

Opioid/Pain Stewardship in C-section Patients

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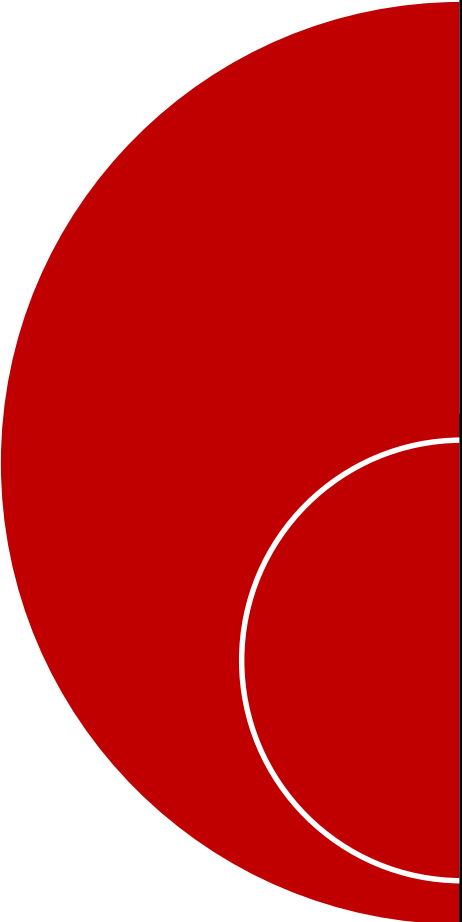
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Objectives

- Define multimodal pain management
- Apply principles of multimodal analgesia to patients in pain



Situation



Best Practice: Postoperative pain should include multimodal analgesics. Patients should receive non-opioids around-the-clock.

Multimodal analgesia is the use of a variety of modalities that work differently to manage pain, including medications and non-medications.



General Principles Regarding the Use of Multimodal Therapies

Recommendation 6

- The panel recommends that clinicians offer multimodal analgesia, or the use of a variety of analgesic medications and techniques combined with non-pharmacological interventions, for the treatment of postoperative pain in children and adults (strong recommendation, high-quality evidence).

Multimodal analgesia, defined as the use of a variety of analgesic medication and techniques that target different mechanisms of action in the peripheral and/or central nervous system (which might also be combined with nonpharmacological interventions) might have additive or synergistic effects and more effective pain relief compared with single-modality interventions. For example, clinicians might offer local anesthetic-based regional (peripheral and neuraxial) analgesic techniques in combination with systemic opioids and other analgesics as part of a multimodal approach to perioperative pain. Because of the availability of effective nonopioid analgesics and nonpharmacologic therapies for postoperative pain management, the panel suggests that clinicians routinely incorporate around the clock nonopioid analgesics and nonpharmacologic therapies into multimodal analgesia regimens. Systemic opioids might not be required in all patients. One study suggests that it should be avoided when not needed, because limited evidence suggests that perioperative opioid therapy might be associated with increased likelihood of long-term opioid use, with its attendant risks.⁴

Guidelines on the Management of Postoperative Pain

Management of Postoperative Pain: A Clinical Practice Guideline
From the American Pain Society, the American Society of Regional Anesthesia and Pain Medicine, and the American Society of Anesthesiologists' Committee on Regional Anesthesia, Executive Committee, and Administrative Council



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Background

Postoperative orders are often “PRN” analgesics linked to pain intensity, typically:

- Acetaminophen prn mild pain
- Ibuprofen prn moderate pain
- Oral opioid in combination with acetaminophen for severe pain

Medications are then administered according to a patient’s reported pain intensity.



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General Recommendations

Implement multimodal analgesia

- Schedule non opioids (acetaminophen, NSAID, topical local anesthetic)
- Prn oral opioids should not be combination with acetaminophen if acetaminophen is scheduled

Revise paper order sheets, request CPOE changes

Allow pharmacy to automatically change prn non-opioids to around the clock



Pharmacy & Therapeutics Committee Approved Automatic Pharmacy Interchange for C-Section Patients

Provider Order	Pharmacist Automatic Interchange
Acetaminophen (any strength, frequency, and indication)	Acetaminophen 1000 mg PO Q6H
Oxycodone/Acetaminophen Combination Or Hydrocodone/Acetaminophen Combination	Oxycodone 5 mg PO Q4H PRN Moderate Pain And Oxycodone 5 mg two tablets (10 mg) PO Q4H PRN Severe Pain And Acetaminophen 1000 mg PO Q6H
NSAID PRN	NSAID Around-the-clock (Same dose, frequency, and route)
Duplicate PRN NSAIDs	Ibuprofen 600 mg PO Q6H
Lidoderm Patch 5% (any directions) OR Lidoderm not ordered	Pharmacist may add/modify Lidoderm 5% order as follows: Apply to intact skin below and/or above surgical dressing, keep on for 24 hours, change daily. May cut patch.



