

2022 SAMBA ANNUAL MEETING
MAY 11 - 14, 2022



Management of the Ambulatory Chronic Pain Patient and Perioperative Analgesia

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Disclosures

- I have no actual or potential conflict of interest in relation to this presentation.
- My words are my own and do not represent the official views of the Veteran Health Administration or the United States government

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Objectives

- Highlight key considerations in the preparation of a patient with chronic pain for ambulatory surgery
- Discuss benefits of continuing buprenorphine perioperatively for ambulatory surgery
- Explain benefits of multimodal analgesia versus opioid therapy for postoperative pain control

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Preoperative Preparation

Set reasonable expectations for pain control with patients before the day of surgery

Good preoperative pain control is important!

Optimize pain medication regimen

Preoperative Management of Opioid and Nonopioid Analgesics: Society for Perioperative Assessment and Quality Improvement (SPAQI) Consensus Statement

Michael J. O'Rourke, MD  Maureen C. Kestock, MD, MHSa  Christine E. Boxhorn, MD  ...
Halena M. Gazelka, MD  Richard D. Uman, MD, MBA  Karen Mauck, MD, MSc  Show all authors

Published: February 19, 2021 · DOI: <https://doi.org/10.1016/j.mayocp.2020.06.045>

<https://doi.org/10.1016/j.mayocp.2020.06.045> 

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Chronic Opioid User

3 Goals:

- Provide Analgesia
- Prevent withdrawal
- Avoid inducing opioid use disorder



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Buprenorphine

Special article

Buprenorphine management in the perioperative period: educational review and recommendations from a multisociety expert panel

Lynn Kohan , Sudheer Potra ,^{2,3} Antje M Barreveld ,⁴ Michael Sprintz,⁵ Olabisi Lane,⁶ Anuj Aryal,⁷ Trent Emerick,⁸ Anna Dopp,⁹ Sophia Chhay,¹⁰ Eugene Viscusi 



<https://doi.org/10.1016/j.asrl.2021.03.001>

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Multimodal Analgesia

The use of several classes of analgesics with varying mechanisms of action to:

- Improve pain control
- Decrease reliance on opioids ←
- Reduce opioid side effects
- Reduce side effects associated with each class of medication

Goldberg SF, et al. Practical management of a regional anaesthesia-driven acute pain service. *Adv Anesth* 2017;35(1):191-211.

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Decrease Reliance on Opioids

THE OPIOID EPIDEMIC BY THE NUMBERS

- 2017: Public Health Emergency declared by US HHS
- Decrease reliance on opioids perioperatively
- Decrease long term opioid use after surgery

-  **70,630**
people died from drug overdose in 2019
-  **10.1 million**
people misused prescription opioids in the past year¹
-  **1.6 million**
people had an opioid use disorder in the past year¹
-  **2 million**
people used nonmorphine in the past year¹

<https://www.hhs.gov/opioids/about-the-epidemic/index.html>

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Multimodal Analgesia

A. Acetaminophen

B. Nonsteroidal Anti-Inflammatory drugs (NSAIDs)

C. Regional anesthesia or Local Anesthetics

D. Gabapentanoids

E. N-methyl-D-aspartate receptor modulators

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Acetaminophen

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- Most commonly used analgesic in the perioperative period
- Few contraindications
- Unless contraindicated, we prescribe routinely for inpatient and outpatient surgery
- Oral or intravenous

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Nonsteroidal Anti-inflammatory Drugs (NSAIDs)

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- Cox-2-inhibitors (celecoxib)
- Ketorolac
- Effective
- Often administered routinely similar to acetaminophen

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Nonsteroidal Anti-inflammatory Drugs (NSAIDs)

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- Bone Healing
- Coronary Artery disease
- Chronic Kidney disease
- Gastrointestinal ulcers
- Bleeding Risk

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Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) (bleeding risk)

RESEARCH PAPERS

Hematoma Risks of Nonsteroidal Anti-inflammatory Drugs Used in Plastic Surgery Procedures: A Systematic Review and Meta-analysis

JAMA Surgery | Review

Postoperative Multimodal Analgesia Pain Management With Nonopioid Analgesics and Techniques: A Review

Elizabeth C. Wu, MD; Michael C. Grant, MD; Christopher L. Wu, MD

Annals of Plastic Surgery June 2019 • Volume 82 • Issue 6 • p 543-544
doi:10.1097/SAP.0000000000000984

Toradol following Breast Surgery: Is There an Increased Risk of Hematoma?

