Emergency Surgical Ambulatory Care

The Bath Experience

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Consultant Surgeon
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Southwest Clinical Senate
Setting the Scene

Unnecessary admissions
Unnecessary waits

Minutes matter for those that need life saving surgery
Traditional Process

- Investigations
- Queue/wait
- Operation
- Queue/wait
How ESAC Works

Patient

Consultant

Decision

Dedicated diagnostics

VIRTUAL WARD

THEATRE
Ambulatory Care is a quick win

“**Ambulatory care** is medical **care** provided on an outpatient basis, including diagnosis, observation, consultation, treatment, intervention, and rehabilitation services. This **care** can include advanced medical technology and procedures”

- Assessment default (not admission)
- Personnel (not beds) are capacity
- Shift as much as possible into out-patient setting
Infrastructure and personnel

- Runs every weekday 8am-8pm
- Trolley based assessment area
- Consultant-led & delivered (separate from on-call Consultant)
- Emergency Surgical Nurse Practitioners
- Scrub Practitioner
- Ultrasonographer
- CT/MRI slots
- Daily daycase lists (as well as 24/7 NCEPOD)
- Virtual ward
- Consultant letter generated immediately to GP
Promotion to GPs, ED and Teams

- Referral guidelines
- Appointment time
- Fasting guidelines
- Telephone numbers
- “Safety netting”
- What to expect

No protocols!
Referrals

Adults > 16 years

- Right upper quadrant pain
- Right iliac fossa pain
- Stable PR bleed
- Painful jaundice
- Peri-anal abscess
- Painful non-obstructed hernias
- Post-op problems/wound problems
- Painful anal abscess
- Accelerated discharges

Now anything that can safely wait until the next morning.
Dedicated radiology and theatres

- It’s all about flow
- 62% have ultrasound, 8% CT or MR
- 12% same day surgery
- 15% home awaiting urgent surgery
- 450 cases/year on afternoon ESAC lists- of these 86% are discharged before 10pm
Lists populated by:
• ESAC patients
• Appropriate NCEPOD patients
• Red Board patients

Finalised 1130am → 1330hrs start
ESAC Daycase Theatre Utilisation

450 cases/year approx

- Rectal EUA/Abscess/Fistula/Botox: 32%
- Laparoscopic cholecystectomy: 24%
- Hernias - various: 16%
- Laparoscopic appendicectomy & diagnostic laparoscopy: 12%
- Excision biopsy/LN biopsy: 7%
- Laparoscopic stoma formation: 5%
- Other: 4%
Emergency Surgical Nurse Practitioners

- Abscesses
- Nurse led clinics
- Accelerated discharges
- Telephone contact
- Virtual ward
- IV antibiotics, drain removal, VAC change
- Post-op discharge
- Data collection, audit, QI programmes, education
Outcomes May 2013-present

- >6500 patients, 25-28% of take referrals
- 92% managed on fully ambulant basis
- 160 bed stays saved per month (2015-16)
- No adverse events reported in patients managed on ambulant basis
- Reduced pre-op LOS in traditionally managed “take” patients- 30 bed stays/month.
- 98% of patients highly likely to recommend service to friends and family
- 1 written complaint (painful lymphadenopathy)
### An average day picked at random

<table>
<thead>
<tr>
<th>Patient</th>
<th>Activity</th>
<th>Diagnosis</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I&amp;D - ESNPs</td>
<td>Abscess</td>
<td>Home</td>
</tr>
<tr>
<td>2</td>
<td>Bloods, TVUS, urine</td>
<td>Ovarian cyst accident</td>
<td>Gynae</td>
</tr>
<tr>
<td>3</td>
<td>Bloods, biliary US</td>
<td>Biliary colic</td>
<td>Home, elective list</td>
</tr>
<tr>
<td>4</td>
<td>Bloods, US, CT</td>
<td>Contained diverticular perforation</td>
<td>IV antibiotics, virtual ward, ESAC 24 hrs</td>
</tr>
<tr>
<td>5</td>
<td>Bloods, biliary US</td>
<td>Acute cholecystitis</td>
<td>Lap chole, home</td>
</tr>
<tr>
<td>6</td>
<td>Bloods, urine</td>
<td>NSAP</td>
<td>Home, telephone FU</td>
</tr>
<tr>
<td>7</td>
<td>Bloods, urine, TVUS</td>
<td>Appendicitis</td>
<td>Laparoscopy, home</td>
</tr>
</tbody>
</table>
Mrs H

- Appointment 9am
- Bloods and obs 910am
- Consultant review 920am
- TV and Abdo US 940am
- CT Scan 1110 am
- GI Radiologist Report 1145am
- Microbiology advice midday
- Home 1230pm

VIRTUAL WARD Daily review ➔ nurse led review ➔ telephone follow up ➔ to be aware of ➔ awaiting surgery ➔ red board ➔ day case lap appendix on ESAC theatre list ➔ virtual ward
Saving NCEPOD (and beds) for the sickest

Overall 30 Day Mortality

- Median
- Laparotomy Pathway
- ESAC
Length of Stay

Average LOS (days)- All Non-Elective General Surgery Patients

<table>
<thead>
<tr>
<th>Year</th>
<th>LOS (days)</th>
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<tbody>
<tr>
<td>12/13</td>
<td>4.1</td>
</tr>
<tr>
<td>13/14</td>
<td>4.1</td>
</tr>
<tr>
<td>14/15 (YTD)</td>
<td>4.5</td>
</tr>
</tbody>
</table>
Good practice and areas for improvement

Areas of good practice

Our inspection team highlighted the following areas of good practice within the hospital:

- The trust had made good progress towards seven-day working where staffing and services at the weekend were similar to weekdays, for example, in the A&E department, for patients receiving emergency medical and surgical care.
- Patient in-hospital mortality rates were lower than expected and there was no difference between weekday and weekend mortality.

