



Opioids and Pain in Youth:

A toolkit for health professionals

This toolkit shares evidence-based solutions to help you and your patients.

Whether safely prescribing opioids, exploring alternative therapies,
or providing informed education, your efforts matter!

#ItDoesntHaveToHurt





Opioids and Pain in Youth: A toolkit for health professionals

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Scan here! For additional information,
tools, and to provide feedback on
the effectiveness of this resource.

linktr.ee/youthinpain



“I have friends who need medications for all kinds of illnesses, but I’m the only one who feels the need to lie and keep my pain medications a secret because of all the rude comments that follow. I shouldn’t have to be ashamed of needing opioids as someone with a chronic illness, and it makes me sad that it’s looked down upon when it makes such a difference in my life. Opioids are sometimes the difference between me lying in bed, wishing I could live a normal life - and me living a normal life.”

~ Ariana, Youth Patient Partner



Opioids and Pain in Youth: A toolkit for health professionals

Introduction to the Toolkit

Overview

Quality pain management is a fundamental human right. Pain in youth should be managed using a multimodal, biopsychosocial approach employing physical, psychological, and pharmacologic modalities.

In cases of moderate or severe pain, the addition of opioids may be warranted for managing short-term pain or chronic pain. When clinically indicated, adding opioids to non-opioid analgesia should not be withheld.

In Canada, there is a lack of evidence-based guidelines driving effective and safe opioid prescribing for quality pain management for children and youth.

The ongoing opioid crisis has profound impacts on the lives of Canadians, making it crucial to address the appropriate and destigmatized use of opioids in youth while mitigating the broader impact of pain on families, communities, and society.

Undertreatment of pain is a significant contributor to the opioid crisis, and poorly managed pain in youth can lead to a cascade of opioid use that extends into adulthood, emphasizing the urgency to prioritize effective pain management during childhood to prevent potential lifelong harm.

The effective treatment of pain, regardless of cause, starts with a proper pain assessment.

Comprehensive pain assessment is foundational for determining the severity of pain, and the potential impact of any pain management approach.

This toolkit summarizes current evidence and resources for safe, effective, and equitable opioid use in managing moderate to severe acute and chronic pain in youth. The information and resources in this toolkit can be integrated into clinical practice, support clinical education, and be used to inform organizational policies. The resources in this toolkit should be helpful for health professionals and the patients and families with whom they work.

This toolkit was guided by the most current and relevant scientific evidence and resources available during its development.

An environmental scan was conducted in April 2023, which included an academic search of systematic and scoping reviews in Ovid Medline. In addition, a grey literature search was conducted by searching the CADTH Grey Matters tool as well as the Google search engine. Search results were reviewed with patient partners, members of the National Advisory Group for the 'Youth in Pain' project, and SKIP Network Hub Leads. The published evidence used to inform this toolkit can be found in the [references section](#).*

*Grey matters: A tool for searching health-related grey literature. Ottawa: CADTH; 2023. <https://greymatters.cadth.ca>. Accessed 2023-04-01

What is Quality Pain Management?

Pain management aims to alleviate or reduce the pain experience using a variety of strategies for prevention, assessment, and treatment of pain. Quality pain management must be:

- Accessible
- Consistent
- Equitable
- Evidence-informed
- Individualized to the unique needs of children and families
- Multimodal
- Safe and Effective

[CAN/HSO 13200:2023 Pediatric Pain Management standard, 2023](#)

Who created this toolkit?

Solutions for Kids in Pain (SKIP)

SKIP is a knowledge mobilization network funded by the Networks of Centres of Excellence (NCE), based at Dalhousie University, and co-led by Children's Healthcare Canada.

SKIP seeks to bridge the gap between current treatment practices and available evidence-based solutions for children's pain in Canadian health institutions. With resources like this toolkit, SKIP's aim is to improve children's pain management by mobilizing evidence-based solutions through coordination and collaboration.

SKIP brings together Canada's world-renowned pediatric pain research community, front-line knowledge user organizations, and patients and caregivers. SKIP capitalizes on the engagement of its 6 hubs (IWK Health Centre, SickKids, Stollery Children's Hospital, Children's Healthcare Canada, CHU Sainte-Justine, University of Calgary), over 200 partners, including patients and caregivers to collaborate on knowledge mobilization activities.





Opioids and Pain in Youth: A toolkit for health professionals

General Resources

Overview

When a child or youth has pain, their pain should be managed using a multimodal, biopsychosocial approach employing physical, psychological, and pharmacologic modalities.

Pharmacologic therapies should begin with non-opioid analgesia whenever possible. For various types of pain adding opioids may sometimes be necessary – this includes moderate to severe short-term pain, or long-term pain.

This toolkit section includes general resources about managing children's and youths' pain, and general information about opioid safety.

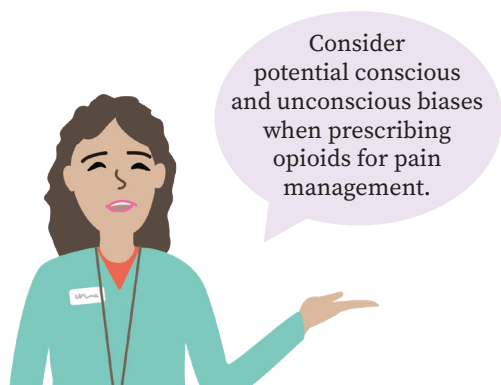
When opioids are prescribed and administered for pain, there are several considerations to ensure safer therapeutic use:

- **Treat pain in a multimodal fashion**, combining physical, psychological, and pharmacologic interventions to create the best pain-relief plan for each child/youth
- **Physical** (e.g., heat, ice, splinting) **and psychological** (e.g., distraction) treatments should be used for most children and youth with acute pain
- **Chronic pain is best managed using combined treatment modalities** (e.g., physiotherapy, occupational therapy), non-opioid medications, and counselling, and infrequently requires opioid use
- **Non-opioid pharmacologic treatments** (e.g., acetaminophen, ibuprofen, other NSAIDs) should be used before or at the same time as opioid options are prescribed
- **When needed, opioid analgesia should be combined with non-opioid pharmacologic medications** to ensure that only the lowest dose of opioids is used
- **Opioid analgesia should be used for as short of a time as possible.** As soon as a child or youth's pain is better managed, they should be transitioned to an alternative non-opioid treatment
- **Children, youth and their families should always be counselled about the potential side effects** of opioid medications when prescribing or administering opioid analgesia
- **Potential for higher-risk opioid use** should be assessed using a validated risk assessment tool before prescribing or administering opioid analgesia
- **Children and youth who are prescribed opioids for a longer term should be educated** about the risks of physical and psychological dependence, as well as withdrawal

Opioids should be prescribed and administered in a culturally safe way.

Also consider risks for opioid use disorder, higher-risk opioid use, child age, and pre-existing mental health diagnoses.

However, even when these risks are present, **children with severe pain have the right to adequate pain management, which may include the use of opioids.** Children and their families should share the decision-making about whether opioid analgesia is appropriate for them with their healthcare provider.



“Children’s pain deserves attention and respect. Ignoring and under-treating their pain has important short and long-term effects for both the child’s well-being as well as their ability to get proper healthcare. Dispelling myths and sharing facts through easy-to-use toolkits like this can help make providing better pain care simpler for care providers.”

~ Dr. Samina Ali, Physician

Implicit bias and stigma in healthcare are significant contributors to health inequalities, poor treatment outcomes and avoidance of care.

To ensure equitable access to quality pain management, it is essential to be self-reflective and consider the conscious and unconscious perceptions and attitudes that drive effective and safe opioid prescribing for pain in youth.

There is a need for additional research and resources to address pain- and opioid-related stigma in youth with acute and chronic pain. The following resources contain general information on the role of stigma in the health system. The resources also include recommended ways of communicating about opioid use in compassionate, safe, and non-stigmatizing ways.

Stigma harms patients and considerations are needed for designing and delivering safe and equitable care.

For example, terms such as ‘medical/non-medical substance use’, ‘substance use’, ‘substance use disorder’ (when medically accurate), or ‘higher-risk opioid use’ are alternative non-stigmatizing terms as compared with, ‘substance abuse’, ‘substance misuse’, ‘substance habit’ or ‘recreational substance use.’

Substance Use Spectrum, Health Canada, 2022.

[Visit website](#)

Stigma & Implicit Bias Toolkit, IPRO NQIC, a Network of Quality Improvement and Innovation Contractor for the U.S. Department of Health and Human Services (HHS). 2020.

[View PDF](#)

Addressing Stigma: Towards a More Inclusive Health System – What We Heard Report, Public Health Agency of Canada. 2019

[Visit website](#)

Communicating about Substance Use in Compassionate, Safe and Non-Stigmatizing Ways - A Resource for Canadian Health Professional Organizations and their Membership, Public Health Agency of Canada. 2019.

[Visit website](#)

Stigma and Opioid Use

Substance Use Spectrum

Health Canada, 2022.

[Visit website](#)

Stigma & Implicit Bias Toolkit

IPRO NQIIC, a Network of Quality Improvement and Innovation Contractor for the U.S. Department of Health and Human Services (HHS). 2020.

[View PDF](#)

Addressing Stigma: Towards a More Inclusive Health System – What We Heard Report

Public Health Agency of Canada. 2019

[Visit website](#)

Communicating about Substance Use in Compassionate, Safe and Non-Stigmatizing Ways - A Resource for Canadian Health Professional Organizations and their Membership

Public Health Agency of Canada. 2019.

[Visit website](#)

Statements and Guidelines

The Pediatric Pain Management Standard

CAN/HSO 13200:2023 Pediatric Pain Management Standard

Health Standards Organization. 2023

[Access national standard](#)

Best practices in pain assessment and management for children

Trottier ED, et al. Paediatrics & Child Health. Canadian Paediatric Society. 2022

[View position statement](#)

The use of oral opioids to control children's pain in the post-codeine era

Reider MJ & Jong G. Paediatrics & Child Health. Canadian Paediatric Society. 2021

[View position statement](#)

Non-prescription pain relief products containing codeine are not recommended for use in people under 18 years of age

Government of Canada. 2020

[View public statement](#)

Summary Safety Review - Hydrocodone-containing products - Assessing the Risk of Serious Breathing Problems (respiratory depression) in Children and Adolescents

Government of Canada. 2016

[View public statement](#)

Review Articles

Opioid Overdose in the Hospital Setting: A Systematic Review

Danovitch I, et al. Journal of Addiction Medicine. 2020

[Access article](#) *subscription-based access

Morphine or hydromorphone: which should be preferred? A systematic review

Spénard S, et al. Archives of Disease in Childhood. 2020

[Access article](#) *subscription-based access

Health Professional Resources

Pain treatment bottom line recommendations

Bottom line recommendation for timely and effective multi-modal pain care including pharmacologic treatment for acute pain in pediatric patients.

TREKK and EMSC Innovation and Improvement Centre. 2022

[View PDF](#)

Opioids and Children's Pain

Online infographic that provides information, guidelines, and tools to safely manage opioid prescribing in pediatric patients.

TREKK. 2021

[Visit website](#)

Prevention and Treatment of Opioid and Benzodiazepine Withdrawal

Sample guideline on how to wean pediatric patients off opioids and benzodiazepines who are at risk of developing withdrawal symptoms.

SickKids. 2018

[View PDF](#)

Pediatric Acute Care Opioid Weaning Guidelines UCSF Benioff Children's Hospital.

Summary table outlining general guidelines for opioid weaning in pediatric patients.

ChildKind International. 2018

[Visit website](#)

Youth and Family Resources

What are Opioids?

A resource for caregivers offering information and guidance on navigating the use of prescribed opioids to treat moderate to severe pain in children.

TREKK. 2021

[View website](#)

Opioids don't have to be scary!

A resource for youth offering information and guidance on navigating the use of prescribed opioids to treat moderate to severe pain.

