Australian and New Zealand Emergency Laparotomy Audit – Quality Improvement

An overview

May 2018

ROYAL AUSTRALASIAN COLLEGE OF SURGEONS

RACS

ANZELA-QI pilot audit

- Co-led by Royal Australasian College of Surgeons (RACS) and Australian and New Zealand College of Anaesthetists (ANZCA) with collaboration from:

- General Surgeons Australia
- New Zealand Association of General Surgeons
- Australian Society of Anaesthetists
- New Zealand Society of Anaesthetists
- Australasian College for Emergency Medicine
- College of Intensive Care Medicine

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Aims of the ANZELA-QI pilot

- To agree an Australian and New Zealand EL data set and test it
- To focus on Quality Improvement from the outset by providing hospitals with frequent data reports showing performance against KPIs
- Provide EL data to support a funding application for a five year definitive project

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ANZELA-QI time lines

Time	Event
June 2017	*ANZCA NSW & Westmead Hospital meetings* *Keynote - Dave Murray, NELA clinical lead*
July & August 2017	*RACS and ANZCA Councils sign off Business Case*
August 2017	*Working Group meeting, Perth*
September 2017	*Working Group meeting, Sydney*
November 2017	*RACS/ANZCA, Peri-operative meeting, Manly*
March 2018	*National HREC ethics approval*
April 2018	*REDCap database license granted*
May 2018	*RACS/ANZCA ASC*

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The rationale: limited EL data

- No published Australian or New Zealand data prior to 2017

- Publications
  - 1 published prospective multi-hospital audit
  - 1 retrospective single hospital audit
  - 1 retrospective administrative data state audit

- Other data
  - 2017 & 2018 ASC abstracts and presentations
  - Two year national administrative data from the Independent Hospital Pricing Authority

The basics

- Pilot database REDCap (Vanderbilt University)
  - Accessible from any web enabled device
- Australia - National HREC ethics approval (not Tasmania and NT)
  - granted in March 2018
  - waiver of consent
  - Site Specific Approval (governance) required
- New Zealand - National HDEC ethics approval
  - each participating site will require local ethics approval
- Organisation audit in preparation in Australia and underway in NZ
  - Private hospitals, IHPA and AIHW differ …..
- Pilot hospitals
  - Approx. 50 expressed an interest at present

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ANZELA-QI versus NELA - differences

- Inclusion/exclusion criteria
    - Emergency Laparotomy not just bowel surgery
- Quality Improvement focus from outset
- Futility of surgery
    - Frailty score (Canadian)
    - Goals of Care documentation
- Include patients who die without an EL & those with acute abdomens but not operated on
- Transfers: 25% to 30% in Australia *versus* ~3% in NELA
- Private sector: ~15% in Australia

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Emergency Laparotomy Pathway Quality improvement care (ELPQuiC)

Evidence based ‘bundle of care’ introduced at 4 hospitals:

- Early Warning Score
- Early antibiotics
- Operation < 6 hours
- Post-op ICU
- Goal Directed Care

Following introduction:

- Adjusted mortality reduced 15.6% -> 9.6%
- 5.97 lives extended beyond 30 days per 100 patients treated

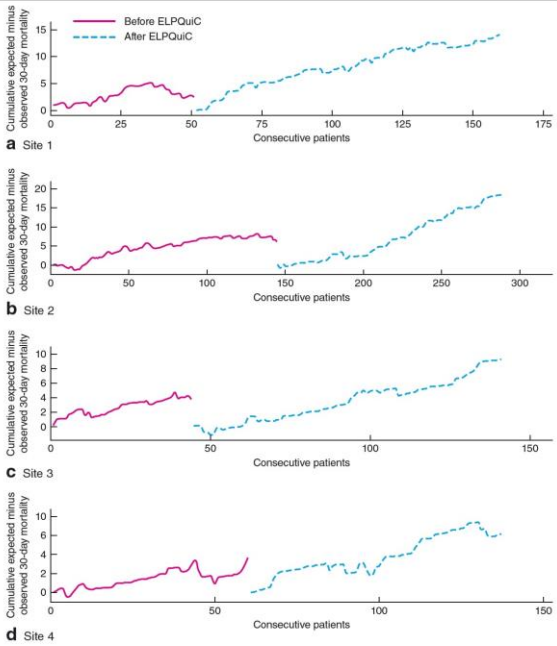

Fig. 1 Cumulative sum analysis before and after implementation of the emergency laparotomy pathway quality improvement care (ELPQuiC) bundle: **a** site 1, **b** site 2, **c** site 3 and **d** site 4

