Investigation of Time to Acute Pain Service Evaluation of Hip Fracture Patients in the ED

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Purpose

Hip fracture patients comprise a clinically complex population where expeditious provision of regional blockade has been shown to improve pain control (per VAS score), lower opioid use preoperatively and decreased length of stay.\(^1\) Despite the demonstrated value of this modality, the majority of variation in whether patients receive regional blocks has been shown to be driven by hospital and anesthetist-related factors.\(^2\)

Study Aims:

- To investigate the average time between acute pain team consult placement and when patient receives a regional block
- Identify causes for increased time to anesthesia pain team evaluation of hip fracture patients at NYP-Weill Cornell
- Understand and streamline orthopedic consult to regional anesthesia/acute pain service evaluation

Investigation Methods

- Chart Review 11/2022 - 12/2022
  - Operative hip and femur fracture procedures (based on Current Procedural Terminology (CPT\(^*\)) codes)
  - Fields of interest: time of ortho consult order versus OR time, time of anesthesia acute pain team order versus evaluation, time of regional block if done prior to surgery
  - Interviews with emergency medicine and orthopedic provider teams regarding order placement and work flow

Audit Results

<table>
<thead>
<tr>
<th>Average Times Between Consult and Acute Pain Evaluation</th>
<th>Time from Ortho Consult Order to Acute Pain Consult (in HOURS)</th>
<th>Time from Ortho Consult Order to OR Start Time (in HOURS)</th>
<th>Time from Ortho Consult Order to Block Procedure Start (in HOURS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Time (n = 21)</td>
<td>24.49</td>
<td>25.96</td>
<td>25.66</td>
</tr>
</tbody>
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Cases Receiving a Block Before the OR

| Count of Cases (n = 21) | Block Received Before OR (8 (38.10%)) | Block Not Received Before OR (13 (61.90%)) |

Figure 1: Aims for Root Cause Analysis

1) When does the consult to the acute pain service occur?
2) Are there patients for whom a consult is not placed?
3) Are there barriers to placing a consult?
4) Are there barriers to acute pain team assessment of patient?
5) Do pre-operative pain scores and off-hour consultation effect the time to consult fulfillment?

Figure 2: Current State Process Map

Investigation of Time to Acute Pain Service Evaluation of Hip Fracture Patients in the ED

<table>
<thead>
<tr>
<th>Event</th>
<th>Time (in HOURS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ortho resident arranges to see Acute Pain Teamist on call with ortho</td>
<td>24.49</td>
</tr>
<tr>
<td>Ortho resident calls Acute Pain Teamist on call with ortho</td>
<td>25.96</td>
</tr>
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</tr>
</tbody>
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Takeaways from Initial Analysis

- Time from Ortho Consult Order to Acute Pain Consult
  - The average time from Ortho consult order to acute pain consult being placed was an average of over 24 hours
- Time to Anesthesia Acute Pain Team Block
  - Following anesthesia acute pain team evaluation, if the patient received a block, it occurred on average 1.2 hours after consult placement
- Receipt of Block Prior to OR
  - Less than half of hip/femur fracture patients received a block prior to OR arrival

Future Directions

- Continued investigation:
- Clarify reasons for delay in acute pain service consult placement by orthopedic team
- Change EPIC order set to include an automatic consult to regional anesthesia/acute pain (either orthopedic surgery or ED order set)
- Understanding reasons for regional block not being delivered after acute pain service has evaluated the patient
- Include a section for acute anesthesia pain team to document in medical record why a block was not performed after acute pain service evaluation