Overdose Prevention Engagement Network

ADULT SURGERY

Pain Management Guide *for* Healthcare Providers

OPEN

Prevention. Treatment. Recovery.

Healthcare Providers

Healthcare providers can find current evidence to support appropriate opioid prescribing, best practices for pain management, opioid prescribing recommendations which can be tailored to meet patient needs, counseling suggestions to educate patients on postoperative expectations, and care coordination strategies to manage complex care needs.

Why Change Prescribing?

EVIDENCE SHOWS:

GREATER THAN 70% OF PRESCRIBED OPIOIDS ARE NOT USED[1,2]

Reducing opioid prescribing improves the safety for patients, families, and communities

- Postoperative opioid prescribing varies significantly[1]
- Prescription size was the strongest predictor of patient consumption[3]
- Evidence-based opioid prescribing guidelines for the perioperative period are needed to enable tailored prescribing for patients and reduce excess opioid pills within communities[4]

6-10% OF SURGICAL PATIENTS DEVELOP NEW PERSISTENT OPIOID USE[8,9,10]

New persistent opioid use is one of the most common surgical complications

- Many patients continue to use their opioids for reasons other than surgical pain[9,10]
- New persistent opioid use after surgery is an underappreciated surgical complication that warrants increased attention[8,9,10]

NO CORRELATION BETWEEN PATIENT SATISFACTION SCORES AND AMOUNT OF OPIOID PRESCRIBED[5]

Prescribing more opioids does not improve patient satisfaction

- Patients who were prescribed fewer opioids reported using fewer opioids with no change in pain scores[6]
- Prescribers can feel empowered to reduce their initial opioid prescription without impacting patient satisfaction[5]

NO CORRELATION BETWEEN PROBABILITY OF REFILL AND AMOUNT OF OPIOID PRESCRIBED[7]

Prescribing fewer opioids initially does not correlate with an increase in refill requests

- Prescribers could prescribe smaller opioid prescriptions without influencing the probability of a refill request[7]
- Implementation of evidence-based prescribing guidelines reduced post-laparoscopic cholecystectomy opioid prescribing by 63% without increasing the need for medication refills[6]

Best Practices for Managing Surgical Pain

SCREEN

Screen for opioid use and substance use before surgery to identify those at risk for poor pain and opioid use outcomes:

- Consider using the TAPS Screening Questionnaire, a validated way to screen patients for risk before surgery
- Learn more about screening with OPEN's SUD Care Coordination Initiative.
- Identify patients at increased risk of respiratory depression: Concurrent medication use (e.g., prior opioid prescriptions, sleep aids, benzodiazepines), obstructive sleep apnea, obesity, neurological disorder, oxygen desaturation prior to discharge
- Use language that respects individuals with substance use disorder to mitigate stigma
- See OPEN's Stigma Initiative for helpful language.

SCAN HERE for the TAPS Screening Questionnaire

PRESCRIBE

Prescribe using OPEN's guidance:

DO	AVOID
Prescribe acetaminophen and NSAIDs, unless patients have contradictions or high risk adverse effects. • Giving families a prescription helps them understand these are the first-line medications for pain management	Prescribing codeine or tramadol. Due to pharmacogenetic differences, codeine and tramadol are poor choices for pain management and should not be prescribed
If prescribing an opioid is indicated, then follow OPEN's Acute Care Opioid Prescribing Recommendations	Prescribing fentanyl or long-acting opioids (e.g. OxyContin®)
Access the prescription drug monitoring program (PDMP) prior to prescribing controlled substances schedules 2-5, in compliance with state law	Prescribing opioids that contain acetaminophen (e.g. Norco®, Vicodin®, Percocet®) to minimize risk of acetaminophen overdose
Consider co-prescribing naloxone to patients on high doses of opioids or Medication for Opioid Use Disorder	Prescribing opioids with other sedative medications (e.g., benzodiazepines, skeletal muscle relaxants)

EDUCATE

Educate patients and families:

- **Acetaminophen and NSAIDs should be used together as first-line medications** for postoperative pain in surgical patients, unless patients have contraindications or high risk of adverse effects

