

Gaps & recommendations from the Pain Management Best Practices Inter-Agency Draft Report

The Pain Management Best Practices Inter-Agency Draft Report is made up of a series of gaps and recommendations in various areas, as well as general commentary about those areas. To help make the 91-page report more digestible, we have put together a 19-page document with just the gaps and recommendations from the report. To read the full report, [click here](#).

2.1.1 Acute Pain

Gap 1: Multimodal, nonopioid therapies are underutilized in the perioperative setting.

- Recommendation 1a: Use procedure-specific, multimodal regimens and therapies when indicated in the perioperative period, including various nonopioid medications, ultrasound-guided nerve blocks, analgesia techniques (e.g., lidocaine and ketamine infusions), and psychological and integrative therapies to mitigate opioid exposure.
- Recommendation 1b: Use multidisciplinary and multimodal approaches for perioperative pain control (e.g., joint camps, Enhanced Recovery After Surgery [ERAS], Perioperative Surgical Home [PSH]). Key components may include preoperative psychology screening and monitoring; preoperative and postoperative consultation and planning for managing pain of moderate to severe complexity; preventive analgesia with preemptive analgesic nonopioid medications; and regional anesthesia techniques, such as continuous catheter-based local anesthetic infusion.
- Recommendation 1c: Develop appropriate reimbursement and authorization policies to allow for a multimodal approach to acute pain in the perioperative setting and the periinjury setting, including preoperative consultation to determine a multimodal plan for the perioperative setting.

Gap 2: Guidelines for the use of multimodal clinical management of the acute pain associated with common categories of surgical interventions and trauma care are needed.

- Recommendation 2a: Develop acute pain management guidelines for common surgical procedures and trauma management, carefully considering how these guidelines can serve both to improve clinical outcomes and to avoid unintended negative consequences.
- Recommendation 2b: Emphasize the following in guidelines, which provide an initial pathway to facilitate clinical decision making:
 - Individualized treatment as the primary goal of acute pain management, accounting for patient variability with regard to factors such as comorbidities, severity of conditions, surgical variability, geographic considerations, and community/hospital resources.
 - Improved pain control, faster recovery, improved rehabilitation with earlier mobilization, less risk for blood clots and pulmonary embolus, and mitigation of excess opioid exposure. To reflect multidisciplinary approaches and the

biopsychosocial model for management of acute and chronic pain, the following sections are organized by five major approaches to pain management: medication, restorative therapies, interventional procedures, behavioral health approaches, and complementary and integrative health. The following section focuses on special populations that face unique challenges in acute and chronic pain management.

2.2 Medication

Gap 1: Clinical policies tend to treat the large population of patients with multiple conditions causing chronic pain with simple medication rules. Guidelines for medication use for specific populations of patients (e.g., different ages, genders, medical conditions, comorbidities) with chronic pain need to be developed for each specialty group and setting.

- Recommendation 1a: Develop condition-specific treatment algorithms that guide physicians to have a more individualized approach for common pain syndromes and conditions. A multidisciplinary approach that integrates the biopsychosocial model is recommended.
- Recommendation 1b: Primary care and non-pain specialists should have timely, early consultation with the pain medicine team and other specialists for the assessment of patients with complex pain to prevent complications and loss of function and to improve QoL.
- Recommendation 1c: Develop a collaborative, multimodal treatment plan among the referring physician, the pain medicine team, and the patient.
- Recommendation 1d: Pharmacies should collaborate with area physicians and other health care providers to develop more effective and patient-friendly delivery systems to meet the needs of their patients.

Gap 2: Opioids are often used early in pain treatment. There has been minimal pain education in medical school and residency programs, and little guidance for primary care providers (PCPs) on appropriate pain treatment approaches.

- Recommendation 2a: Use of nonopioid medications (e.g., oral and IV acetaminophen, oral and IV NSAIDs, long-acting local anesthetics, dexmedetomidine), with nonpharmacologic treatments, should be used as first-line therapy whenever possible in the in-patient and out-patient settings.
- Recommendation 2b: If an opioid is being considered, physicians and other health care providers should use evidence-informed guidelines.
- Recommendation 2c: The type, dose, and duration of opioid therapy should be determined by treating clinicians according to the individual patient's need and pain condition.
- Recommendation 2d: Opioid therapy should be initiated only with ongoing nonopioid treatments when the benefits outweigh the risks; the patient is experiencing severe acute or chronic pain that interferes with function; and the patient is willing to continue to engage with the team on a comprehensive multidisciplinary treatment plan, as clinically indicated, with established clear and measurable treatment goals, along with close followup and regular risk assessment and reevaluation.
- Recommendation 2e: The Centers for Medicare & Medicaid Services (CMS) and payors should provide reimbursement that aligns with the medication guidelines the Task Force has described.

Gap 3: There is often a lack of understanding and education regarding the clinical indication and effective use of nonopioid medications as part of a multimodal and

multidisciplinary approach to acute and chronic pain management. Chronic pain is often ineffectively managed, which can in part be the result of a variety of factors, including physician training, patient access, and other barriers to care:

- Recommendation 3a: Physicians and other health care providers should understand the use of nonopioid medication and their mechanism-based pharmacology for managing different components of pain syndromes.
- Recommendation 3b: For neuropathic pain, consider antineuropathic medication, including TCAs; anticonvulsants (e.g., gabapentin, pregabalin, carbamazepine, oxcarbazepine); SNRIs (e.g., duloxetine, venlafaxine); and topical analgesics, such as lidocaine and capsaicin. Regardless of the route of medication, education regarding the side effects and risks and benefits is vital in terms of understanding clinical indications and patient outcomes.
- Recommendation 3c: For non-neuropathic, noncancer pain, use NSAIDs and acetaminophen as first-line classes of medications following standard dosing schedules. Further classes of medication depend on the patient's response and can include (depending on specific pain syndromes) an indication for muscle relaxants (e.g., tizanidine, baclofen) and topical agents in addition to other multimodal approaches. Additional consideration should be given to SNRIs indicated for chronic musculoskeletal pain.