Background: Ketorolac, tramadol (Toradol), a nonsteroidal anti-inflammatory drug associated with increased frequency of bleeding in postoperative pain control and the subsequent decreased need for narcotics. Its use has been limited in plastic surgery for fear of postoperative bleeding and hematoma formation. In this study of breast surgery patients, the authors investigated whether ketorolac increased the risk of postoperative hematoma formation.

Elizabeth C. Wu, MD; Michael C. Grant, MD; Christopher L. Wu, MD

Minneapolis, Minn

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Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) (bleeding risk)

Ann Surg Oncol (2021) 28:5134–5140
https://doi.org/10.1285/s10434-021-09722-4

ORIGINAL ARTICLE – BREAST ONCOLOGY

Intraoperative Ketorolac is Associated with Risk of Reoperation After Mastectomy: A Single-Center Examination

Patrick J. McCormick, MD, MEng^{1,2} , Melissa Assel, MS³, Kimberly J. Van Zee, MS, MD, FACS^{4,5}, Andrew J. Vickers, PhD^{6,7}, Jonas A. Nelson, MD, MPH^{3,8}, Monica Morrow, MD, FACS^{4,5}, Hanae K. Tokita, MD,¹ Brett A. Simon, MD, PhD^{1,2}, and Rebecca S. Twersky, MD, MPH^{1,2}

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Local Anesthetics

Regional Anesthesia
Local anesthetic infiltration

Systems Based Approach
Educating anesthesia personnel
Adequate support staff and equipment

Shoulder Arthroscopy  Interscalene single shot injection

Shoulder Arthroplasty  Interscalene continuous catheter

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Dexamethasone

PAIN MEDICINE

Perioperative Single Dose Systemic Dexamethasone for Postoperative Pain
A Meta-analysis of Randomized Controlled Trials

Gildásio S. De Oliveira, Jr., M.D.,* Marcella D. Almeida, M.D.,† Honório T. Benzon, M.D.,‡ Robert J. McCarthy, Pharm.D.§

Anesthesiology. 2011 Sep;115(3):575-88. PMID: 21799397.

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Gabapentinoids

Strongly recommended in a 2016 Practice Guideline by the American Pain Society and ASRA

Common in multimodal pain control regimens

1 Pain. 2016 Feb;17(2):131-57

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Gabapentinoids

Perioperative Gabapentin Decreases Anxiety and Improves Early Functional Recovery from Knee Surgery
A Prospective, Randomized, Controlled Trial

Anand Kumar Baranendran, MDP   

British Journal of Anesthesia 108 (5): 790–4 (2012)
doi:10.1093/bja/aeq244 Advance Access publication August 20, 2008

Evaluation of a single preoperative dose of pregabalin for attenuation of postoperative pain after laparoscopic cholecystectomy

A. Agarwal^{1,2}, S. Gautam¹, D. Gupta¹, S. Agarwal¹, P. K. Singh¹ and U. Singh²

Perioperative Pregabalin Improves Pain and Functional Outcomes 3 Months After Lumbar Discectomy

Shin M. Burke, MD, and George D. Sherten, PhD

BJA

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ANESTHESIOLOGY

Perioperative Use of Gabapentinoids for the Management of Postoperative Acute Pain

