

Current Concepts

The Role of Pre-Operative Opioid Counseling in Post-Operative Pain Management: Current Concepts

Sina Ramtin, MD¹ 

¹ Rothman Opioid Foundation, Philadelphia, PA, USA

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Pre-operative opioid counseling is a vital component of surgical preparation that educates patients on post-operative pain expectations, safe opioid use, and alternative pain management strategies. This structured intervention, typically delivered by a multidisciplinary team, reduces opioid reliance by promoting multimodal analgesia and fostering realistic recovery goals. Counseling enhances patient satisfaction, supports adherence to treatment plans, and mitigates the risks of opioid-related complications, including dependence and prolonged use. Despite its benefits, implementation challenges such as time constraints and variability in patient understanding persist. Standardizing counseling protocols and leveraging digital tools may improve accessibility and impact. This review highlights the critical role of pre-operative opioid counseling in advancing safer, more effective post-operative pain management.

INTRODUCTION

Pre-operative opioid counseling is a structured communication process that occurs before surgery, where patients are educated about managing post-operative pain and the responsible use of opioid analgesics.^{1,2} This counseling, typically led by a surgeon or anesthesiologist during the pre-operative assessment, is designed to inform patients of the risks and benefits of opioid use, including the dangers of overuse, dependence, and side effects such as sedation, constipation, and respiratory depression.^{3,4} Patients are also educated on realistic pain expectations and introduced to multimodal pain management strategies that reduce opioid reliance, such as non-opioid medications, physical therapy, regional anesthesia, and cognitive-behavioral techniques.^{5,6} By providing clear information and a comprehensive pain management plan, pre-operative counseling aims to minimize unnecessary opioid consumption, enhance pain outcomes, and foster safer recovery practices.

Opioids, while effective for acute post-surgical pain, carry significant risks, especially when overused or used for prolonged periods. Short-term side effects include nausea, vomiting, and respiratory depression, while long-term use can lead to tolerance, physical dependence, and opioid use disorder.⁷ Even brief exposure to opioids after surgery has

been linked to long-term opioid use in opioid-naïve individuals, and studies show that many patients continue to use opioids unnecessarily beyond the recovery period.^{8,9} Poorly monitored prescribing practices also contribute to opioid misuse and diversion, further exacerbating the opioid crisis.

This review examines the role of pre-operative opioid counseling in post-operative pain management, highlighting its potential to reduce opioid consumption, minimize risks, and support safer, more effective recovery.

UNDERSTANDING OPIOID USE IN SURGERY

Post-operative pain control is critical to recovery, minimizing complications, and optimizing patient outcomes.^{10, 11} Multimodal strategies combine pharmacologic and non-pharmacologic modalities that target different pain pathways to maximize analgesia while minimizing opioid exposure. Common pharmacologic agents include nonsteroidal anti-inflammatory drugs (NSAIDs), acetaminophen, gabapentinoids, and local anesthetics, administered alone or in combination depending on the procedure.¹² Regional anesthesia techniques, such as peripheral nerve blocks and epidural analgesia, provide targeted, prolonged relief with fewer systemic effects. In some cases, continuous local

^a Corresponding Author
Sina Ramtin, MD
Rothman Opioid Foundation, 825 Old Lancaster Road, Bryn Mawr, PA 19010,
sina.ramtin@rothmanopioid.org

anesthetic infusions are used to maintain pain control beyond the operating room.^{13,14}

Non-pharmacologic measures, including cryotherapy, elevation, early mobilization, and cognitive-behavioral interventions, further support recovery by addressing both physical and psychological aspects of pain.¹⁵

While effective in acute situations, opioids present significant risks. Side effects like respiratory depression, sedation, nausea, and constipation can cause complications, particularly in older or high-risk individuals.^{16,17} Prolonged use can result in tolerance, physical dependence, and opioid use disorder. Given these risks, multimodal pain control, combined with patient education and judicious opioid prescribing, forms the foundation of responsible post-operative pain management.