Gap 4: Barriers, such as lack of coverage and reimbursement and understanding of proper usage, limit access to buprenorphine treatment for chronic pain:

- Recommendation 4a: Make buprenorphine treatment for chronic pain available for specific groups of patients, and include oral buprenorphine for third-party payors with hospital formularies.
- Recommendation 4b: Provide coverage and reimbursement for buprenorphine treatment approaches.

Gap 5: There is currently inadequate education for patients regarding safe medication storage and appropriate disposal of excess medications targeted at reducing outstanding supplies of opioids that may be misused by others or inadvertently accessed by children and other vulnerable members of the household.

- Recommendation 5a: Increase public awareness of poison center services as a resource that provides educational outreach programs and materials; referral to treatment facilities; links to take-back facilities; and resources for safe drug storage, labeling, and disposal.
- Recommendation 5b: The US Drug Enforcement Administration (DEA) should increase opportunities for safe drug disposal and drug disposal sites (i.e., pharmacies, police departments, fire departments).
- Recommendation 5c: Adopt neutralization technologies that may make safe disposal more readily available.
- Recommendation 5d: Include partial fills of C-2 drug classes.
- Recommendation 5e: Educate veterinarians on the importance of safe storage and disposal of opioid medications in their practice. In addition, educate pet owners about the importance of safe storage and disposal of opioid pain medication prescribed for their pets.

2.2.1 Risk Assessment

2.2.1.1 Prescription Drug Monitoring Programs

Gaps and Recommendations Gap 1: PDMP use varies greatly across the United States, with variability in PDMP design; the state's health information technology infrastructure; and current regulations on prescriber registration, access, and use.

- Recommendation 1a: Check PDMPs, in conjunction with other risk stratification tools, upon initiation of opioid therapy, with periodic reevaluation.
- Recommendation 1b: Provide clinician training on accessing and interpreting PDMP data.
- Recommendation 1c: Physicians and other health care providers should engage patients to discuss their PDMP data rather than making a judgment that may result in the patient not receiving appropriate care. PDMP data alone is not error proof and should not be used to dismiss patients from clinical practices.
- Recommendation 1d: The health care provider team should determine when to use PDMP data. PDMP use should not be mandated without proper clinical indications to avoid unnecessary burden in the inpatient setting.
- Recommendation 1e: Conduct studies to better identify where PDMP data is best used (e.g., inpatient versus outpatient settings). Adjust PDMP data use based on the findings of the recommended studies to minimize undue burdens and overutilization of resources (i.e., streamline PDMP data use).
- Recommendation 1f: EHR vendors should work to integrate PDMPs into their system design at minimal to no additional cost to providers (to eliminate barriers to accessing PDMP data), especially when these data points are mandated.
- Recommendation 1g: Enhance the interoperability of PDMPs across state lines to allow for more effective use.
- Recommendation 1h: Physicians and other health care providers within and outside federal health care entities should have access to each other's data to ensure safe continuity of care.
- Recommendation 1i: Include all opioid prescribers, including physician and nonphysician providers and dentists, in PDMPs.

2.2.1.2 Screening and Monitoring

Gap 1: Comprehensive screening and risk assessment of patients is time-consuming but vital for proper evaluation of their chronic pain conditions. Lack of sufficient compensation for time and payment for services have contributed to barriers in best practices for opioid therapy.

- Recommendation 1a: Provide sufficient compensation for time and payment for services to implement the various screening measures (e.g., extensive history taking, review of medical records, PDMP query, urine toxicology screenings). These are vital aspects of risk assessment and stratification for patients on opioids and other medications.
- Recommendation 1b: Consider referral to pain and other specialists when high-risk patients are identified.

Gap 2: UDTs are not consistently used as part of the routine risk assessment for patients on opioids.

- Recommendation 2a: Use UDTs as part of the risk assessment tools prior to the initiation of opioid therapy and as a tool for reevaluating risk, using the clinical judgment of the treatment team.

- Recommendation 2b: Physicians and other health care providers should educate patients on the use of UDTs and their role in identifying both potential inappropriate use and appropriate use.

Gap 3: There is variability in what is included in opioid treatment and opioid agreements.

- Recommendation 3a: Conduct studies to evaluate the effectiveness of the different components of opioid treatment agreements. Treatment agreements should include the responsibilities of both the patient and the provider.
- Recommendation 3b: Use opioid treatment discussions as an educational tool between providers and patients to inform the risks and benefits of and alternatives to chronic opioid therapy

2.2.2 Overdose Prevention Education and Naloxone

Gap 1: Bystander/take-home naloxone distribution is associated with a cost-effective reduction in mortality as well as improved connection to OUD; however, distribution is not widely available.

- Recommendation 1a: Provide naloxone co-prescription/dispensing and education for patients and family members when the patient is on long-term opioids.
- Recommendation 1b: Increase naloxone distribution programs and education for first responders.
- Recommendation 1c: Research the potential risks and benefits of making naloxone available over the counter.

