

Information Statement

Safe and Effective Alleviation of Pain and Optimal Opioid Stewardship

This Information Statement was developed as an educational tool based on the consensus opinion of the authors. It is not a product of a systematic review. Readers are encouraged to consider the information presented and reach their own conclusions.

The United States is in the midst of an epidemic of opioid misuse, overdose, and overdose deaths.¹ To address this critical public health issue, orthopaedic surgeons can develop strategies for safe and effective alleviation of pain with optimal opioid stewardship.

It is estimated that the United States consumes 80 percent of the global opioid supply.² Furthermore, patients undergoing low risk surgical procedures in the United States are notable recipients of opioid prescriptions.³ According to the Centers for Disease Control and Prevention (CDC), the number of prescriptions for opioid medications peaked in 2012 at 255 million (81.3/100 persons) and has experienced a steady decline through 2018.⁴ The increase in opioid prescription medication corresponded to an increase in opioid diversion for nonmedical use as well as a resurgence in heroin use.⁵⁻⁷ Opioid overdose remains a leading cause of accidental death in young adults with a reported increase from 2016 to 2017.⁸ Even when used in the medical setting, opioids are associated with a higher risk of postoperative death.⁹⁻¹¹

The AAOS believes that a comprehensive strategy for safe and effective alleviation of pain and optimal opioid stewardship can help people get comfortable using fewer opioids. New, effective education programs for physicians, caregivers, and patients; improvements in physician monitoring of opioid prescription; increased research funding for effective alternative pain alleviation including attention to mental and social health; and support for more effective treatment of opioid misuse are needed.

The American Academy of Orthopaedic Surgeons supports the following strategies for safer and more effective pain alleviation:

Strategies for Safe and Effective Alleviation of Pain with Maximums for Opioid Prescription: Orthopaedic surgeons and their team members can more effectively depersonalize discussions about opioids by developing a practice-wide strategy as a tool for improving communication and behaviors. Orthopaedic practices can set maximum strength, dosage, pill numbers, and duration of opioid prescription after classes of injury and surgery. Many institutions/practices have published their protocols. More information regarding pain alleviation strategies can be found in the [AAOS Pain Alleviation Toolkit](#). With electronic prescribing, it is relatively easy for physicians to refill prescriptions after connecting with people and guiding them through non-opioid pain alleviation status. At least 15 states have opioid supply prescription limits that also influence the size of initial prescriptions.

For patients that are taking opioids regularly and considering discretionary, elective surgery, it's worth a pause to check on mental and social health opportunities and consider weaning off opioids prior to surgery.

Avoid Extended-Release Opioids: Orthopaedic surgeons prescribe opioids for the acute pain of injury or surgery. Such acute pain typically improves over hours to days, rather than days to weeks. Extended-release opioids are not appropriate for the treatment of acute pain. Long-acting opioids are also associated with more severe and prolonged side-effects and adverse reactions when compared with shorter-acting medications.

Restriction of Opioid Use for Preoperative and Nonsurgical Patients: Pain from acute trauma can often be managed without opioids prior to surgery. Among people having elective surgery, daily opioid use is associated with higher complications rates, increased use of opioids postoperatively, lower satisfaction rates, and worse outcomes after surgery.¹²

The potential harms of opioid use for persistent daily pain may outweigh the potential benefits. Opioid use in this setting should be restricted to the practice of pain experts who understand the biopsychosocial complexities of pain illnesses.

Predictive Opioid Use/Misuse/Abuse Tools: The risk for opioid misuse can be calculated (e.g., using the opioid risk tool: <http://www.mdcalc.com/opioid-risk-tool-ort-for-narcotic-abuse/>)
<http://www.mdcalc.com/opioid-risk-tool-ort-for-narcotic-abuse/>).

Mental and Social Health Opportunities: Patients with symptoms of depression and less effective cognitive coping strategies (more unhelpful thoughts about pain) can be identified and addressed prior to elective surgery. Physicians, the public, and policy makers should value interventions to lessen stress, improve coping strategies, and enhance support for patients recovering from injury or surgery.

