SUMNER Regional Medical Center
HIGHPOINT HEALTH SYSTEM

Decreasing Post-Surgical Opioids

Using Multimodal Techniques and a United Front

The 2022 CDC guidelines for opioid prescribing are an invaluable tool for physicians in the opioid decision-making process.

With the US continuing to face an opioid crisis, clinicians confront a difficult decision. Post-surgical pain limits mobility, but opioid prescribing increases dependency risk. Post-surgical pain impairs rehabilitation efforts, but opioid abuse often leads to overdose. Post-surgical pain contributes to decreased mental health and quality of life, but opioid addiction does the same. Chronic pain costs more than $560 billion annually, but opioid misuse is an economic burden of roughly $78.5 billion annually. It is clear to see prescribing clinicians face a conundrum.

Hope for the future

Often patients expect pain-free surgeries and rehab. Family members panic at the sight of their loved one suffering. Staff may unintentionally weaken the multimodal analgesic efforts by prematurely offering opioids.

However, when the public talks about the opioid crisis, the fingers are typically pointed at the providers. Pain is a multi-factorial problem, and pain management is safely achieved with multimodal techniques. These multimodal techniques listed below require a united front as we all learn to work together to fiercely fight this opioid crisis.

Perioperative protocols

Using the Enhanced Recovery After Surgery (ERAS) protocol has been shown to decrease opioid need for effective pain management both during hospitalization and after discharge. The ERAS protocol assists medical professionals in providing a better patient experience with the use of the following:

- Preoperative education
- Nutrition optimization
- Analgesic and anesthetic regiment standards
- Prompt mobilization

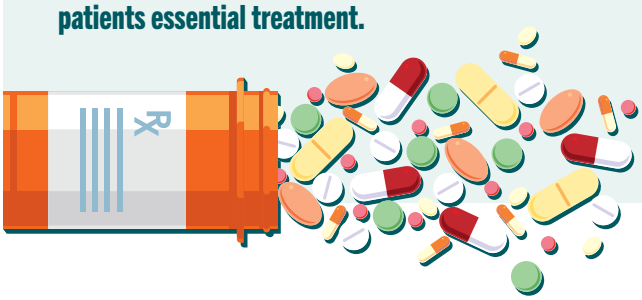
Key Takeaways

- **Multimodal pain management techniques require a united front as we all learn to work together to fiercely fight the opioid crisis.**
- **The ERAS protocol uses preoperative education, nutrition optimization, analgesic and anesthetic regiment standards, and prompt mobilization to improve patient outcomes.**
- **Using the ERAS protocol decreases post-operative opioid use.**
- **Increasing the number of pain management interventions has shown to improve patient outcomes and experience while reducing opioid consumption.**

By using multi-modal pain relief and the

Enhanced Recovery After Surgery (ERAS) protocol,

doctors can prescribe fewer opioids while giving patients essential treatment.



The ERAS protocol's pharmacological regiment standards use multiple analgesics that approach pain through various mechanisms. By using multiple analgesics, rather than a single opioid, a **20% reduction in opioid refills has been seen up to a year after initial prescribing.**

Pain protocols, like the ERAS, strive to modify psychological and physiological responses to surgical intervention. Using ERAS's key elements has shown to **decrease surgical complications and hospital stays, improve cardiopulmonary and gastrointestinal function and provide patients with prompt resumption of daily activities.**

Preoperative intervention

Effective pain management begins prior to the administration of the first medication. **Patient education has shown to be the most effective intervention for successful pain management.** Formal preoperative patient education programs assist individuals in setting realistic expectations, give people information about the average number of opioids used for a similar surgery, and encourage patients to share in the decision-making process. **This empowerment reduces opioid-naivety and equips individuals to face pain from an informed perspective.**

Intraoperative and immediate perioperative treatment

Using the ERAS protocol to provide a concert of low-dose analgesics enables patients to successfully fight both pain and opioid dependency. By increasing the number of non-narcotic pain management interventions, opioid consumption has been shown to decrease.

Local anesthetics

The **ON-Q Painbuster ball system, known by patients as the "Q-ball," is a nerve block inserted into the tissue surrounding the wound site**. This nerve block slowly administers a continual infusion of local analgesia. The catheter of the Q-ball should not be placed directly into the joint as this placement has shown to cause chondrolysis in some patients.

The simplicity of the ON-Q design makes it user-friendly for patients. However, some providers are concerned that the inability to monitor infusion history is a safety risk.

