PACE

Pharmaceutical Assistance
Contract for the Elderly

Alosa Health

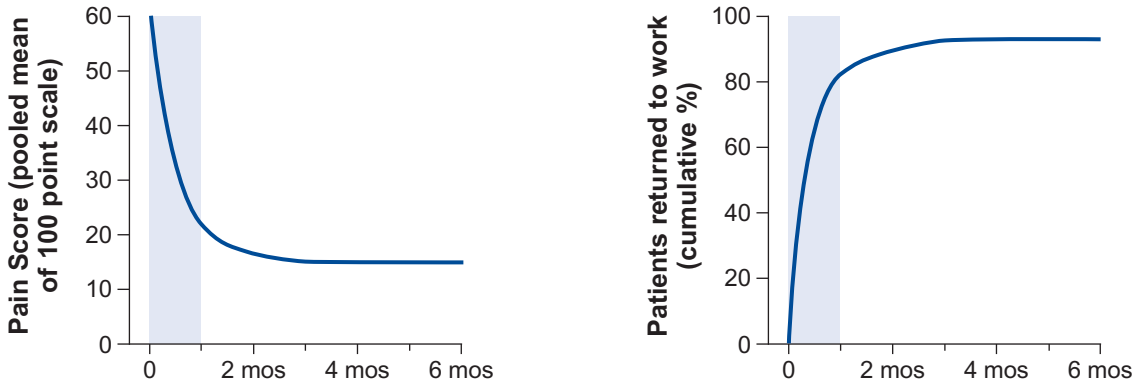
Balanced information for better care

Dealing with acute pain in older patients

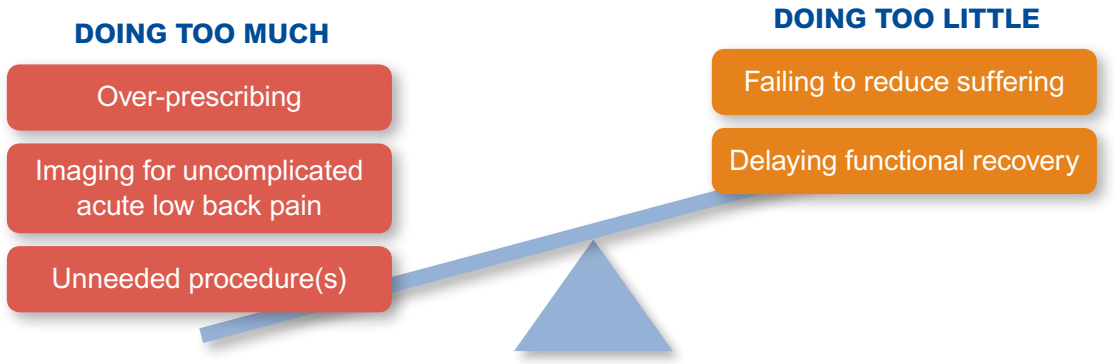
Current evidence on effective, safe strategies

Acute pain (< 90 days) usually resolves rapidly, even without intervention

FIGURE 1. 82% of participants who were unable to work because of acute low back pain returned to work within 30 days.[1]



Find a balance between undertreating and overtreating a self-limited condition.



Helping patients manage their expectations about acute pain can be a powerful way to reduce distress and requests for drugs.

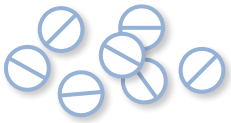
- Structured messaging can reassure patients with acute low back pain. Examples tested in clinical studies include:[2]
  - "Based on the history and exam, you have a good prognosis."
  - "The acute pain you are experiencing is benign."
  - "Avoid bed-rest."

Several medication choices can relieve acute pain without resorting to addictive drugs

Despite this, opioids are still overused to treat acute pain.

