

Pharmacist-Partnered Preoperative Opioid Tapering Resource Package

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Background

Opioid use before surgery has been linked with worse pain and physical function after surgery (standardised mean difference -0.53, 95% CI -0.75 to -0.32),¹ longer length of hospital stay (mean 4 vs. 3 days; $p = 0.01$),¹ and an increased risk of surgical complications (e.g., prosthesis revision rate 16% [8/49] vs. 0% [0/49]; $p < 0.01$).² Preoperative opioid use is also one of the strongest predictors for ongoing opioid use beyond 3 months after surgery (adjusted odds ratio 6.96, 95% CI 3.26 to 14.86)³, which may contribute to further harms such as opioid tolerance and dependence, leading to adverse effects ranging from sedation to respiratory depression.⁴

An intervention involving pharmacist and primary care physician partnered opioid tapering before total hip and knee replacement surgery was shown to be feasible and effective to reduce opioid use before surgery in the OpioidHALT Pilot Trial.⁵ This opioid tapering resource package was used to inform the pharmacist-partnered opioid tapering intervention.

Scope

This document serves as a resource package to support opioid tapering before elective hip or knee replacement surgery. This resource is suitable for patients who are willing to engage in an opioid tapering program. This resource should not be used to drive forced weaning and should not be used for patients on opioid agonist therapy or those with suspected opioid dependency. For these patients, more comprehensive multidisciplinary approaches are warranted.

The information contained in this resource package is freely available online. The Infographic summarises the key steps to tapering opioid analgesics before surgery with supporting references. Table 1 provides additional resources outlining principles of pain management, opioid tapering, and motivational interviewing.

This resource package was developed by researchers at the University of Sydney, Australia, for the OpioidHALT Pilot⁵ and II⁶ Clinical Trials.

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Disclaimer

This resource package is intended for use as a general guide only. Clinicians are advised to adhere to appropriate legislative and professional requirements, and clinical judgement. Clinicians are also advised to engage in shared decision-making to develop opioid tapering plans that are appropriate for individuals' preferences and circumstances. All referenced links are accessible at the time of publication.

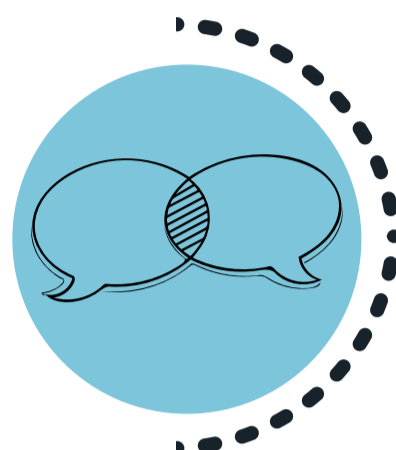
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PHARMACIST-PARTNERED PREOPERATIVE OPIOID TAPERING OVERVIEW

1

INTRODUCE

- Establish rapport with the patient.¹
- Introduce how pain works.²⁻⁴
- Introduce the preoperative opioid tapering program.⁵⁻⁸



2

EXPLORE

- Liaise with primary care physician and, for complex cases, a pain specialist.
- Discuss pain management expectations & goals.^{1, 6, 9}
- Provide overview of opioid tapering process.^{6, 7, 10}
- Address questions or concerns.



3

PLAN

- Engage in shared decision-making to agree on opioid tapering plan (including opioid tapering rate & multimodal analgesia).⁶⁻¹⁰
- Provide education on non-opioid & non-pharmacological pain self-management.^{2, 11-13}
- Discuss what to expect (potential withdrawal symptoms or pain).^{6, 7}
- Share plan with primary care physician, and if required, pain specialist.⁶⁻¹⁰



4

SCHEDULE

- Schedule follow-up appointment.
- Schedule referral(s) to other health professionals as appropriate.^{6, 7}



5

REVIEW

- Review opioid tapering progress and any challenges encountered.
- Assess and address withdrawal symptoms and/or pain.^{6, 7, 10}
- Adjust opioid tapering plan.^{6, 7}



