

# Establishing a New Pain Pathway for Hip Fracture Patients at Providence Healthcare

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**AIM**  
The purpose of this project was to implement a quality improvement pathway where hip fracture patients receive a femoral nerve block pre-operatively to decrease pain prior to their surgery.

**CONTEXT**  
Every year, approximately 300 patients arrive at Providence Health Care (PHC) in Vancouver, BC, with fractured hips. These patients typically receive intravenous opioids for pre-operative pain control, the use of which often contributes to pneumonia, delirium, decreased level of consciousness, and other medical complications in this frail, elderly population

Strong clinical evidence shows that pre-operative peripheral nerve blocks in hip fracture patients improves pain on movement within 30 mins, reduces the incidence of peri-operative pneumonia, and reduces the cost of analgesia compared to other modes of systemic analgesia (Guay et al, 2017). Growing evidence supports that when a pre-operative peripheral nerve block is part of a multidisciplinary care bundle, the incidence of post-operative delirium decreases (Chuan et al, 2019).

**STRATEGY**  
We performed a chart audit for 6 months prior to implementation of the novel pathway to get a baseline of our patient population. We collected data on admission-to-surgery time, pre-op nerve block data, morphine equivalents, pain, and rates of delirium. Development of the new pathway began with a meeting of anesthesiologists, then we held a multi-disciplinary meeting of various stakeholders to determine the best path forward. Pre-printed orders (PPOs) were developed in coordination with our acute pain nurse and a clinical nurse specialist. We then implemented the pathway, and subsequently performed another chart audit with data from the 6 months post-implementation.

We increased the percent of hip fracture patients receiving regional anesthesia for pre-operative pain control from 3% to over 60% in 6 months.

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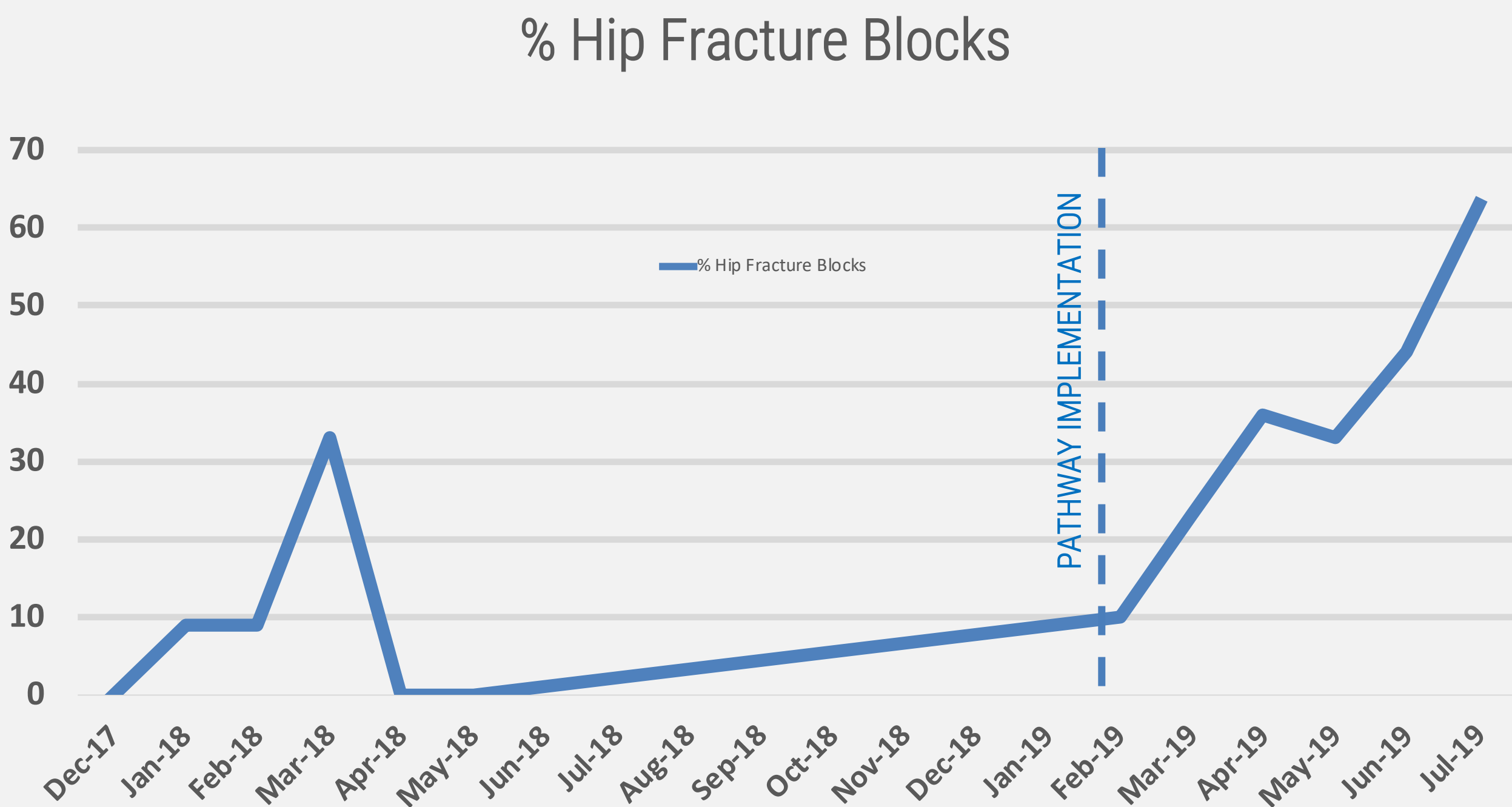
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We then surveyed bedside physicians and nurses involved to gauge attitude toward the new pathway.

## IMPROVEMENT MEASURES

Pre-Implementation:	Post-Implementation (3 mo):
Total # of pts: 69	Total # of pts: 66
Mean age: 78	Mean age: 75
Male: 42%	Male: 41%
Received block: 6/69 (8.7%)	Received block: 22/66 (33%)
Morphine: 0.99 mg/hr	Morphine: 0.35 mg/hr



## EFFECTS OF CHANGE

Overall, there was a steady improvement in patients getting nerve blocks in the emergency department for primary pain control. **98%** of those surveyed said the pathway was beneficial for patients, and **87%** said they saw improvements in patients when the pathway was used.

## CHALLENGES

We initially did not involve bedside ED nurses in the discussion of how to implement this pathway, which was an oversight. We were able to work with bedside ED nurses to understand their perspective of how this would change patient care and impact their workload. The most common reason why a hip block was not given was due to lack of an available anesthesiologist to perform the block.

## SUSTAINABILITY

Pre-printed orders continue to be available at St. Paul's Hospital ED, and patients are being directed down this pathway daily. In order to address the concern around anesthesiologist availability, we intend to identify emergency physicians who would like to be trained to perform nerve blocks independently.