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Lidoderm for Incisional Pain

Pharmacokinetics and Safety of Continuously Applied Lidocaine Patches 5%

Arnold R. Gammaitoni, Nancy A. Alvarez, Bradley S. Galer

Posted: 01/06/2003; American Journal of Health-System Pharmacy. 2002;59(22) © 2002 American Society of Health-System Pharmacists

- Continuous application for 72 hours of four lidocaine patches 5%, changed every 12 or 24 hours, produced plasma lidocaine concentrations that remained well below those that typically produce antiarrhythmic effects or toxicity.
- Mild application-site erythema occurred in most patients, but no systemic adverse reactions were judged to be related to the patches.
- No loss in sensation at the application site was reported.



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Methods

- Inpatient acetaminophen, NSAID, lidocaine patch, opioid prescribing patterns, opioid use, and opioid discharge quantity were evaluated
 - 50 control patients evaluated before Pharmacy Automatic Interchange implemented (July – August 2018)
 - 50 intervention patients evaluated after Pharmacy Automatic Interchange implemented (November – December 2018)

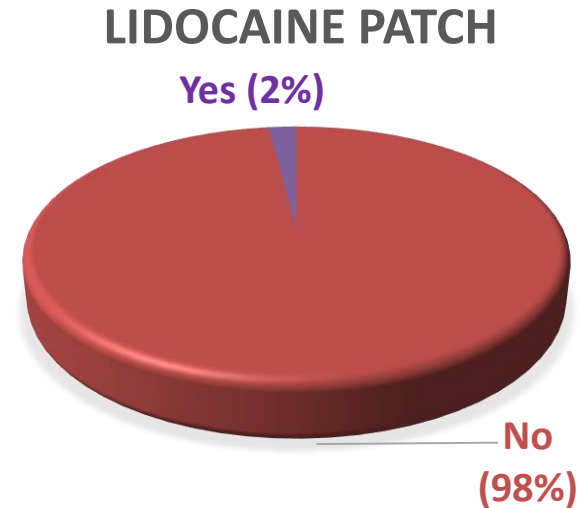
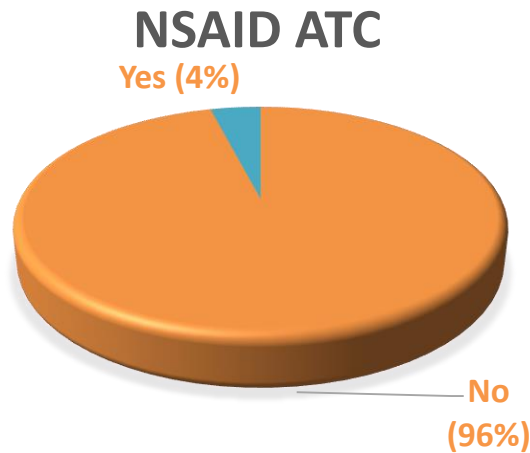
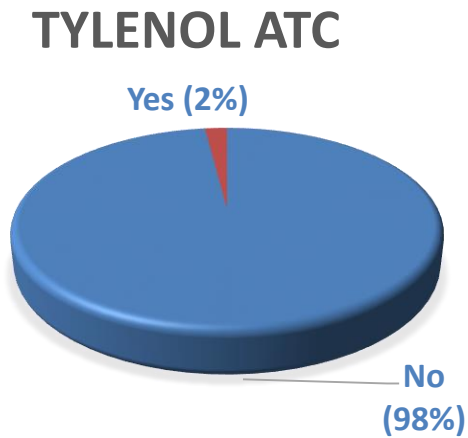


RESULTS



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Inpatient Prescribing Patterns – Controls



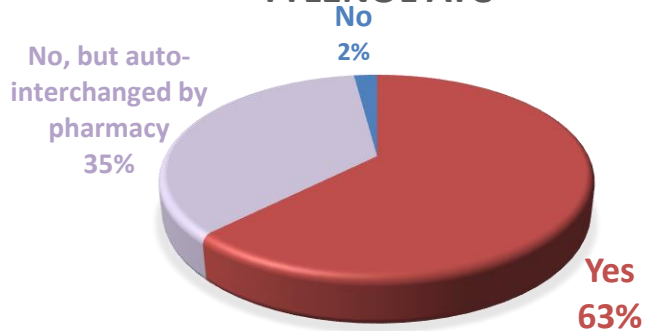
ATC=around the clock



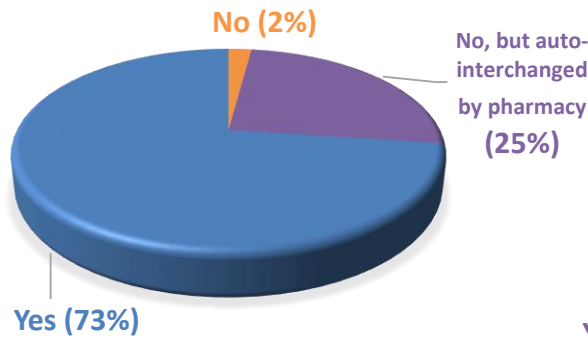
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Inpatient Prescribing Patterns - Interventions

