

OBJECTIVE

To determine if there would be an overall improvement in postpartum pain management for patients who delivered via cesarean section and, in turn, a decrease in need for opioid use for breakthrough pain management via implementing a scheduled dosage of NSAIDs vs. an as-needed basis

INTRODUCTION

- Current guidelines for post-cesarean pain as per The American College of Obstetricians and Gynecologists:
 - Standard oral analgesic adjuvants
 - Nonsteroidal anti-inflammatory drugs (NSAIDs)
 - Opioids
 - Opioids in combination formulations with either acetaminophen or an NSAID⁽¹⁾
- Untreated pain is associated with a risk of greater opioid use, postpartum depression, and development of persistent pain ⁽¹⁾
- NSAIDs decrease pain scores, particularly related to visceral cramping pain ⁽³⁾
- Scheduled administration of NSAIDs may allow a consistent therapeutic concentration as opposed to peaks and troughs when taken as needed, resulting in a reduced need for opiate rescue analgesia ⁽⁴⁾
- Oral NSAIDs are breast feeding-friendly, excreted into breast milk in low concentrations —equivalent to 0.2% of the pediatric dose ⁽³⁾

One in 300 opioid-naïve patients exposed to opioids after cesarean birth become **persistent users of opioids** ⁽¹⁾



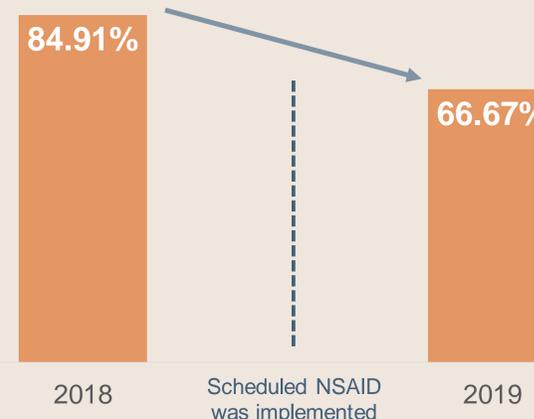
METHODS

- Post-partum pain management was changed from the initial pain scale, which included an NSAID every six hours **as needed** for mild pain as indicated by a visual analogue score of 1-3, with opioids reserved for any moderate or severe pain
- The order set was revised to include a **scheduled dose** of an NSAID every six hours regardless of pain, with opioids reserved for breakthrough pain as needed
- Chart review was then conducted looking at medication dispensed for pain control in post-operative cesarian section patients over two 60-day intervals; one set prior to the pain management medication change and the other after the change was implemented
- Amount of NSAID (Ibuprofen 600mg) and opioids (Acetaminophen 325mg/Oxycodone 5 mg) dispensed to each patient were reviewed amongst both groups

RESULTS

- Statistical significance was found in regard to the percentage of patients who did not require any opioids for breakthrough pain throughout their post-operative recovery (p-value = 0.024, odds ratio = 2.8 (95% CI = 1.1-7.0))

% of Women Requiring Opioids Post-Operatively



CONCLUSION
Using a regularly scheduled NSAID showed a statistically significant reduction in the need for opioids after cesarean birth — ultimately cutting down opioid exposure entirely.

1. ACOG Committee Opinion No. 742. (2018). Obstetrics & Gynecology, 132(1). doi:10.1097/aog.0000000000002683
 2. "FastStats - Births - Method of Delivery." Centers for Disease Control and Prevention, Centers for Disease Control and Prevention, 20 Apr. 2020, www.cdc.gov/nchs/fastats/delivery.htm
 3. Sutton, C. D., & Carvalho, B. (2017). Optimal Pain Management After Cesarean Delivery. Anesthesiology Clinics,35(1), 107-124. doi:10.1016/j.anclin.2016.09.010
 4. Valentine, A.r., et al. "Scheduled Acetaminophen With As-Needed Opioids Compared With As-Needed Acetaminophen Plus Opioids for Postcesarean Pain Management." Obstetric Anesthesia Digest, vol. 36, no. 2, 2016, pp. 110-111., doi:10.1097/01.aoa.0000482647.00882.aa.