Improving Elective Surgery Utilisation Rates at Shellharbour Hospital
Mission Statement

To Achieve the NSW Health Benchmark of 98% of elective surgery being completed on the planned day of surgery, at Shellharbour Hospital by reducing the elective surgery cancellation rate from 3.16% to less than 2% over a 6 month period
Project Team Members & Roles

- **Angela Jones** (NUM Peri-operative Unit, Shellharbour)
- **Angela Jones** (MUM Midwifery Unit, Shoalhaven)
- **Justin Dixon** (Deputy Chief Radiation Therapist, Wollongong)
- **Heidi Epps** (CNS Oncology Day Care, Wollongong)
- **Barbara Kennard** (Pharmacist, Port Kembla & Coledale)
Guidance Team Members & Roles

- **Kristy Pierce**: Research Governance Officer (Southern Hospital Network (SHN) Ethics)
- **Robert Farrugia** (CPIU – Clinical Practice Improvement Unit)
- **Sheree Paterson** (Clinical Leadership Program (CLP) Facilitator)
- **Health Care Interpreter Service**
- **Diversity Health**
Evidence of a Problem Worth Solving

- Below benchmark utilisation rate of 98%
- Anecdotal evidence – NUM’s observations of cancellation rate
- These numbers were confirmed by
  - Review of eMR data
  - IPM
  - Shellharbour Hospital Elective Waiting List
Our Project Aims To

• To review relevant current literature
• Compare current literature
• Identify and eliminate causes of cancellation
Literature Review

• A review of 9 Journal articles was completed
• From this review, the common themes which emerged for surgery being cancelled on the day of theatre were:
  - Inefficient use of theatre time resulting in wasted resources
  - Failure to fast – lack of understanding of instructions
  - Medication taken which should have been withheld
  - Patient didn’t follow instructions
  - Instructions not clearly communicated
SHH Day Surgery Process Map - Detailed View (part 1)

1. Patient goes to specialist
2. Patient takes RFA to hospital admissions
3. Hospital admissions check Medicare number, DOB, Address, insurance status, RFA filled out correctly
4. RFA OK?
   - YES: Admissions staff assign an MRN if one not already allocated
   - NO: RFA sent back to the referring Dr to correct errors
5. RFA sent back to admissions once rectified
6. Specialist recommends surgery and gives request for admission (RFA) to patient
7. Num checks RFA for:
   - Proper consent
   - Stated procedure matches consent
   - Patient health status
   - Medications
   - BMI
   - Co-morbidities
   - ? Day case or surgical
   - Interpreter required
   - Age
   - Length of stay
8. RFA OK?
   - YES: Admissions staff enter patient into IPM
   - NO: Admissions staff send RFA to NUM of Perisp
SHH Day Surgery Process Map - Detailed View (part 3)

Flow Chart of Process

- If no contact made, patient removed from the list and RFA returned to filing process.
- Patient only allowed 3 offers of surgery & Patient can only defer a limited amount of time based on category – then will be removed from list.

1. Admissions book patient into allocated clinic?
   - NO: Admissions staff notify patient in writing or by phone depending on timeframes (ie phone if short notice resulting from gap filling OR 30 days “CAT A”)
   - YES: Patient phones to confirm (within 5 days)

2. Admissions mail out surgery date, patient education/information leaflets to patient, and are asked to phone admissions to confirm date of surgery

3. Patient phones to confirm the clinic booking with the patient

4. Patient attend for clinic

5. Patient fit for surgery?
   - NO: Go back into the booking process at some point depending on the issue
   - YES: Patient phones the day before and is given fasting instruction

6. Patient phones the day before surgery

7. Patient asks to phone day surgery the day before surgery

8. Patient Attends on Day of Surgery

9. Patient fit for surgery?
   - NO: Day surgery nurse tries to call patient
   - YES: Patient has surgery!

10. Patient agrees to attend

11. Patient contacted

12. Phone Call
   - NO: Phone Call
   - YES: Patient contacted
Process Map Critique

- The process map was displayed in Theatres, Day only unit and Admissions at Shellharbour Hospital
- Brown paper critique was conducted
- Comments on post-it notes by all stakeholders
- The process map was also emailed to our key stakeholders for comment
Process Map Critique
## Process Map Critique

