

RESEARCH AGENDA

The National Academy of Medicine's Action Collaborative on Countering the U.S. Opioid Epidemic is a public-private partnership composed of more than 60 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. The Action Collaborative's work focuses on four key areas: health professional education and training; pain management guidelines and evidence standards; prevention, treatment, and recovery services; and research, data, and metrics needs. Learn more about the Action Collaborative at: nam.edu/Opioid_Collaborative.

This research agenda, developed on behalf of the Action Collaborative, benefited greatly from the guidance of the Research, Data, and Metrics Needs Working Group, whose members include **Carlos Blanco, MD, PhD**, National Institute on Drug Abuse; **Kelly J. Clark, MD, MBA**, American Society of Addiction Medicine; **Rebecca Baker, PhD**, National Institutes of Health; **David Beier, JD**, Bay City Capital; **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**, American Academy of Pain Medicine; **Kyle P. Edmonds, MD, FAAHPM**, American Academy of Hospice and Palliative Medicine; **James Gifford, MD, FACP**, Federation of State Medical Boards; **Lisa Hines, PharmD**, Pharmacy Quality Alliance; **Christopher M Jones, PharmD, MPH**, US Centers for Disease Control and Prevention; **Kelly King, PhD, MPH**, American Institutes of Research; **Kevin Larsen, MD, FACP**, Optum Labs; **Bertha K. Madras, PhD**, McLean Hospital and Harvard Medical School; **Edward Mariano, MD, MS**, American Society of Anesthesiologists; **Ray Mitchell, MD, MBA**, Liaison Committee on Medical Education; **Vincent G. Nelson, MD, MBA**, Blue Cross Blue Shield Association; **Robert "Chuck" Rich, Jr., MD, FAAFP**, American Academy of Family Physicians; **Friedhelm Sandbrink, MD**, US Department of Veterans Affairs; and **Steve Singer, PhD**, Accreditation Council for Continuing Medical Education.

Disclaimer: The views expressed in this research agenda are those of individual 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.

Key Definitions

Background

Health Professional Education and Training

Priority: Improve Educational Infrastructure and Data Sharing

Priority: Support Ongoing Identification of PPGs

Priority: Foster Educational Research and Scholarship that Advances the Creation, Evaluation, and Dissemination of Effective Educational Tools and Interventions

Pain Management Guidelines and Evidence Standards

Priority: Investigate Opioid Tapering Strategies and Best Practices

Priority: Better Understand and Address Gaps in the Prevention and Treatment of Pain and OUD, Including Payment Barriers

Priority: Evaluate Opioid, Non-Opioid Pharmacological, and Non-Pharmacological Therapies for Management of Acute and Chronic Pain

Prevention, Treatment, and Recovery

Priority: Collect and Assess Data on Demographics, Social Determinants, Special Populations, and Outcomes

Priority: Review Current Telemedicine Services, Including Access Limitations

Priority: Better Understand Key Challenges in Care Transitions

Priority: Evaluate Policies/Initiatives that may Facilitate Greater Access to Prevention, Treatment, and Recovery Care

Priority: Identify Barriers and Best Practices Relevant to Treatment and Medications for Opioid Use Disorder (MOUD)

Conclusion

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Acute Pain	Pain that is often sharp, sudden, and caused by something specific. It usually does not last longer than six months and goes away when there is no longer an underlying cause for the pain.
Analgesic	An agent producing diminished sensation to pain without loss of consciousness.
BIPOC	An acronym that stands for Black, Indigenous, and people of color
Buprenorphine	A semisynthetic narcotic analgesic that is administered in the form of its hydrochloride $C_{29}H_{41}NO_4 \cdot HCl$ to control moderate to severe pain and treat opioid dependence.
Chronic Pain	Pain that is ongoing and usually lasts longer than six months. This type of pain can continue even after the injury or illness that caused it has healed or gone away.
Clinical Decision Support (CDS)	Clinical decision support provides clinicians, staff, patients, or other individuals with knowledge and person-specific information, intelligently filtered or presented at appropriate times, to enhance health and health care. CDS encompasses a variety of tools to enhance decision-making in the clinical workflow.
Medication for Opioid Use Disorder (MOUD)	The use of one of three medications (buprenorphine, naltrexone, or methadone) [often] in combination with psychosocial and/or behavioral therapy to treat opioid use disorder.
Methadone	A synthetic narcotic drug, $C_{21}H_{27}NO$, used especially in the form of its hydrochloride for the relief of pain and as a substitute narcotic in the treatment of opioid addiction.
Naltrexone	A synthetic opiate antagonist, $C_{20}H_{23}NO_4$, administered in the form of its hydrochloride.

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KEY DEFINITIONS



Opioid Use Disorder (OUD)

A problematic pattern of opioid use leading to problems or distress, with at least two of eleven criteria, as outlined by the Diagnostic and Statistical Manual of Mental Disorders, occurring within a 12-month period .

Precision Medicine

A form of medicine that uses information about a person’s own genes or proteins to prevent, diagnose, or treat disease.