2.3 Restorative Therapies

Gap 1: There is a lack of clarity on which restorative therapy modalities are indicated in the various pain syndromes.

- Recommendation 1a: Conduct further research to provide evidence-informed data on which restorative therapy modalities are indicated as part of a multidisciplinary approach to specific pain syndromes.
- Recommendation 1b: For those modalities where there are clear indications for benefits in the treatment of chronic pain syndromes (e.g., OT; PT; aqua therapy; TENS; movement-based modalities, including tai chi, Pilates, and yoga), there should be minimal barriers to accessing these modalities as part of a recommended multidisciplinary approach to the specific pain condition.
- Recommendation 1c: Make harm-free, self-administered therapies such as TENS freely available (e.g. over the counter) to support pain management treatment plans.

2.4 Interventional Procedures

Gap 1: Interventional pain procedures can provide diagnostic information when evaluating patients in pain and provide therapeutic pain relief. A comprehensive assessment by a skilled pain specialist needs to be available to assess which particular procedure is indicated for a patient's pain syndrome. Unfortunately, pain physician specialists are typically not involved in the multidisciplinary approaches of treating a pain patient early enough in his or her treatment, which can lead to suboptimal patient outcomes.

- Recommendation 1a: Adopt well-researched interventional pain guidelines to guide the appropriate use of interventional pain procedures as a component of a multidisciplinary approach to the pain patient. Guidelines are particularly important for guiding the collaboration of primary care and pain medicine.
- Recommendation 1b: Conduct additional clinical research that establishes how interventions work in conjunction with other approaches in the process of caring for chronic pain patients, especially early in the process, when combined appropriately with goal-directed rehabilitation therapy and appropriate medications.
- Recommendation 1c: Establish criteria-based guidelines for properly credentialing physicians who are appropriately trained using interventional techniques to help diagnose, treat, and manage patients with chronic pain.

Gap 2: There are inconsistencies and frequent delays in insurance coverage for interventional pain techniques that are clinically appropriate for a particular condition and context.

- Recommendation 2a: Provide consistent and timely insurance coverage for evidence informed interventional procedures early in the course of treatment when clinically appropriate. These procedures can be paired with medication and other therapies to improve function and QoL.
- Recommendation 2b: Restore reimbursement to nonhospital sites of service to improve access and lower the cost of interventional procedures.

Gap 3: There is a trend of inadequately trained physicians and nonphysicians performing interventional procedures. This trend can potentially lead to serious complications and inappropriate utilization. For example, outside the Accreditation Council for Graduate Medical Education (ACGME)-accredited residency and fellowship programs, there is currently little to no oversight over training requirements for interventional procedures.

- Recommendation 3a: Establish credentialing criteria for minimum requirements for training physicians in interventional pain management.
- Recommendation 3b: Only clinicians who are credentialed in interventional pain procedures should perform interventional procedures.
- Recommendation 3c: Clearly identify physicians who specialize in pain management by their training. This identification should be determined by ACGME-accredited pain medicine programs and by well-recognized credentials, such as the American Board of Pain Medicine (ABPM) and the American Board of Interventional Pain Physicians.

2.4.1 Perioperative Management of Chronic Pain Patients

Gap 1: Chronic pain patients undergoing a surgical procedure often have complex issues that go unaddressed that may lead to incomplete and poor care.

- Recommendation 1a: The perioperative team should be consulted to form a treatment plan that addresses the various aspects that would be necessary for best outcomes in this pain population.

2.5 Behavioral Health Approaches

2.5.1 Access to Psychological Interventions

Gap 1: Access to evidence-based psychological and behavioral health approaches for treating chronic pain and mental health comorbidities (e.g., post-traumatic stress disorder [PTSD], depression, anxiety, mood disorders, SUD) is limited by geography, reimbursement, and education in primary care and specialty care settings.

- Recommendation 1a: Increase access to evidence-based psychological interventions through alternative treatment delivery (e.g., telehealth, Internet self-management, group, telephone counseling) and hub-and-spoke models.
- Recommendation 1b: Educate physicians and other health care providers on the benefits of psychological and behavioral health treatment modalities in the multidisciplinary approach to acute and chronic pain management.
- Recommendation 1c: Improve reimbursement policies for integrated, multidisciplinary, multimodal treatment approaches that include psychological and behavioral health interventions through traditional and nontraditional delivery methods.

2.5.2 Chronic Pain Patients With Mental Health and Substance Use Comorbidities

Gap 1: CBPs for chronic pain do not adequately address how to treat individuals with comorbid psychological health concerns.

- Recommendation 1a: Screen for psychological health and SUDs in patients with acute or chronic pain, and consider early referral to psychologists or psychiatrists who have expertise in pain. Recommendation 1b: Use an integrated multidisciplinary approach that may include existing evidence-based psychological and behavioral interventions (e.g., CBT, coping skills, stress reduction, mindfulness-oriented recovery) to address complex chronic pain.
- Recommendation 1c: Refer patients to both pain and addiction specialists when OUD is suspected.
- Recommendation 1d: When opioids are indicated for someone with a history of OUD (e.g., postoperative injury, cancer), clinicians should use the lowest effective dose in conjunction with nonopioid treatment modalities, with enhanced monitoring and collaboration with addiction specialists. Conduct regular reevaluation and assessment, with a treatment plan and established goals, to achieve optimal patient outcomes.

Gap 2: Many CBPs for chronic pain do not adequately address barriers to acceptance of psychological treatments.