Huddart *et al*, BJS, 2014

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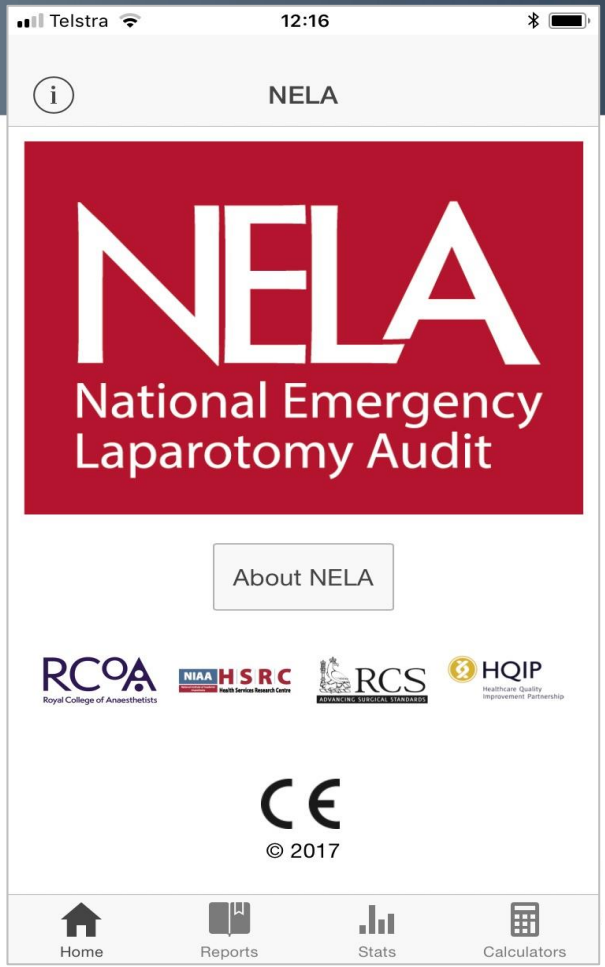
NINE KEY STANDARDS CURRENTLY SUBJECT TO RAG-RATING

- CT scan reported before surgery.
- Risk of death documented preoperatively.
- Arrival in theatre within a timescale appropriate to urgency.
- Preoperative review by a consultant surgeon and a consultant anaesthetist when P-POSSUM risk of death ≥5%.
- Consultant surgeon and consultant anaesthetist both present in theatre when P-POSSUM risk of death ≥5%.
- Consultant surgeon present in theatre when P-POSSUM risk of death ≥5%.
- Consultant anaesthetist present in theatre when P-POSSUM risk of death ≥5%.
- Admission directly to critical care after surgery when P-POSSUM risk of death >10%.
- Assessment by a care for the older person specialist for patients aged 70 years and over.

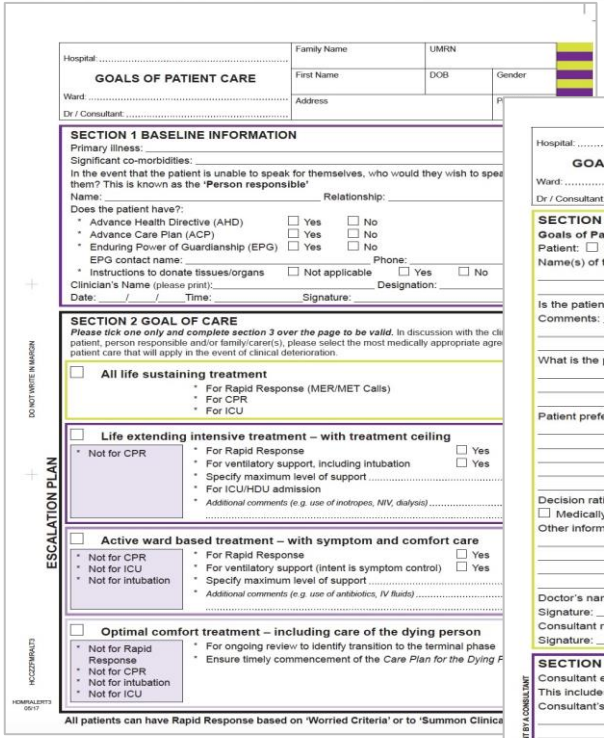
Pre-operative risk assessment

- Options
  - P-POSSUM
  - SORT
  - NSQUIP
  - NELA
  - and 19 others …



Key issue is that a risk assessment is done

Frailty and Goals of Care



Hospital: ..... | Family Name | UMRN

GOALS OF PATIENT CARE

Ward: ..... | First Name | DOB | Gender

Dr / Consultant: ..... | Address | P

SECTION 1 BASELINE INFORMATION

Primary Illness:

