Traditional Hospital Bed vs. Recliner Chair in Post-Surgical Recovery Time

**BACKGROUND**

Through professional networking clinical nurses in the perioperative areas at Carle heard that major hospitals use recliners for post-op recovery.

**LITERATURE REVIEW FINDINGS**

A single study was found involving recovery of patients in a recliner after laparoscopic surgery. Patients experienced fewer problems with:

- Pain
- Ambulation
- Voiding
- Consciousness

Also, females who underwent laparoscopy and used a recliner during recovery had significantly shorter length of stays.

(Agodoa et al., 2002, p. 323)

**RESEARCH QUESTION**

To determine if subjects who recover in a recliner chair following scheduled laparoscopic cholecystectomy experience shorter recovery time vs. those who recover in a traditional hospital bed during phase 2 of post-operative recovery.

**DESIGN/METHODS**

In order to pursue this research question staff decided to conduct their own research study after finding limited information and research available on the topic.

- In 2009, the IRB approved the research study, which replicated much of the Agodoa study. 151 adult patients scheduled for laparoscopic cholecystectomies consented to participate in the study, which ended in 2015.
- Patients were randomly assigned by coin toss to a traditional hospital bed or a recliner chair. After the patient completed phase 1 of recovery they were then transferred accordingly.
- Patients were assessed using the Diagnostic Laparoscopy Recovery Scale (DLRS) to determine readiness for discharge. Patients were assessed at 15 minute intervals.

**RESULTS**

**BED VS. RECLINER**

A highly significant correlation was found in overall recovery time for patients in recliners vs. hospital beds. Patients in the study recovered an average of 24 minutes faster in the recliners.

Average Recovery time in Bed: 101
Average Recovery time in Recliner: 77
P-Value = .0003

**RESULTS ANALYZED BY GENDER, AGE, AND BMI**

When recovery time was analyzed specifically for gender, age < and ≥50, and BMI < and ≥30, no significant differences were noticed.

**CLINICAL IMPLICATIONS**

**BENEFITS**

The 24 minute reduction in recovery time could provide:

- Improved Patient outcomes
- Cost savings

<table>
<thead>
<tr>
<th></th>
<th>Base Rate cost</th>
<th>Each additional 15 min cost</th>
<th>Average LOS</th>
<th>Average total cost</th>
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</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>$680</td>
<td>$94</td>
<td>101</td>
<td>$1,338</td>
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<tr>
<td>Hospital Bed</td>
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</tr>
<tr>
<td>Recliner</td>
<td>$680</td>
<td>$94</td>
<td>77</td>
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<tr>
<td></td>
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<td>$188</td>
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</table>

- Increase room availability for additional patient volume
- Shorter LOS allows 4.4 additional patients per day
- Increase in revenue $5,175/day and $1,345,500/annually

**HOW CARLE IMPLEMENTED CHANGE**

- Met with CNO, Pam Bigler, and presented research findings
- Gathered key stakeholders in perioperative areas to discuss how to disseminate information and present findings at national level
- 7 additional recliners were ordered for each outpatient bay/room
- It was determined that any patient could be transferred to a recliner for Phase 2 recovery (if no complications)
- Study Results were presented at Carle 8th Annual Evidence-Based Practice Nursing Conference
- Policy was approved on 10/12/17