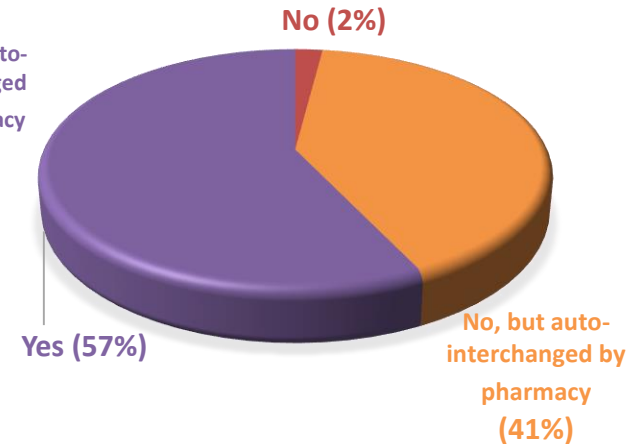
TYLENOL ATC



NSAID ATC



LIDOCAINE PATCH



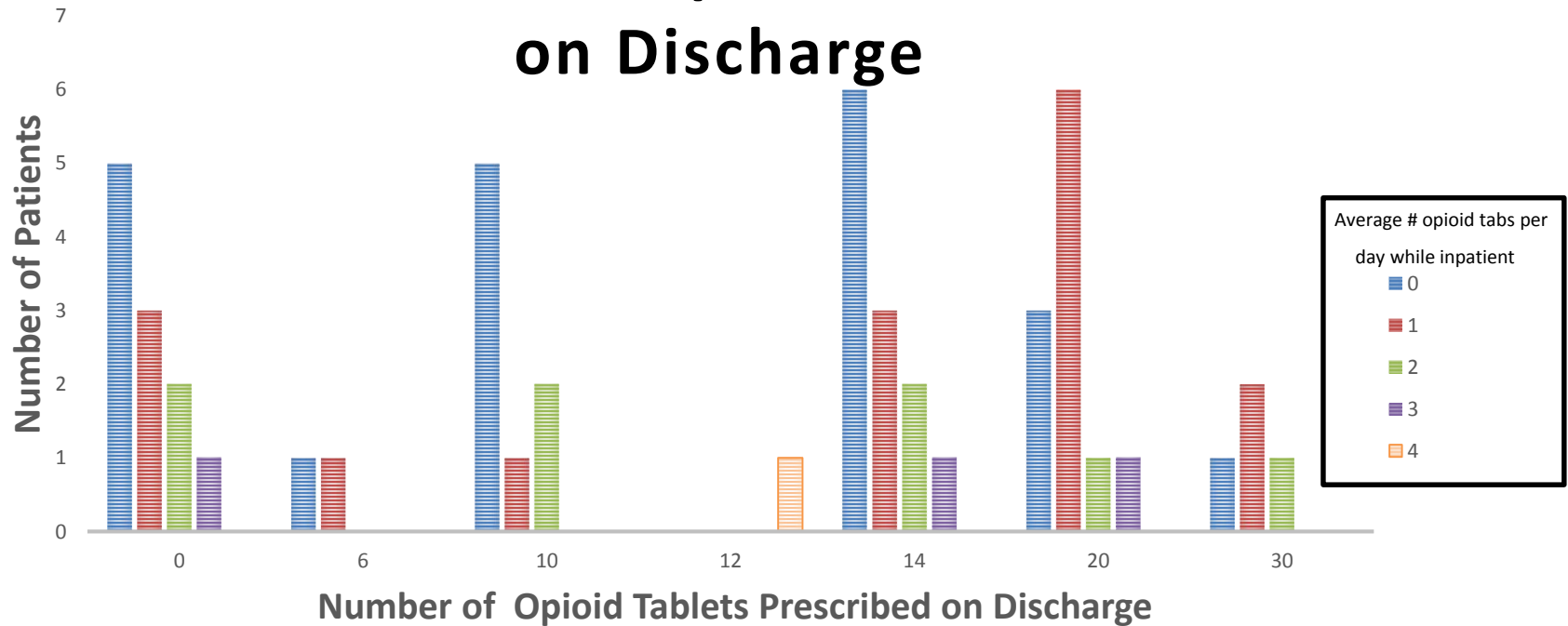
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Results: Opioid Use

	Control patients	Intervention patients	% change
No. times medicated for moderate pain	74	106	43% increase
No. times medicated for severe pain	235	138	41% decrease
Oral morphine equivalents received	3,860 mg	2,858 mg	20% decrease



Quantities of Opioids Prescribed on Discharge



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Limitations

- Observational, not a RCT
 - Not powered to show significance
- Did not remove outliers
 - opioid tolerant patients
 - Opioid use disorder
 - Chronic pain on opioids



Summary: Scheduled Multi-modal Analgesia improves pain control with less opioid

- Providers prescribed multimodal regimen 63-75% of the time, pharmacist automatic interchange improved adherence with multi-modal analgesia prescribing

	Prior to interchange (%)	After interchange (%)
ATC acetaminophen	2	98
ATC NSAID	4	98
24 hour lidocaine patch	2	98

- Patients experienced more moderate, and less severe pain
- Opportunities will be explored for improved correlation between in patient use and discharge quantity



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