Infographic References

1. Hall K, Gibbie T, Lubman DI. Motivational interviewing techniques: Facilitating behaviour change in the general practice setting. *Australian family physician*. 2012;41:660-7.
2. Agency for Clinical Innovation Pain Management Network. Pain Management: For Everyone 2024; accessed 20 April 2024. [Available from: <https://aci.health.nsw.gov.au/chronic-pain/for-everyone>].
3. Pain and Analgesia [published 2020]. In: Therapeutic Guidelines. Melbourne: Therapeutic Guidelines Limited; accessed [20 April 2024]. <https://www.tg.org.au>
4. Australian Medicines Handbook [Internat]. Analgesics. Adelaide: AMH 2020.
5. Australian Government Therapeutic Goods Administration. Clinician information sheet on opioid analgesic tapering 2021; accessed 20 April 2024. [Available from: <https://www.tga.gov.au/resources/publication/publications/clinician-information-sheet-opioid-analgesic-tapering>].
6. NPS Medicinewise. 5 steps to tapering opioids for patients with chronic non-cancer pain 2020; accessed 20 April 2024. [Available from: <https://www.nps.org.au/news/5-steps-to-tapering-opioids#:~:text=Slow%20taper&text=One%20practical%20strategy%20is%20to,cessation%20in%203%E2%80%93939%20months.>].
7. NPS Medicinewise. Opioid Tapering Algorithm 2019; accessed 20 April 2024. [Available from: <https://www.nps.org.au/assets/NPS-MedicineWise-opioid-tapering-algorithm.pdf>].
8. Agency for Clinical Innovation Pain Management Network. How to de-prescribe and wean opioids in general practice 2024; accessed 20 April 2024. [Available from: https://aci.health.nsw.gov.au/chronic-pain/health-professionals/quick-steps-to-manage-chronic-pain-in-primary-care/how_to_de-prescribe_and_wean_opioids_in_general_practice].
9. NPS Medicinewise. Starting a conversation about opioid tapering with patients. Practice tips for GPs and pharmacists. 2019; accessed 20 April 2024. [Available from: https://www.nps.org.au/assets/NPS_MedicineWise_Opioids_Conversation_Starter_FINAL.pdf].
10. Kuntz JL, Schneider JL, Firemark AJ, et al. A Pharmacist-Led Program to Taper Opioid Use at Kaiser Permanente Northwest: Rationale, Design, and Evaluation. *Perm J*. 2020;24. doi:10.7812/tpp/19.216.
11. Black Dog Institute. Mindfulness and meditation 2024; accessed 20 April 2024. [Available from: <https://www.blackdoginstitute.org.au/resources-support/wellbeing/improve-wellbeing/mindfulness-and-meditation/>].
12. NPS Medicinewise. If not opioids, then what? 2019; accessed 20 April 2024. [Available from: <https://www.nps.org.au/news/if-not-opioids-then-what>].
13. Arthritis Australia. Managing arthritis 2017; accessed 20 April 2024. [Available from: <https://arthritisaustralia.com.au/managing-arthritis/>].

Table 1. Summary of resources to support opioid tapering before elective hip or knee replacement surgery.

*Reproduced with permission from Anaesthesia.*⁵

Background in pain management	
NPS MedicineWise	List of resources that are easy to read and will help with conversations with patients. <ul style="list-style-type: none"> • Pain: what is going on? – link • Medicines for short term pain - link • Nerve pain, explained - link
Australian Prescriber	Prescribing wellness: comprehensive pain management outside specialist services - link
ACI Pain Management Network	Chronic Pain management strategies – link Pain and pacing – link Pain and Physical activity – link
Opioid tapering – how to taper opioids for patients with acute or chronic non cancer pain	
TGA – prescription opioids hub	Clinician information sheet on opioid analgesic tapering – link and summary
NPS MedicineWise	<ul style="list-style-type: none"> • 5 steps to tapering opioids for patients with chronic non-cancer pain - link, PDF • Opioid tapering algorithm - link
ACI Pain Management Network Hub	How to de-prescribe and wean opioids in general practice - link
Language for effective conversations with patients	
ACI	Pain management for everyone - link Short videos on the following topics: <ul style="list-style-type: none"> • Introduction to pain • Getting help from your healthcare team • Pain and physical activity • Pain: lifestyle and nutrition • Pain and role of medications • Pain and thoughts • Pain and sleep
NPS MedicineWise	Opioid medicines and chronic non-cancer pain - link Short videos and explanations on the following topics <ul style="list-style-type: none"> • What are opioids? • Harms and benefits • When to take or not to take an opioid • When an opioid has been prescribed • Feeling worst when continuing to take opioids • Plan for reducing or stopping opioids • How to reduce or stop an opioid • Withdrawal symptoms • Overdose
	Chronic pain explained;

