# Background

- The length of stay (LOS) varies significantly in the post-op short stay unit at a local community hospital for a laparoscopic cholecystectomy.
- Postoperative nausea and vomiting (PONV) is a common complication after general anesthesia in patients undergoing laparoscopic cholecystectomy, which can increase a patient's LOS.

## Research Questions

- What is the current average post-op LOS for laparoscopic cholecystectomy patients?
- What factors differ in the care of laparoscopic cholecystectomy patients that stay longer?
- Can the care be standardized to shorten the length of stay in the post-op short stay unit?

## Objectives

- To decrease the average length of stay in the post-op unit after a laparoscopic cholecystectomy from the 170 minutes current average to 120 minutes.

# Methods

- Reviewed EPIC charts of 41 patients who received a laparoscopic cholecystectomy since July 1st 2014 and gathered data on the following:
  - Medications used during the procedure
  - Use of a nerve block
  - Xanax administration before the surgery
  - Difference between LOS of males and females
- Observed the care of a patient getting a laparoscopic cholecystectomy from hospital arrival to discharge, including the procedure, communication of staff and nursing care
- Conducted a literature review to gather information on evidence based standards of care

# Results

- No differences in LOS was found based on the following factors:
  - Nerve blocks, Xanax before surgery, or differences between males and females
  - Patients who received at least 3 different antiemetics during surgery had the shortest length of stay.
  - Common intraoperative antiemetics included odansetron, dexamethasone, metoclopramide, ephedrine, scopolamine patch, diphenhydramine and propofol infusion
- Our findings agree with evidence based literature that suggests using a combination of antiemetics may be the most effective method of preventing PONV for high-risk patients, because different antiemetics work on different neurotransmitters involved in the pathogenesis of post-op nausea and vomiting (Wilhelm, Dehoorne-Smith, Kale-Pradhan, 2007).

## Results

<table>
<thead>
<tr>
<th>Number of Antiemetics vs. Length of Stay</th>
<th>Sample Size: 41 patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;3 Hours</td>
<td>2.5</td>
</tr>
<tr>
<td>3-11 Hours</td>
<td>3.0</td>
</tr>
<tr>
<td>&gt;11 Hours</td>
<td>3.5</td>
</tr>
</tbody>
</table>

# Discussion

- Combining antiemetics provides more effective coverage by preventing nausea and vomiting through a variety of pathways.
- This study showed that increasing the number of different antiemetics used during surgery leads to a shorter length of stay.
- Patients with less nausea and vomiting meet the discharge criteria sooner, reducing their length of stay in the post-op unit.
- A limitation of this study was that the literature used is slightly outdated, from 2007.

## Recommendations

- A combination of at least 3 different antiemetics should be used during laparoscopic cholecystectomy to reduce postoperative nausea and vomiting in order to reduce the length of stay.
- Research upcoming literature for more recent study results

# References