Acute Management of Gallbladder Disease

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Hospital Code Name: Gosford Hospital
OUTCOMES:

- Decrease in presentations to ED and admissions with gallbladder disease
- Decrease in bed days per patient for laparoscopic cholecystectomy patients
- Timely management of Gallstone Pancreatitis in line with best available evidence
- Increase in overall number of laparoscopic cholecystectomies being performed acutely
- $$$$$ savings $800 per day per patient
- Assisting National Elective Surgery Times (NEST)
SUMMARY:

- Cholecystitis, biliary colic, gallstone pancreatitis was not historically operated on acutely.
- The establishment of an Acute Surgical Unit (ASU) enabled operating time for acute surgical presentations that would have otherwise been managed electively.
- Almost all gallbladder disease is now operated on during the initial presentation or within a short period.
- This is reducing elective waitlists, reducing emergency presentations and providing better outcomes for patients whilst conserving health system dollars.
KEY PROBLEM

- Previously, most gallbladder disease presenting to ED was admitted, conservatively treated and discharged with GP referral for follow up
- Most patients were placed on waitlists for elective cholecystectomy
- Minimal cholecystectomies performed acutely
- Multiple avoidable presentations and admissions due to recurrence of biliary colic, cholecystitis or gallstone pancreatitis
- Long wait times for laparoscopic cholecystectomy surgery
AIM OF THIS INNOVATION

- Safe and timely management of patients with gallbladder disease
- Decrease representations to Emergency Department with gallbladder disease
- Decrease bed demand from patients with multiple presentations
- Reduce the number of patients being allocated to waitlists
- Save health care dollars
BASELINE DATA:

- **July – December 2011:**
  - Patients with Gallstone Pancreatitis had average **95** days between presentation and operation
  - 109 Patients underwent Cholecystectomy
  - 107 ED presentations (0.98 presentations per patient)
  - 372 days of admission from ED (admitted, not operated)
  - 242 days Operative admissions
  - Average of 5.63 days total admission

- **February – July 2014:**
  - Patients with Gallstone Pancreatitis had average **21** days between presentation and operation. More timely management of GP. Significant percentage fell within 2 week window of recommended best practice.
  - 139 patients underwent cholecystectomy
  - 101 ED presentations (0.73 presentations per patient)
  - 232 days of admission from ED (admitted, not operated)
  - 390 days of operative admission
  - Average of 4.47 days total admission per patient
KEY CHANGES IMPLEMENTED

- Establishment of ASU model of care for general emergency surgery
- Laparoscopic cholecystectomy a key Diagnostic Related Group (DRG) under this model
- Dedicated operating time and dedicated consultant
- Patients managed in a timely fashion
- Up to 12 laparoscopic Cholecystectomies being attended per month on the ASU acutely
# OUTCOMES SO FAR

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<tbody>
<tr>
<td>Cholecystectomies (Number)</td>
<td>109</td>
<td>139</td>
<td></td>
<td></td>
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<tr>
<td>Mean Age</td>
<td>54.9</td>
<td>50.7</td>
<td>0.374</td>
<td>t-Test</td>
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<tr>
<td>% Female</td>
<td>68%</td>
<td>66%</td>
<td>0.662</td>
<td>Chi Sq</td>
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<td>ED Presentations (Total for sample)</td>
<td>107</td>
<td>101</td>
<td>0.056</td>
<td>MWU</td>
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<tr>
<td>Days of Admission from ED (Excludes patients with procedure during admission)</td>
<td>372</td>
<td>232</td>
<td>0.05</td>
<td>MWU</td>
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<tr>
<td>Days of Admission for Procedure</td>
<td>242</td>
<td>390</td>
<td>0.022</td>
<td>MWU</td>
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<tr>
<td>Total Admission (Days)</td>
<td>614</td>
<td>622</td>
<td>0.601</td>
<td>MWU</td>
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<tr>
<td>Mean Admission Days per patient</td>
<td>5.63</td>
<td>4.47</td>
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<tr>
<td>Mean time from presentation to procedure, Gallstone Pancreatitis (Days)</td>
<td>95.6</td>
<td>20.8</td>
<td>&lt;0.001</td>
<td>MWU</td>
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<td>Mean from Presentation to Procedure, all pathologies (Days)</td>
<td>99.3</td>
<td>27.3</td>
<td>&lt;0.001</td>
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LESSONS LEARNT

- Establishment of an ASU beneficial
- Quarantined emergency theatre time essential
- 2.5 day consultant allocated model provides continuum of patient care in line with ASU patient LOS
- Acute management of cholecystitis under the ASU model results in better patient outcomes and financial savings
- Hospital efficiency can be improved through better patient management
- Significant reduction in bed load in both emergency and wards possible
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