- Recommendation 2a: Enhance and inform patient, clinician, and public understanding of the importance of a biopsychosocial model approach for certain chronic pain conditions.

Gap 3: Research gaps exist on the effectiveness of existing psychological interventions for the treatment of psychological health and substance use in the subpopulation of patients with chronic pain and psychological health comorbidities.

- Recommendation 3a: Conduct research on the applications and indications of existing evidence-based psychological health interventions for chronic pain patients with psychological health and/or substance use comorbidities.

- Recommendation 3b: Conduct research on the efficacy of novel and promising psychological and behavioral health treatments (e.g., biofeedback, hypnosis, relaxation therapies, meditation, tai chi).

Gap 4: There has not been sufficient validation of mobile and electronic health applications (apps) used for clinical treatment of pain patients with comorbid psychological conditions.

- Recommendation 4a: Conduct peer-reviewed validation research to guide the use of mobile and electronic health (e-health) applications within the context of the biopsychosocial treatment modalities for chronic pain.
- Recommendation 4b: Add a category for electronic and mobile treatments to the Substance Abuse and Mental Health Services Administration evidence-based practices resource center and a designation for pain for target audiences when evidence of benefit exists.
- Recommendation 4c: Establish a validation process for apps used for biopsychosocial treatments to better inform physician, provider, and patient users of these apps that are evidence-based and effective for the management of various chronic pain syndromes.

2.6 Complementary and Integrative Health

Gap 1: There is a large variety of complementary and integrative health approaches that remain unknown to the broader medical community and that are often overlooked in the management of pain.

- Recommendation 1a: Consider complementary and integrative health approaches, including acupuncture, mindfulness meditation, movement therapy, art therapy, massage therapy, manipulative therapy, spirituality, yoga, and tai chi, in the treatment of acute and chronic pain, when indicated.
- Recommendation 1b: Develop CPGs for the application of complementary and integrative health approaches for specific indications.

Gap 2: There is a gap in the understanding of complementary and integrative health approaches in terms of mechanisms of action, clinical studies examining the feasibility of integrating complementary and integrative health approaches into current care models, the efficacy of individual complementary and integrative health approaches in special populations, and clinical evaluation of complementary and integrative health approaches in the perioperative surgical period as part of a multimodal approach to acute and chronic pain settings.

- Recommendation 2a: Conduct further research on complementary and integrative health approaches to determine therapeutic value, risk and benefits, mechanisms of action, and economic contribution to the treatment of various pain settings, including the acute perioperative surgical pain period and various other chronic pain conditions and syndromes.
- Recommendation 2b: Consider the inclusion of various complementary and integrative health approaches as part of an integrated approach to the treatment of chronic pain, as clinically indicated, while evidence is further developed.
- Recommendation 2c: Conduct further research on supplements such as alpha lipoic acid, L-carnitine transferase, and vitamin C and their effect on acute and chronic pain management

2.7 Special Populations

2.7.1 Unique Issues Related to Pediatric Pain Management

Gap 1: The significant shortage of pediatric pain specialists and comprehensive pain service centers presents a barrier to addressing the needs of pediatric acute and chronic pain patients and their medical issues. This limited access is further compromised by lack of reimbursement and coverage for services related to comprehensive pain management, including non-pharmacologic evidence-based pain therapies.

- Recommendation 1a: Increase access to pediatric pain services with pain expertise, which can likely be achieved through an increase in the workforce and novel care delivery models.
- Recommendation 1b: Deliver and appropriately reimburse and cover pediatric pain care in the context of comprehensive, multidisciplinary treatment.

Gap 2: Pediatric patients with chronic pain conditions eventually transition to adult care, during which they may experience gaps in care, increased health care utilization, poor patient outcomes, and other health care vulnerabilities and morbidities.

- Recommendation 2a: Develop models of care for appropriate transition for pediatric patients with acute or chronic pain conditions to ensure seamless care delivery as well as decreased morbidity and mortality.
- **Gap 3: Most physician pain specialists are not credentialed in pediatric pain and, therefore, are not permitted by their institutions to take care of children with chronic pain.** Recommendation 3a: Encourage and assist pain physicians in obtaining the necessary training for credentialing in pediatric pain. This is a significant step toward improving pediatric patient access.

Gap 4: Many current CBPs do not address pediatric opioid prescribing best practices. Further, there is a lack of RCTs and real-world evidence on nonopioid pharmacologic therapies in pediatric patients for chronic pain.

- Recommendation 4a: Develop pediatric pain management guidelines that address appropriate indications for opioids and responsible opioid prescribing.
- Recommendation 4b: Conduct pediatric pain research to inform national guidelines using multimodal approaches to optimize pain management for children and adolescents.

2.7.2 Older Adults

Gap 1: There is a lack of opioid prescribing guidelines for the aging population given this population's increased risk of falls, cognitive decline, respiratory depression, and renal impairment.

- Recommendation 1a: Develop pain management guidelines for older adults that address their unique risk factors.
- Recommendation 1b: Use a multidisciplinary approach with a nonpharmacologic emphasis given the increased risk of medication side effects in this population.
- Recommendation 1c: Establish appropriate pain management education for physicians and other health care providers who treat older adults.

2.7.3 Unique Issues Related to Pain Management in Women

Gap 1: Women face unique challenges regarding their physical and mental health, interactions with the health care system, and roles in society. Women use the health care system as patients, caregivers, and family representatives and can be particularly affected by costs, access issues, and gender insensitivity from health care providers and staff. Several diseases associated with pain — in particular, chronic high-impact pain — have a higher prevalence in women or are sex specific, including endometriosis, musculoskeletal and orofacial pain, fibromyalgia, migraines, and abdominal and pelvic pain.