Professional Practice Gap (PPG)

The difference between health care processes or outcomes observed in practice, and those potentially achievable on the basis of current professional knowledge.

Screening, Brief Intervention, and Referral to Treatment (SBIRT)

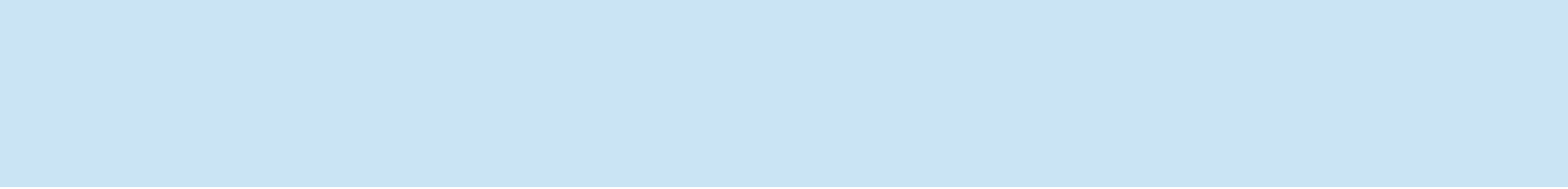
Screening, Brief Intervention, and Referral to Treatment (SBIRT) is an evidence-based approach to delivering early intervention treatment services for persons with substance use disorders, and those at risk of developing a substance use disorder.

Stigma

in the social work literature, Dudley (2000), working from Goffman’s initial conceptualization, defined stigma as stereotypes or negative views attributed to a person or groups of people when their characteristics or behaviors are viewed as different from or inferior to the norm.

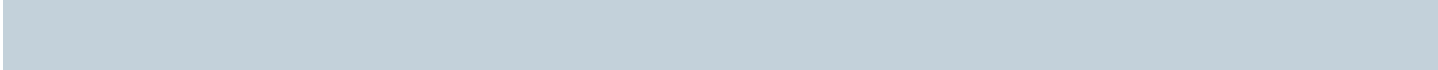
In order to help address the persistent devastation of the nationwide opioid crisis, the National Academy of Medicine partnered with the Aspen Institute and over 60 interdisciplinary stakeholders to establish the Action Collaborative on Countering the U.S. Opioid Epidemic. Over the past two years, the Collaborative has sought to accelerate the national response to the opioid epidemic through the creation and dissemination of actionable cross-sectoral solutions. These solutions have centered on four priority areas, which represent among the highest-priority elements of the nation's response to the opioid crisis and are the focus areas of the Action Collaborative's working groups: Health Professional Education and Training; Pain Management Guidelines and Evidence Standards; Prevention, Treatment, and Recovery Services; and Research, Data, and Metrics Needs.

The working groups representing the first three priority areas identified critical evidence gaps, research questions, and data and metrics needs that if unaddressed will hinder the comprehensive response to the opioid crisis that is required to resolve it. The Research, Data, and Metrics Needs working group then validated these research needs and collated them into a comprehensive research agenda, which is presented in this document. Priorities identified in this research agenda build upon national recommendations and the existing state of science to elevate critical research gaps.

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- **Foster scholarship and research among educators and educational stakeholders** to evaluate the effectiveness of educational practices, tools, and resources and Promote dissemination of evidence-informed best-practices through publications and learning communities-of-practice [29]
 - **Develop and evaluate educational interventions that address PPGs and assessment approaches** to address men

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- Investigate the potential relationship between non-pharmacological pain management interventions and the need for opioids to control pain across diverse patient populations [4]pui




Improving the availability, accessibility, and quality of prevention, treatment, and recovery services for patients with OUD is integral to combating the opioid epidemic. Access to these services has consistently been inadequate, which continues to perpetuate the epidemic and cause preventable patient morbidity and mortality [22]. 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 practices 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 [25]. Undeniably, data collection relevant to diverse populations sufferæ

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

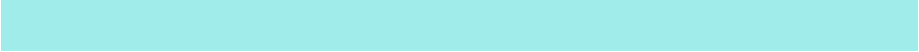
- **Collect more granular data on opioid-related deaths to elucidate the causes of opioid overdose** (e.g. SUDs, pain treatment, recreational use of opioids in children) [11]
- **Include information specific to patient sociodemographic factors, such as socio-economic standing, in data related to OUD prevalence and rescue outcomes** [19]
- **Specifically target capturing data for especially high-risk populations with SUDs** (e.g. people of color, rural, incarcerated, homeless, and expectant mothers) to gather insights on barriers to obtaining treatment [11]
 - Potential focus: persisting issues related to accessing treatment and recovery services, disparities and mortality numbers, and other outcomes in the context of the COVID-19 pandemic [32]
- **Evaluate the efficacy of prevention, treatment, and recovery strategies in special populations** (adolescents, incarcerated populations, etc.) [4,11]
 - Potential focus: strategies that involve patient peers and family members
- **Establish data systems to monitor and take steps to prevent a rise in SUDs and overdoses during the COVID-19 pandemic (and afterwards)** [32]