- The emergency surgical ambulatory clinic was specifically designed to see patients with urgent general surgical problems. Patients were assessed and diagnosed (and some had their procedures) on the same day. The clinic had helped to avoid hospital admissions and had reduced the time inpatients waited for emergency surgery.
- Staff in the critical care unit were struggling with staffing levels and being able to discharge people in an appropriate way, but they showed complete dedication to the service and provided outstanding care.
£441K for ESAC

- 2 Consultants
- 2 Secretaries
- 2 Emergency Surgical Nurse Practitioners
- 1 Scrub Nurse Practitioner
- 1 Ward HCA
- Set up costs/courses
Tariff Complexities

- New ESAC patient £765
- ESAC follow up patient c£60
- Gen Surg follow up patient c£60
- Gen Surg ESAC follow up c£60
- Admit c£1600
- Phone call c£20
Acute biliary patients

- Average 25 patients/week referred acute biliary problems
- 28% of re-admissions biliary
- ESAC supported “Acute Biliary Pathway” since January 2016
- Gallstone pancreatitis, acute cholecystitis, crescendo biliary colic
- 236 urgent LCs since January 2016
Measuring system dynamics

Flow in – the **DEMAND** for water
(number of patients needing urgent lap chole)

Amount of water in the bath – the **WORK IN PROGRESS**
(current waiting list)

Flow out – the **SUPPLY** of water to the next system
(number of operating slots)

How long from water entering the bath until leaving through the drain - the **LEAD** time
(AC <7 days, GSP<14 days!!)
Biliary Coordinator

- Receives referrals
- Discusses with Consultant Surgeon
- Liaises with patient
- Maintains “virtual ward”
- Keeps Lap Chole database
- First Assistant
- Education
Capacity Planning

Combined count of admissions

Start: 18 Jan 2015
U.C.L. = 7.5
Mean = 3.6
L.C.L. = n/a

= 80% to avoid queue
= 5 slots per week
Acute Cholecystitis (K800/K810)

- January 2015 to May 2016
- 219 patients
- Lap chole in 113 patients (51%)

Pre-October 2015
Average wait= 103 days
Percentage done within 7 days= 24%

Post-October 2015
Average wait= 11.3 days
Percentage done within 7 days=79%
But 8 awaiting LC
Time to surgery after Diagnosis of Acute Cholecystitis (Days)

Lead time from admission to surgery for all LC pts K800 and K810

<table>
<thead>
<tr>
<th>Split Start</th>
<th>U.C.L.</th>
<th>Mean</th>
<th>L.C.L.</th>
</tr>
</thead>
<tbody>
<tr>
<td>04/01/2015 - 10/01/2015</td>
<td>=387.2</td>
<td>=103.8</td>
<td>=n/a</td>
</tr>
<tr>
<td>23/08/2015 - 29/08/2015</td>
<td></td>
<td>(Extra)</td>
<td></td>
</tr>
<tr>
<td>27/09/2015 - 03/10/2015</td>
<td>=191.1</td>
<td>=49.4</td>
<td>=n/a</td>
</tr>
<tr>
<td>17/04/2016 - 23/04/2016</td>
<td>=17.2</td>
<td>=4.4</td>
<td>=n/a</td>
</tr>
</tbody>
</table>
Gallstone Pancreatitis

- 89 patients (Jan 15-July 16)
- 72% have had LC
- Remainder - not fit, death, out of area etc. 2 notes no clear reason.

Pre-October 2015
Percentage done within 14 days = 31%

Post-October 2015
Percentage done within 14 days = 65%
Time to surgery after diagnosis of Gallstone Pancreatitis (Days)

Biliary readmission rate 8% Nov16-Jan17
Protected Area

Total number of patients seen in ESAC
Bed savings
% of days unable to work at full capacity
Training

Overall numbers being admitted via the take unchanged-but are of higher acuity

- Preservation of F1s but rotating them through ESAC as “community facing weeks” with excellent feedback.
- ESAC lists attended well by CTs to gain relevant exposure prior to ST3
- Complex biliary cases for advanced trainees
- Nurse practitioners
- Scrub practitioners
ESAC Umbrella

- Consultant clinic
- GP Advice
- Therapies - IV antibiotics
- Transfusions
- Post-op advice/complications
- Nurse-led clinics
- Virtual ward
- Accelerated discharges
- Acute biliary work
- Assessment in ambulatory care not default admission
Initial Challenges

- Different way of working
- GPs perplexed, process evolved
- Little notice for theatre
- Radiology
- Paperwork
- Recording data
- Day surgery mentality
- Risk!
Top Tips

• Dedicated diagnostics
• Senior delivered service - risk
• But get trainees involved - great training
• Establish appropriate tariff
• Protected area
• Use a “virtual ward” concept
• Dedicated theatre lists
• Supportive colleagues and hospital management!
Thanks to the ESAC Team

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