### Results

<table>
<thead>
<tr>
<th>Comments Made on Process Map Critique</th>
<th>Category / Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Give patients a detailed leaflet outlining possibilities of delay, cancellations etc so they are forewarned along with fasting instructions etc</td>
<td>Patient Information Sent</td>
</tr>
<tr>
<td>Send surgery specific instruction to patient with admission mail out e.g. importance of fasting, shave, medications to take / not take,</td>
<td>Patient Information Sent</td>
</tr>
<tr>
<td>Day only patients may think pre-op instructions don’t apply to them but only to overnight operations</td>
<td>Patient Understanding</td>
</tr>
<tr>
<td>Improve admission offer letter</td>
<td>Patient Information Sent</td>
</tr>
<tr>
<td>Slow the phone call down - day only is very busy and the calls about surgery are very rushed</td>
<td>Phone Calls</td>
</tr>
<tr>
<td>Well organised and good information on checklist for nurse answering day prior to surgery phone calls e.g. listing medications to take and all questions to ask patients</td>
<td>Checklists</td>
</tr>
<tr>
<td>Nursing homes do not always listen to what they are told</td>
<td>Phone Calls</td>
</tr>
<tr>
<td>Family members do not always pass over messages properly</td>
<td>Phone Calls</td>
</tr>
<tr>
<td>A lot of patients do not have good English</td>
<td>Patient Understanding</td>
</tr>
<tr>
<td>Patients do not read information booklet</td>
<td>Patient Information Sent</td>
</tr>
<tr>
<td>Eye patients are mostly old, some slightly demented or deaf and do not understand</td>
<td>Patient Understanding</td>
</tr>
<tr>
<td>When more clinics are available then book patients in anaesthetic clinic if they are non English speaking</td>
<td>Interpreter Services</td>
</tr>
<tr>
<td>Doctors are often late, procedures run longer and doctors have to leave early</td>
<td>Resources</td>
</tr>
<tr>
<td>Develop policy / procedure for cancellation of patients - when is cancellation appropriate? &amp; when it is not</td>
<td>Policy / Procedure</td>
</tr>
<tr>
<td>Send the RFA back to patient not to Dr to correct details</td>
<td>RFA management</td>
</tr>
<tr>
<td>If category or procedure is missing on RFA then fax to Dr for information</td>
<td>RFA management</td>
</tr>
<tr>
<td>Patient takes RFA to hospital or to TWH or Bulli or mails or faxes in RFA</td>
<td>RFA management</td>
</tr>
<tr>
<td>Is the NUM the only person who can check the RFA’s?</td>
<td>RFA management</td>
</tr>
<tr>
<td>The NUM or delegate should be responsible for the RFA’s</td>
<td>RFA management</td>
</tr>
<tr>
<td>Who notifies the interpreter service is there a change to the booking (this is causing us a few problems)</td>
<td>Interpreter Services</td>
</tr>
<tr>
<td>Who gives fasting instructions over the phone to those who are deaf or are NESB</td>
<td>Interpreter Services</td>
</tr>
<tr>
<td>Most cancellations to the dental list are due to medical reasons (colds etc)</td>
<td>Medical Reasons</td>
</tr>
<tr>
<td>Dental lists are on Mondays, so patients aren’t contacted the day before (Sunday) and the list cannot be adjusted if pt unfit. Can the list be reviewed on Sundays?</td>
<td>Resources</td>
</tr>
</tbody>
</table>