TREKK. 2021

[View website](#)

So you have been prescribed an opioid?

A resource for youth explaining how to safely take prescribed opioid medication, dispelling misconceptions, and tips for communication with healthcare providers.

Reiter E & Ali S. Solutions for Kids in Pain. 2021

[View PDF](#)

Question Opioids: A video series

This is a video series aimed at youth and adults to empower them with important information about starting opioids.

The Institute for Safe Medication Practices Canada. 2017

[Watch videos](#)

Opioids for pain

Learn why opioids such as morphine, fentanyl and codeine are prescribed and how they help manage pain in children.

About Kids Health. SickKids. 2014

[Visit website](#)

Safe opioid checklist for kids

A safety checklist to minimize the risks linked with opioid use.

About Kids Health. SickKids. No Date

[View PDF](#)

Health Canada advises Canadians to exercise caution when taking gabapentin or pregabalin with opioids

Government of Canada. 2019

[View public statement](#)

Patients as the last slice of swiss cheese

He T & Ho C. Hospital News. Institute for Safe Medication Practices Canada. 2017

[View PDF](#)

Summary Safety Review - Codeine-containing products - Further Assessing the Risk of Serious Breathing Problems in Children and Adolescents

Government of Canada. 2016

[View public statement](#)

Advancing Opioid Safety for Children in Hospitals

The Institute for Safe Medication Practices Canada. 2014

[Visit website](#) (multiple languages)

Recognition and Management of Iatrogenically Induced Opioid Dependence and Withdrawal in Children

Galinken J, et al.. Pediatrics. 2014

[Access article](#)

Premedication for endotracheal intubation in the newborn infant

Barrington KJ. Canadian Paediatric Society. 2011

[View position statement](#)

Opioids BC Children's Hospital.

[View PDF](#)

Weaning Algorithm for Combination Use of Opioids and Benzodiazepines

SickKids. ChildKind International. No Date

[Visit website](#)

Additional Resources

Codeine

Government of Canada. 2023

[Visit website](#)

5 Questions to ask about my medicines

Institute for Safe Medication Practices Canada. 2021

[Visit website](#)

Talking to Your Health Care Provider About Opioids (fact sheet)

Government of Canada. 2020

[Visit website](#)

[View References](#)



Opioids and Pain in Youth: A toolkit for health professionals

Acute Pain

Overview

Acute pain often accompanies injury or illness in childhood. When a child or youth has acute pain, their pain should be first managed with physical and psychological strategies, coupled with non-opioid analgesia whenever possible.

For moderate or severe pain, however, the short-term use of opioids may sometimes be necessary. Judicious use of opioids can help reduce children's discomfort, keep them comfortable during medical examination and diagnostic evaluation, improve their satisfaction with care, and prevent long-term negative consequences of untreated pain.

This toolkit section includes resources for safer and responsible prescribing and administering opioids for acute pain in children and youth.

When opioids are prescribed and administered for acute pain, there are several considerations to ensure safer therapeutic use:

- **Physical** (e.g., heat, ice, splinting) and **psychological** (e.g., distraction) treatments should be used for most children and youth with acute pain
- **Non-opioid medications** (e.g., acetaminophen, ibuprofen, other NSAIDs) should be used as first-line pharmacologic therapies
- **Ibuprofen and acetaminophen can be combined for relief of moderate pain**; this combination provides relief similar to many oral opioid medications, without opioid side effects, and may alleviate the need to prescribe opioids
- **Opioids should be combined with a non-opioid medication** to reduce the total amount of opioid needed and lessen the occurrence of adverse events.
- **Three days (or 5-10 doses) of an oral opioid medication** is almost always enough to manage acute injuries at home
- **Children and their families should always be counselled** about the potential side effects of opioid medications
- **Opioid risk assessment should be performed for all families** receiving a prescription for opioids, using a validated risk assessment tool

Opioids should be prescribed and administered in a culturally safe way.

Also consider risks for opioid use disorder, higher-risk opioid use, child age, and pre-existing mental health diagnoses.

However, even when these risks are present, **children with severe pain have the right to adequate pain management, which may include the use of opioids.** Children and their families should share the decision-making about whether opioid analgesia is appropriate for them with their healthcare provider.

“Opioids have their place and are definitely a very powerful resource in caring for youth with acute and chronic pain. It’s just that there has to be more knowledge, more education for physicians and for patients.”

~ Youth Patient Partner

Definition of acute pain:

Pain that is recent in onset and typically self-limiting, with a duration that typically ranges from a few hours to no more than 3 months (depending on the anticipated duration of the healing process) related to tissue injury, a medical procedure, and/or following surgery, acute illness, trauma, or other injuries. Children can experience acute and chronic pain concurrently.

[CAN/HSO 13200:2023 Pediatric Pain Management Standard, 2023](#)



Statements and Guidelines

Evidence-Based Guidelines for Prehospital Pain Management: Recommendations

Lindbeck G, et al. Prehospital Emergency Care. 2023

[View recommendations](#)

Acute complications in children with sickle cell disease: Prevention and management

Beck CE, et al. Paediatrics & Child Health. Canadian Paediatric Society. 2022

[View position statement](#)

Approaching acute pain in emergency settings; European Society for Emergency Medicine (EUSEM) guidelines—part 2: management and recommendations

Hachimi-Idrissi S, et al. Internal and Emergency Medicine. 2020

[View recommendations](#)

*subscription-based access

Managing pain and distress in children undergoing brief diagnostic and therapeutic procedures

Trottier ED, et al. Paediatrics & Child Health. Canadian Paediatric Society. 2019

[View position statement](#)

Practice guideline update summary: Acute treatment of migraine in children and adolescents

Oskoui M, et al. Neurology. 2019

[View practice guideline](#)

Opioid prescribing for acute pain: care for people 15 years of age and older

Health Quality Ontario. 2018

[View PDF](#)

Review Articles

Responsible and safe use of opioids in children and adolescents in the emergency department

Ali S & Drendel A. Pediatric Emergency Medicine Practice. 2023

[Access article](#) *subscription-based access

Health Professional Resources

Assessing and Treating Acute Pain in Children with Sickle Cell Disease

Guidance for emergency department staff, based on a Canadian Paediatric Society Position Statement CHU Sainte-Justine. 2023.

[View PDF](#)

Intranasal Fentanyl

CHU Sainte-Justine. 2020

Guide clinique destiné aux professionnels de la santé sur l'utilisation du fentanyl intranasal lors des interventions médicales

[Visit website](#)

Youth and Family Resources

Analésiques opioïdes à courte action: informations pour les patients et les familles

CHU Sainte-Justine. 2021

This brochure provides additional information on the use of short-acting opioids to help reduce pain while minimizing associated side effects and risks.

[View PDF](#)

Short-acting Opioid Analgesics: information for patients and families

CHU Sainte-Justine. 2021

This brochure provides additional information on how to use prescription opioids to help reduce pain while minimizing associated side effects and risks.

[View PDF](#)

Acute pain: How to treat and manage in infants and toddlers

About Kids Health. SickKids. 2019

Learn about the 3P approach to pain management for infant and toddler's acute pain.

[Visit website](#) (multiple languages)

Acute pain: How to treat and manage in young children

About Kids Health. SickKids. 2019

Learn about the 3P approach to pain management for children's acute pain.

[Visit website](#) (multiple languages)

Acute pain: How to treat and manage in older children

About Kids Health. SickKids. 2019

Learn about the 3P approach to pain management for older children's pain (age six to 12).

[Visit website](#) (multiple languages)

Acute pain: How to treat and manage in teens

About Kids Health. SickKids. 2019

Learn about the 3P approach to pain management for pain in teens.

[Visit website](#) (multiple languages)

Additional Resources

The Effectiveness of Ketamine Compared to Opioid Analgesics for management of acute pain in Children in The Emergency Department: systematic Review

Alanazi E. American Journal of Emergency Medicine. 2022

[Access article](#)

*subscription-based access

The effectiveness and safety of paediatric prehospital pain management: a systematic review

Abebe Y, et al. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine. 2021

[Access article](#)

Influence of ketamine versus fentanyl on pain relief for pediatric orthopedic emergencies: A meta-analysis of randomized controlled studies

Qui J & Xie M. Medicine. 2021.

[Access article](#)

Medications containing low-dose codeine for the treatment of pain and coughs

CADTH. 2021

[View PDF](#)

Oral non-steroidal anti-inflammatory drugs versus other oral analgesic agents for acute soft tissue injury

Jones P, et al. Cochrane Database of Systematic Reviews. 2020

[Access article](#)

Efficacy of ibuprofen in musculoskeletal post-traumatic pain in children: A systematic review

Parri N & Lazzeri S. PLoS ONE. 2020

[Access article](#)

Codeine for Pediatric Patients with Acute Pain: A Review of Clinical Effectiveness

CADTH. 2019

[View PDF](#)

Revisiting established medicines: An overview of systematic reviews about ibuprofen and paracetamol for treating pain in children

Radman M, et al. European Journal of Pain. 2019

[Access article](#)

Treatment of pain with intranasal fentanyl in pediatric patients in an acute care setting: a systematic review

Setlur A & Friedland H. Pain Management. 2018

[Access article](#) *subscription-based access

How Safe Are Common Analgesics for the Treatment of Acute Pain for Children? A Systematic Review

Hartling L, et al. Pain and Research Management. 2016

[Access article](#)

Intranasal fentanyl for the management of acute pain in children

Murphy A, et al. Cochrane Database Systematic Reviews. 2014

[Access article](#)



Opioids and Pain in Youth: A toolkit for health professionals

Perioperative Pain

Overview

When a child or youth needs surgery, they will almost always be administered opioids during the surgery to manage the pain associated with their procedure. Almost 80% of these patients experience postoperative pain, with 80% of them reporting moderate to severe pain*.

*Boric et al. 2017. <https://doi.org/10.1111/pan.13203>

As such, children and youth may require opioids after surgery for their postoperative pain. Judicious use of opioids can help reduce discomfort, shorten time of hospitalization, lower hospital costs, and increase patient satisfaction. In contrast, inadequate postoperative pain treatment is associated with delayed wound healing and the development of chronic pain in the future.

This toolkit section includes resources for safely and responsibly prescribing and administering opioids for perioperative pain in children and youth.

When opioids are prescribed and administered for postoperative pain, there are several considerations to ensure safer therapeutic use:

- **Inadequate management of postoperative pain** may lead to development of complications and prolonged recovery time, with increased morbidity and mortality
- **Physical** (e.g., ice, splinting) and **psychological** (e.g., music therapy, child life specialist involvement) treatments should be used for all children and youth with post-operative pain
- **Non-opioid medications** (e.g., ketorolac, diclofenac, other NSAIDs) should be used as first-line pharmacologic therapies
- **Systemic opioid prescribing can be decreased** with judicious use of regional anesthesia, for certain procedures and surgeries
- **Opioid analgesia (both oral and parenteral)** should be combined with non-opioid medications such as ketorolac or acetaminophen to ensure that only the lowest dose of opioids is used
- **Opioid analgesia should be used for as short of a time as possible.** As soon as a child's pain is better managed, they should be transitioned to an alternative non-opioid pharmacologic treatment
- **Children and their families should always be counselled** about the potential side effects of opioid medications
- **Potential risks for higher-risk opioid use** should be assessed using a validated risk assessment tool before prescribing or administering opioid analgesia

Opioids should be prescribed and administered in a culturally safe way.

Also consider risks for opioid use disorder, higher-risk opioid use, child age, and pre-existing mental health diagnoses.

However, even when these risks are present, **children with severe pain have the right to adequate pain management, which may include the use of opioids.** Children and their families should share the decision-making about whether opioid analgesia is appropriate for them with their healthcare provider.

Definition of perioperative pain:

Pain related to or that occurs around the time of a surgical procedure. Effectively managing perioperative pain is essential for optimizing pediatric surgical health outcomes and preventing the development of chronic pain after surgery.