A Systematic Review and Meta-analysis

Michael Verrel, M.D., M.Sc., François Lavoie, M.D., M.Sc., Ryan Zarychanski, M.D., M.Sc., Caroline Perron, M.Sc., Xavier Savard, M.D., candidate Anne-Marie Poirier, M.D., M.Sc., Guillaume Léblanc, M.D., M.Sc., Marie-Josée Cossi, Ph.D., Xavier Newell, M.Sc., Alexis F. Turgeon, M.D., M.Sc., and the Canadian Perioperative Anesthesia Clinical Trials (PACT) Group
Anesthesiology 2020; 133:265-279

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N-methyl-D-aspartate Receptor Antagonists

• Ketamine (and Magnesium)

• Consider if:
• Patient is opioid tolerant
• Painful Surgery

• Often avoided in Ambulatory Surgery
• Adjuvant in sedation cases

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Opioids

► PAIN MEDICATIONS (PAIN SCORE/INTENSITY 1 - 3)
 acetaminophen tab (S)
650 mg, oral, EVERY 6 HOURS PRN for 3 days, mild pain (pain score 1-3). *Give as needed for mild pain (PAIN SCORE / INTENSITY 1-3)* *Minimize opioid use in patients over 70 years old*
"Acetaminophen MAX dose is 4 g per 24 hours from ALL sources"

► PAIN MEDICATIONS (PAIN SCORE / INTENSITY 4 - 6)
 hydrocodone 5 mg with acetaminophen 325 mg (NORCO) - choose for patients over 60 years old (S)
2 Tab, oral, EVERY 4 HOURS PRN, Starting 4/8/21 for 3 days, mod pain (pain score 4-6). *Give PRN for moderate pain (Pain Score/Intensity 4-6)* *Acetaminophen MAX dose is 4 g per 24 hours from ALL sources* "Minimize opioid use in patients over 70 years old"

hydrocodone 10 mg with acetaminophen 325 mg (NORCO) (S)
2 Tab, oral, EVERY 4 HOURS PRN, Starting 4/8/21 for 3 days, mod pain (pain score 4-6). *Give PRN for moderate pain (PAIN SCORE / INTENSITY 4-6)* Acetaminophen MAX dose is 4 g per 24 hours from ALL sources* "Minimize opioid use in patients over 70 years old"

► PAIN MEDICATIONS (PAIN SCORE 7 OR ABOVE)
 morphine injection (S)
1 mg, intravenous, EVERY 3 HOURS PRN, Starting 4/8/21 for 3 days. *Give PRN for severe pain (PAIN SCORE 7 or above). *Give no more than 5 doses* *If pain is not relieved after 3 doses, consider changing to PCA (preferred method for parenteral analgesic)* "Minimize opioid use in patients over 70 years old"

hydromorphone (DIAUDID) (S)
0.02 mg, intravenous, EVERY 3 HOURS PRN, Starting 4/8/21 for 3 days

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Opioids

• System based approach to implementation
• Ambulatory surgery center
• Service Line

► ASC MILD ORAL POST-OP PAIN MANAGEMENT: CHOOSE ONE
 acetaminophen tab
650 mg, oral, ONCE PRN, Starting 4/8/21 for 1 dose, mild pain (pain score 1-3). *When able to take oral pain medications*. Recovery (only)

ibuprofen tab
one, ONCE PRN for 1 dose, mild pain (pain score 1-3). *When able to take oral pain medications*. Recovery (only)

• Flexibility to tailor to individual patient needs

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Orthopaedic Multimodal Analgesia

► Acute Pain Service Consult
 For performance and management of regional anesthesia for postoperative pain control, Preprocedure

► Preop Medications
 Acetaminophen tablet 975mg
 Celecoxib capsule 200mg
 Oxycodeone CR tablet 10mg
 Ketamine injection 30mg. To be given by anesthesia

Gabapentin
 Gabapentin capsule 600mg for CrCl 15 or greater
 Gabapentin capsule 300mg for CrCl under 15
 Gabapentin is contraindicated for this patient

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