*RFA – Request For Admission (form)*
## Process Map Critique Results

<table>
<thead>
<tr>
<th>Count for Each Theme</th>
<th>Count</th>
<th>% of Total</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFA management</td>
<td>5</td>
<td>21.7%</td>
<td>21.7%</td>
</tr>
<tr>
<td>Patient Information Sent</td>
<td>4</td>
<td>17.4%</td>
<td>39.1%</td>
</tr>
<tr>
<td>Phone Calls</td>
<td>3</td>
<td>13.0%</td>
<td>52.2%</td>
</tr>
<tr>
<td>Patient Understanding</td>
<td>3</td>
<td>13.0%</td>
<td>65.2%</td>
</tr>
<tr>
<td>Interpreter Services</td>
<td>3</td>
<td>13.0%</td>
<td>78.3%</td>
</tr>
<tr>
<td>Resources</td>
<td>2</td>
<td>8.7%</td>
<td>87.0%</td>
</tr>
<tr>
<td>Checklists</td>
<td>1</td>
<td>4.3%</td>
<td>91.3%</td>
</tr>
<tr>
<td>Policy / Procedure</td>
<td>1</td>
<td>4.3%</td>
<td>95.7%</td>
</tr>
<tr>
<td>Medical Reasons</td>
<td>1</td>
<td>4.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>23</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Process Map Critique

Results

Pareto Chart of Process Map Comment Themes

% of Total
Cumulative %

0.0% 20.0% 40.0% 60.0% 80.0% 100.0%

Themes:
- RFA management
- Patient Information Sent
- Phone Calls
- Patient Understanding
- Interpreter Services
- Resources
- Checklists
- Policy / Procedure
- Medical Reasons

- % of Total
- Cumulative %
Process Map Critique

Results

Pareto Chart of Process Map Comment Themes
Process Map Critique

Results

Pareto Chart of Process Map Comment Themes

- RFA management
- Patient Information Sent
- Phone Calls
- Patient Understanding
- Interpreter Services
- Resources
- Checklists
- Policy / Procedure
- Medical Reasons

% of Total
Cumulative %
Patient Phone Survey

- Phone survey designed in collaboration with CPIU and approved for use by SHN Research Directorate
- Patients who have had elective surgery cancelled on the day of theatre at Shellharbour Hospital compiled from eMR
- Confidential phone survey was conducted by the entire project team
- Healthcare interpreter service assisted in completing surveys with Non English Speaking Patients
# Patient Phone Survey

**Phone Survey of Patient's with a Cancelled Surgical Procedure on the Day of Surgery**

Good morning/afternoon Mr/Mrs. [only record MRN]. My name is __________ and I am calling from South Eastern Sydney Illawarra Area Health Service. Our records show that you had surgery scheduled and then cancelled at Shellharbour Hospital in the last 12 months. I am part of a project that is trying to reduce the number of cancellations in surgery at Shellharbour Public Hospital and I wonder if I would be able to ask you a few questions over the phone regarding your experience?

If the respondent agrees:

My/Mrs. __________, I must advise you that any information you give me will be treated confidentially. The answers will be presented as part of a group tele phone survey and will only be used for quality improvement purposes.

If the respondent disagrees:

Thank you for your time etc

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**Did you attend the [surgical/anesthetic] clinic prior to the planned day of surgery?**

- [ ] Yes
- [X] No

**Do you think there is anything the hospital could have done, or should have done, to prevent your surgery from being cancelled?**

- [ ] Yes
- [X] No

**Did you eventually have surgery after this cancellation?**

- [ ] Yes
- [X] No

**How long after?**

- [ ] 12 Months
- [X] 6 Months
- [ ] 3 Months
- [ ] 2 Months
- [ ] 1 Week
- [X] 1 Day
- [ ] 1 Hour
- [ ] Other

**Were there any other delays to your surgery?**

**Is there any other feedback that you would like the project team to give back to the Hospital regarding the cancellation of surgery in general?**

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**When the surgery was cancelled, did you change your mind about having the surgery?**

- [ ] Yes
- [X] No

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**What of the following were factors in the delay?**

- [ ] Medical reason
- [ ] Information / instructions
- [ ] Interpreter services
- [ ] Failure to test
- [ ] Your understanding of what was required
- [ ] The Hospital cancelled
- [ ] Changed my mind
- [ ] Financial

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**Did you receive any paperwork in relation to your admission?**

- [ ] Yes
- [X] No

**Did you understand the information it contained?**

- [ ] Yes
- [X] No

**Were you contacted by phone in regards to your admission?**

- [X] Yes
- [ ] No

**Which contact method do you think you would prefer?**

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**Thank participant for their time.**

If they have any further problems that they would like to discuss, they can contact Angie Jones on 4225/5208.