Birnie et al. 2022.

<https://www.tandfonline.com/doi/full/10.1080/24740527.2022.2038031>

“Acute pain after surgery is common, ranging from moderate to severe, and often goes undertreated. This can lead to delayed recovery, longer hospital stays, and is linked to chronic post-surgical pain, a devastating and expensive public health concern. Post-surgical pain should be treated with non-opioid medications, alongside physical and psychological strategies – but when these approaches fall short in providing comfort, children should receive opioids as a critical component of pain care. Hopefully this toolkit will help in the quest to provide proper pain management for children. It doesn’t have to hurt!”

~ Dr. Fiona Campbell, Physician



Statements and Guidelines

Clinical practice guidelines for pain management after tonsillectomy: Systematic quality appraisal using the AGREE II instrument

Barrette L-X, et al. International Journal of Pediatric Otorhinolaryngology. 2022

[View guideline](#) *subscription-based access

Guidelines for Opioid Prescribing in Children and Adolescents After Surgery: An Expert Panel Opinion

Kelley-Quon LI, et al. JAMA Surgery. 2021

[View guideline](#) *subscription-based access

PROSPECT guideline for tonsillectomy: systematic review and procedure-specific postoperative pain management recommendations

Aldamluji N, et al. Anaesthesia. 2020

[View guideline](#)

Revision of expert panel's guidelines on postoperative pain management

Aubrun F, et al. Anaesthesia Critical Care & Pain Medicine. 2019

[View recommendations](#)

Postoperative pain management in children: Guidance from the pain committee of the European Society for Paediatric Anaesthesiology (ESPA Pain Management Ladder Initiative)

Vittinghof M, et al. Pediatric Anesthesia. 2018.

[View recommendations](#)

Review Articles

Assessment and management of pain in pediatric otolaryngology

Rodriguez M. International Journal of Pediatric Otorhinolaryngology. 2016

[Access article](#) *subscription-based access

Strategies for preventing side effects of systemic opioid in postoperative pediatric patients

Jitpakdee T & Mande S. Pediatric Anesthesia. 2014

[Access article](#) *subscription-based access

Opioid-sparing effects of perioperative paracetamol and nonsteroidal anti-inflammatory drugs (NSAIDs) in children

Wong I, et al. Pediatric Anesthesia. 2013

[Access article](#)

Youth and Family Resources

L'analgesie contrôlée par le patient (ACP) pour le soulagement de la douleur

CHU Sainte-Justine. 2019

Découvrez comment l'analgesie contrôlée par le patient (ACP) et l'analgesie contrôlée par le personnel infirmier (ACPI) peuvent soulager votre enfant de douleurs graves de courte durée à l'hôpital.

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Opioids for Pain after Surgery

Institute For Safe Medication Practices. 2018

Answers to common questions about opioids for pain after surgery.

[View PDF](#)

Les opioïdes pour la douleur après la chirurgie : réponses à vos questions

L'Institut pour la sécurité des médicaments. 2018

Answers to common questions about opioids for pain after surgery.

[View PDF](#)

Additional Resources

Prescription Patterns, Associated Factors, and Outcomes of Opioids for Operative Foot and Ankle Fractures: A Systematic Review

Badin D, et al. Clinical Orthopaedics and Related Research. 2022

[Access article](#) *subscription-based access

Opioid Prescription and Usage in Adolescents Undergoing Orthopaedic Surgery in the United States: A Systematic Review

Dautremont E, et al. JB&JS Reviews. 2017

[Access article](#) *subscription-based access

How to replace codeine after tonsillectomy in children under 12 years of age? Guidelines of the French Oto-Rhino-Laryngology – Head and Neck Surgery Society (SFORL)

Constant I, et al. European Annals of Otorhinolaryngology, Head and Neck Diseases. 2014

[Access article](#)

A Meta-Analysis of the Use of Nonsteroidal Anti-inflammatory Drugs for Pediatric Postoperative Pain

Michelet D, et al. Anesthesia & Analgesia. 2012

[Access article](#)



Opioids and Pain in Youth: A toolkit for health professionals

Chronic Pain

Overview

When a child or youth has chronic pain, their care should include a multimodal, biopsychosocial approach employing physical, psychological, occupational, and pharmacologic modalities*.

[Guidelines on the management of chronic pain in children. Geneva: World Health Organization; 2020. License: CC BY-NC-SA 3.0 IGO.](#)

The primary focus of treatment in chronic pain is functional improvement and pain reduction. Whenever possible, pharmacologic therapies should consist of non-opioid analgesia. For some types of chronic pain adding opioids may be necessary.

This toolkit section includes resources for managing children and youths' chronic pain, including when and how to introduce opioids for specific chronic pain conditions in a safer manner.



When opioids are prescribed and administered for chronic pain, there are several considerations to ensure safer therapeutic use:

- **Children and youth with chronic pain** should receive an individualized and multidisciplinary approach to their care
- **Physical** (e.g., physical therapy) and **psychological** (e.g., biofeedback, distraction) treatments should be used for all children and youth with chronic pain
- **Non-opioid medications** can be considered as part of balanced multimodal pharmacotherapy to treat chronic pain in pediatric patients, simple analgesia (e.g., acetaminophen, NSAIDs), antidepressants, anticonvulsants, and topical treatments such as lidocaine patches
- **Opioids are rarely prescribed for chronic pain in the pediatric population**, due to the lack of evidence regarding its efficacy in chronic pain as well as their adverse effects profile
- **For the rare circumstances when opioids are indicated for chronic pain**, they should be trialed at the lowest effective dose, titrated over time, linked to improvements in function (not pain reduction alone), and used for the shortest period of time possible
- **Opioids should be prescribed** by a single healthcare professional with close monitoring and follow up
- **Any healthcare professional overseeing the use of opioids** for chronic pain should have the knowledge and skills to assess pain and function; appropriately prescribe, monitor, taper, and discontinue opioids; and recognize and treat opioid use disorder
- **Children and their families should always be counselled** about the potential side effects of opioid medications
- **Potential risk for higher-risk opioid use should be assessed** using a validated risk assessment tool before prescribing or administering opioid analgesia
- **Children and youth who are prescribed opioids for chronic pain should be educated** about the risks of physical and psychological dependence, as well as withdrawal

Opioids should be prescribed and administered in a culturally safe way.

Also consider risks for opioid use disorder, higher-risk opioid use, child age, and pre-existing mental health diagnoses.

However, even when these risks are present, **children with severe chronic pain have the right to adequate pain management, which may include the use of opioids.** Children and their families should share the decision-making about whether opioid analgesia is appropriate for them with their healthcare provider.

Adverse childhood experiences (abuse, neglect, and household dysfunction occurring before the age of 18) have the potential to impact a youth's perception and expression of pain, and its association with chronic pain.

If there is a need for long-term opioid use for chronic pain, establish a clear plan that identifies a single prescriber (only one person) and includes regular follow-up (monitoring symptoms and function), communication and record keeping.

Definition of chronic pain:

Pain that persists or recurs for longer than three months. The World Health Organization's International Classification of Disease (ICD-11) considers chronic pain as a disease in its own right (i.e., chronic primary pain) or secondary to an underlying disease (i.e., chronic secondary pain). It can include chronic cancer-related pain, chronic neuropathic pain, chronic secondary visceral pain, chronic post-traumatic and post-surgical pain, chronic secondary headache and orofacial pain, and chronic secondary musculoskeletal pain. Children can experience acute and chronic pain concurrently.

[CAN/HSO 13200:2023 Pediatric Pain Management Standard, 2023](#)

“Chronic pain is a complex phenomenon which can have a devastating impact on the quality of life for children and youth, and their families. Health professionals can help young people with chronic pain find ways to cope with their symptoms and allow them to lead rich, meaningful lives. A holistic approach is essential to achieve these goals. Although opioids may be considered for some types of chronic pain in children, their role is limited due to their potential for harm, and limited efficacy in the setting of chronic pain. However, in rare situations when opioids are indicated for chronic pain, a trial of opioids should be considered only when a combination of non-opioid pharmacotherapy and physical and psychological strategies have provided inadequate symptom control.”

~ Dr. Marie-Joëlle Doré-Bergeron, Physician

Statements and Guidelines

Guidelines on the management of chronic pain in children

World Health Organization. 2020

[View practice guideline](#)

Opioid prescribing for chronic pain: care for people 15 years of age and older

Health Quality Ontario. 2018

[View quality standard](#)

Pharmacological Management of Chronic Neuropathic Pain: Revised Consensus Statement from the Canadian Pain Society

Moulin DE, et al. Pain Research Management. 2014

[Access consensus statement](#)

Review Articles

Pharmacological Interventions for Chronic Pain in Pediatric Patients: A Review of Guidelines

Canada's Drug and Health Technology Agency. 2020

[View guidelines](#)

Management of chronic pain in children and young people: summary

Scottish government. 2018

[Access article](#)

Health Professional Resources

Pre-Surgical Screening Tools and Risk Factors for Chronic Post-Surgical Pain: A Summary

Canada's Drug and Health Technology Agency. 2022.

This resource helps identify evidence-based risk factors and screening tools for chronic post-surgical pain, allowing for pain management to be planned and initiated before surgery and for more appropriate and timely pain management during the peri-surgical and post-surgical periods.

[Access article](#)

Canadian guideline for safe and effective use of opioids for chronic noncancer pain. Clinical summary for family physicians. Part 2: special populations

Kahan M, et al. Canadian Family Physician. 2011. Provides a practical clinical summary of the Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain, developed by the National Opioid Use Guideline Group.

[View practice guideline](#)

Youth and Family Resources

Power Over Pain Portal for Youth

The Hospital for Sick Children. 2023

The Power Over Pain Portal provides youth with chronic pain access to a range of free resources, courses and peer support. The portal was co-designed by Canadian youth living with chronic pain.

[Access Portal](#)

Longer-lasting pain: how to treat and manage in infants and toddlers

About Kids Health. SickKids. 2019

Managing ongoing pain in infancy is vital for long-term outcomes; the 3P approach includes psychological, physical, and pharmacologic methods.

[View website](#)

Chronic pain: How to treat and manage in young children

About Kids Health. SickKids. 2019

Discover how to use the 3P approach to manage chronic pain in a young child.

[Visit website](#)

Chronic pain: How to treat and manage in older children

About Kids Health. SickKids. 2019

Find out how to use the 3P approach to manage chronic pain in older children.

[Visit website](#)

Chronic pain: How to treat and manage in teens

About Kids Health. SickKids. 2019

Find out how the 3P approach to pain management can help your teen manage their chronic pain.

[Visit website](#)

Additional Resources

Hydromorphone for cancer pain

Li Y, et al. Cochrane Database Systematic Review. 2021

[Access article](#)

Chronic pain: an update on burden, best practices, and new advances

Cohen S, et al. Lancet. 2021

[Access article](#) *subscription-based access

Pragmatic but flawed: the NICE guideline on chronic pain

Eccleston C, et al. Lancet. 2021

[Access article](#) *subscription-based access

Opioids for chronic non-cancer pain in children and adolescents

Cooper TE, et al. Cochrane Database Systematic Review. 2017

[Access article](#)

Opioids for cancer-related pain in children and adolescents

Wiffen, P., et al. Cochrane Database Systematic Review. 2017

[Access article](#)

Long-term neuropsychological effects of opioid use in children: a descriptive literature review

Mahendra V, et al. Pain Physician. 2014

[Access article](#)

Opioid tapering in children: a review of the literature

Fisher D. ACCN Advanced Critical Care. 2010

[Access article](#) *subscription-based access

Tolerance and Withdrawal From Prolonged Opioid Use in Critically Ill Children

Anand K.J.S., et al., Pediatrics. 2010

[Access article](#)

[View References](#)



Opioids and Pain in Youth: A toolkit for health professionals

Acute Dental Pain

Overview

When a child or youth needs dental treatment, they may sometimes require opioids afterwards. When 60-95% of opioids prescribed to children and youth for pain related to a dental procedure remain unused*, this creates a large amount of medication available for potential non-indicated usage.

