RESEARCH AGENDA

PAIN MANAGEMENT GUIDELINES AND EVIDENCE STANDARDS

Effective pain management should continue to be a part of the effort to curb the opioid crisis. Advances in evidence-based multimodal and multidisciplinary treatment options for patients with pain and/or SUD can reduce unnecessary opioid exposure and improve patient quality of life (NSTC, 2018). A lack of aligned, evidence-based, subpopulation-specific pain management guidelines has likely contributed to suboptimal pain care and undesirable patient outcomes (NASEM, 2019a). Thus, a critical component of addressing the opioid epidemic will be increased support for the development and judicious implementation of multimodal and population- and settings-specific pain management guidelines. In addition, inconsistent pain management prescribing practices contribute to present challenges in the prevention, management, and treatment of pain, as well as exacerbate disparities across patient groups (HHS, 2019). The COVID-19 pandemic further exacerbated the existing disparities in access to traditional pain care for BIPOC, underscoring the urgent need to enhance prevention strategies and adopt multimodal care models that are responsive to the unique needs of diverse patient populations (SAMHSA, n.d.). Current approaches to pain treatment and care fall short of the required evidence-based, population-, and setting-specific standards. Moving forward, concerted research efforts must be directed toward developing new standards of care that are grounded in science and health equity.

Several government agencies and clinician associations have issued clinical pain management guidelines. The 2022 U.S. Centers for Disease Control and Prevention (CDC) Clinical Practice Guideline for Prescribing Opioids for Pain offers guidance to clinicians who treat adults with acute and chronic non-cancer pain (Dowell et al., 2022). Additionally, the U.S. Department of Health and Human Services (HHS) released a pain management report in 2019 that emphasizes the importance of interdisciplinary, person-centered care and the use of multimodal approaches, including pharmaceutical, behavioral, restorative, and complementary therapies in the treatment of pain and OUD (HHS, 2019). While these pain management guidelines are increasingly recognizing the need for individualized care and are tailoring their recommendations to diverse patient populations (NSTC, 2018), gaps in the evidence base persist. Current pain management research priorities include the development of safer opioids and non-opioid analgesics, nonpharmacologic therapy, comprehensive evaluation of pain management care models, and integration of precision medicine into pain management across the spectrum of care (HHS, 2019). Therefore, these current recommendations and guidelines must continue to be updated and improved as the evidence base is strengthened.

Despite the multiple publicly available clinical guidelines and research initiatives, many questions remain unanswered regarding pain management and its intersection with OUD care. Therefore, research on best practices for pain management, including practices for interdisciplinary coordination and strategies to overcome barriers to care, is needed to improve the state of pain care. Once established, support for the implementation and dissemination of evidence-based approaches for multimodal care and appropriate payment models for the provision of this care will be critical. Highlighting and advancing opportunities to strengthen integral aspects of pain management and the translation of pain guidelines into practice can contribute to sustainable improvements across the pain care continuum and ultimately help curb the opioid epidemic.

RESEARCH, DATA, AND METRICS NEEDS

Priority: Better Understand Access, Quality, and Equity Barriers in Pain Management and OUD Care

- **Evaluate the impact of opioid prescribing guidelines, laws, and regulations on access and quality of care for individuals with pain and/or OUD,** including examining unintended consequences such as barriers to accessing care, increased stigma, and the use of multimodal treatments (Dowell et al., 2022).
- **Identify and characterize the influence of systemic racism, implicit bias, and other health care disparities on acute and chronic pain management,** including their impact on treatment outcomes and patient experiences (HHS, 2019).
- **Evaluate the effectiveness of clinician and health system strategies to promote equitable access to high-quality pain management,** with a particular focus on identifying and addressing disparities related to race, ethnicity, age, gender, disability, and socioeconomic status (Dowell et al., 2022). Potential areas of focus should include clinician biases, patient trust, access to specialty care, and person-centered approaches to pain management**.**
- **Investigate current payment barriers and incentives to improve access to and delivery of evidence-based pain management and SUD care across different payer systems,** including Medicare, Medicaid, and commercial payers (NSTC, 2018). This investigation should include the role of alternative payment models (e.g., bundled and value-based payments) in incentivizing effective, high-quality pain and SUD care for patients.
- **Identify barriers and facilitators to implementing evidence-based opioid prescribing and pain management strategies in special populations** (e.g., racial/ethnic groups, older adults, rural communities), including understanding the unique needs and preferences of these populations and tailoring strategies accordingly (Dowell et al., 2022).

- **Produce evidence-based clinician and patient education that is accessible, culturally competent, and tailored to address knowledge gaps and reduce stigma** related to pain and/or opioid use. This approach should also evaluate the effectiveness of these education interventions on improving pain management outcomes (Dowell et al., 2022).
- **Explore the impact of stigma on the decision-making processes of patients with pain and SUD in seeking treatment** and develop and evaluate interventions to reduce stigma associated with these treatments (Dowell et al., 2022).
- **Assess the impact of practice-level strategies and care coordination approaches on reducing opioid-related harm, improving patient outcomes, and promoting equitable access to high-quality pain management** (Dowell et al., 2022).