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**Surveyors use:** Identify which step in the process resulted in the surgery being delayed (based on process map), if this has need been identified try to ascertain this from the patient.
Survey Results

Results From Patient Survey - Reasons for Surgery Cancellations at SHH

<table>
<thead>
<tr>
<th>Reason</th>
<th>Count</th>
<th>% of Total</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medically unwell</td>
<td>8</td>
<td>38.1%</td>
<td>38.1%</td>
</tr>
<tr>
<td>Failure to fast</td>
<td>6</td>
<td>28.6%</td>
<td>66.7%</td>
</tr>
<tr>
<td>Cancelled by hospital</td>
<td>3</td>
<td>14.3%</td>
<td>81.0%</td>
</tr>
<tr>
<td>Miscommunication</td>
<td>2</td>
<td>9.5%</td>
<td>90.5%</td>
</tr>
<tr>
<td>Signed self out of hospital prior to surgery</td>
<td>2</td>
<td>9.5%</td>
<td>100.0%</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Survey Results

Pareto Chart of Reasons Surgery Cancelled from Patient Survey

- Medically unwell: 40.0%
- Failure to fast: 20.0%
- Cancelled by hospital: 10.0%
- Miscommunication: 5.0%
- Signed self out of hospital prior to surgery: 3.0%

% of Total
Cumulative %
Survey Results

Pareto Chart of Reasons Surgery Cancelled from Patient Survey

- Medically unwell
- Failure to fast
- Cancelled by hospital
- Miscommunication
- Signed self out of hospital prior to surgery

% of Total
Cumulative %
Survey Results

Pareto Chart of Reasons Surgery Cancelled from Patient Survey

- Medically unwell
- Failure to fast
- Cancelled by hospital
- Miscommunication
- Signed self out of hospital prior to surgery

% of Total
Cumulative %
Literature Review

• Results of review were comparable to project team findings in our local area.

• This highlights the need to look at ways in which we can implement strategies to simplify/clarify the current process to improve surgical utilisation at Shellharbour Hospital.
Main Areas of Focus

• Screening patients for illness & medication use
• Better Information on fasting
• Use of Interpreter services
• Patient information sent
• Process of RFA management
POTENTIAL SOLUTIONS
Proposal One

• Develop a dedicated pre-surgical checklist which is completed for each patient
• Patients phone in day before surgery
• Day surgery staff will answer questions and confirm instructions
• Illness, contraindications, medication
POTENTIAL SOLUTIONS

Proposal One

• Develop a dedicated presurgical checklist which is completed for each patient

Patient name: .............................................
Time of call: ......................
Interpreter: Yes/No  Language: ...............................
Time Interpreter booked: ......................

Time to be admitted at hospital admission office: ...............................

Fasting time NO FOOD OR FLUIDS (which includes no chewing gum, smoking, lollies or water):
Morning list - Midnight
Afternoon list or after 12.00 admission - early morning light breakfast before 06:00
Remind patient they may be cancelled if they eat or drink after this time

Do you take regular medications? Yes/No
Explain the need to take Heart, BP and thyroid meds.

Unless specifically asked by your Doctor, the following medications need to be stopped prior to surgery: Diabetic tablets
Fluid tablets
Aspirin/Plavix
Non-steroidal anti-inflammatory medications
Warfarin
May need to check with Pharmacy and ring the patient back if not sure.

Please bring all medications with you to the hospital on the day of your operation.

Do you need a medical certificate:  Yes/No

WHAT TO BRING

- Current medications
- A small bag to put your clothes in when you go to Theatre
- 1 support person as we have limited facilities in the DOU
- Please leave all jewellery, watches and money at home.
- Please do not wear make-up, nail polish, deodorant, perfume or aftershave on the day of surgery.

Please ensure you have someone to drive you home after surgery. You cannot drive for 24hrs after an anaesthetic.

Signature: .............................  Date: .............................
POTENTIAL SOLUTIONS
Proposal Two

• Give patients a reminder fridge magnet
• Contains date of when to phone in etc
• Instructions simplified
• Health Diversity was consulted and have assisted in the design and information on the magnet
POTENTIAL SOLUTIONS

Proposal Two

• Give patients a reminder fridge magnet
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• Instructions simplified
• Health Diversity was consulted and have assisted in the design and information on the magnet

Shellharbour Hospital
Important Information For Day Surgery Patients

You Are Booked In To Have Your Operation On

! Now You Need To Do Three Things:

1. Please phone the day surgery unit to find out your admission time. This is the time you need to be at the hospital for your operation.