- Recommendation 1a: Increase research to elucidate further understanding of the mechanisms driving sex differences in pain responses and research of mechanism-based therapies that address those differences.
- Recommendation 1b: Raise awareness in the public and health care arenas to the unique challenges that women face during pregnancy and in the postpartum period, including various pain syndromes and psychosocial comorbidities.

Gap 2: Women may experience increased pain sensitivity. Of note, OB-GYNs may be one of the first health care providers a woman with pain encounters, yet they are not often included as part of a multidisciplinary care team.

- Recommendation 2a: Include OB-GYNs as part of multidisciplinary care teams because they are likely to play an important role in the treatment of pain for women

2.7.4 Pregnancy

Gap 1: There is a need for evidence-based CPGs for the use of analgesics during pregnancy and the postpartum period.

- Recommendation 1a: Develop pain management guidelines for pregnant and postpartum women in collaboration with the national specialty societies (the American College of Obstetricians and Gynecologists, neonatologists, obstetricians, perinatal pediatricians, and other specialists). Recommendation 1b: Counsel women of childbearing age on the risks of opioids and other medications in pregnancy, including risks to the fetus and newborns.

2.7.5 Chronic Relapsing Pain Conditions

Gap 1: There is often a lack of partnership between the disease specialist (i.e., the hematologist, oncologist, rheumatologist, or neurologist) and providers of comprehensive multidisciplinary pain programs.

- Recommendation 1a: Provide referrals to a comprehensive pain program early in the course of the chronic disease (e.g., MS, cancer, porphyria, systemic lupus erythematosus, migraine, Parkinson's disease, neuropathic pain syndromes) to determine the optimal approach to managing acute or chronic pain exacerbations, including potential nonopioid, alternative therapies and nonpharmacologic therapies. Establish a partnership between the disease specialist (i.e., the hematologist, oncologist, neurologist, or rheumatologist) and the pain team to optimize care

2.7.6 Sickle Cell Disease

Gap 1: There is a lack of evidence-based management guidelines for the treatment of acute and chronic pain in children and adults with SCD.

- Recommendation 1a: Develop comprehensive, evidence-based guidelines for the treatment of acute and chronic SCD pain in children and adults.
- Recommendation 1b: Conduct research targeted at nonopioid pharmacologic therapies and nonpharmacologic approaches for SCD pain management.

Gap 2: Unpredictable, episodic exacerbations of acute pain pose a challenge for SCD pain management, and the majority of patients have failed nonopioid pain drugs prior to presentation for acute care. Constraints on opioid treatment duration can be restrictive for individualization of pain management. Further, limited access to oral opioids at home for the treatment of unplanned acute pain events can result in increased use of health care services that could have been avoided.

- Recommendation 2a: Protect access to the appropriate and safe use of opioids for patients with SCD, with consideration for exemption from prescribing guidelines and state prescribing laws that do not specifically address patients with SCD because of the complex nature and mechanism of acute and chronic sickle cell pain.
- Recommendation 2b: Consider the lowest effective dose of opioids to treat acute pain crises, and prescribe within the context of close follow-up and comprehensive outpatient pain care. Recommendation 2c: Develop an individualized approach to pain management that includes consideration of opioid and nonopioid therapies, such as behavioral health strategies and multimodal approaches.
- Recommendation 2d: Provide patient education on the risks and benefits of opioids.

Gap 3: The SCD patient population faces significant health care disparities that affect access to and delivery of comprehensive pain care and mental health services. Further, stigma, negative provider attitudes, and perceived racial bias may possibly be associated with SCD pain, which may compromise care, thus leading to increased suffering from pain and pain care delivery.

- Recommendation 3a: Develop comprehensive care delivery models for SCD pain management, including collaborative partnerships between pain medicine and hematology.
- Recommendation 3b: Develop outpatient infusion clinics/day hospitals for SCD pain management to decrease reliance on the ED for pain treatment.
- Recommendation 3c: Increase access to and reimbursement for mental health services for patients with SCD.
- Recommendation 3d: Provide education focused on stigma, negative provider attitudes, and perceived racial bias at all levels of health care to optimize delivery of pain treatment to patients with SCD.

2.7.7 Health Disparities in Racial and Ethnic Populations, Including African Americans, Latinos, American Indians, and Alaska Natives

Gap 1: Socioeconomic and cultural barriers may impede patient access to effective multidisciplinary care. There is evidence of racial and ethnic disparities in pain treatment and treatment outcomes in the United States, yet few interventions have been designed to

address these disparities. Lower quality pain care may be related to many factors, including barriers to accessing health care, lack of insurance, discrimination, lack of a PCP, lack of child care, lower likelihood to be screened or receive treatment, and environmental barriers that impede self-management.

- Recommendation 1a: Develop intervention programs informed by the biopsychosocial model to reduce racial and ethnic disparities in pain.

Gap 2: Research shows that ethnic minorities may have greater pain sensitivity and are at increased risk for chronic pain, yet they are underserved.

- Recommendation 2a: Develop biopsychosocial interventions for pain that are scalable and culturally enhanced.

2.7.8 Military Personnel and Veterans

Gap 1: Active-duty service members and veterans have unique physical and mental health challenges related to their military service that contribute to the development of or exacerbate acute and chronic pain conditions. Medical and mental health comorbidities such as TBI, PTSD, limb loss, and musculoskeletal injuries often interfere with successful treatment outcomes. Assessment and treatment of pain conditions in active-duty service members and veterans require military-specific expertise and a coordinated, collaborative approach between medical and mental health providers.