Significant co-morbidities:

In the event that the patient is unable to speak for themselves, who would they wish to spea them? This is known as the **'Person responsible'**

Name: _____ Relationship: _____

Does the patient have?:

* Advance Health Directive (AHD) ☐ Yes ☐ No
* Advance Care Plan (ACP) ☐ Yes ☐ No
* Enduring Power of Guardianship (EPG) ☐ Yes ☐ No

EPG contact name: _____ Phone: _____

* Instructions to donate tissues/organs ☐ Not applicable ☐ Yes ☐ No

Clinician's Name (please print): _____ Designation: _____

Date: ____/____/____ Time: _____ Signature: _____

SECTION 2 GOAL OF CARE

Please tick one only and complete section 3 over the page to be valid. In discussion with the cli patient, person responsible and/or family/carer(s), please select the most medically appropriate agre patient care that will apply in the event of clinical deterioration.

☐ **All life sustaining treatment**

* For Rapid Response (MER/MET Calls)
* For CPR
* For ICU

☐ **Life extending intensive treatment – with treatment ceiling**

* Not for CPR
* For Rapid Response ☐ Yes
* For ventilatory support, including intubation ☐ Yes
* Specify maximum level of support .....
* For ICU/HDU admission
* *Additional comments (e.g. use of inotropes, NIV, dialysis)* .....

☐ **Active ward based treatment – with symptom and comfort care**

* Not for CPR
* Not for ICU
* Not for intubation
* For Rapid Response ☐ Yes
* For ventilatory support (intent is symptom control) ☐ Yes
* Specify maximum level of support .....
* *Additional comments (e.g. use of antibiotics, IV fluids)* .....

☐ **Optimal comfort treatment – including care of the dying person**

* Not for Rapid Response
* Not for CPR
* Not for intubation
* Not for ICU
* For ongoing review to identify transition to the terminal phase
* Ensure timely commencement of the *Care Plan for the Dying P*

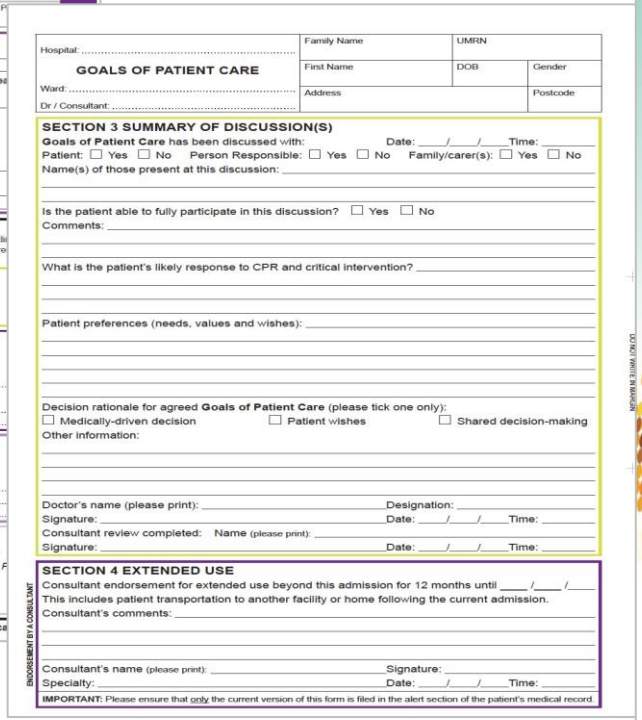
All patients can have Rapid Response based on 'Worried Criteria' or to 'Summon Clinica

DO NOT WRITE IN MARGIN

ESCALATION PLAN

HC222FMHALT3

HDMRALERT3 05/17



Hospital: ..... | Family Name | UMRN

GOALS OF PATIENT CARE

Ward: ..... | First Name | DOB | Gender

Dr / Consultant: ..... | Address | Postcode

SECTION 3 SUMMARY OF DISCUSSION(S)