   You can call us on (02) 4295 2383 between 10am and lunchtime on this day

   My admission time is: _______

2. You need to fast before your operation. This means nothing to eat or drink from midnight until after your operation.

   ! It is not safe for you to have your operation if you have had something to eat or drink

   (This includes food, water, lollies and chewing gum. Unless informed otherwise).

Read all the information you have been given.?

If you have any questions write them on the back of this card and ask us when you ring to find out your admission time.
Remaining Proposals

• Review and refine all patient information that is sent out
• Look at health literacy
• Monitor the impact of CALD bookings into anaesthetics clinic with interpreter support
• RFA Management – potential future CPI project
PDSA Cycle 1

PLAN
- Review current pre admission process for the booking of elective surgical procedures at Shellharbour Hospital
- Project team predict problem may lie in information given to patients and their understanding

DO
- Current process map displayed in theatre, day only, admissions and comment invited
- Process map also emailed to stakeholders for comment
- Key stakeholders invited to comment and make suggestions for change
- Process map displayed during October 2010

ACT
- Patient phone survey conducted of elective surgical patients who had procedures cancelled in the previous 12 months to identify areas of concern in patient experience
- Discussion with ethics committee prior to survey being done

STUDY
- 23 responses were received
- Main suggestions; inconsistency in the process for pre-admission phone calls, RFA management, patient information, patient understanding, better utilisation of interpreter service, Monday list patients should be able to ring for admission time on Sunday & clearer patient information
PDSA Cycle 2

**PLAN**
- To understand the reasons behind cancellation of surgery based on feedback from patients
- Standard survey developed for all members of project team to use

**DO**
- Phone Survey of patients who have had an elective surgery procedure cancelled at Shellharbour Hospital in the last 12 months

**ACT**
- Ensure involvement of interpreter service with patients from a CALD background
- Develop and trial standard checklist to be completed during pre admission phone call on day before surgery
- Develop and trial simplified fridge magnet, containing clear and concise information for patients

**STUDY**
- 21 patients participated in survey
- Results were; Medically unwell, Failure to fast, Cancelled by hospital, Miscommunication, Signed Self out of hospital prior to surgery
- Those who failed to fast didn’t understand or hadn’t read fasting instructions
- Understanding identified as a problem for CALD patients

Patient Survey
**PDSA Cycle 3**

**PLAN**
- Design and seek approval of standard pre surgery checklist
- To identify patients not suitable for surgery
- To reinforce previously supplied written information

**DO**
- Trial use of pre surgery checklist
- Trial period to be decided by project team
- Use interpreter service and pharmacy as indicated
- Present findings and proposals to stakeholders

**ACT**
- Review and modify the checklist to enhance effectiveness

**STUDY**
- Analyse and incorporate feedback from stakeholders
- Seek feedback from patients

**Pre Admission Checklist**
**PLAN**
- Design and seek approval for use of patient information fridge magnet
- Simplified and concise information
- Consult with health literacy experts for design and wording

**DO**
- Conduct trial of fridge magnet use
- Seek grants to have published in identified main languages (Macedonian, Italian, Greek and Spanish)
- Present findings and proposals to stakeholders.

**ACT**
- Review and modify the checklist to enhance effectiveness

**STUDY**
- Analyse and incorporate feedback from stakeholders
- Seek feedback from patients

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Reminder Fridge Magnet
Sustainability

- Team has identified that having patients bring in their fridge magnet on the day of admission will allow hospital staff to identify on an ongoing basis
  - The effectiveness of the pre admission phone call
  - Eliciting additional information from patients around patient factors leading to cancellation
Sustainability (continued)

• Peri operative unit can use the ongoing patient feedback to continually refine the surgical admission process
Transferability

• Proposed strategies will be trialed at Shellharbour Hospital initially
• Present to various SHN forums
• Strategies will be easily transferable to other hospitals/units once trial of Patient information and Pre surgery checklist is completed
Project Team Photo