Priority: Better Understand and Address Gaps in the Prevention, Diagnosis, and Treatment of Pain and Opioid-Related Harms

- **Investigate co-prescribing of central nervous system depressants,** including which medications increase the chance of opioid overdose **(FDA, 2016).**
- **Determine the long-term effects of opioid use on the development of co-occurring conditions beyond kidney and liver disease,** including the impact on mental health, cardiovascular disease, and overall mortality rates (Shipton et al., 2018). This examination should consider how these effects may differ depending on patient demographics and pre-existing health conditions.
- **Evaluate the efficacy of screening tools for assessing the risk of opioid misuse and**
- **developing OUD,** including the use of innovative approaches such as machine learning
- and predictive analytics in such assessments (Dowell et al., 2022). Potential areas of focus should include establishing the reliability, validity, and utility of existing screening tools; identifying gaps that need to be addressed in the development of new tools; evaluating the impact of using these tools in clinical practice; and evaluating the effectiveness of interventions that are triggered by positive screening results.
- **Develop and validate more objective, reliable, and sensitive diagnostic tools to measure and assess pain to improve the diagnosis and treatment of pain** (e.g., biomarkers, imaging technologies, and other physiological measures) (Dowell et al., 2022).
- **Improve understanding of the effectiveness of multidisciplinary and multimodal models of pain treatment for patients on high-dosage opioids,** such as the use of nonpharmacological approaches and telehealth (Dowell et al., 2022).
- **Collect data on the comparative effectiveness and risks of partial agonist opioids (e.g., buprenorphine) versus full agonist opioids,** and evaluate the impact of these medications on long-term pain outcomes and the risk of developing OUD (Dowell et al., 2022).
- **Assess treatment outcomes for specific pain conditions and how the benefits and risks of appropriate therapies vary among subpopulations** (Dowell et al., 2022).

- **Investigate the factors that contribute to the transition from acute to chronic pain,** including the role of psychosocial and lifestyle factors, and develop and evaluate effective diagnostic, preventive, and therapeutic approaches for managing chronic pain (Dowell et al., 2022). Potential areas of focus should include the use of interdisciplinary pain management teams, developing and implementing pain education programs for patients and health care providers, and investigating the potential of nonpharmacological approaches for managing chronic pain (e.g., mindfulness-based therapies, acupuncture, and physical therapy).

Priority: Investigate Opioid Tapering Strategies and Best Practices

- **Better understand and quantify the benefits and risks of opioid tapering,** including best practice models for specific patient populations with co-existing conditions (HHS, 2019).
- **Establish models for opioid tapering considering individual patient factors** such as current opioid dose, preexisting SUD and/or behavioral health issues, and the impact on patient outcomes, including pain reduction, function, and quality of life (Rich et al., 2020).
- **Assess the efficacy of interdisciplinary teams in opioid tapering,** including the composition of the team, the most appropriate roles for different health care professionals, and the involvement of family members and loved ones as part of the caregiving team (Rich et al., 2020).
- **Evaluate the essential components of shared decision-making and tapering agreements,** including the identification of best practices for patient education, communication, and follow-up (Mackey et al., 2019).
- **Develop evidence-based guidelines and protocols for follow-up and monitoring of patients during opioid tapering,** including the frequency and mode of communication between patients and health care providers to ensure optimal patient outcomes and safety (Rich et al., 2020). A potential area of focus should include the use of digital health technologies (e.g., mobile apps, remote monitoring devices) to facilitate communication and monitoring during opioid tapering.
- **Investigate the effectiveness and risks of preoperative opioid tapering in reducing postoperative opioid use and improving pain management and recovery outcomes in surgical patients** (Larach et al., 2022). Potential areas of focus should include the optimal timing, duration, and methods for opioid tapering before surgery, as well as the impact of preoperative tapering on patient satisfaction and quality of life after surgery.

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

- **Investigate the impact of non-pharmacological pain management interventions** (e.g., physical therapy, acupuncture, cognitive behavioral therapy, mindfulness-based interventions) on controlling pain in diverse patient populations, including those with chronic pain, acute pain, and those undergoing surgical procedures (Gatchel et al., 2014).
- **Investigate and compare the efficacy of different non-pharmacologic pain management interventions for specific acute and chronic pain conditions** and explore the optimal selection and delivery of these interventions based on patient characteristics and preferences (HHS, 2019).
- **Identify successful models of multimodal pain management for acute, transitional, and chronic pain that could be scaled outside of integrated delivery systems (Gatchel et al., 2014).**
- **Collect and analyze data on pain and opioid use trajectories after common surgeries,** including interventions in the postoperative period to prevent chronic pain and opioid use (HHS, 2019).
- **Collect and analyze data on access to non-opioid modalities for surgical pain management across diverse patient populations to identify potential disparities and inform strategies for improving equitable access** (Dowell et al., 2022). Potential areas of focus should include factors such as geographic location, race/ethnicity, socio-economic status, insurance status, and other demographic factors that may impact access to non-opioid modalities for pain management.
- **Evaluate the long-term comparative effectiveness and safety of pharmacologic and nonpharmacologic therapies for managing chronic pain,** considering individual differences such as comorbidities and medication histories (Dowell et al., 2022).
- **Better understand the impact of pain management therapies on non-pain outcomes,** such as quality of life, mental health, and functional status (Dowell et al., 2022).

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.

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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