PRE-OPERATIVE OPIOID COUNSELING

Pre-operative opioid counseling is an organized educational program conducted before surgery, aimed at preparing patients for managing post-operative pain.^{3,4,18} Its goals include educating patients about anticipated pain levels, minimizing reliance on opioids, and encouraging safer, more effective alternatives.¹⁹ The process starts by emphasizing that experiencing pain post-surgery is a normal bodily reaction and that complete pain relief is not always necessary for recovery. The emphasis is on achieving sufficient pain control that supports key activities like mobility, sleep, and participation in physical therapy.²⁰ Patients are encouraged to expect a natural reduction in pain over time and reassured that their discomfort will be proactively addressed.

The next component of counseling addresses the risks associated with opioid use. Particular emphasis is placed on the risk of prolonged opioid use even after a brief post-operative exposure. Counseling includes guidance on safe opioid practices, such as using the lowest effective dose for the shortest duration, avoiding dangerous drug interactions, and securing medications to prevent diversion or misuse.²¹

An essential part of this conversation involves introducing non-opioid pain management strategies. Patients are informed about pharmacologic alternatives, including non-steroidal anti-inflammatory drugs, acetaminophen, local anesthetics, and adjuvants such as gabapentinoids. These agents may be used individually or in combination to enhance pain relief while minimizing the need for opioids.²²⁻²⁴

Counseling is typically provided by a multidisciplinary team within the perioperative care setting. Surgeons often introduce the conversation by discussing procedure-specific pain expectations. Anesthesiologists or pain management specialists contribute by outlining the available analgesic options, especially those related to regional techniques. Nurses, physician assistants, nurse practitioners, and pharmacists may reinforce the information and provide detailed instructions on medication use and safety. In some institutions, pre-operative clinics or enhanced recovery programs coordinate this counseling to ensure con-

sistency and effectiveness. Standardized educational materials such as visual aids and digital modules may be used to support patient understanding and retention.

For patients receiving chronic opioid therapy prior to surgery, pre-operative counseling must be adapted to address their unique clinical challenges. These include opioid tolerance, opioid-induced hyperalgesia, and the heightened risk of prolonged postoperative opioid use and poorer pain control outcomes. Counseling should include setting realistic expectations regarding postoperative pain levels, emphasizing the potential for increased analgesic requirements, and discussing the role of non-opioid adjuncts. Evidence supports the implementation of multimodal analgesia, including acetaminophen, NSAIDs, gabapentinoids, and regional anesthesia, to improve outcomes in this population.^{25,26} Involvement of a multidisciplinary team, particularly early consultation with pain management specialists, can aid in optimizing perioperative care. Additionally, tapering opioid use before surgery, when clinically feasible, has been associated with improved postoperative outcomes.²⁷ Future studies are needed to evaluate the impact of structured, pre-operative counseling protocols specifically designed for patients on chronic opioid therapy (COT) to improve perioperative pain control and reduce the risk of long-term opioid dependence. This comprehensive approach empowers patients to participate in their pain management plan actively, promotes realistic expectations, and reduces the likelihood of opioid overuse following surgery.

HOW COUNSELING IMPROVES POST-OPERATIVE PAIN MANAGEMENT

Pre-operative opioid counseling plays a pivotal role in improving post-operative pain management by aligning patient expectations with clinical realities and promoting safer analgesic practices.^{1,28} By preparing patients in advance, counseling helps reduce unnecessary opioid use. When individuals understand that some degree of discomfort is expected and learn about effective non-opioid alternatives, they are more likely to accept multimodal pain strategies and less likely to rely on opioids as their sole source of relief.

This proactive education also enhances patient satisfaction.²⁹ When patients feel informed and included in decision-making, they develop a stronger sense of control over their recovery process. Counseling clarifies the experience of pain management and the rationale behind medication choices, and reassures patients that their care team is committed to alleviating pain safely and effectively. This understanding contributes to greater trust and adherence to prescribed treatment plans.