*Dyson et al. 2022. <https://doi.org/10.1002/emp2.12822>

Dentists have an opportunity to reduce non-indicated opioid use by decreasing the quantity of opioids they prescribe. Dental treatment-related pain should be managed with non-opioid analgesia whenever possible. When needed for moderate to severe dental pain, judicious use of opioids can help reduce children's discomfort, improve their satisfaction with care, and prevent long-term negative consequences of untreated pain.

This toolkit section includes resources for safer and responsible prescribing and administering opioids for acute dental pain in children and youth.

When opioids are prescribed and administered for acute dental pain, there are several considerations to ensure safer therapeutic use:

- **Physical** (e.g., salt water rinses, cold drinks) **and psychological** (e.g., distraction) treatments should be used for all children and youth with acute dental pain
- **Non-opioid medications** (e.g., acetaminophen, ibuprofen, other NSAIDs) should be used as first-line pharmacologic therapies
- **Ibuprofen and acetaminophen can be combined for relief of moderate pain**; this combination provides relief similar to many oral opioid medications, without opioid side effects, and may alleviate the need to prescribe opioids
- **Opioids should be combined with a non-opioid medication** to reduce the total amount of opioid needed and lessen the occurrence of adverse events
- **Three days (or 5-10 doses) of an oral opioid medication** is almost always enough to manage acute dental pain at home
- **Indicate the quantity of opioid doses** on the prescription, and note "no refills"
- **Children and their families should always be counselled** about the potential side effects of opioid medications
- **Opioid risk assessment should be performed for all families** receiving a prescription for opioids, using a validated risk assessment tool

Opioids should be prescribed and administered in a culturally safe way.

Also consider risks for opioid use disorder, higher-risk opioid use, child age, and pre-existing mental health diagnoses.

However, even when these risks are present, **children with severe pain have the right to adequate pain management, which may include the use of opioids.**

Children and their families should share the decision-making about whether opioid analgesia is appropriate for them with their healthcare provider.

“The dental profession recognizes the importance of proper pain management for oral health issues. But we also recognize the debilitating impact that higher-risk use of analgesics such as opioids can have on individuals, families, society, and healthcare systems. Oral healthcare providers have an obligation to ensure appropriate pain management for their patients, while at the same time reduce opioid prescriptions in their practice through a focus on preventative care, multimodal pain relief strategies, effective and timely interventions, and the use of non-opioid analgesics.”

~ Public Health Dentist



Statements and Guidelines

Analgesics for Surgical Third Molar Extraction: Clinical Effectiveness and Guidelines

Seal K & Wright M-D. CADTH Rapid Response Report: Summary of Abstracts. 2018

[View clinical guidelines](#)

Health Professional Resources

Evidence-based clinical practice guideline for the pharmacologic management of acute dental pain in children. Carrasco-Labra, et al. The Journal of American Dental Association. 2023

Provides evidence-based guidelines for oral healthcare providers for the management of acute dental pain in children under 12 years of age following the extraction of 1 or more teeth (simple and surgical) and the temporary management of toothache when treatment is not immediately available.

[Access article](#)

Pain Management in Infants, Children, Adolescents, and Individuals with Special Health Care Needs

American Academy of Pediatric Dentistry, The Reference Manual of Pediatric Dentistry. 2022
This statement provides current best practices for pediatric pain management resulting from dental/orofacial injury, infection, and dental procedures.

[View PDF](#)

Opioids and Children and Adolescents: Information for Oral Health Professionals

Barzel R & Holt K. National Maternal and Child Oral Health Resource Center. 2022

This resource provides information on recent research, best practice and tips for managing acute oral pain.

[View PDF](#)

Pain Relief without Opioids. Teens, wisdom teeth, and opioids

Canadian Dental Association. CDA Essentials. 2017
Provides information for health professionals on the safe and effective use of opioids following third molar surgery.

[Access article](#)

Youth and Family Resources

Managing pain after wisdom teeth removal: your questions answered

ISMP. 2019

Answers to common questions related to managing and monitoring pain after wisdom teeth removal.

[View PDF](#)

Additional Resources

Chairside Pain and Management Discussion: Acute Pain and Opioid Prescriptions

American Dental Association, Chairside Pain Management Discussion. 2022

[View PDF](#)

First Use Non Opioids!

Ontario Pharmacy Evidence Network. Summit. 2021

[Watch video](#)

[View References](#)



Opioids and Pain in Youth: A toolkit for health professionals

Higher-Risk Opioid Use

Overview

Almost 15% of families report living with a family member who has a substance use disorder*, which has implications for the management of children's pain.

*Jun et al. 2021. <https://doi.org/10.1093/pch/pxz162>
Hadland et al. 2021. <https://doi.org/10.1111/add.15487>

Screening children and their families for higher-risk opioid use and opioid use disorder (OUD) prior to prescribing opioids can help identify at-risk families for treatment referral and improve safety counselling regarding medication use at home. Further, prescribing or providing a take-home naloxone kit provides an opportunity to discuss harm reduction with families and children/youth who may be at risk for adverse outcomes such as overdose.

This toolkit section includes resources about screening for and treating higher-risk opioid use in children and youth and OUD risk assessment.

Recommendations for screening or treating children and youth for higher-risk opioid use or opioid use disorder (OUD) include:

- **Take time to provide thorough discharge instructions and education** when sending a family home with a prescription for therapeutic opioids; this includes safe storage, side effects, and safe disposal
- When treating a child/youth who reveals a personal or family history of higher risk opioid use or an opioid use disorder, **consider providing or prescribing a naloxone take-home kit**
- When dispensing opioids for a child/youth (or their caregiver) who has an OUD, **risk-mitigating options** include pharmacy dispensing of partial prescriptions, involvement of another caregiver for dispensing of medications, and closer follow-up for signs of higher risk use
- **All children and youth should be screened for OUD** and other substance use disorders, using a validated tool such as [S2BI](#) or [BSTAD](#)
- When treating an OUD in a child/youth, the healthcare provider should **consult and/or refer to a substance use disorder specialist/team** with experience treating youth with OUD
- **Treatment plans for youth with OUD should be developmentally-appropriate**, youth centered, trauma-informed, culturally appropriate, confidential, promote recovery, and include family involvement when appropriate
- **When treating an OUD, the full range of available treatments should be considered** including pharmacologic treatments, non-pharmacologic interventions, and recovery-oriented services, with buprenorphine/naloxone recommended as first line treatment for moderate/severe opioid use disorder
- **Transitioning to methadone should be considered** in youth who do not respond to adequately dosed buprenorphine/naloxone

Opioids should be prescribed and administered in a culturally safe way.

Also consider risks for opioid use disorder, higher-risk opioid use, child age, and pre-existing mental health diagnoses.

However, even when these risks are present, **children with severe chronic pain have the right to adequate pain management, which may include the use of opioids.**

Children and their families should share the decision-making about whether opioid analgesia is appropriate for them with their healthcare provider.

Definitions:

Higher-risk use: is use that has a harmful and negative impact to a person, their family, friends and others

<https://www.canada.ca/content/dam/hc-sc/documents/services/publications/substance-use-spectrum-infographic/pub-eng.pdf>

Opioid use disorder (OUD): Misuse or use of prescription opioids (e.g. oxycodone, hydrocodone) and/or use of illegal opioids (e.g. heroin, carfentanil) resulting in significant impairment or distress; a DSM-5 diagnostic code. Opioid use disorder also includes the terms “opioid addiction”, “opioid abuse”, and “opioid dependence”.

Groenewald, CB. 2020. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6782052/>

“I would like to see prescribers pay as much attention to the pain kids have as they do to the potential complications of opioids. Families and patients need to be involved in weighing the risks and benefits of whether these medications should be taken, as opposed to being made to feel we are bad for trying to get medication that works.”

~ Natalie, Parent Partner



Statements and Guidelines

Prescription Opioids

Canadian Centre on Substance Use and Addiction. Canadian Drug Summary. 2022

[View summary](#)

CAEP Position Statement: Emergency department management of people with opioid use disorder

Koh J, et al. Canadian Journal of Emergency Medicine. 2020

[View position statement](#)

Treatment of opioid use disorder for youth: Guideline supplement.

British Columbia Centre on Substance Use. 2018

[View guideline](#)

Medication-Assisted Treatment of Adolescents With Opioid Use Disorders

Committee on Substance Use and Prevention. Pediatrics. 2016

[View policy statement](#)

Pain Management in Patients With Substance Use Disorders

Oliver J, et al. Journal of Addiction Nursing. 2012

[View practice guidelines](#)

Nonmedical Opioid Use After Short-term Therapeutic Exposure in Children: A Systematic Review

Ahrari M, et al. Pediatrics. 2021

[Access article](#)

Opioid use and misuse in children, adolescents, and young adults with cancer: a systematic review of the literature

Beauchemin M, et al. Supportive Care in Cancer. 2021

[Access article](#) *subscription-based access

Risk Assessment Tools

Screening Tools for Adolescent Substance Use

National Institute on Drug Abuse, Advancing Addiction Science. 2019

This website includes two online screening tools that providers can use to assess for substance use disorder risk among adolescents. These tools help providers quickly and easily introduce brief, evidence-based screenings into their clinical practices. This includes the Brief Screener for Tobacco, Alcohol, and other Drugs (BSTAD) and the Screening to Brief Interventions (S2BI) tools.

[Visit website](#)

[Access online BSTAD tool](#)

[Access online S2BI tool](#)

CRAFFT Tool

Center for Adolescent Behavioral Health Research (CABHRe). 2020

The CRAFFT is an efficient and effective health screening tool designed to identify substance use, substance-related riding/driving risk, and substance use disorder among youth ages 12-21.

[Visit website](#) (multiple languages)

Review Articles

Quantifying unused opioids following emergency and ambulatory care: A systematic review and meta-analysis

Dyson MP, et al. Journal of the American College of Emergency Physicians Open. 2022

[Access article](#)

Interventions to Reduce Opioid Use in Youth At-Risk and in Treatment for Substance Use Disorders: A Scoping Review

Narin SA, et al. Canadian Journal of Psychiatry. 2022

[Access article](#)

Youth and Family Resources

Parents like us. The Unofficial Survival Guide to Parenting a Young Person with a Substance Use Disorder

Foundry BC. 2021

This handbook is written by parents for parents, to let other parents know they are not alone. It includes information on the science of addiction, signs of problematic substance use, harm reduction strategies, and resources for staying connected, caring for yourself, and navigating the system.

[View PDF](#)

Opioids: what you and your friends need to know

Centre for Addiction and Mental Health. 2020

This resource is geared towards teens and answers common questions about prescription opioid use, danger signs of an opioid problem, and information on getting help if there are concerns about the safe use of prescription opioids.

[View PDF](#)

Let's talk opioids, including fentanyl. A parent's guide to understanding opioid use by youth

Drug free kids Canada. 2020

This guide answers parents' questions about opioids and what to know about the risks associated with their use

[View PDF](#)

Need help? Know that you are not alone. Parents' support hub

Drug free kids Canada. 2023

The Parent Support Hub is safe virtual space for parents, guardians and families to get guidance and support. It is a free service available 24/7 for anyone who is concerned about the use of substances by a young person in their life.