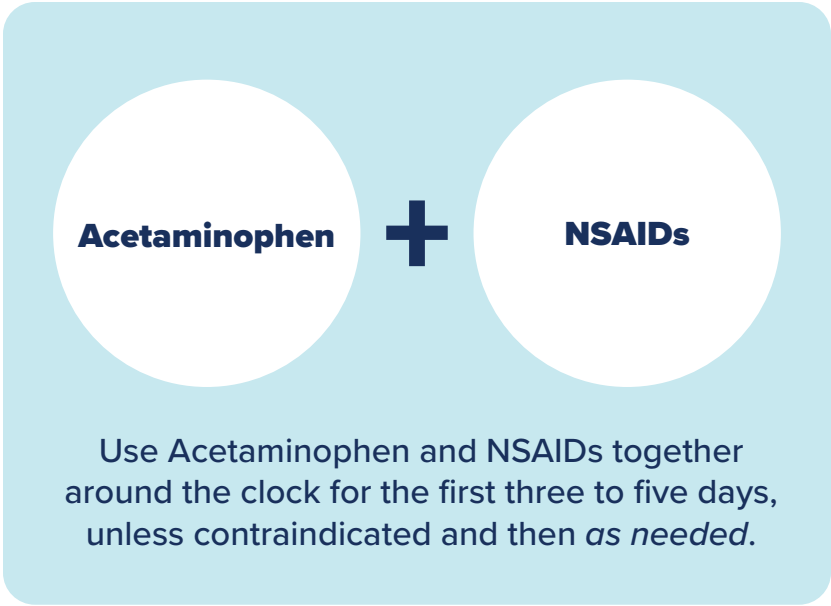
- Use of opioids **ONLY** to manage severe breakthrough pain that is not relieved by acetaminophen and NSAIDs
- Pain expectations and how to taper opioid use as pain improves
- Pain usually peaks and then improves after the first 2-3 days following surgery
- The **risks and side effects** of opioid medications (sedation, respiratory depression, dependence, withdrawal, addiction, overdose)
- How to **safely store and dispose of opioids**
- Appropriate use of naloxone, if prescribed

COORDINATE

Coordinate postoperative pain management plan

- **Coordinate with anesthesia**, and consider nerve block, local anesthetic catheter or an epidural when appropriate
- **Connect with the patient's primary care provider** and/or usual prescriber with information about the patient's operative procedure and the plan for management of acute postoperative pain
- If the patient screens positive for risk of SUD, consult an addiction medicine specialist

First-Line Medications for Pain Control



Use Acetaminophen and NSAIDs together around the clock for the first three to five days, unless contraindicated and then *as needed*.

How to dose Acetaminophen

MEDICATION	USUAL DOSE	MAX DAILY DOSE (mg)	COMMON OTC FORMULATIONS
Acetaminophen	1000 mg three to four times per day	4000 mg	Tablet: 325 mg or 500 mg Capsule: 325 mg or 500 mg Oral solution: 160 mg/5 mL Extended release tablet: 650 mg

- Caution should be observed in patients with liver disease, active alcohol use, and G6PD deficiency
- Acetaminophen overdose may occur with 5-6 grams daily for prolonged use (6-8+ weeks) or acute ingestion of at least 7.5 grams

How to dose NSAIDs

MEDICATION	USUAL DOSE	MAX DAILY DOSE (mg)	COMMON OTC FORMULATIONS
Celecoxib*	100-200 mg two times per day	400 mg	Capsule: 50 mg, 100 mg, 200 mg, 400 mg
Ibuprofen	400-800 mg three to four times per day	3200 mg	Tablet: 200 mg, 400 mg, 600 mg, 800 mg
Naproxen	200-400 mg two to three times per day	1375-1500 mg	Tablet: 220 mg, 250 mg, 275 mg, 375 mg, 500 mg, 550 mg Capsule: 220 mg Extended release tablet: 375 mg, 500 mg, 750 mg
Ketorolac	10 mg four times per day	200 mg	Tablet: 10 mg
Meloxicam	15 mg daily	15 mg	Tablet: 7.5 mg, 15 mg Capsule: 5 mg, 10 mg