Priority: Review Current Telemedicine Services, Including Access Limitations


- **Conduct studies to address potential bias and limitations of telehealth studies to date**
 - Potential focus: studies must consider rural populations - telemedicine may be a potential fruitful intervention for rural communities [19]
- **Collect data on barriers to telemedicine access for underserved/marginalized populations** [13]
- **Evaluate use of telehealth to support the needs of patient populations with SUDs or chronic pain during COVID-19 and beyond** [30]
- **Further investigate issues of informed consent, guidance, and clarification of uncertainties, best practices, and lessons learned related to telemedicine** [7]

- **Evaluate compliance with and use of care plans when persons with OUD are moving between care settings;** map OUD journeys comprehensively, including details about what is happening/not happening during handoffs, and the role of family engagement
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- Assess the gap between evidence-based practice and clinical implementation of MOUD [31]



The Action Collaborative's Research, Data, and Metrics Needs Working Group has identified critical evidence gaps, research questions, and data and metrics needs to focus the response to the U.S. opioid epidemic moving forward. The research agenda builds upon the existing state of evidence to collate and elevate cross-cutting needs that, if addressed, can facilitate a comprehensive response to the opioid crisis. Given the scope and urgency of this work, it should be widely disseminated and prioritized for funding by mulesem

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- Investment in educational research, particularly among continuing education, to promote research and scholarship that informs best approaches to elaborate the determination of PPG, development of effective educational interventions to address those gaps, and assessment approaches that facilitate learning and improvement
 - Effectiveness research on the dissemination and uptake of evidence-informed tools to educate clinicians on best practices in treating and managing pain and OUD
 - Research on effectiveness of interventions designed to facilitate education and fill PPG
 - Possible recommendations to journal editors that Medical Subject Headings (MeSH) include

- Need for more granular data on opioid-related deaths. Data will help elucidate the cause of opioid overdose (SUD vs. pain treatment, vs. recreational use of opioids in children).
- More research is needed on whether offspring of parents with OUD are more or less likely to use opioids than their peers
- Interventions that have shown reductions in prescription opioid misuse and use of other opioids in 12-18 year olds must be identified and verified, as well as strategies for parents of adult children who are refusing treatment

Objective 2: Urgent

- Data is needed on the most effective ways to encourage clinicians to pursue obtaining an x-waiver
- Data is needed on what value-based payment arrangements sustainably align outcomes and payment for MOUD
- The evidence base around use of integrative therapies regarding opioid reduction is limited; Can traditional, complimentary, and alternative integrative treatments replace opioids and/or can they interfere with OUD treatment, given that the evidence base for such treatments is limited?
- Evaluation of OUD stigma reduction campaigns among healthcare clinicians and patients
- Evaluation of addiction treatment programs that receive federal funding to determine if they provide evidence-based care like MOUD
- Evaluation of programs that expedite access to MOUD
- Fund and evaluate innovative models of treatment delivery that address social determinants of health and racial and geographic disparities in access to care
- Establish clear metrics in settings where clinicians are likely to encounter patients with OUD, including screening for SUDs and provision of MOUD
- Provision of technical assistance for clinicians treating patient with MOUD
- Further research on the barriers federally funded opioid treatment programs face in providing medical, counseling, vocational, educational, and other assessment and treatment services
- Research on emerging systems to alert clinicians that a patient may be at high risk for addiction
- Further research and implementation of targeted interventions to improve prevention and treatment outcomes in high-risk populations
- Collect data on the most urgent needs of patients with SUDs and of health clinicians who treat SUDs during the COVID-19 pandemic
- More data is needed on care transitions, and specifically on compliance and use of care plans when patients with OUD are moving between care settings, comprehensively mapping the journey of patients with OUD

- Impact of clinical decisions supporting OUD, an opioid screening and prescribing
 - Screening, Brief Intervention, and Referral to Treatment (SBIRT) data are needed on patients who are referred
 - Data is needed as patients move through treatment that can be utilized to design targeted interventions to increase treatment effectiveness
 - Data is needed on Barriers to SBIRT implementation and expansion and implications on being able to reimburse clinicians who conduct SBIRT
 - Research on strategies to increase patient engagement and motivation to receive OUD treatment
 - Conduct studies to address potential bias and limitations of telehealth studies to date. Studies must consider rural populations - telemedicine may be a potential fruitful intervention for rural communities
 - Data on issues of access for underserved/marginalized populations
 - More data is need on implementation of telehealth, including issues of informed consent, and lessons learned
 - Evaluate use of telehealth to support the needs of patient populations with SUDs or chronic pain during COVID-19 and beyond
 - Expand access to telehealth SUD treatment options for expectant mothers by integrating treatment early into remote obstetric care
 - Data is needed on how clinical care informs guidelines. Data is needed on how the implementation of metrics, especially unintended consequences from collecting this data, can help or harm patients. Data (or the sharing of existing data) is needed on how payers have changed guidelines and metrics to reduce the cost of care
 - Research is needed into local and state policy levers that have the greatest ROI for prevention and treatment
 - Data is needed to better understand how policy can improve

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Books

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