[Visit website](#)

Additional Resources

Opioid agonist treatment for people who are dependent on pharmaceutical opioids

Nielsen S, et al. Cochrane Database of Systematic Reviews. 2022

[Access article](#)

Risk Factors for Drug Overdose in Young People: A Systematic Review of the Literature

Lyons RM, et al. Journal of Child and Adolescent Psychopharmacology. 2019

[Access article](#)

Detoxification treatments for opiate dependent adolescents

Minozzi S, et al. Cochrane Database Systematic Review. 2014

[Access article](#)

References:

General Resources

Danovitch, I., Vanle, B., Van Groningen, N., Ishak, W., & Nuckols, T. (2020). Opioid Overdose in the Hospital Setting: A Systematic Review. *Journal of Addiction Medicine*, 14(1), 39–47. <https://doi.org/10.1097/ADM.0000000000000536>

Health Canada. (2016). Summary Safety Review—Hydrocodone-containing products—Assessing the risk of serious breathing problems (respiratory depression) in children and adolescents [Assessments]. Government of Canada. <https://www.canada.ca/en/health-canada/services/drugs-health-products/medeffect-canada/safety-reviews/summary-safety-review-hydrocodone-containing-products-assessing-risk-serious-breathing.html>

Health Canada. (2022). Substance use spectrum [Education and awareness]. Government of Canada. <https://www.canada.ca/en/health-canada/services/publications/healthy-living/substance-use-spectrum-infographic.html>

Health Standards Organization (HSO). (2023). Pediatric Pain Management (Organizational Competency CAN/HSO 13200 :2023). Health Standards Organization (HSO). <https://store.healthstandards.org/products/pediatric-pain-management-can-hso-13200-2023-e>

Health Canada. (2020). Non-prescription pain relief products containing codeine are not recommended for use in people under 18 years of age (Advisory RA-73635; Recalls, Advisories and Safety Alerts). Government of Canada. <https://recalls-rappels.canada.ca/en/alert-recall/non-prescription-pain-relief-products-containing-codeine-are-not-recommended-use>

Institute for Safe Medication Practices Canada (Director). (2017, July 24). Question opioids (1–8) [Youtube Video Series]. <https://www.youtube.com/playlist?list=PLvQDf5LHFSkMOI6nMFN9s2-yduDODTC2N>

IPRO Quality Innovation Network-Quality Improvement Organization. (2020). Stigma & implicit bias toolkit (12SOW-IPRO-QIN-TA-AA-21–470). Centers for Medicare & Medicaid Services, US Department of Health and Human Services. https://qi.ipro.org/wp-content/uploads/Stigma-Implicit-Bias-Toolkit_v1e-508c.pdf

Public Health Agency of Canada. (2020). Communicating about substance use in compassionate, safe and non-stigmatizing ways: A resource for Canadian health professional organizations and their membership. Government of Canada. <https://www.canada.ca/en/public-health/services/publications/healthy-living/communicating-about-substance-use-compassionate-safe-non-stigmatizing-ways-2019.html>

Reiter, E., & Ali, S. (2021, May). So you have been prescribed an opioid? [Infographic leaflet]. Stollery Children's Hospital/ University of Alberta. https://kidsinpain.ca/wp-content/uploads/2021/04/ED_opioids_19Apr2021_Final.pdf

Rieder, M. J., & Jong, G. 't. (2021). The use of oral opioids to control children's pain in the post-codeine era. *Paediatrics & Child Health*, 26(2), 120–127. <https://doi.org/10.1093/pch/pxaa133>

SickKids. (n.d.). Safe opioid checklist for kids [Pamphlet]. The Hospital for Sick Children. Retrieved July 5, 2023, from <https://assets.aboutkidshealth.ca/AKHAssets/OpioidSafetyChecklist.pdf>

SickKids. (2021). Prevention and treatment of opioid and benzodiazepine withdrawal (Medication Guideline, Treatment Guideline Version 2; Pain Education, Pain Treatment - Pharmacologic, Withdrawal Assessment). <https://childkindinternational.org/wp-content/uploads/Prevention-and-treatment-of-opioid-and-benzodiazepine-withdrawal.pdf>

SickKids. (2014, May 16). Opioids for pain. AboutKidsHealth. <https://www.aboutkidshealth.ca/443/article?contentid=2999&language=english>

Spénard, S., Gélinas, C., D. Trottier, E., Tremblay-Racine, F., & Kleiber, N. (2021). Morphine or hydromorphone: Which should be preferred? A systematic review. *Archives of Disease in Childhood*, 106(10), 1002–1009. <https://doi.org/10.1136/archdischild-2020-319059>

Tam, T. (2019). Addressing stigma: Towards a more inclusive health system [Education and awareness]. Public Health Agency of Canada, Government of Canada. <https://www.canada.ca/en/public-health/corporate/publications/chief-public-health-officer-reports-state-public-health-canada/addressing-stigma-toward-more-inclusive-health-system.html>

TREKK. (2021a). Clinician Practice Guideline: Opioids and children's pain [Infographic]. <http://opioidscinicians.trekk.ca>

TREKK. (2021b). Opioids don't have to be scary! [Infographic]. <http://opioidsyouth.trekk.ca>

TREKK. (2021c). What are opioids? [Infographic]. <http://opioidsparent.trekk.ca>

TREKK. (2022). Pain treatment bottom line recommendations (3.1). EMSC Innovation and Improvement Center. https://trekk.ca/system/assets/assets/attachments/588/original/2022-10-07PainTreatmentBLR_FINAL_v3.1.pdf?1665168885

Trottier, E. D., Ali, S., Doré-Bergeron, M.-J., & Chauvin-Kimoff, L. (2022). Best practices in pain assessment and management for children. *Paediatrics & Child Health*, 27(7), 429–437. <https://doi.org/10.1093/pch/pxac048>

UCSF Benioff Children's Hospital. (2018). Pediatric acute care opioid weaning guidelines (Pain Assessment, Pain Education, Pain Treatment - Pharmacologic, Withdrawal Assessment) [Education for Professionals, Medication Guideline, Treatment Guideline]. <https://childkindinternational.org/wp-content/uploads/Pediatric-Acute-Care-Opioid-Weaning-Guidelines.pdf>

General Resources - additional

Barrington, K. (2011). Premedication for endotracheal intubation in the newborn infant. *Paediatrics & Child Health*, 16(3), 159–171. <https://doi.org/10.1093/pch/16.3.159>

BC Children's Hospital. (n.d.). Opioids. BC Children's Hospital. Retrieved July 6, 2023, from http://www.cw.bc.ca/library/pdf/pamphlets/BCCH_Medication_Opioids.pdf

Galinkin, J., Koh, J. L., Committee on Drugs, Section On Anesthesiology and Pain Medicine, Frattarelli, D. A. C., Green, T. P., Johnson, T. D., Neville, K. A., Paul, I. M., Van Den Anker, J. N., Bannister, C. F., Tobias, J., Anderson, C. T. M., Goldschneider, K. R., & Polaner, D. M. (2014). Recognition and Management of Iatrogenically Induced Opioid Dependence and Withdrawal in Children. *Pediatrics*, 133(1), 152–155. <https://doi.org/10.1542/peds.2013-3398>

He, T., & Ho, C. (2017, April). Patients as the last slice of swiss cheese. *Hospital News*, 38–39. <https://www.ismp-canada.org/download/hnews/201704-HospitalNews-SwissCheese.pdf>

Health Canada. (2015). Summary safety review—Codeine prescription products Indicated for cough—Further assessing the risk of serious breathing problems in children and adolescents [Assessments]. Government of Canada. <https://www.canada.ca/en/health-canada/services/drugs-health-products/medeffect-canada/safety-reviews/summary-safety-review-codeine-prescription-products-indicated-cough-further-assessing-risk-serious-breathing-problems-children-adolescents-1.html>

Health Canada. (2019). Health Canada advises Canadians to exercise caution when taking gabapentin or pregabalin with opioids (Information Update RA-71003). Government of Canada. <https://recalls-rappels.canada.ca/en/alert-recall/health-canada-advises-canadians-exercise-caution-when-taking-gabapentin-or-pregabalin>

Health Canada. (2020). Talking to your health care provider about opioids (fact sheet) [Education and awareness]. Government of Canada. <https://www.canada.ca/en/health-canada/services/publications/healthy-living/talking-to-health-care-provider-opioids-fact-sheet.html>

Health Canada. (2023). Codeine: Uses, effects and risks [Education and awareness]. Government of Canada. <https://www.canada.ca/en/health-canada/services/substance-use/controlled-illegal-drugs/codeine.html>

Institute for Safe Medication Practices Canada. (2014). Advancing opioid safety for children in hospitals (ISMP Canada Safety Bulletin 14, (3)). https://ismpcanada.ca/wp-content/uploads/ISMPCSB2014-3_HospitalOpioidSafetyForChildren.pdf

Institute for Safe Medication Practices Canada. (2016). 5 questions to ask about your medications when you see your doctor, nurse, or pharmacist [Infographic]. https://www.ismp-canada.org/download/MedRec/MedSafety_5_questions_to_ask_poster.pdf

SickKids. (n.d.). Weaning algorithm for combination use of opioids and benzodiazepines (Pain Treatment - Pharmacologic) [Medication Guideline, Treatment Guideline]. Retrieved June 19, 2023, from <https://childkindinternational.org/wp-content/uploads/Weaning-algorithms-for-opioids-and-benzodiazepines.pdf>

Acute Pain

Ali, S., & Drendel, A. L. (2023). Responsible and safe use of opioids in children and adolescents in the emergency department. *Pediatric Emergency Medicine Practice*, 20(1), 1–24. <https://pubmed.ncbi.nlm.nih.gov/36592388/>

Beck, C. E., Trottier, E. D., Kirby-Allen, M., & Pastore, Y. (2022). Acute complications in children with sickle cell disease: Prevention and management. *Paediatrics & Child Health*, 27(1), 50–62. <https://doi.org/10.1093/pch/pxab096>

CHU St Justine Pain Management Committee (GAN). (2021). Short-acting opioid analgesics: Information for patients and families (F-848A GRM 30004606 (rev. 10-2021)). CHU Sainte-Justine. https://www.chusj.org/getmedia/e3aa98f7-0be1-4339-b06e-a8ca5ddd0a2d/depliant_F-848_Analgésiques-opioides-a-courte-action_FR.pdf.aspx?ext=.pdf

Comité de gestion des analgésiques du CHUSJ (GAN). (2021). Analgésiques opioïdes à courte action: Informations pour les patients et les familles (F-848 GRM 30004520 (rév. 01-2021)). Urgence CHU Sainte-Justine. https://www.chusj.org/getmedia/bab6d4ad-42d2-41d6-8f9a-4559718451ab/depliant_F-848_Analgésiques-opioides-a-courte-action.pdf.aspx?ext=.pdf

Hachimi-Idrissi, S., Dobias, V., Hautz, W. E., Leach, R., Sauter, T. C., Sforzi, I., & Coffey, F. (2020). Approaching acute pain in emergency settings; European Society for Emergency Medicine (EUSEM) guidelines-part 2: Management and recommendations. *Internal and Emergency Medicine*, 15(7), 1141–1155. <https://doi.org/10.1007/s11739-020-02411-2>

Health Quality Ontario. (2018). Opioid prescribing for acute pain: Care for people 15 years of age and older (Quality Standard CL28611; Quality Standards, p. 48). Government of Ontario. <https://www.hqontario.ca/evidence-to-improve-care/quality-standards/view-all-quality-standards/opioid-prescribing-for-acute-pain>

Health Standards Organization (HSO). (2023). Pediatric Pain Management (Organizational Competency CAN/HSO 13200 :2023). Health Standards Organization (HSO). <https://store.healthstandards.org/products/pediatric-pain-management-can-hso-13200-2023-e>

Hoffe, J., Bailey, B., Thibault, M., & Trottier, E. D. (2020). Fentanyl intranasal. Urgence CHU Sainte-Justine. <https://www.urgencehsj.ca/protocoles/fentanyl-intranasal-2/>

Lindbeck, G., Shah, M. I., Braithwaite, S., Powell, J. R., Panchal, A. R., Browne, L. R., Lang, E. S., Burton, B., Coughenour, J., Crowe, R. P., Degn, H., Hedges, M., Gasper, J., Guild, K., Mattera, C., Nasca, S., Taillac, P., & Warth, M. (2023). Evidence-based guidelines for prehospital pain management: Recommendations. *Prehospital Emergency Care*, 27(2), 144–153. <https://doi.org/10.1080/10903127.2021.2018073>