Goals of Patient Care has been discussed with: Date: ____/____/____Time: _____

Patient: ☐ Yes ☐ No Person Responsible: ☐ Yes ☐ No Family/carer(s): ☐ Yes ☐ No

Name(s) of those present at this discussion: _____

Is the patient able to fully participate in this discussion? ☐ Yes ☐ No

Comments: _____

What is the patient's likely response to CPR and critical intervention? _____

Patient preferences (needs, values and wishes): _____

Decision rationale for agreed **Goals of Patient Care** (please tick one only):

☐ Medically-driven decision ☐ Patient wishes ☐ Shared decision-making

Other information: _____

Doctor's name (please print): _____ Designation: _____

Signature: _____ Date: ____/____/____Time: _____

Consultant review completed: Name (please print): _____

Signature: _____ Date: ____/____/____Time: _____

SECTION 4 EXTENDED USE

Consultant endorsement for extended use beyond this admission for 12 months until ____/____/____

This includes patient transportation to another facility or home following the current admission.

Consultant's comments: _____

Consultant's name (please print): _____ Signature: _____

Specialty: _____ Date: ____/____/____Time: _____

IMPORTANT: Please ensure that only the current version of this form is filed in the alert section of the patient's medical record.

ENDORSEMENT BY A CONSULTANT

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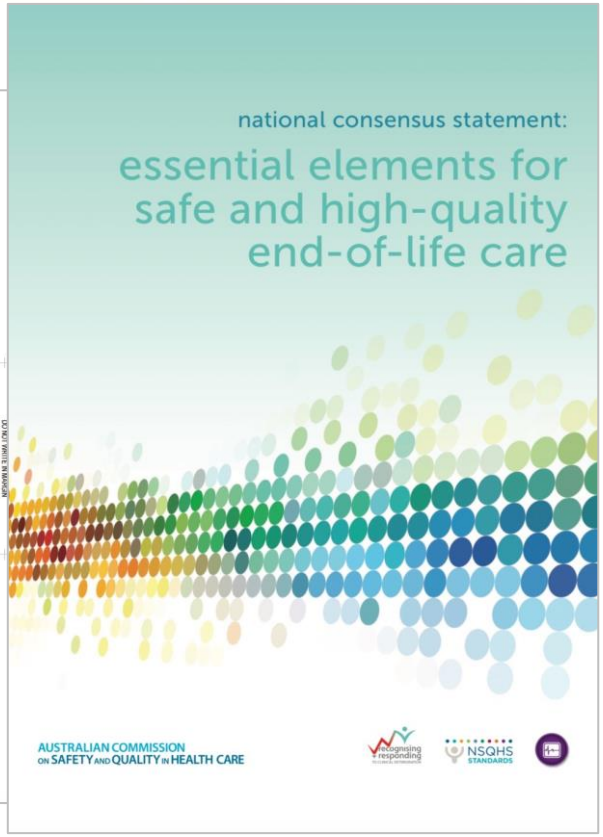

Acute abdomen, no surgery

What is the true denominator?

PELA

- 6.5% 30-day mortality
- proportion ≥80 years and risk ≥10% less than NELA
- 43% of all presenting with an acute abdomen and who die did not have an EL

WAASM data (2 years)

- 4% of all acute abdomens die without an EL
- 6% die after an EL

Some practical tips

- The universal experience is that data to that point should be collected/completed in theatre
- Most will enter the hospitals system via ED and a sepsis assessment should be undertaken there
- If a pre-operative risk assessment is more likely to be prospectively completed if if is embedded in the theatre booking process
- Post-operative rounds are ideal to check all the data has been collected
- Full case ascertainment will require the hospital PI to check theatre lists each week to ensure all EL have been captured.

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Important issues

- Data collected to hospitals level only
- No clinician data being collected
- Benchmarking with peer hospitals on an identifiable basis
- No Qualified Privilege
- Aggregated data open for research
  - Trainee Research Collaborative