2 out of 5 U.S. adults received an opioid in the past year.[3]

1 in 5 adults share their opioid medications with others.[4]

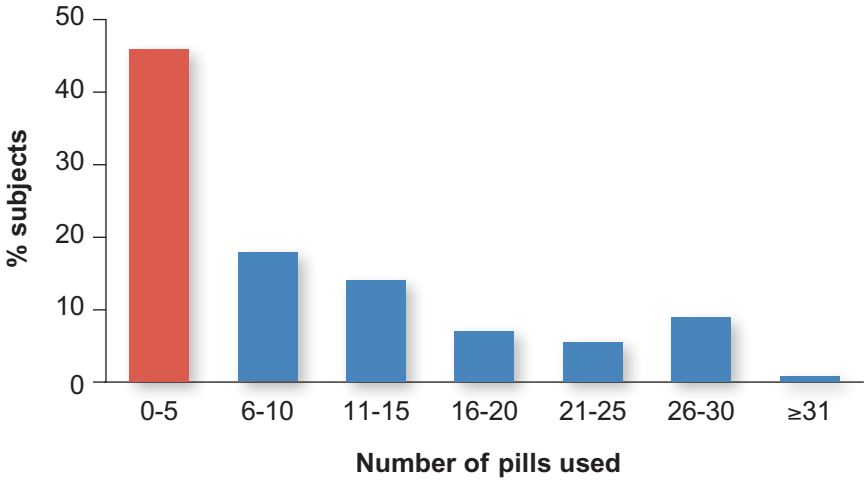


More than half of patients surveyed expect to have leftover opioid medications.[4]

54% of adults misusing prescription opioids received them from family or friends.[5]

Leftover prescribed opioids increase the risk of addiction, accidental overdose, and diversion.

FIGURE 2. In one study of patients prescribed opioids after an outpatient orthopedic procedure, almost half used fewer than 5 pills from the average of 30 dispensed.[6]



Diverted pills can cause harm: There was a 165% increase in opioid poisoning hospitalizations among children from 1997-2012.[7]

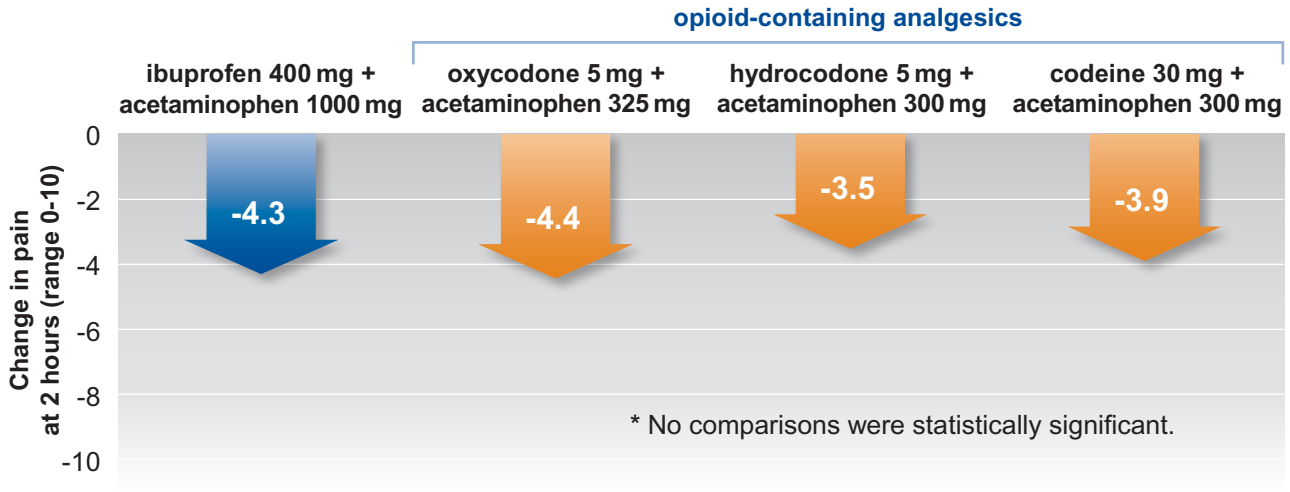
Acute pain caused by sprains, strains, fractures, and trauma