- Recommendation 1a: Physicians and other health care providers taking care of active-duty service members, regardless of practice setting, should consider in their pain care plan prior military history and service-connected health factors that may contribute to acute or chronic pain, as relevant to the clinical presentation.
- Recommendation 1b: Physicians and other health care providers should work collaboratively to deliver comprehensive pain care that is consistent with the biopsychosocial model of pain.
- Recommendation 1c: Conduct research to better understand the biopsychosocial factors that contribute to acute and chronic pain in active-duty service members and veterans, with a focus on TBI, PTSD, and other mental health and substance use disorders.
- Recommendation 1d: Conduct studies to better understand the contributing factors predisposing these patients to movement along the spectrum from acute pain to persistent pain.

Gap 2: The transition of active-duty service members to veteran status can be complicated. A multitude of factors may affect a successful transition, including incomplete integration of EHRs and imposed changes or delays in access to primary care, pain specialty, and mental health physicians and other health care providers.

- Recommendation 2a: The integration of DoD and VHA health care systems is important for effective and timely pain care. This integration should include coordination of the transition from active duty to veteran status and care coordination across the health care spectrum that includes a smooth transition to primary care, mental health and pain specialty physicians, and other health care providers.

Gap 3: Active-duty military service members and veterans increasingly receive care in the community (including care provided through external payment systems and DoD/VHA

purchased care). A fragmented health care system results in lack of coordinated care provided in the community, within the Military Health System, and in the VHA as well as differing care standards (such as the implementation of opioid risk-mitigation strategies). Within VHA, access to primary care and specialty care — and multidisciplinary pain specialty care in particular — is difficult for some veterans because of geographical factors, limited availability of providers, and the need for specialized pain care treatment.

- Recommendation 3a: To improve care coordination across health care systems, streamlined access to medical records and collaboration across systems are needed to provide more timely and effective pain care.

3. Cross-Cutting Clinical and Policy Best Practices

3.1 Stigma

Gap 1: Chronic pain patients may face barriers in access to pain care due to being stigmatized as people seeking medications to misuse. Contributing to this stigmatization are the lack of objective biomarkers for pain, the invisible nature of the disease, and societal attitudes that equate acknowledging pain with weakness.

- Recommendation 1a: Increase patient, physician, other health care provider, and societal education on the underlying disease processes of acute and chronic pain to reduce stigma. Recommendation 1b: Increase patient, physician, other health care provider, and societal education on the disease of addiction.
- Recommendation 1c: Counter societal attitudes that equate pain with weakness through an awareness campaign that urges early treatment for pain that persists beyond the expected duration for that condition or injury.
- Recommendation 1d: Encourage research aimed at discovering biomarkers for neurobiological mechanisms of chronic pain.

Gap 2: The national crisis of illicit drug use, with overdose deaths, is confused with appropriate therapy for patients who are being treated for pain. This confusion has created a stigma that contributes to raise barriers to proper access to care.

- Recommendation 2a: Identify strategies to reduce stigma in opioid use so that it is never a barrier to patients receiving appropriate treatment, with all cautions and considerations for the management of their chronic pain conditions.

3.2 Education

3.2.1 Public Education

Gap 1: National public education about pain is needed.

- Recommendation 1a: Develop a national evidence-based pain awareness campaign that emphasizes the public's understanding of acute and chronic pain syndromes.
- Recommendation 1b: Establish a mechanism to finance a large-scale, systematic, coordinated public campaign to address pain awareness

3.2.2 Patient Education

Gap 1: Current patient education is lacking for both acute and chronic pain

- Recommendation 1a: Prioritize time and patient access to educational tools that include clinician visits, patient handouts, Web resources, and support groups to optimize patient outcomes.
- Recommendation 1b: Explore and test innovative methods of delivering patient education and support for acute and chronic pain patients using technology, particularly in rural areas that have little access to multimodal treatment. Examples of means to provide patient access in such situations include telemedicine, the Project ECHO hub-and-spoke model, online support groups, networks of in-person support groups with training and guidance of leaders, and applications easily accessible on mobile phones.

Gap 2: Patient expectations regarding the management of their pain in the perioperative arena are frequently not aligned with current surgical practices or procedures that require pain management.

- Recommendation 2a: Emphasize discussions about pain control after surgery during the preoperative visit. This discussion should be conducted by both the surgical team and the preoperative team.
- Recommendation 2b: For major surgeries, use models such as the PSH or ERAS protocols to emphasize the importance of patient education and management.
- Recommendation 2c: CMS and other payors should recognize that the time spent educating and managing patients' expectations provides a significant value that reduces the length of hospital stays and improves patients' postoperative pain management, allowing for faster recovery through earlier PT and mobility that decreases the risk for postoperative complications (e.g., blood clots). CMS and other payors should compensate according to physician-patient time spent.

Gap 3: Current educational materials and interventions for patients with chronic pain lack consistency, standardization, and comprehensive information.

- Recommendation 3a: Establish an online resource of evidence-informed educational materials for common pain conditions and appropriate treatment modalities.
- Recommendation 3b: Convene a chronic pain expert panel that includes experienced patients, patient advocates, and clinicians to develop a set of core competencies and other essential information specific to patient pain education. Provide grants for the creation of patient education programs and materials based on these core competencies, and disseminate them widely to patients and their families and caregivers through clinics, hospitals, pain centers, and patient groups.