Safety and Side Effect Considerations

NSAID RISK	CAUTION
Cardiovascular	Short-term use is safe for most patients. In patients who have CVD or risk factors for CVD, long-term and high dose NSAID use can increase risk for cardiovascular events (e.g. MI, CVA, CV death). Avoid use in patients who have undergone CABG surgery.
Gastrointestinal	Short-term use (<=7days) is safe for most patients. Long-term use risk is low (<2%). In patients >60 years of age, history of peptic ulcers, gastrointestinal bleeds, or Helicobacter pylori infections, consider celecoxib (Celebrex) and/or use of a concomitant proton pump inhibitor (PPI, e.g. OTC omeprazole).
Renal	Acute kidney injury from NSAID use can occur in those with risk factors including patients age >= 65, pre-existing kidney impairment, or CKD with high cumulative doses (e.g. ibuprofen 700 mg/day). Use with caution in patients with CKD.
Bleeding	Anti-platelet effect is due to COX-1 inhibition, but NSAIDs block COX in a reversible fashion. Normal platelet function returns within 1-3 days depending on the drug (e.g. 1 day for ibuprofen, 2 days for naproxen, diclofenac, and 3 days for piroxicam).
Pregnancy	Avoid use of NSAIDs in pregnancy and consult an obstetric specialist.

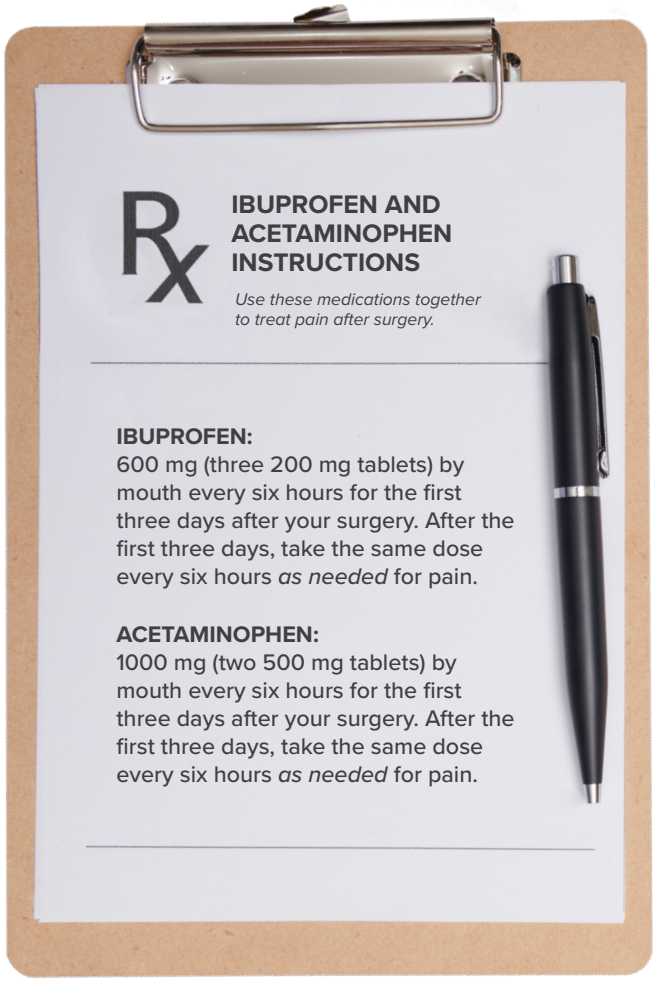
Prescribe Acetaminophen and NSAIDs even at discharge*

Since acetaminophen and ibuprofen are available over the counter and don't require a prescription for patients to use, patients and their caregivers often do not receive instructions on how to use them after surgery. The packaging instructions for acetaminophen and ibuprofen provide minimal dosing and recommend as-needed use. If these instructions are followed, patients may be underdosed and inadequately addressing their pain.

In addition, if patients were prescribed an opioid, they may think this is the first medication they should use for their pain, not understanding that acetaminophen and ibuprofen often provide adequate pain relief when appropriately dosed and that an opioid may not be needed.

**Unless contraindicated*

A sample prescription



Adult Opioid Prescribing Recommendations

OPEN has developed the first evidence-based opioid prescribing and counseling recommendations in the U.S. for over 70 common adult and pediatric procedures.

SCAN HERE for the latest prescribing recommendations!