TABLE 1. Efficacy and harms in the treatment of acute musculoskeletal pain

	INTERVENTION	Efficacy	Harm	Comment
NON-DRUG OPTIONS	**compression**	●	○	Compression with an elastic wrap or air-stirrup brace **improves function in mild ankle sprains**.[8]
	exercise	●	○	Incorporating therapeutic exercises in the first week after ankle sprain **improves short term function**.[9,10]
	casting (severe sprains)	●	○	For the most severe ankle sprains (unable to bear weight for 3 days), **a hard cast or air cast was more effective for foot/ankle function** compared to compression bandage alone.[11]
	physical therapy	○	○	**May not be better than usual care** for mild ankle sprains.[12]
DRUG OPTIONS	**acetaminophen**	●	○	**Keep daily dose of acetaminophen below 3000 mg/day** for most older patients.[13]
	oral NSAIDs	●	●	**Co-prescribe a PPI or H2 blocker** for patients at higher risk of **gastrointestinal bleeding**.[13]
	topical NSAIDs	●	○	Number needed to treat for acute musculoskeletal pain: 1.8–4.4[14]
	opioids	●	●	A systematic review found that **opioids are no better than NSAIDs** for acute sprain, strain, or contusions, **while posing important risks**.[13]

● = strong evidence of efficacy; ● = some evidence of efficacy or harm; ● = evidence of lack of efficacy or evidence of harm; ○ = inadequate evidence

FIGURE 3. A 2017 randomized trial found that opioids were no more effective than a combination of ibuprofen + acetaminophen in patients with severe acute musculoskeletal pain.[15] *



Acute low back pain

TABLE 2. Efficacy and harms in the treatment of acute low back pain

	INTERVENTION	Efficacy	Harm	Comment
NON-DRUG OPTIONS	massage	●	○	Limited evidence from **small studies suggest short-term benefits** for pain but not function.[16,17]
	acupuncture	●	○	**Superior to sham acupuncture** based on results from 2 RCTs[18]
	spinal manipulation	●	○	**Small improvements in pain and function** based on systematic review of 12 RCTs[19]
	exercise	○	○	A review of 6 RCTs showed **no difference between exercise and usual care** for acute LBP.[18]
	physical therapy	○	○	**Did not improve pain intensity at 3 months** in an RCT of 220 patients randomized to 3 weeks of PT sessions or usual care[20]
DRUG OPTIONS	NSAIDs	●	●	**A small effect on pain intensity and function** versus placebo.[21] Cox-2 selective NSAIDs reduce the risk of gastrointestinal bleeding.[22]
	acetaminophen	●	○	In a randomized trial of over 1500 patients with acute LBP, **acetaminophen (~4000 mg total) was not better than placebo** for any pain outcome.[23]
	systemic oral steroids	●	○	**Do not improve pain severity** among patients with acute LBP without radiculopathy[24]
	epidural steroids (for sciatica)	●	●	May provide **small or short-term benefits** for acute low back pain with **radicular symptoms (sciatica)**[25]
	opioids	●	●	Offer no benefit beyond NSAIDs,[26] but with greater risk
	muscle relaxants	●	●	Shown to be more effective than placebo[27]

● = strong evidence of efficacy; ● = some evidence of efficacy or harm; ● = evidence of lack of efficacy or evidence of harm; ○ = inadequate evidence

FIGURE 4. Adding oxycodone/acetaminophen or cyclobenzaprine to naproxen to treat acute low back pain was no better than naproxen alone in reducing pain or function scores at 1 week.[26*]

† naproxen 500 mg + oxycodone 5 mg/acetaminophen 325 mg; § naproxen 500 mg + cyclobenzaprine 5 mg

Acute post-operative pain

The leading patient concern (57%) before surgery is the pain they will experience afterwards.[28]

- Acknowledge this concern and offer reassurance that the pain will be self-limited and does not necessarily mean that anything has gone wrong.