Oskoui, M., Pringsheim, T., Holler-Managan, Y., Potrebic, S., Billingham, L., Gloss, D., Hershey, A. D., Licking, N., Sowell, M., Victorio, M. C., Gersz, E. M., Leininger, E., Zanitsch, H., Yonker, M., & Mack, K. (2019). Practice guideline update summary: Acute treatment of migraine in children and adolescents. *Neurology*, 93(11), 487–499. <https://doi.org/10.1212/WNL.0000000000008095>

SickKids. (2019a, January 25). Acute pain: How to treat and manage in infants and toddlers. AboutKidsHealth. <https://www.aboutkidshealth.ca:443/article?contentid=3635&language=English>

SickKids. (2019b, January 25). Acute pain: How to treat and manage in older children. AboutKidsHealth. <https://www.aboutkidshealth.ca:443/article?contentid=3661&language=English>

SickKids. (2019c, January 25). Acute pain: How to treat and manage in teens. AboutKidsHealth. <https://www.aboutkidshealth.ca:443/article?contentid=3642&language=English>

SickKids. (2019d, January 25). Acute pain: How to treat and manage in young children. AboutKidsHealth. <https://www.aboutkidshealth.ca:443/article?contentid=3637&language=English>

SKIP & CHU St Justine. (2023). Assessing and Treating Acute Pain in Children with Sickle Cell Disease. https://kidsinpain.ca/wp-content/uploads/2023/09/VOEManagement-SCD_EN.pdf

Trottier, E. D., Doré-Bergeron, M.-J., Chauvin-Kimoff, L., Baerg, K., & Ali, S. (2019). Managing pain and distress in children undergoing brief diagnostic and therapeutic procedures. *Paediatrics & Child Health*, 24(8), 509–535. <https://doi.org/10.1093/pch/pxz026>

Acute Pain - additional

Abebe, Y., Hetmann, F., Sumera, K., Holland, M., & Staff, T. (2021). The effectiveness and safety of paediatric prehospital pain management: A systematic review. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, 29(1), 170. <https://doi.org/10.1186/s13049-021-00974-3>

Alanazi, E. (2022). The effectiveness of ketamine compared to opioid analgesics for management of acute pain in children in the emergency department: Systematic review. *The American Journal of Emergency Medicine*, 61, 143–151. <https://doi.org/10.1016/j.ajem.2022.08.004>

Hartling, L., Ali, S., Dryden, D. M., Chordiya, P., Johnson, D. W., Plint, A. C., Stang, A., McGrath, P. J., & Drendel, A. L. (2016). How safe are common analgesics for the treatment of acute pain for children? A systematic review. *Pain Research & Management*, 2016, 5346819. <https://doi.org/10.1155/2016/5346819>

Jones, P., Lamdin, R., & Dalziel, S. R. (2020). Oral non-steroidal anti-inflammatory drugs versus other oral analgesic agents for acute soft tissue injury. *The Cochrane Database of Systematic Reviews*, 8(8), CD007789. <https://doi.org/10.1002/14651858.CD007789.pub3>

Li, K. X. (Chloe), & Ford, C. (2019). Codeine for pediatric patients with acute pain: A review of clinical effectiveness (Summary with Critical Appraisal RC1200-000). Canadian Agency for Drugs and Technologies in Health. <https://www.cadth.ca/codeine-pediatric-patients-acute-pain-review-clinical-effectiveness>

Murphy, A., O'Sullivan, R., Wakai, A., Grant, T. S., Barrett, M. J., Cronin, J., McCoy, S. C., Hom, J., & Kandamany, N. (2014). Intranasal fentanyl for the management of acute pain in children. *The Cochrane Database of Systematic Reviews*, 2014(10), CD009942. <https://doi.org/10.1002/14651858.CD009942.pub2>

Parri, N., & Lazzeri, S. (2020). Efficacy of ibuprofen in musculoskeletal post-traumatic pain in children: A systematic review. *PLoS One*, 15(12), e0243314. <https://doi.org/10.1371/journal.pone.0243314>

Qiu, J., & Xie, M. (2021). Influence of ketamine versus fentanyl on pain relief for pediatric orthopedic emergencies: A meta-analysis of randomized controlled studies. *Medicine*, 100(42), e27409. <https://doi.org/10.1097/MD.00000000000027409>

Radman, M., Babic, A., Runjic, E., Jelacic Kadic, A., Jeric, M., Moja, L., & Puljak, L. (2019). Revisiting established medicines: An overview of systematic reviews about ibuprofen and paracetamol for treating pain in children. *European Journal of Pain* (London, England), 23(6), 1071–1082. <https://doi.org/10.1002/ejp.1380>

Setlur, A., & Friedland, H. (2018). Treatment of pain with intranasal fentanyl in pediatric patients in an acute care setting: A systematic review. *Pain Management*, 8(5), 341–352. <https://doi.org/10.2217/pmt-2018-0016>

Young, C., & Loshak, H. (2021). Medications containing low-dose codeine for the treatment of pain and coughs. *Canadian Journal of Health Technologies*, 1(8). <https://doi.org/10.51731/cjht.2021.127>

Perioperative Pain

Aldamluji, N., Burgess, A., Pogatzki-Zahn, E., Raeder, J., Beloeil, H., the PROSPECT Working Group collaborators*, Albrecht, E., Beloeil, H., Bonnet, F., Freys, S., Joshi, G. P., Kehlet, H., Lavand'homme, P., Lirk, P., Lobo, D., Pogatzki-Zahn, E., Rawal, N., Raeder, J., Sauter, A., ... Van De Velde, M. (2021). PROSPECT guideline for tonsillectomy: Systematic review and procedure-specific postoperative pain management recommendations. *Anaesthesia*, 76(7), 947–961. <https://doi.org/10.1111/anae.15299>

Aubrun, F., Nouette-Gaulain, K., Fletcher, D., Belbachir, A., Beloeil, H., Carles, M., Cuvillon, P., Dadure, C., Lebuffe, G., Marret, E., Martinez, V., Olivier, M., Sabourdin, N., & Zetlaoui, P. (2019). Revision of expert panel's guidelines on postoperative pain management. *Anaesthesia, Critical Care & Pain Medicine*, 38(4), 405–411. <https://doi.org/10.1016/j.accpm.2019.02.011>

Barrette, L.-X., Harris, J., De Ravin, E., Balar, E., Moreira, A. G., & Rajasekaran, K. (2022). Clinical practice guidelines for pain management after tonsillectomy: Systematic quality appraisal using the AGREE II instrument. *International Journal of Pediatric Otorhinolaryngology*, 156, 111091. <https://doi.org/10.1016/j.ijporl.2022.111091>

Institute for Safe Medication Practices Canada. (2018a). Les opioïdes pour la douleur après la chirurgie: Réponses à vos questions. <https://www.ismp-canada.org/download/OpioidStewardship/OpioidsAfterSurgery-FR.pdf>

Institute for Safe Medication Practices Canada. (2018b). Opioids for pain after surgery: Your questions answered. <https://www.ismp-canada.org/download/OpioidStewardship/OpioidsAfterSurgery-EN.pdf>

Jitpakdee, T., & Mandee, S. (2014). Strategies for preventing side effects of systemic opioid in postoperative pediatric patients. *Paediatric Anaesthesia*, 24(6), 561–568. <https://doi.org/10.1111/pan.12420>

Kelley-Quon, L. I., Kirkpatrick, M. G., Ricca, R. L., Baird, R., Harbaugh, C. M., Brady, A., Garrett, P., Wills, H., Argo, J., Diefenbach, K. A., Henry, M. C. W., Sola, J. E., Mahdi, E. M., Goldin, A. B., St Peter, S. D., Downard, C. D., Azarow, K. S., Shields, T., & Kim, E. (2021). Guidelines for opioid prescribing in children and adolescents after surgery: An expert panel opinion. *JAMA Surgery*, 156(1), 76–90. <https://doi.org/10.1001/jamasurg.2020.5045>

Paquette, J. (2019, April). L'analgésie contrôlée par le patient (ACP) pour le soulagement de la douleur: Guide destiné à l'enfant, l'adolescent, la femme et/ou sa famille (F-1438 GRM : 3001 0380 (Révisé : avril 2019)). CHU Sainte-Justine. https://www.chusj.org/getmedia/7809bf9f-4192-4e40-af76-cf407127e414/F1438_analgésie-contrôlée.pdf.aspx?ext=.pdf

Rodríguez, M. C., Villamor, P., & Castillo, T. (2016). Assessment and management of pain in pediatric otolaryngology. *International Journal of Pediatric Otorhinolaryngology*, 90, 138–149. <https://doi.org/10.1016/j.ijporl.2016.09.015>

Vittinghoff, M., Lönnqvist, P.-A., Mossetti, V., Heschl, S., Simic, D., Colovic, V., Dmytriiev, D., Hölzle, M., Zielinska, M., Kubica-Cielinska, A., Lorraine-Lichtenstein, E., Budić, I., Karisik, M., Maria, B. D. J., Smedile, F., & Morton, N. S. (2018). Postoperative pain management in children: Guidance from the pain committee of the European Society for Paediatric Anaesthesiology (ESPA Pain Management Ladder Initiative). *Paediatric Anaesthesia*, 28(6), 493–506. <https://doi.org/10.1111/pan.13373>

Wong, I., St John-Green, C., & Walker, S. M. (2013). Opioid-sparing effects of perioperative paracetamol and nonsteroidal anti-inflammatory drugs (NSAIDs) in children. *Paediatric Anaesthesia*, 23(6), 475–495. <https://doi.org/10.1111/pan.12163>

Perioperative Pain - additional

Badin, D., Ortiz-Babilonia, C. D., Gupta, A., Leland, C. R., Musharbash, F., Parrish, J. M., & Aiyer, A. A. (2022). Prescription patterns, associated factors, and outcomes of opioids for operative foot and ankle fractures: A systematic review. *Clinical Orthopaedics and Related Research*, 480(11), 2187–2201. <https://doi.org/10.1097/CORR.0000000000002307>

Birnie, K. A., Stinson, J., Isaac, L., Tyrrell, J., Campbell, F., Jordan, I. P., Marianayagam, J., Richards, D., Rosenbloom, B. N., Clement, F., & Hubley, P. (2022). Mapping the current state of pediatric surgical pain care across Canada and assessing readiness for change. *Canadian Journal of Pain*, 6(2), 108–120. <https://doi.org/10.1080/24740527.2022.2038031>

Boric, K., Dosenovic, S., Jelacic Kadic, A., Batinic, M., Cavar, M., Urlic, M., Markovina, N., & Puljak, L. (2017). Interventions for postoperative pain in children: An overview of systematic reviews. *Paediatric Anaesthesia*, 27(9), 893–904. <https://doi.org/10.1111/pan.13203>

Constant, I., Ayari Khalfallah, S., Brunaud, A., Deramoudt, V., Fayoux, P., Giovanni, A., Mareau, C., Marianowski, R., Michel, J., Mondain, M., Paganelli, A., Pondaven, S., Schultz, P., Treluyer, J. M., Wood, C., Nicolas, R., & SFORL Work Group. (2014). How to replace codeine after tonsillectomy in children under 12 years of age? Guidelines of the French Oto-Rhino-Laryngology--Head and Neck Surgery Society (SFORL). *European Annals of Otorhinolaryngology, Head and Neck Diseases*, 131(4), 233–238. <https://doi.org/10.1016/j.anorl.2014.06.001>

Dautremont, E. A., Ebramzadeh, E., Beck, J. J., Bowen, R. E., & Sangiorgio, S. N. (2017). Opioid prescription and usage in adolescents undergoing orthopaedic surgery in the United States: A systematic review. *JBJS Reviews*, 5(8), e5. <https://doi.org/10.2106/JBJS.RVW.16.00093>