Our recommendations are designed for patients with no preoperative opioid use as a starting point for tailored pain management. They are not intended for patients taking opioid preoperatively.

Our recommendations are informed by:

- Patient-reported outcomes (PROs) on opioid consumption pain control and patient satisfaction
- Published studies
- Expert opinion

OPEN is dedicated to continuously improving prescribing using the most current data and evidence available.

Patient Education

As prescribers write for fewer opioids, there may be concern about possible increase in phone calls for refills or inadequate pain management. However, OPEN research shows that with appropriate patient education, not only did patients consume less medication, but requests for refills did not increase and patient satisfaction was unchanged. To ensure appropriate pain management, all patients and support person(s) should receive preoperative counseling about postoperative pain and how to manage it.

Preoperative Medication Counseling

Set Clear Expectations

Talk about the experience of pain and usual length of recovery with the patient and their support person(s).

SAMPLE CONVERSATION STARTER:

- "Some pain is normal. You should be able to walk and light activity but may be sore for a few days. This will gradually get better with time."
- "Half of all patients who have this procedure take less than five doses of an opioid medication."

Discuss Effective Alternatives

Discuss use of the over-the-counter medications.

SAMPLE CONVERSATION STARTER:

- "Tylenol® and Motrin® are the first medications we use to manage pain after surgery. By themselves they are often enough to manage your pain."
- "You should take 1000 mg of Tylenol® and 600 mg of Motrin® together every 6 hours around the clock for the first 3 days after surgery."

Explain Safer Use

Explain when opioids should be used.

SAMPLE CONVERSATION STARTER:

- "This opioid medication is only for managing severe pain from your surgery and should not be used to manage pain from any other condition."

Talk About Risks

Talk about the possible risks associated with opioids.

SAMPLE CONVERSATION STARTER:

- "We are careful about opioids because they have been shown to be addictive, cause harm, and even cause overdose if used incorrectly or misused."

Advocate for Safe Storage and Disposal

Let patients know that they should dispose of medications after their acute postoperative pain has resolved, and how they should do this.

SAMPLE CONVERSATION STARTER:

- "Disposing of the opioid medication prevents accidental overdose or misuse. You can use a drug disposal bag, take the pills to an approved collector, often at a police station or pharmacy, or mix the medication with kitty litter in a sealed bag and throw it in your household trash."

Connect with Primary Care Providers for Better Outcomes

Among surgical patients who develop new persistent opioid use, surgeons provided the majority of opioid prescriptions during the first three months after surgery. By 6 months after surgery, surgeons provided 20% or less of opioid prescriptions, and primary care clinicians increased to over 50% of prescriptions 12 months after surgery[13].

While a prescription from a surgeon may be the initial point of opioid exposure for a patient, the relationship a surgeon has with a patient is often episodic and as a result, signs of ongoing use or misuse may not be identified. A primary care provider has a longitudinal relationship with the patient and can be better equipped to identify persistent use, misuse, or onset of substance use disorder.

However, primary care providers are often unaware that their patients have received an initial opioid prescription from their surgeon. Providing a primary care provider with information about their patient's operative procedure and the plan for management of acute postoperative pain (especially if that plan includes an opioid prescription) allows for better communication, consistent messaging, and improved patient monitoring after surgery.

The goal of this communication is to let the primary care provider know that their patient had surgery, when it occurred, the plan for pain management, whether an opioid was prescribed and, if so, how much was dispensed, and the expectations in terms of pain duration and plan for refills (if any).

Ideas in terms of sharing this information include using the capability of the electronic medical record to auto-populate a letter or communication to the primary care provider containing this information. If an after-visit summary is created by your electronic medical record, you might forward a copy of this automatically to the primary care provider. Providers could also add standard language to their operative notes containing this information and forward the operating report to the primary care provider.

Resources

More resources for surgery-related pain management can be found below.

PATIENT EDUCATION MATERIALS

PROVIDER RESOURCES

REFERENCES

The Overdose Prevention Engagement Network (OPEN) is a diverse team dedicated to improving lives and reducing harms of substance use. By engaging with individuals, communities, and organizations, we share education and resources to strengthen person-centered prevention, treatment, and recovery.

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