Opioids are frequently (and often unnecessarily) prescribed after surgery:

- One study of over 1 million patients reported 56% had been given opioids after surgery, including minor procedures.[29]
- A study of over 2 million Medicaid patients showed 42% received opioids after a tooth extraction.[30]

TABLE 3. Efficacy and harms in the treatment of acute post-operative pain

	INTERVENTION	Efficacy	Harm	Comment
NON-DRUG	**acupuncture**	●	○	Compared to controls or sham acupuncture, **can reduce opioid use by 21% to 29% after surgery.**[31]
NON-DRUG	**TENS***	●	○	**Recommended by the American Pain Society** as an adjunct to other treatments.
DRUG OPTIONS	**NSAIDs** (ibuprofen 400 mg, diclofenac 50 mg, naproxen 500 mg or celecoxib 400 mg)	●	○	**Beneficial in mild to moderate acute pain and inflammation** (NNT† 2-3 to achieve a 50% reduction in acute post-op pain vs placebo).[32]
DRUG OPTIONS	**acetaminophen**	●	○	In a review of 51 studies, **46% of patients achieved at least 50% pain relief after surgery**, compared to 20% for placebo (NNT† = 4).[33]
DRUG OPTIONS	**NSAID + acetaminophen**	●	○	A review of 21 studies indicates **combining NSAIDs with acetaminophen offers better pain relief** compared with either drug alone.[34]
DRUG OPTIONS	**gabapentin (e.g., Neurontin); pregabalin (e.g., Lyrica)**	●	●	Evidence for efficacy is mixed. One study found **adding gabapentin** for patients already taking acetaminophen and celecoxib after total knee replacement **was no different than adding placebo.**[35]
DRUG OPTIONS	**opioids**	●	●	In 20 RCTs, oxycodone provided **more effective analgesia than placebo.**[36] **Adverse events included nausea, vomiting, dizziness.**

● = strong evidence of efficacy; ● = some evidence of efficacy or harm; ● = evidence of lack of efficacy or evidence of harm; ○ = inadequate evidence

* **TENS:** transcutaneous electrical nerve stimulation; † **NNT:** number needed to treat

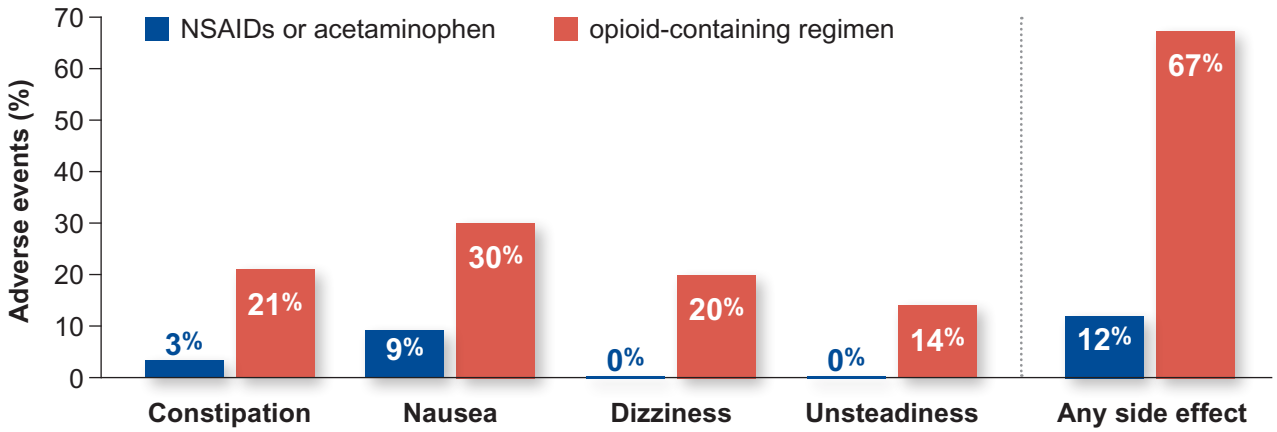
Special challenges in managing acute pain in the elderly

Poorly controlled pain can produce behavioral problems and delirium.[37]

- These underlying conditions may go undiagnosed and untreated.

Older patients are at higher risk of complications from prescription opioids.

FIGURE 5. Patients over age 65 seen for emergency care had much higher rates of adverse events within one week if they were given opioids compared to NSAIDs or acetaminophen.[38]



Other common opioid-induced adverse events include gait instability, erectile dysfunction, and confusion.[38]

Assessing pain in patients with cognitive impairment

- Patients with severe dementia may be unable to report or describe their pain.
  - — get additional history from caregivers
- Observe common pain behaviors:
  - — facial expressions
  - — mental status changes (delirium or other behavioral changes)
- Determine whether there is a treatable cause of the pain:
  - — e.g., fracture, severe constipation or other intra-abdominal process

When opioids must be used for acute pain, follow these principles

Prescribe short courses, usually less than three days. Each refill or additional week of drug prescribed increases the risk of misuse by 20%.[29]

Continue non-opioid treatments (non-drug approaches, NSAIDs, acetaminophen).