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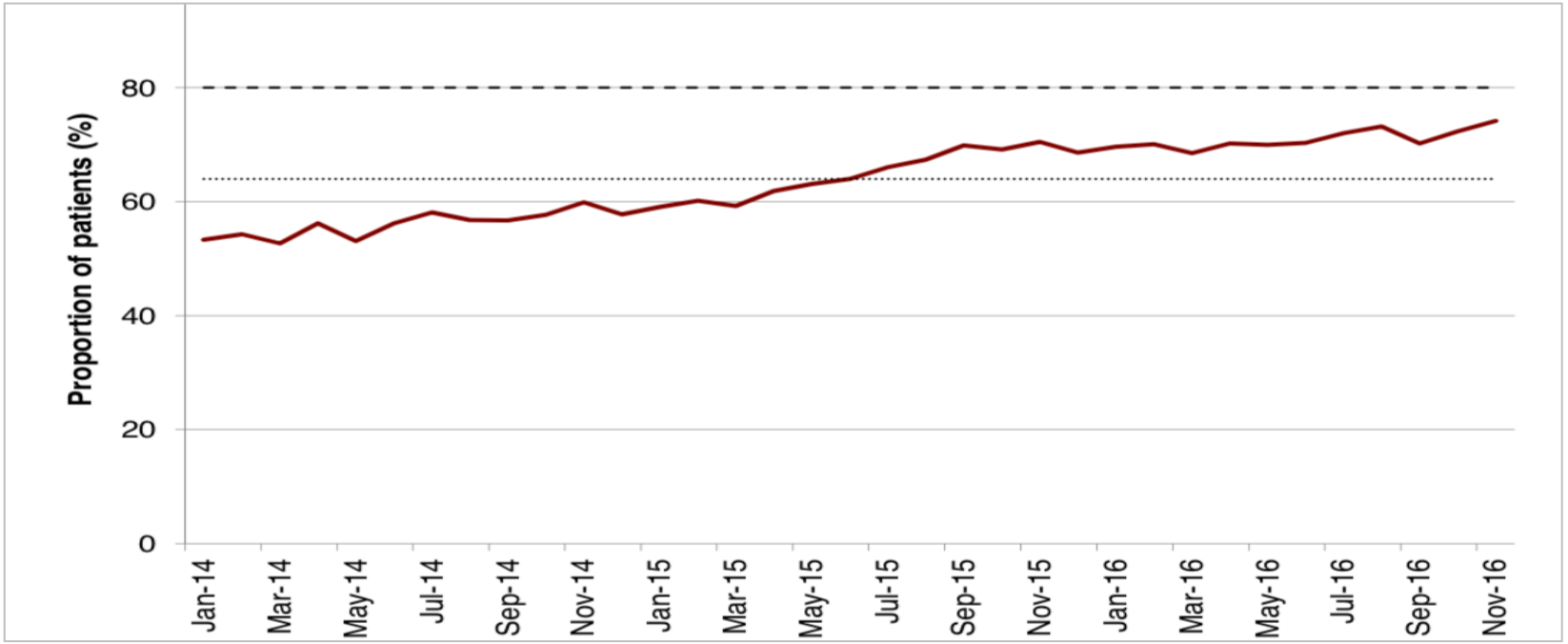
Run chart



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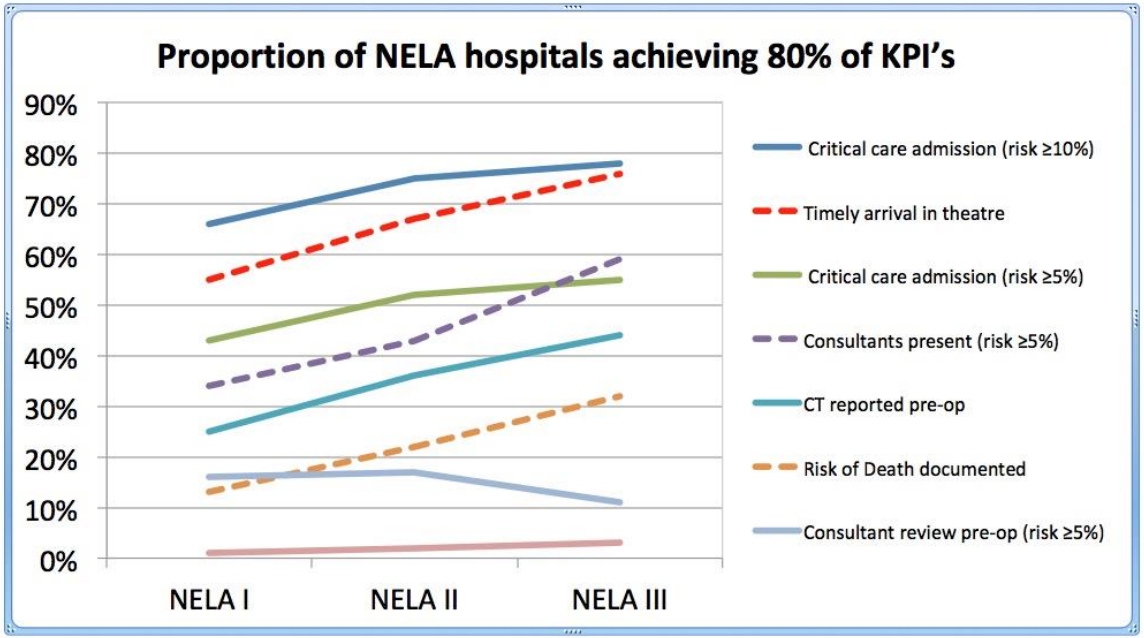
The third Patient Report of the National Emergency Laparotomy Audit (NELA)