3.2.3 Provider Education

Gap 1: There are gaps in pain management understanding and education throughout the medical school curriculum, graduate medical education, residency training, and all levels of other health care providers' training and education.

- Recommendation 1a: Incorporate further development of a biopsychosocial education model for physicians and other health care providers at all levels of training.

- Recommendation 1b: Develop effective educational resources for PCPs to improve the current understanding and knowledge of pain treatment modalities, initially available treatments, and early referral to pain specialists.
- Recommendation 1c: Explore intensive continuing pain education for PCPs, including telehealth, telementoring, and the Project ECHO model, as a means of providing pain education for PCPs by pain specialists. Consider the State Targeted Response Technical Assistance model for pain training as it currently exists for addiction training.

Gap 2: Pain is generally treated as a symptom of other illness, disease, or injury, not commonly recognized as a separate category of disease. The lack of education on pain syndromes and pain mechanisms limits the ability to recognize chronic pain as a category of disease.

- Recommendation 2a: Recognize chronic pain as a category of disease when the pain persists for more than the expected recovery time (3-6 months) despite appropriate treatment of the original inciting injury or disease.
- Recommendation 2b: Conduct further education on pain syndromes and mechanisms through physician and other health care provider training, such as CME, the Project ECHO model, telementoring, and other continuing education programs.

3.3 Access to Pain Care

3.3.1 Medication Shortage

Gap 1: Recurrent shortages in opioid and nonopioid medications have created barriers to the proper continuity of treatment in acute and chronic pain patients. This creates the unintended consequence of poor patient care.

- Recommendation 1a: The FDA should monitor, report, and prioritize the availability of key opioid and nonopioid medications, including injectables such as local anesthetic agents.
- Recommendation 1b: The FDA should make available alternative sources for these medications when critical shortages occur (e.g., stop-gap measures such as obtaining these medications from other countries, compound pharmacies).
- Recommendation 1c: Support the Agency Drug Shortages Task Force in its endeavors to find solutions to the critical challenges of drug shortages.

3.3.2 Insurance Coverage for Complex Management Situations

Gap 1: Time and resources are not sufficient for complex and safe opioid management.

Recommendation 1a: Reimburse complex opioid and nonopioid management consistent with the time and resources required for patient education, safe evaluation, risk assessment, reevaluation, and integration of alternative, nonopioid modalities.

Recommendation 1b: CMS and private payors should investigate and implement innovative payment models that recognize and reimburse holistic, integrated, multimodal pain management, including complementary and integrative health approaches.

Gap 2: Payor guidelines are outdated and not in sync with the current medical and clinical guidelines.

- Recommendation 2a: CMS and other payors should align their reimbursement guidelines for acute and chronic multidisciplinary pain management with current CPGs.

Gap 3: Payors often do not reimburse for nonopioid pharmacologic therapies that are more expensive than opioids.

- Recommendation 3a: CMS and other payors should align their reimbursement guidelines for nonopioid pharmacological therapies with current CPGs.

Gap 4: Coordinated, individualized, multidisciplinary care for chronic pain management is a best practice and has been shown to result in better and more cost-effective outcomes, yet this model of care is nearly impossible to achieve with current payment models.

- Recommendation 4a: Payors should reimburse pain management using a chronic disease management model. CMS and private payors should reimburse integrative, multidisciplinary pain care by using a chronic disease management model in the manner they currently reimburse cardiac rehabilitation and diabetes chronic care management programs. In addition, reimburse care team leaders for time spent coordinating patient care

3.3.3 Workforce

Gap 1: There is a lack of multidisciplinary physicians and other health care providers who specialize in pain. These physicians and other health care providers include pain specialists, addiction psychiatrists, psychologists, pharmacists, and others who are trained to be part of the pain management team.

- Recommendation 1a: Enhance physician and other health care provider pain management specialty workforce training in treating chronic pain with psychological comorbidities. This training should include improved curriculum training in residency, fellowship, and CME courses as well as other continuing education modules that help improve patients' understanding of and engagement in psychological treatment.
- Recommendation 1b: Expand graduate medical residency positions to train in pain specialties, including adult pain specialists, pediatric pain specialists, behavioral health providers, pain psychologists, and addiction psychiatrists.
- Recommendation 1c: Expand the availability of nonphysician specialists, including physical therapists, psychologists, and behavioral health specialists.

3.3.4 Research

Gap 1: Incentives for innovations in the treatment of chronic and acute pain are necessary for the advancement of treatment.

Recommendation 1a: Increase federal (and state) funding through the NIH, DoD, and other agencies to support and accelerate basic science, translational, and clinical research of pain. Allocate funding to develop innovative therapies and build research capabilities for better clinical outcomes tracking and evidence gathering.

Gap 2: Genetic and experiential factors in the progression of pain are not clearly understood.

- Recommendation 2a: Improve understanding of the specific interplay of genetic and experiential contributions to pain, including identification of biomarkers, factors that play a role in persistent pain and eventually chronic pain, the role of comorbid conditions, and predictive risk factors.

Gap 3: There is a lack of understanding of contributing factors that predispose certain patients to SUD and addiction.

- Recommendation 3a: Further evaluate the lifelong risk factors for the development of SUD rather than the isolated evaluation of prescription opioid use (e.g., adolescent substance use, early life trauma).
- Recommendation 3b: Conduct research to identify biomarkers, genetic predisposition, and other patient factors to assist in improved and accurate identification of those patients at risk for SUD and addiction disease.