Avoid co-prescribing with benzodiazepines, as this can increase the risk of overdose death by over two-fold.[39]

Avoid long-acting or extended-release (ER) opioids.

- Dose titration is more difficult
- Onset of analgesia is delayed compared to immediate release opioids
- Abuse potential is higher (leading to higher "street" value)

FIGURE 6. Selected immediate release and long-acting opioids

IMMEDIATE RELEASE	LONG-ACTING
• codeine **(not recommended)**	Not recommended for acute pain
• hydrocodone + acetaminophen	• buprenorphine patch
• hydromorphone	• fentanyl patch
• levorphanol	• hydrocodone ER*
• meperidine **(not recommended)**	• hydromorphone ER
• morphine	• methadone
• oxycodone*	• morphine ER*
• oxymorphone	• morphine ER + naltrexone*
• tapentadol	• oxycodone ER*
• tramadol	• oxycodone ER + naloxone*
	• oxymorphone ER
	• tapentadol ER
	• tramadol ER

* available in "abuse-deterrent" formulations

So-called "abuse-deterrent" formulations *are no less addictive* than regular opioids when taken by mouth

advantages:

- more difficult to crush or dissolve
- may deter abuse by snorting or injecting

disadvantages:

- all but one are extended release (not recommended for acute pain)
- patients and prescribers may mistakenly think they are non-addictive
- contain a higher opioid dose than regular opioids
- **expensive:** One study estimated it would cost a single state $475 million over one year to convert all existing opioid prescriptions to "abuse-deterrent" formulations.[40]

Check the prescription drug monitoring program (PDMP)

The PDMP can provide vital information about a patient's use of opioids from other prescribers, as well as co-use of benzodiazepines, which can increase overdose risk. **For Pennsylvania-specific rules, visit: doh.pa.gov/PDMP**.

Managing acute pain in patients who are long-term opioid users

- Emphasize a multimodal approach, using both non-drug and non-opioid pharmacologic interventions.
- Titrate to effect with short-acting opioids as needed.
- Use another type of opioid ("opioid rotation") to provide additional analgesic effect.
- Follow up closely because of an increased risk of overdose (dose-dependent).
- Prescribe naloxone if the patient is at risk of overdose because of high daily dose or a history of overdose.

Any patient prescribed an opioid for acute pain may become a long-term user of opioids

- Patients undergoing a range of surgical procedures were **2 to 5 times more likely to be using opioids chronically a year later** compared to patients not having surgery.[41]
- Whenever a patient has had an acute event for which they were prescribed an opioid, monitor carefully for conversion to long-term opioid use.

FIGURE 7. The likelihood of long-term use increases with the days supply of the first opioid prescription.[42]

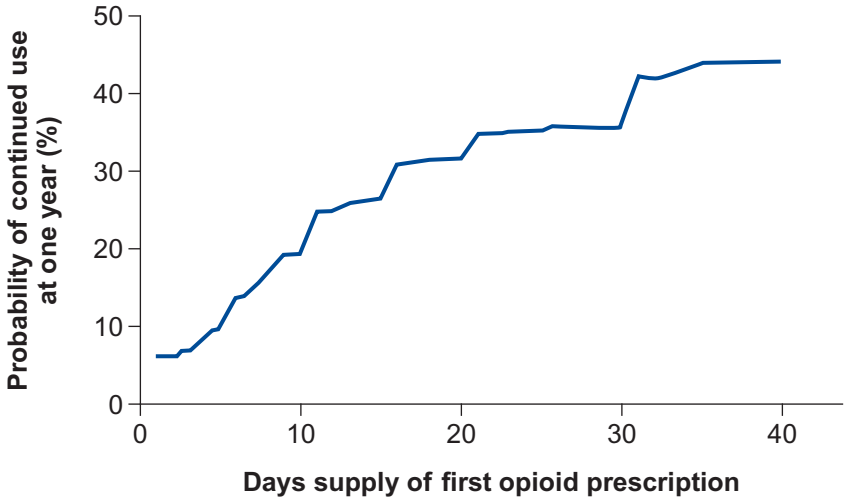


FIGURE 8. The intensity of initial opioid prescribing predicts the risk of long-term use in patients receiving emergency care for acute pain.[43]