Special Caution with Elderly or Infirm Patients: Extra care should also be taken when prescribing opioid medications to elderly, frail or infirm patients. Due to reduced renal clearance with age, the dose of medication in older aged people may need to be adjusted. Furthermore, medication reconciliation remains critical to minimize the risk for adverse drug interactions. The side effects of opioid use, which include constipation, urinary retention, drowsiness, and confusion, can be dangerous for frail elderly patients. Opioids might increase the risk of a fall with injury. Non-opioid medications and non-medication options are often sufficient.

Communication Strategies: Surgeons can script and practice empathetic communication strategies, appropriate for all levels of health literacy, that help people feel more at ease, cared for, safe, and in control—all of which can decrease pain intensity. Patients are more comfortable and use fewer opioids when they know their doctor cares about them as individuals.

Professional, Interpersonal, and Organizational Collaborations: Partnerships can be established among hospitals, employers, patient groups, state medical and pharmacy boards, law enforcement, pharmacy benefit managers, insurers, and others. Patients can benefit from an understanding that opioid medications

are best used in the smallest amount for the shortest duration possible. Opioids should be stored safely, and unused pills should be discarded in a locked receptacle in a pharmacy or police station.

The patient's family and friends can be enlisted to provide distraction, companionship, and emotional support during recovery. Prior to elective surgeries, physicians can encourage patients to bolster their social network of friends, family, and neighbors—perhaps including visiting nurses and home health aides, as well as neighborhood volunteers—to provide emotional and physical support during recovery.

Improved Care Coordination and Opioid Use Tracking: It should be possible for a surgeon and pharmacist to see all prescriptions filled in all states by a single patient. Currently, 49 states have an operational Prescription Drug Monitoring Program (PDMP), though mandated use prior to prescribing opioids is not universal. Going forward, mandatory registration by practitioners and inter-state coordination of these databases will allow for more real-time identification of unhealthy and inappropriate prescribing patterns.¹³ Opioid use is best coordinated through a single prescribing physician/surgeon/practice. This is mandatory with patients who take daily opioids for pain or to manage a misuse disorder. Doctors in emergency departments or other consulting physicians can then contact that prescribing physician/surgeon/practice to ensure adherence to the planned strategy. Referral to experts in the management of daily pain as an illness should be considered for troubling persistent musculoskeletal pain. Evidence is available that ongoing pain after injury or surgery is most often associated with symptoms of depression, posttraumatic stress disorder, and cognitive bias about pain (e.g. worst case thinking or fear of painful movement)—all of which are responsive to cognitive behavioral therapy and its derivatives.

Continuing Medical Education (CME) for Physicians: Physician and caregiver awareness of the risks and appropriate uses of opioid medications is important. Recommended periodic CME on opioid safety and optimal pain management strategies will help physicians reduce opioid use and misuse.

Quality Improvement: Physicians and caregivers can integrate performance improvement to continuously improve the safety and effectiveness of pain alleviation, optimal opioid stewardship, and screening and treatment for mental and social health opportunities including misuse disorders into new delivery model quality metrics. Questions about satisfaction with pain relief and pain medication may not be optimal quality measures. There is a trend to focus on function rather than pain.

Opioid Culture Change: Making opioids the focus of pain alleviation created many unintended consequences that often put both patients and their families at increased risk of misuse, addiction, and death. A new approach to pain alleviation is needed to ensure that people understand pain as a cognitive and emotional experience. Patients with similar injuries and surgeries experience varying amounts of pain. Recognition of risk factors for opioid misuse following surgery, such as smoking and pre-operative opioid use, can be beneficial in minimizing inappropriate utilization.¹⁴ The differences in pain for a given injury or surgery are largely explained by individual patient circumstances, characteristics, and mindset. Stress, distress, and cognitive bias about pain increase pain intensity for a given nociception. Peace of mind is the strongest pain alleviator. Studies have found that opioids are associated with more pain and lower satisfaction with pain alleviation. Opioids are potentially dangerous medications; they are habit forming and can cause death via respiratory suppression.

In the United States, the current expectation of opioid use as the primary treatment for the pain of injury and surgery as well as for persistent daily pain as an illness has contributed to opioid misuse. Only a culture change led by physicians dedicated to limiting inappropriate opioid use will reverse this trend.¹⁵ Physicians, patients, and caregivers can learn how to treat pain with less dependency on opioid medications.¹² Specifically, the ongoing implementation of opioid stewardship programs can help change clinician prescribing habits by focusing on both biological and psychosocial aspects of pain, as well as by emphasizing improved provider-patient communication.

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