	<p>Chronic pain is pain that lasts more than three months or longer than expected. Chronic pain can happen for many reasons, including after surgery or an injury, or as a result of another condition. This information is about chronic pain that is not caused by cancer. - link</p> <p>Starting a conversation about opioid tapering with patients Practice tips for primary care physicians and pharmacists - link</p> <p>If not opioids, then what? - link limited role opioid medicines have in chronic non-cancer pain</p>
NPS MedicineWise and ANZCA	<p>Opioids information video - link This video was developed by NPS MedicineWise and the Faculty of Pain Medicine of the Australian and New Zealand College of Anaesthetists (ANZCA). It provides information to people who may be considering taking opioids for chronic (ongoing) non-cancer pain.</p>
Arthritis Australia	<p>Living with arthritis. This website includes topics such as healthy eating, dealing with pain, emotions, physical activity and exercise.</p>
Interview technique	
RACGP	<p>Motivational interviewing techniques - link</p>
Effective communication and conflict resolution	<ul style="list-style-type: none"> • Valtalk resources to assist with conflicts during conversation - link • Michie behaviour change wheel
Non-pharmacological treatment	
Healthy Eating	<ul style="list-style-type: none"> • Australian dietary guidelines - link • ACI Pain Management Network: Pain – Lifestyle and management link • Arthritis Australia – healthy eating link
Insomnia	<ul style="list-style-type: none"> • NPS MedicineWise - How to sleep right - link • Australian Prescriber – Management of insomnia in primary care - link
Smoking	<ul style="list-style-type: none"> • CDC Smoking cessation - link
Alcohol	<ul style="list-style-type: none"> • Australian Government - How can you reduce or quit alcohol? - link • Australian guidelines to reduce health risks from drinking alcohol - link, summary
Staying socially active	<ul style="list-style-type: none"> • CDC Social connectedness - link
Mindfulness techniques	<ul style="list-style-type: none"> • Black Dog Institute – link • Headspace – link
Managing arthritis – e.g. healthy eating and exercise	<p>Arthritis Australia</p> <ul style="list-style-type: none"> • Physical activity and exercise - link • Strength training – link • Fatigue and arthritis - link • Healthy eating - link • Managing at home - link

	<ul style="list-style-type: none">• Booklet: At home with arthritis: simple steps for managing in the home - link NPS medicine wise and Arthritis Australia• Managing your arthritis flare – link ACI Pain Management Network• Be Pain smart – Physical Activity My Pacing website, Plan - link
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ACI; Agency for Clinical Innovation, TGA; Therapeutic Goods Administration of Australia, ANZCA; Australian and New Zealand College of Anaesthetists, RACGP; Royal Australian College of General Practitioners, CDC; Centers for Disease Control and Prevention.

References

1. Goplen CM, Verbeek W, Kang SH, et al. Preoperative opioid use is associated with worse patient outcomes after Total joint arthroplasty: a systematic review and meta-analysis. *BMC Musculoskeletal Disorders*. 2019;**20**:234.
2. Zywiell M, Stroh D, Mont M, et al. Chronic Opioid Use Prior to Total Knee Arthroplasty. *Journal of bone and joint surgery. American volume*. 2011;**93**:1988-93. doi:10.2106/JBJS.J.01473.
3. Liu S, Stevens JA, Collins AE, et al. Prevalence and predictors of long-term opioid use following orthopaedic surgery in an Australian setting: A multicentre, prospective cohort study. *Anaesthesia and intensive care*. 2023;**51**:321-30. doi:10.1177/0310057x231172790.
4. Benyamin R, Trescot AM, Datta S, et al. Opioid complications and side effects. *Pain physician*. 2008;**11**:S105-S20. doi:10.36076/ppj.2008/11/S105.
5. Liu S, Patanwala AE, Stevens J, et al. A pilot multicentre randomised clinical trial to determine the effect of a pharmacist-partnered opioid tapering intervention before total hip or knee arthroplasty. *Anaesthesia*. 2024. <https://doi.org/10.1111/anae.16390>
6. Australian and New Zealand Clinical Trials Registry. Responsible Opioid Use for Hip and Knee Arthroplasty (OpioidHALT II) Study 2023; accessed 29 March 2024. [Available from: <https://www.anzctr.org.au/Trial/Registration/TrialReview.aspx?id=385581&isReview=true>].