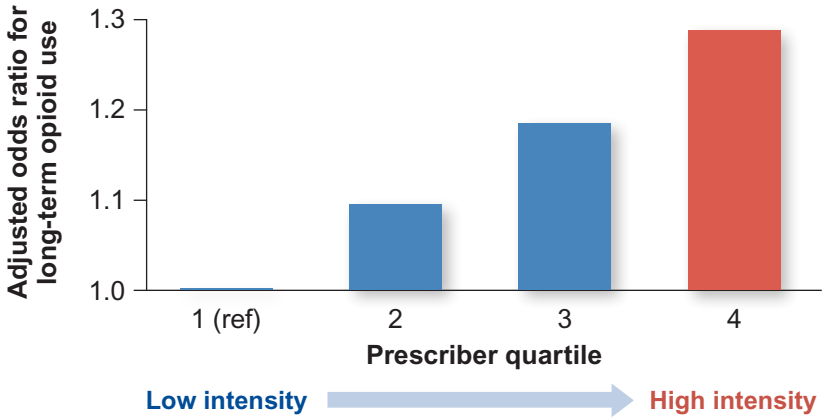
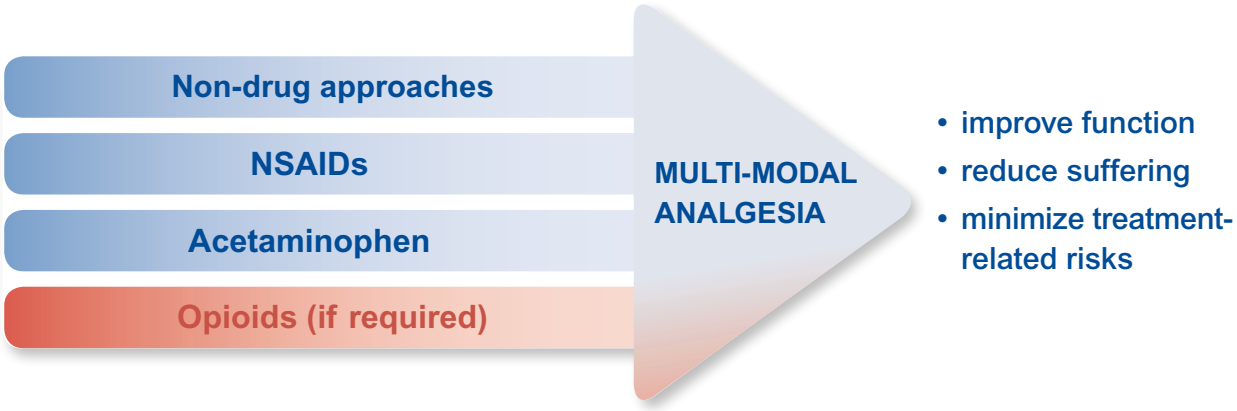


FIGURE 9. Combining drug and non-drug treatments produces a synergistic effect in managing acute pain.



Key messages

- **Manage patient expectations about acute pain:** providing reassurance can reduce fear, worry, and distress, as well as demand for pain medications.
- **Many clinicians overprescribe opioids for acute pain**; leftover prescription opioids increase the risk of misuse or accidental overdose by the patient or others.
- For many acute pain conditions, **opioids are no more effective than other treatments**, though they do add increased risk.
- Be wary of **"abuse-deterrent" opioid formulations; they are no less addictive** than regular opioids when taken by mouth.

More information is available at AlosaHealth.org/AcutePain

References:

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About this publication

These are general recommendations only; specific clinical decisions should be made by the treating physician based on an individual patient's clinical condition. More detailed information on this topic is provided in a longer evidence document at AlosaHealth.org.

IDIS Independent Drug Information Service

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Alosa Health

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