When using the Q-ball for pain management, **collaborative communication** between patient, staff, providers and pharmacist **is vital for safe use.** The ON-Q nerve block has been effectively used for several types of surgeries, including the following:

- Cardiovascular
- Cardiothoracic
- Urologic
- Gynecological
- Obstetrical
- Orthopedic
- General surgery

Another local anesthetic that is receiving accolades is the liposome injection. This slow-release anesthetic, called the **bupivacaine lipsome injectable suspension,** is the topic of conversation for post-surgical patients nationwide. Though they may not remember its name, patients are raving about the **impressive pain relief delivered up to seventy-two hours post-op.**

This long-acting, single-dose nerve block enables a reduction in opioid prescribing while also managing pain. Bupivacaine is combined with a delivery product called DepoFoam to form this pain-reducer commonly referred to as Exparel. It is now approved for use in plastic surgery and total shoulder arthroplasty.

Non-opioid pain medication options

Combination therapy is the key to reducing opioid use while also improving pain management outcomes. Though many patients laugh at the nursing staff when they bring in the scheduled Tylenol, they cease mockery when pain is notably decreased, and opioids are rarely needed.

- Scheduled NSAIDS and Acetaminophen
- Antidepressant (Ketamine)
- Anticonvulsants (Gabapentin)
- Lidocaine infusion

Non-pharmacological pain management options

- Hot and cold therapy
- Electrical neuromodulation
- TENS
- Acupuncture

Postoperative pain management

In 2022, the CDC released their revised guidelines for opioid prescribing. This tool assists clinicians in evaluating the benefits and risks of opioid prescribing. These **12 recommendations equip prescribers in making patient-centric decisions for acute, subacute and chronic pain care.** The goals of these guidelines are the following:

- Develop open communication of the benefits and risks of opioid consumption
- Improve the safety and effectiveness of pain management treatment
- Mitigate pain
- Increase mobility, function and quality of life
- Reduce risks associated with opioid use

Recommendations 1 and 2 focus on the decision-making process for initiation of opioids. Maximizing the benefits of non-pharmacological and non-opioid therapies prior to opioid use is vital. Secondly, avoid opioid prescribing for subacute or chronic pain management. These two recommendations are key for safe initiation of patient-centric opioid therapies.

Recommendations 3 through 7 assist in determining the type and dose of opioids if initiation is inevitable. Using an immediate-release opioid at the lowest effective dose while prescribing only the necessary opioid count decreases the risk of abuse and diversion. After establishing that the opioid is no longer needed, gradual tapering is essential for long-term success.

Recommendations 8 through 12 aid in the ongoing assessment of benefits versus risks. Mental health and substance abuse pre-screening, regular prescription review, and toxicology testing help professionals make informed decisions. **Intense caution is advised when prescribing an opioid and CNS antidepressants.** During every step of the opioid prescribing process, evaluation of benefits and risks is vital for safe pain management.

Conclusion

The opioid crisis is ongoing and an accelerating crisis across the country. It can be frustrating when blame is shifting, fingers are pointing and the crisis is continuing. However, **determined collaboration is the weapon of war** in the fight against the opioid crisis. **Realistic expectations** empower patients to fight for their future. **Improved training** helps staff members understand the effectiveness of a multimodal pain management approach. **Advanced treatment options** enable physicians to optimize non-opioid pain management techniques.

Though the ERAS protocol and the CDC guidelines have proven effectiveness, they are only successful with clinician implementation, staff support and patient involvement. **Our hospital continually strives to decrease post-surgical opioid use while improving pain management outcomes.** We understand this is achieved when we unite our forces and implement evidence-based interventions.

SUMNER Regional Medical Center
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Physician Outreach and Connections

Our growth and outreach liaisons provide support and information to referring physicians and other healthcare providers. 615.882.4205

Resources

"Enhanced recovery after surgery (ERAS) protocols: Time to change practice?" National Library of Medicine, 2011, Enhanced recovery after surgery (ERAS) protocols: Time to change practice? - PMC (nih.gov).

"Opioids: Guidelines at a Glance." Centers of Disease Control and Prevention (CDC), 2022, Guideline at a Glance | Guidelines | Healthcare Professionals | Opioids | CDC.

"Reducing New Persistent Opioid Use after Surgery: A Review of Interventions." National Library of Medicine, 2021, Reducing New Persistent Opioid Use After Surgery: A Review of Interventions - PMC (nih.gov).

"CDC Clinical Practice Guidelines for Prescribing Opioids for Pain." Centers of Disease Control and Prevention (CDC), 2022, CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022 | MMWR.

"Drug Overdose: Safely and Effectively Managing Pain Without Opioids." Centers of Disease Control and Prevention (CDC), 2022, Safely and Effectively Managing Pain Without Opioids | Feature Topics | Drug Overdose (cdc.gov).

"Process for Handling Elastomeric Pain Relief Balls (ON-Q Painbuster and Others) Requires Safety Imporvements." Institute for Safe Medication Practices, 2009, Process for Handling Elastomeric Pain Relief Balls (ON-Q Painbuster and Others) Requires Safety Improvements | Institute For Safe Medication Practices (ismp.org)

"Non-opioid options for managing chronic pain." Harvard Health Publishing, 2016, Non-opioid options for managing chronic pain - Harvard Health