

### Summary

- High-quality best practice guidance is lacking for interventions that are generalizable across patient conditions to reduce the risk of transition from acute to chronic pain.
- High-quality synthesized evidence is lacking regarding the effectiveness of self-management strategies and multi-disciplinary/specialized pain services to reduce the risk of transition from acute to chronic pain.
- Many publications recognize that control of acute post-operative pain is a primary risk factor for transition to chronic pain; however, long-term outcomes such as transition to chronic pain were not provided in supporting evidence for any acute pain management recommendations.
- Surgical techniques for specific surgeries have been recommended to reduce the risk of transition from acute to chronic post-surgical pain but are non-generalizable.
- Review findings suggest that little emphasis has been placed on research specifically to reduce the risk of transition from acute to chronic pain.

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### What is the issue?

In 2018, the World Health Organization and an international working group developed a definition and classification system for chronic pain, thereby advancing the recognition of chronic pain as a health condition, in its own right. Acute pain typically begins due to an identifiable antecedent (e.g., injury, surgery) and occurs for a short duration. This pain serves as a protective factor and typically responds well to analgesics, anti-inflammatories, and non-pharmaceutical modalities. When acute pain persists beyond the expected timeframe of recovery, it transitions to chronic pain. A rapid review was conducted to determine the best practices for reducing the risk of acute pain transitioning to chronic pain after injury or surgery.

### What was the aim of the study?

The following review question was addressed:

- What interventions do best practice guidelines, overview of reviews, overviews of guidelines, network-meta-analyses, and meta-analyses recommend for reducing the risk of transition from acute to chronic pain following injury or surgery?

### How was the study conducted?

Ovid MEDLINE, including Epub Ahead of Print and In-Process & Other Non-Indexed Citations, and Embase Classic + Embase were searched in 2020 for clinical practice guidelines (CPGs), overviews of reviews/umbrella reviews, overviews of guidelines, network meta-analyses (NMAs), and meta-analyses (MAs) of randomized controlled trials that focused on individuals with acute pain due to injury or surgery. Studies were included if they (1) met criteria of a high-quality CPG or systematic review; (2) reported a recommendation or relevant analysis for a chronic pain outcome of interest; (3) were published in Canada, the USA, the UK, or Australia, or were of international or European origin (CPGs only); and (4) were available in full text in either English or French. Outcomes of interest included pain at or beyond three months, composite functional outcomes of interest at or beyond three months, and persistent opioid use beyond three months of injury or surgery. We extracted recommendations from CPGs and conclusions from overviews, NMAs, and MAs regarding interventions to reduce the risk of transition from acute to chronic pain (pharmacologic, psychological, physical, self-management, and multidisciplinary interventions). Extracted data were synthesized, with recommendations and conclusions that were generalizable across patient conditions being highlighted.

### What did the study find?

- Five CPGs, seven NMAs, and twenty-five MAs were included.
- Five interventions were identified with the potential to reduce the risk of transition from acute to chronic pain that could be **generalized across some patient conditions**:
  - *Surgery*: Active perioperative psychotherapy (cognitive behavioural therapy, relaxation therapy), local or regional anesthesia (intravenous lidocaine, epidural, local infiltration/irrigation, specific regional nerve blocks), intravenous ketamine as part of multimodal analgesia
  - *Injury*: Physical therapy, physical therapy + education
- One CPG provided recommendations for opioid-exposed/tolerant patients undergoing surgery:
  - Referral to a perioperative pain specialist
  - Communication with patient's outpatient opioid prescriber to anticipate discharge needs
- Most included evidence was not generalizable beyond the patient condition for which it was intended

**Few high-quality CPGs were identified that had generalizable recommendations to reduce the risk of transition from acute to chronic pain**

**Minimal high-quality synthesized evidence is available regarding self-management strategies and multi-disciplinary/specialized pain services**

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