access and quality of care for methadone patients (NASEM, 2022).
- **Investigate the effectiveness of integrative therapies, including traditional, complementary, and alternative treatments in reducing opioid use in SUD treatment and identify best practices for integrating these therapies into multimodal care** (NSTC, 2018).
- **Develop and test effective interventions to address misinformation and stigma related to SUD care among health care providers, patients and families, criminal-legal and child welfare systems, and the public**, including interprofessional education and training, story-sharing and narrative change efforts, peer-led programs, community forums, public awareness campaigns, as well as social media and other communication strategies (McGinty et al., 2018).



# ABOUT THE ACTION COLLABORATIVE

The National Academy of Medicine’s Action Collaborative on Countering the U.S. Opioid Epidemic (the Action Collaborative) is a public-private partnership composed of more than 70 organizations representing federal, state, and local governments; health systems; associations and provider groups; health education and accrediting institutions; pharmacies; payers; industry; nonprofits; and academia. The Action Collaborative is committed to developing, curating, and disseminating multi-sector solutions designed to reduce opioid misuse and improve outcomes for individuals, families, and communities affected by the opioid crisis. Learn more about the Action Collaborative at [nam.edu/opioidcollaborative](https://nam.edu/opioidcollaborative).

## ACKNOWLEDGEMENTS

This research agenda, developed on behalf of the Collaborative, benefited greatly from the guidance of the Phase II (2021–2022) Research, Data, and Metrics Needs Working Group, whose members include **Carlos Blanco**, MD, PhD, National Institute on Drug Abuse; **Kelly J. Clark**, MD, MBA, Addiction Crisis Solutions; **Rebecca Baker**, PhD, National Institutes of Health; **Richard Bonnie**, LLB, University of Virginia; **Kathy Chappell**, PhD, RN, FNAP, FAAN, American Nurses Credentialing Center; **Humayun “Hank” J. Chaudhry**, DO, MS, MACP, Federation of State Medical Boards; **Jianguo Cheng**, MD, PhD, Cleveland Clinic; **Lisa Hines**, PharmD, Pharmacy Quality Alliance; **Christopher M. Jones**, PharmD, MPH, U.S. Centers for Disease Control and Prevention; **Kevin Larsen**, MD, FACP, Optum; **Bertha K. Madras**, PhD, McLean Hospital and Harvard Medical School; **Edward Mariano**, MD, MS, Stanford University; **Ray Mitchell**, MD, MBA, Liaison Committee on Medical Education; **Robert “Chuck” Rich, Jr.**, MD, FAAFP, American Academy of Family Physicians; **Friedhelm Sandbrink**, MD, U.S. Department of Veterans Affairs; and **Steve Singer**, PhD, Accreditation Council for Continuing Medical Education.

Please note this is an excerpt from the full research agenda. The research agenda and complete list of references can be found here: [www.nam.edu/opioid-collaborative-agenda](https://www.nam.edu/opioid-collaborative-agenda)

**Disclaimer:** The views expressed in this research agenda are those of the individual authoring experts and not necessarily of the individuals’ organizations, the National Academy of Medicine (NAM), or the National Academies of Sciences, Engineering, and Medicine (the National Academies). This research agenda is intended to help inform and stimulate discussion. It is not a report of the NAM or the National Academies.