Moreover, reducing opioid use through counseling directly lowers the risk of complications such as dependence, misuse, and prolonged post-operative use. By emphasizing short-term use and offering clear tapering instructions, counseling supports the safe discontinuation of opioids when no longer needed. In turn, this reduces the likelihood of persistent opioid use or diversion. Additionally, the use of multimodal and non-pharmacologic interventions often

leads to earlier mobilization, fewer side effects, and faster recovery, which are all key indicators of improved surgical outcomes.³⁰ Thus, pre-operative counseling not only mitigates risk but also contributes to a smoother and more successful recovery process.

The success of pre-operative opioid counseling programs is typically measured using a combination of quantitative and qualitative outcomes. Common metrics include post-operative opioid consumption (measured in morphine milligram equivalents), pain scores using validated scales, patient satisfaction with pain management, and the rate of prolonged opioid use beyond the expected recovery period.³¹ Additional outcomes may include functional recovery, time to mobilization, and incidence of opioid-related adverse events such as nausea, constipation, or sedation. Standardizing these outcome measures is critical to allow comparison across studies and to determine which counseling strategies yield the most clinically meaningful benefits.

CHALLENGES IN IMPLEMENTING COUNSELING

Implementing pre-operative opioid counseling poses several challenges that can limit its effectiveness despite its proven benefits. One of the primary obstacles is the limited time available during pre-surgical visits. Pre-operative consultations are often tightly scheduled and focused on consent, procedural logistics, and immediate medical concerns, leaving little room for comprehensive discussions about pain management. As a result, counseling may be rushed, superficial, or overlooked entirely.

Another challenge lies in patient comprehension and receptivity. Some patients may arrive with preconceived notions about pain control, expecting complete pain relief and assuming opioids are the most effective or necessary option. These beliefs can make it difficult for them to fully understand or accept the idea of using alternative strategies or tolerating a manageable level of discomfort. Additionally, language barriers, health literacy limitations, and anxiety about the upcoming surgery can further hinder the patient's ability to absorb and retain critical information.

To address these issues, healthcare systems may need to adopt standardized educational tools, extend pre-operative education through digital or written materials, and involve a multidisciplinary team to reinforce key messages. Nonetheless, overcoming time constraints and tailoring messages to individual patient needs remains a core challenge in integrating effective opioid counseling into routine surgical care.

FUTURE PLAN

Looking ahead, integrating pre-operative opioid counseling as a routine component of surgical preparation is a key goal for improving post-operative care. Standardizing this practice across surgical specialties can help ensure that all patients receive consistent, evidence-based guidance on pain expectations, safe opioid use, and available alternatives. Making counseling a formal part of pre-surgical protocols,

much like informed consent, may enhance its delivery and impact.

To overcome logistical challenges, healthcare systems are increasingly exploring digital solutions. Online educational modules, video tutorials, and telemedicine consultations can extend the reach of counseling beyond the clinic, allowing patients to receive information at their own pace and revisit it as needed. These tools are particularly useful for reinforcing content, bridging language barriers, and involving family members in care planning.

Studies should explore the most effective formats, timing, and content for diverse patient populations, as well as the long-term impact of counseling on opioid use, recovery outcomes, and patient satisfaction. Continued investigation will help optimize this important intervention and ensure its sustainability as a standard element of surgical care.

CONCLUSIONS

In conclusion, pre-operative opioid counseling is a critical tool in modern surgical care, equipping patients with the knowledge and strategies needed to manage post-operative pain safely and effectively. By setting realistic expectations, highlighting the risks associated with opioid use, and promoting evidence-based alternatives, counseling empowers patients to take an active role in their recovery. Reducing reliance on opioids through informed decision-making not only decreases the risk of adverse effects and long-term dependence but also supports faster, more comfortable recoveries. As healthcare systems continue to prioritize patient-centered care, the routine integration of opioid counseling into pre-surgical preparation stands as a vital step toward safer, more effective pain management.

DECLARATION OF CONFLICT OF INTEREST

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