Michelet, D., Andreu-Gallien, J., Bensalah, T., Hilly, J., Wood, C., Nivoche, Y., Mantz, J., & Dahmani, S. (2012). A meta-analysis of the use of nonsteroidal antiinflammatory drugs for pediatric postoperative pain. *Anesthesia and Analgesia*, 114(2), 393–406. <https://doi.org/10.1213/ANE.0b013e31823d0b45>

Chronic Pain

Banerjee, S., & Butcher, R. (2020). Pharmacological interventions for chronic pain in pediatric patients: A review of guidelines (Summary with Critical Appraisal RC1275-000). Canadian Agency for Drugs and Technologies in Health. <https://www.cadth.ca/sites/default/files/pdf/htis/2020/RC1275%20Ped%20Chronic%20Pain%20Guidelines%20Final.pdf>

Canadian Agency for Drugs and Technologies in Health. (2022). Pre-surgical screening tools and risk factors for chronic post-surgical pain: A summary (p. 4) [Summary of evidence]. Canadian Agency for Drugs and Technologies in Health. https://www.cadth.ca/sites/default/files/attachments/2022-05/HC0023_pre_surgery_screening_summary_0.pdf

Chief Medical Officer Directorate. (2018). Management of chronic pain in children and young people: Summary [Advice and guidance]. Scottish Government. <http://www.gov.scot/publications/management-chronic-pain-children-young-people/>

Health Quality Ontario. (2018). Opioid prescribing for chronic pain: Care for people 15 years of age and older (Quality Standards) [Quality standard]. Government of Ontario. <https://www.hqontario.ca/portals/0/documents/evidence/quality-standards/qs-opioid-chronic-pain-clinician-guide-en.pdf>

Health Standards Organization (HSO). (2023). Pediatric Pain Management (Organizational Competency CAN/HSO 13200 :2023). Health Standards Organization (HSO). <https://store.healthstandards.org/products/pediatric-pain-management-can-hso-13200-2023-e>

Kahan, M., Wilson, L., Mailis-Gagnon, A., Srivastava, A., & National Opioid Use Guideline Group. (2011). Canadian guideline for safe and effective use of opioids for chronic noncancer pain: Clinical summary for family physicians. Part 2: special populations. *Canadian Family Physician Medecin De Famille Canadien*, 57(11), 1269–1276, e419-428. <https://www.cfp.ca/content/57/11/1269.long>

Moulin, D., Boulanger, A., Clark, A. J., Clarke, H., Dao, T., Finley, G. A., Furlan, A., Gilron, I., Gordon, A., Morley-Forster, P. K., Sessle, B. J., Squire, P., Stinson, J., Taenzer, P., Velly, A., Ware, M. A., Weinberg, E. L., Williamson, O. D., & Canadian Pain Society. (2014). Pharmacological management of chronic neuropathic pain: Revised consensus statement from the Canadian Pain Society. *Pain Research & Management*, 19(6), 328–335. <https://doi.org/10.1155/2014/754693>

SickKids. (2019a, January 25). Chronic pain: How to treat and manage in older children. AboutKidsHealth. <https://www.aboutkidshealth.ca/443/article?contentid=3650&language=English>

SickKids. (2019b, January 25). Chronic pain: How to treat and manage in teens. AboutKidsHealth. <https://www.aboutkidshealth.ca/443/article?contentid=3653&language=English>

SickKids. (2019c, January 25). Chronic pain: How to treat and manage in young children. AboutKidsHealth. <https://www.aboutkidshealth.ca/article?contentid=3647&language=english>

SickKids. (2019d, January 25). Longer-lasting pain: How to treat and manage in infants and toddlers. AboutKidsHealth. <https://www.aboutkidshealth.ca/443/article?contentid=3645&language=English>

The Hospital for Sick Children (SickKids). (2023). Power over pain: Public portal. <https://www.popyouth.ca>

World Health Organization. (2020). Guidelines on the management of chronic pain in children (p. 40). World Health Organization. <https://apps.who.int/iris/rest/bitstreams/1323615/retrieve>

Chronic Pain - additional

Anand, K. J. S., Willson, D. F., Berger, J., Harrison, R., Meert, K. L., Zimmerman, J., Carcillo, J., Newth, C. J. L., Prodhan, P., Dean, J. M., Nicholson, C., & Eunice Kennedy Shriver National Institute of Child Health and Human Development Collaborative Pediatric Critical Care Research Network. (2010). Tolerance and withdrawal from prolonged opioid use in critically ill children. *Pediatrics*, 125(5), e1208-1225. <https://doi.org/10.1542/peds.2009-0489>

Cohen, S. P., Vase, L., & Hooten, W. M. (2021). Chronic pain: An update on burden, best practices, and new advances. *Lancet* (London, England), 397(10289), 2082–2097. [https://doi.org/10.1016/S0140-6736\(21\)00393-7](https://doi.org/10.1016/S0140-6736(21)00393-7)

Cooper, T. E., Fisher, E., Gray, A. L., Krane, E., Sethna, N., van Tilburg, M. A., Zernikow, B., & Wiffen, P. J. (2017). Opioids for chronic non-cancer pain in children and adolescents. *The Cochrane Database of Systematic Reviews*, 7(7), CD012538. <https://doi.org/10.1002/14651858.CD012538.pub2>

Eccleston, C., Aldington, D., Moore, A., & de C Williams, A. C. (2021). Pragmatic but flawed: The NICE guideline on chronic pain. *Lancet* (London, England), 397(10289), 2029–2031. [https://doi.org/10.1016/S0140-6736\(21\)01058-8](https://doi.org/10.1016/S0140-6736(21)01058-8)

Fisher, D. (2010). Opioid tapering in children: A review of the literature. *AACN Advanced Critical Care*, 21(2), 139–145. <https://pubmed.ncbi.nlm.nih.gov/20431442/>

Li, Y., Ma, J., Lu, G., Dou, Z., Knaggs, R., Xia, J., Zhao, S., Dong, S., & Yang, L. (2021). Hydromorphone for cancer pain. *The Cochrane Database of Systematic Reviews*, 8(8), CD011108. <https://doi.org/10.1002/14651858.CD011108.pub3>

Mahendra, V., Singhal, S., Dzara, K., Jain, G., Pilla, T. R., Manworren, R., & Kaye, A. D. (2014). Long-term neuropsychological effects of opioid use in children: A descriptive literature review. *Pain Physician*, 17(2), 109–118. <https://www.painphysicianjournal.com/current/pdf?article=MjA2NA==&journal=81>

Wiffen, P. J., Cooper, T. E., Anderson, A.-K., Gray, A. L., Grégoire, M.-C., Ljungman, G., & Zernikow, B. (2017). Opioids for cancer-related pain in children and adolescents. *The Cochrane Database of Systematic Reviews*, 7(7), CD012564. <https://doi.org/10.1002/14651858.CD012564.pub2>

Acute Dental Pain

American Academy of Pediatric Dentistry. (2022). Pain management in infants, children, adolescents, and individuals with special health care needs (The Reference Manual of Pediatric Dentistry, p. 392.400). American Academy of Pediatric Dentistry. https://www.aapd.org/media/Policies_Guidelines/BP_Pain.pdf

Benzel, R., & Holt, K. (2022). Opioids and children and adolescents: Information for oral health professionals. National Maternal and Child Oral Health Resource Center, Georgetown University. https://www.mchoralhealth.org/PDFs/opioids_children_adolescents.pdf

Canadian Dental Association, & Donaldson, M. (2017). Pain relief without opioids: Teens, wisdom teeth, and opioids. *CDA Essentials*, 4(7), 21. <https://www.cda-adc.ca/en/services/essentials/2017/issue7/19/>

Carrasco-Labra, A., Polk, D. E., Urquhart, O., Aghaloo, T., Claytor, J. W., Jr, Dhar, V., Dionne, R. A., Espinoza, L., Gordon, S. M., Hersh, E. V., Law, A. S., Li, B. S.-K., Schwartz, P. J., Suda, K. J., Turturro, M. A., Wright, M. L., Dawson, T., Miroshnychenko, A., Pahlke, S., ... Moore, P. A. (2023). Evidence-based clinical practice guideline for the pharmacologic management of acute dental pain in children: A report from the American Dental Association Science and Research Institute, the University of Pittsburgh School of Dental Medicine, and the Center for Integrative Global Oral Health at the University of Pennsylvania. *The Journal of the American Dental Association*, 154(9), 814-825.e2. <https://doi.org/10.1016/j.adaj.2023.06.014>

Institute for Safe Medication Practices Canada. (2019). Managing pain after wisdom teeth removal: Your questions answered. Institute for Safe Medication Practices Canada. <https://www.ismp-canada.org/download/OpioidStewardship/WisdomTeethRemoval-EN.pdf>

Seal, K., & Wright, M.-D. (2018). Analgesics for surgical third molar extraction: Clinical effectiveness and guidelines (Summary of Abstracts RB1209-000; pp. 1–15). Canadian Agency for Drugs and Technologies in Health. <https://www.cadth.ca/sites/default/files/pdf/htis/2018/RB1209%20Analgesics%20for%20Oral%20Surgery%20Final.pdf>

Acute Dental Pain - additional

American Dental Association. (2022). Chairside pain management discussion acute pain and opioid prescriptions (Chairside Pain Management Discussion). American Dental Association. https://www.ada.org/-/media/project/ada-organization/ada/ada-org/files/resources/practice/health-and-wellness/ada_chairside_pain_management_discussion.pdf?rev=b72ea26d3a434bd590a0e321f07e9904&hash=B496A3F1062EFCAE52707FB8E662694A

Canadian Dental Association. (2023). Pain management. http://www.cda-adc.ca/en/oral_health/talk/complications/pain_management/

Dyson, M. P., Dong, K., Sevcik, W., Graham, S. Z., Saba, S., Hartling, L., & Ali, S. (2022). Quantifying unused opioids following emergency and ambulatory care: A systematic review and meta-analysis. *Journal of the American College of Emergency Physicians Open*, 3(5), e12822. <https://doi.org/10.1002/emp2.12822>

Ontario Pharmacy Evidence Network. (2021, March 11). First Use Non Opioids! OPEN Summit 2021. <https://www.youtube.com/watch?v=LVvEnMW3n7M>

Higher-risk Opioid Use

Ahrari, M., Ali, S., Hartling, L., Dong, K., Drendel, A. L., Klassen, T. P., Schreiner, K., & Dyson, M. P. (2021). Nonmedical opioid use after short-term therapeutic exposure in children: A systematic review. *Pediatrics*, 148(6), e2021051927. <https://doi.org/10.1542/peds.2021-051927>

Beauchemin, M., Dorritie, R., & Hershman, D. L. (2021). Opioid use and misuse in children, adolescents, and young adults with cancer: A systematic review of the literature. *Supportive Care in Cancer: Official Journal of the Multinational Association of Supportive Care in Cancer*, 29(8), 4521–4527. <https://doi.org/10.1007/s00520-020-05980-2>

British Columbia Centre on Substance Use. (2018). Treatment of opioid use disorder for youth: Guideline supplement [Guideline supplement]. British Columbia Ministry of Health. <https://www.bccsu.ca/wp-content/uploads/2018/06/ODU-Youth.pdf>

Canadian Centre on Substance Use and Addiction. (2020). Prescription Opioids (Canadian Drug Summary). CCSA. <https://www.ccsa.ca/prescription-opioids-canadian-drug-summary>

Center for Adolescent Behavioral Health Research (CABHRe). (2020). CRAFFT Screening Test. <https://crafft.org/get-the-crafft/>

Centre for Addiction and Mental Health. (2020). Opioids: What you and your friends need to know. Centre for Addictions and Mental Health. <https://www.camh.ca/-/media/files/guides-and-publications/prescription-opioids-youth-en.pdf>

Committee on Substance use and Prevention. (2016). Medication-Assisted Treatment of Adolescents With Opioid Use Disorders. *Pediatrics*, 138(3), e20161893. <https://doi.org/10.1542/peds.2016-1893>