Gap 4: There is a lack of research on and funding of potentially innovative modes of delivery and treatment.

- Recommendation 4a: Increase the levels of research into novel strategies that target the underlying mechanisms of chronic pain, including pharmacologic and biologic research and development, medical devices, new and innovative technological advancements, medication delivery systems, neuromodulation, regenerative medicine, and complementary and integrative health approaches, as well as movement-based modalities

4. Review of the CDC Guideline

Recommendations noted in this section are organized into two groups:

- Update: Requires updated scientific evidence since the release of the CDC guideline in March 2016
- Emphasize or Expand: Refers to content already in the CDC guideline or areas to expand on

Update 1: There is an absence of high-quality data on the duration of opioid effectiveness for chronic pain, which has been interpreted as a lack of benefit.

- Recommendation 1a: Support studies to determine the long-term efficacy of opioids in the treatment of chronic pain syndromes (primary and secondary) in different populations as determined by clinical context, clinical conditions, and comorbidities.
- Recommendation 1b: Conduct clinical trials on specific disease entities, with a focus on patient variability and response to tissue injury and on the effectiveness of opioid analgesics. Design trials to be applicable in real-world settings (e.g., patients receiving trialed opioid medications while maintaining the usual multimodal therapy). 2: There is an absence of criteria for identifying the sub-population of patients for whom opioids may make up a significant part of pain management.
- Recommendation 2: Conduct clinical studies or complete systematic reviews to identify which sub-populations of patients with different chronic pain conditions may be appropriate for long-term opioid treatment in conjunction with the various nonopioid modalities.

Emphasize or Expand

3: There is wide variation in factors that affect the optimal dose of opioids.

- Recommendation 3a: Consider patient variables that may affect opioid dose in patients prior to initiation of opioid therapy, including respiratory compromise, individual patient metabolic

variables, or differences between opioid medications that could affect plasma opioid concentrations.

- Recommendation 3b: Perform comprehensive initial assessments for patient management, with an understanding of the need for periodic comprehensive reevaluation to adjust the medication dose.
- Recommendation 3c: Careful consideration should be given to patients on an opioid pain regimen who have additional risk factors for OUD.

4: Specific guidelines addressing opioid tapering and escalation need further elucidation.

- Recommendation 4a: Undertake opioid tapering or escalation with a thorough assessment of the risk-benefit ratio. This should be done in collaboration with the patient whenever possible.
- Recommendation 4b: Develop guidelines for tapering and dose escalation for the subpopulations of patients who have chronic pain conditions that includes consideration of their comorbidities.
- Recommendation 4c: Consider maintaining therapy for patients who are stable on longterm opioid therapy and for whom the benefits outweigh the risks.

5: There are multiple potential causes of worsening pain that are often not recognized or considered. Non-tolerance-related factors include iatrogenic causes such as surgery, flares of the underlying disease or injury, and increased ergonomic demands or emotional distress (e.g., anxiety disorders, catastrophizing, depression).

- Recommendation 5a: When a stable dose has been established for at least two months, avoid increases in the dose until the patient is reevaluated for the underlying causes of elevated pain or possible OUD risk.
- Recommendation 5b: Considerations to avoid dose escalation should include opioid rotation, non-opioid medications, interventional strategies, cognitive behavioral strategies, complementary and integrative health approaches, and PT.

6: Although the risk of overdose by benzodiazepine co-prescription with opioids is well established, this combination may still have clinical value in patients who have chronic pain and comorbid anxiety, which commonly accompanies pain, and in patients who have chronic pain and spasticity.

- Recommendation 6a: If clinically indicated, co-prescription should be managed and coordinated by physicians, providers, and clinician specialists who have knowledge, training, and experience in co-prescribing benzodiazepines with opioids. For those patients who have anxiety disorders or SUD who have been prescribed benzodiazepines, collaboration with experts in mental health and the use of psychological modalities should be considered.
- Recommendation 6b: Develop CPGs that focus on tapering for co-prescription of benzodiazepines and opioids.

7: The risk-benefit balance for opioid management may vary for individual patients. Similarly, the balance of benefit and risk for doses above 90 MME/day may be favorable to some patients, while for other patients, doses below 90 MME/day may be a greater risk because of individual patient factors. The variability in the effectiveness and safety of low doses of opioids and the variability in the effectiveness and safety of high doses of opioids are not clearly defined. The clinician should maintain caution with higher doses in general.

- Recommendation 7a: Use the lowest effective opioid dose that balances benefits, risks, and adverse reactions. Physicians and other health care providers should individualize doses based on a carefully monitored medication trial by the patient, with frequent monitoring of analgesic effectiveness with each dose adjustment and with regular risk reassessment.
- Recommendation 7b: Additional factors influence risk and benefit that should be considered; therefore, guidance regarding dose should not be applied as strict limits. Providers can use established and measurable goals such as functionality, ADL, and QoL measures.

8: The duration of pain following an acute, severely painful event such as trauma, surgery, or burn is widely variable.

- Recommendation 8a: Appropriate duration of therapy is best considered within guidelines, and then ultimately determined by the treating clinician. The CDC recommendation for duration of treatment should be emphasized as guidance only for a general approach, with individualized patient care as the primary goal and the clinician then considering all modalities for best outcomes.
- Recommendation 8b: Develop acute pain management guidelines for common surgical procedures and trauma management, as noted in Acute Pain Recommendation 2a.
- Recommendation 8c: To address this variability and provide an easy solution to the challenges of medication duration, consideration should be given to a partial refill system