December 2015 to November 2016



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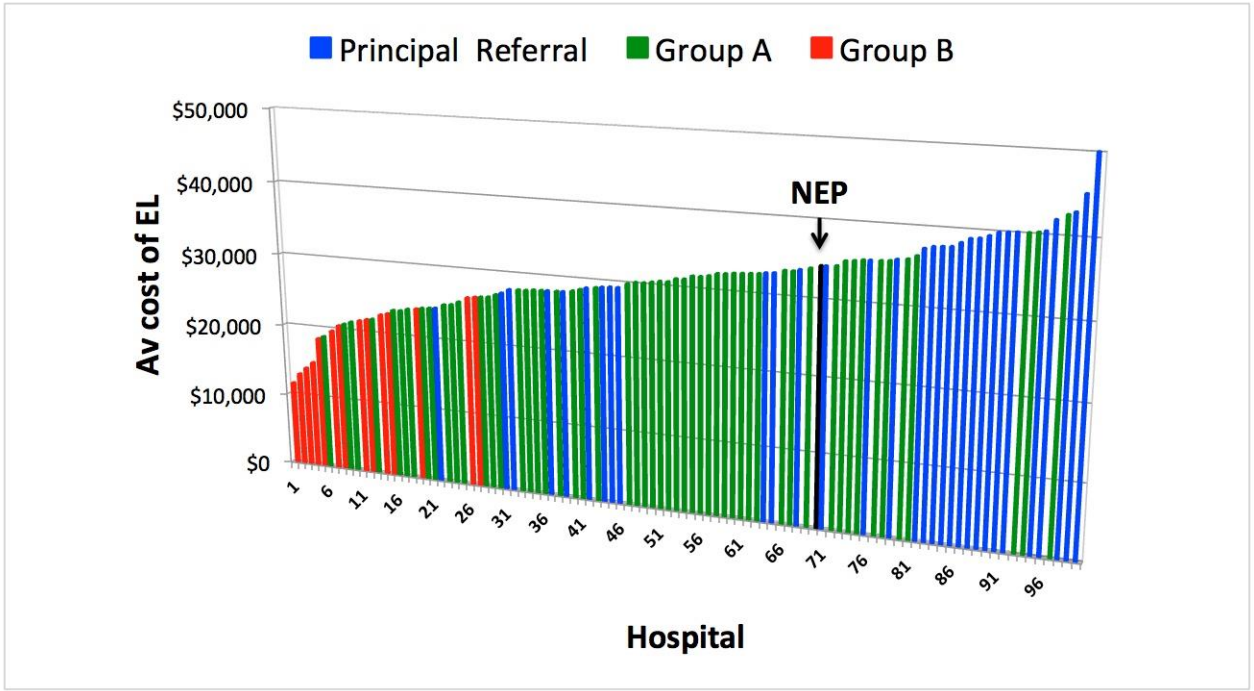
Average National Weighted Activity Unit (NWAU) cost of an Emergency Laparotomy in Australian public hospitals



Estimated national EL cost >$400 million pa
Bed day cost ~$30 million

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What will ANZELA-QI provide?

- Reports against the KPIs, published by identified hospital and in cohorts
- The reports will facilitate sharing of experiences and learnings with other similar hospitals
- Access to the bi-national dataset for other research projects (subject to an approval process)

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Specifically for New Zealand

- CADENZAA
- Will report the NZ data back to RACS Adelaide
- Will leverage strong IT platforms
- Build QI into the system
- Full collaboration with ANZELA-QI

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What next?

1. Email RACS your expression of interest in becoming a pilot hospital.
2. Once RACS have new pilot sites added to national ethics, each site needs to coordinate local governance approval (SSA). Then login to ANZELA-QI can be given by RACS.
3. The website will be the central place for all pilot hospital resources.
4. Forms/templates will be available to collect data locally ahead of ethical approval to provide it to ANZELA-QI.

More information at www.surgeons.org/anzela-qi

Email anzela-qi@surgeons.org

Call Katherine Economides/RACS on +61 8 8219 0912

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