Drug Free Kids Canada. (n.d.). Parent Support Hub. Retrieved December 15, 2023, from <https://www.drugfreekidscanada.org/support/supporthub/>

Drug Free Kids Canada. (2020). Let's talk about opioids: Including fentanyl. Government of Canada. https://www.drugfreekidscanada.org/wp-content/uploads/2020/01/DFK_Opioids_Booklet_FINAL.pdf

Dyson, M. P., Dong, K., Sevcik, W., Graham, S. Z., Saba, S., Hartling, L., & Ali, S. (2022). Quantifying unused opioids following emergency and ambulatory care: A systematic review and meta-analysis. *Journal of the American College of Emergency Physicians Open*, 3(5), e12822. <https://doi.org/10.1002/emp2.12822>

Foundry BC. (2021). Parents like us: The unofficial survival guide to parenting a young person with a substance use disorder. Government of British Columbia. <https://foundrybc.ca/stories/parents-like-us-have-something-to-say/>

Health Canada. (2022). Substance use spectrum [Education and awareness]. Government of Canada. <https://www.canada.ca/en/health-canada/services/publications/healthy-living/substance-use-spectrum-infographic.html>

Koh, J. J., Klaiman, M., Miles, I., Cook, J., Kumar, T., Sheikh, H., Dong, K., Orkin, A. M., Ali, S., & Shouldice, E. (2020). CAEP position statement: Emergency department management of people with opioid use disorder. *Canadian Journal of Emergency Medicine*, 22(6), 768–771. <https://doi.org/10.1017/cem.2020.459>

Nairn, S. A., Audet, M., Stewart, S. H., Hawke, L. D., Isaacs, J. Y., Henderson, J., Saah, R., Knight, R., Fast, D., Khan, F., Lam, A., & Conrod, P. (2022). Interventions to reduce opioid use in youth at risk and in treatment for substance use disorders: A scoping review. *Canadian Journal of Psychiatry. Revue Canadienne De Psychiatrie*, 67(12), 881–898. <https://doi.org/10.1177/07067437221089810>

National Institute on Drug Abuse. (n.d.-a). Brief screener for tobacco, alcohol, and other drugs [Teens Screening Tool]. Brief Screener for Tobacco, Alcohol, and Other Drugs. Retrieved July 11, 2023, from <https://nida.nih.gov/bstad/>

National Institute on Drug Abuse. (n.d.-b). Screening to Brief Intervention (S2BI) [Teens Screening Tool]. Screening to Brief Intervention (S2BI). Retrieved July 11, 2023, from <https://nida.nih.gov/s2bi>

National Institute on Drug Abuse. (2019, May 30). Screening Tools for adolescent substance use. <https://nida.nih.gov/nidamed-medical-health-professionals/screening-tools-resources/screening-tools-adolescent-substance-use>

Oliver, J., Coggins, C., Compton, P., Hagan, S., Matteliano, D., Stanton, M., St Marie, B., Strobbe, S., Turner, H. N., & American Society for Pain Management Nursing. (2012). American Society for Pain Management nursing position statement: Pain management in patients with substance use disorders. *Journal of Addictions Nursing*, 23(3), 210–222. <https://doi.org/10.1097/JAN.0b013e318271c123>

Higher-risk Opioid Use - additional

Groenewald, C. B. (2019). Opioid-prescribing Patterns for Pediatric Patients in the United States. *The Clinical Journal of Pain*, 35(6), 515–520. <https://doi.org/10.1097/AJP.0000000000000707>

Hadland, S. E., Bagley, S. M., Gai, M. J., Earlywine, J. J., Schoenberger, S. F., Morgan, J. R., & Barocas, J. A. (2021). Opioid Use Disorder and Overdose Among Youth Following an Initial Opioid Prescription. *Addiction (Abingdon, England)*, 116(10), 2790–2800. <https://doi.org/10.1111/add.15487>

Jun, E., Ali, S., Yaskina, M., Dong, K., Rajagopal, M., Drendel, A. L., Fowler, M., Poonai, N., & Pediatric Emergency Research Canada. (2021). A two-centre survey of caregiver perspectives on opioid use for children's acute pain management. *Paediatrics & Child Health*, 26(1), 19–26. <https://doi.org/10.1093/pch/pxz162>

Lyons, R. M., Yule, A. M., Schiff, D., Bagley, S. M., & Wilens, T. E. (2019). Risk factors for drug overdose in young people: A systematic review of the Literature. *Journal of Child and Adolescent Psychopharmacology*, 29(7), 487–497. <https://doi.org/10.1089/cap.2019.0013>

Minozzi, S., Amato, L., Bellisario, C., & Davoli, M. (2014). Detoxification treatments for opiate dependent adolescents. *The Cochrane Database of Systematic Reviews*, 4, CD006749. <https://doi.org/10.1002/14651858.CD006749.pub3>

Nielsen, S., Tse, W. C., & Larance, B. (2022). Opioid agonist treatment for people who are dependent on pharmaceutical opioids. *The Cochrane Database of Systematic Reviews*, 9(9), CD011117. <https://doi.org/10.1002/14651858.CD011117.pub3>

Additional Readings

Abraham, O., Szela, L., Brasel, K., & Hoernke, M. (2022). Engaging youth in the design of prescription opioid safety education for schools. *Journal of the American Pharmacists Association: JAPhA*, 62(2), 441–449. <https://doi.org/10.1016/j.japh.2021.10.016>

American Society of Anesthesiologists Task Force on Acute Pain Management. (2012). Practice guidelines for acute pain management in the perioperative setting: An updated report by the American Society of Anesthesiologists Task Force on Acute Pain Management. *Anesthesiology*, 116(2), 248–273. <https://doi.org/10.1097/ALN.0b013e31823c1030>

Bailey, B., & Trottier, E. D. (2016). Managing pediatric pain in the emergency department. *Pediatric Drugs*, 18(4), 287–301. <https://doi.org/10.1007/s40272-016-0181-5>

Buffalo, L. A. (2018). Application du timbre de fentanyl: Guide destiné aux engants et à leur famille (F-57 GRM : 3000 9963 (Révisé : 02/2018)). CHU Sainte-Justine. https://www.chusj.org/getmedia/9a6163dd-0ac3-463e-ad49-1d43f856225e/depliant_F-57_application-timbre-fentanyl.pdf.aspx?ext=.pdf

Centre for Addiction and Mental Health. (2012). Youth and prescription painkillers: What parents need to know. Centre for Addiction and Mental Health. <https://camh.ca/-/media/files/guides-and-publications/youth-prescription-drugs.pdf>

Drug Free Kids Canada. (2023). Fentanyl – Drug Free Kids Canada. Parent Support Hub. <https://www.drugfreekidscanada.org/drug-spotlights/fentanyl/>

Duedahl, T. H., & Hansen, E. H. (2007). A qualitative systematic review of morphine treatment in children with postoperative pain. *Paediatric Anaesthesia*, 17(8), 756–774. <https://doi.org/10.1111/j.1460-9592.2007.02213.x>

Feinberg, A. E., Chesney, T. R., Srikandarajah, S., Acuna, S. A., McLeod, R. S., & Best Practice in Surgery Group. (2018). Opioid use after discharge in postoperative patients: A systematic review. *Annals of Surgery*, 267(6), 1056–1062. <https://doi.org/10.1097/SLA.0000000000002591>

Food and Drug Administration. (n.d.-a). Parents and caregivers of children: It's important to safely dispose of opioids. US Department of Health and Human Services, National Institutes of Health. Retrieved July 6, 2023, from <https://www.fda.gov/media/123331/download>

Food and Drug Administration. (n.d.-b). Parents and caregivers of teens: It's important to safely dispose of opioids. US Department of Health and Human Services, National Institutes of Health. Retrieved July 6, 2023, from <https://www.fda.gov/media/123332/download>

Gall, O. & Comité douleur-anesthésie locorégionale et le comité des référentiels de la Sfar. (2009). Comment utiliser les morphiniques en périopératoire? Spécificités pédiatriques Recommended use of morphine in children for postoperative pain relief. *Annales Francaises D'anesthésie Et De Reanimation*, 28(2), e43-47. <https://doi.org/10.1016/j.annfar.2008.12.002>

Howard, M. L., Isaacs, A. N., & Nisly, S. A. (2018). Continuous infusion nonsteroidal anti-inflammatory drugs for perioperative pain management. *Journal of Pharmacy Practice*, 31(1), 66–81. <https://doi.org/10.1177/0897190016665539>

Institute for Safe Medication Practices Canada (Ed.). (n.d.). Prévenir les accidents reliés aux médicaments [Pamphlet]. Retrieved July 6, 2023, from <https://www.ismp-canada.org/download/OpioidStewardship/information-sur-le-stockage-elimination.pdf>

Institute for Safe Medication Practices Canada (Ed.). (n.d.). Prevent medication accidents [Pamphlet]. Retrieved July 6, 2023, from <https://www.ismp-canada.org/download/OpioidStewardship/storage-disposal-information.pdf>

Institute for Safe Medication Practices Canada (Ed.). (2016). Patient information: Storage and disposal of opioids [Pamphlet]. Health Canada. <https://www.ismp-canada.org/download/OpioidStewardship/OpioidStorageDisposal-patient.pdf>

Koh, W. S., & Leslie, K. (2022). Postoperative analgesia for complex spinal surgery. *Current Opinion in Anaesthesiology*, 35(5), 543–548. <https://doi.org/10.1097/ACO.0000000000001168>

Krčevski Škvarč, N., Morlion, B., Vowles, K. E., Bannister, K., Buchsner, E., Casale, R., Chenot, J.-F., Chumbley, G., Drewes, A. M., Dom, G., Jutila, L., O'Brien, T., Pogatzki-Zahn, E., Rakusa, M., Suarez-Serrano, C., Tölle, T., & Häuser, W. (2021). European clinical practice recommendations on opioids for chronic noncancer pain - Part 2: Special situations. *European Journal of Pain* (London, England), 25(5), 969–985. <https://doi.org/10.1002/ejp.1744>

McCarty, D., Chan, B., Buchheit, B. M., Bougatsos, C., Grusing, S., & Chou, R. (2022). Effectiveness of and access to medications for opioid use disorder for adolescents and young adults: A scoping Review. *Journal of Addiction Medicine*, 16(3), e157–e164. <https://doi.org/10.1097/ADM.0000000000000898>

Poonai, N., Paskar, D., Konrad, S.-L., Rieder, M., Joubert, G., Lim, R., Golozar, A., Uledi, S., Worster, A., & Ali, S. (2014). Opioid analgesia for acute abdominal pain in children: A systematic review and meta-analysis. *Academic Emergency Medicine: Official Journal of the Society for Academic Emergency Medicine*, 21(11), 1183–1192. <https://doi.org/10.1111/acem.12509>

Silva, C., Oliveira, D., Pestana-Santos, M., Portugal, F., & Capelo, P. (2022). Chronic non-cancer pain in adolescents: A narrative review. *Brazilian Journal of Anesthesiology* (Elsevier), 72(5), 648–656. <https://doi.org/10.1016/j.bjane.2021.04.033>

Voepel-Lewis, T., Malviya, S., Grant, J. A., Dwyer, S., Becher, A., Schwartz, J. H., & Tait, A. R. (2021). Effect of a brief scenario-tailored educational program on parents' risk knowledge, perceptions, and decisions to administer prescribed opioids: A randomized controlled trial. *Pain*, 162(3), 976–985. <https://doi.org/10.1097/j.pain.0000000000002095>

Zhu, A., Benzon, H. A., & Anderson, T. A. (2017). Evidence for the efficacy of systemic opioid-sparing analgesics in pediatric surgical populations: A systematic review. *Anesthesia and Analgesia*, 125(5), 1569–1587. <https://doi.org/10.1213/ANE.0000000000002434>