Queen Elizabeth Hospital
Lewisham & Greenwich NHS Trust

Lewisham and Greenwich NHS Trust

South London Emergency Laparotomy Collaborative

Case Study

Queen Elizabeth Hospital (QEH), Woolwich, is a district general hospital in South East London which has an average of **154 National Emergency Laparotomy Audit (NELA) cases per year**. Although, relatively busy compared to some other London hospitals, the number of NELA cases and **predicted mortality (NELA score) are close to the national average**.

Data collection had been prospective, relying upon clinicians to complete the NELA webtool during and just after patient encounters. Frequently, case ascertainment had been poor, and the quantity and quality of data has been dependent upon a few enthusiastic junior doctors. **Often data was completed retrospectively,** just prior to NELA end-of-year deadlines and many cases were either missed or incomplete.

A worrying trend was emerging in Woolwich. The fourth NELA patient report demonstrated a year-on-year increased mortality at Queen Elizabeth Hospital to a peak of 15.1% in Year 4, far above the national average. This was in stark contrast to the national trend of improving mortality, reduced length of stays and better consultant presence.

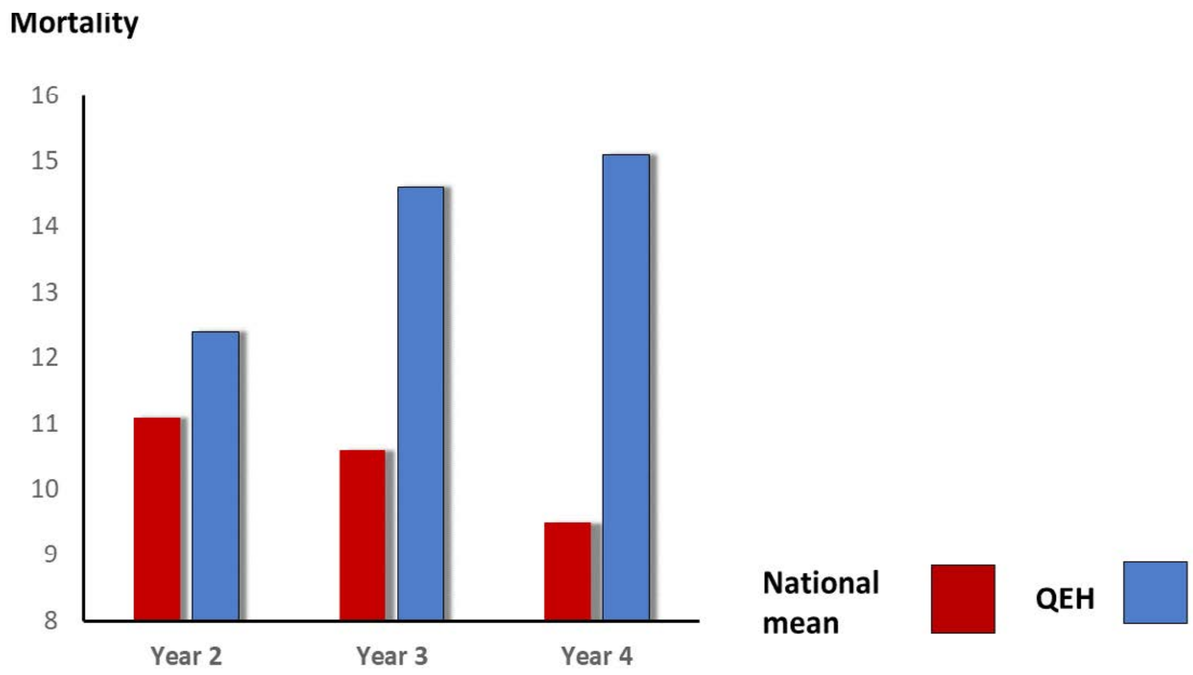
A watershed moment

This report genuinely provoked the Queen Elizabeth NELA team to question our entire methodology of engaging with NELA. None of our hard-working and caring staff wanted poorer outcomes for our patients. However, it was clear that a passive approach to NELA had meant that we had missed out on the benefits of quality improvement.

We're no longer prepared to accept the status quo.

> **None of our hard-working and caring staff wanted poorer outcomes for our patients. We were no longer prepared to accept the status quo.**

Fourth NELA report (Nov 2018), showing continued national improvements.

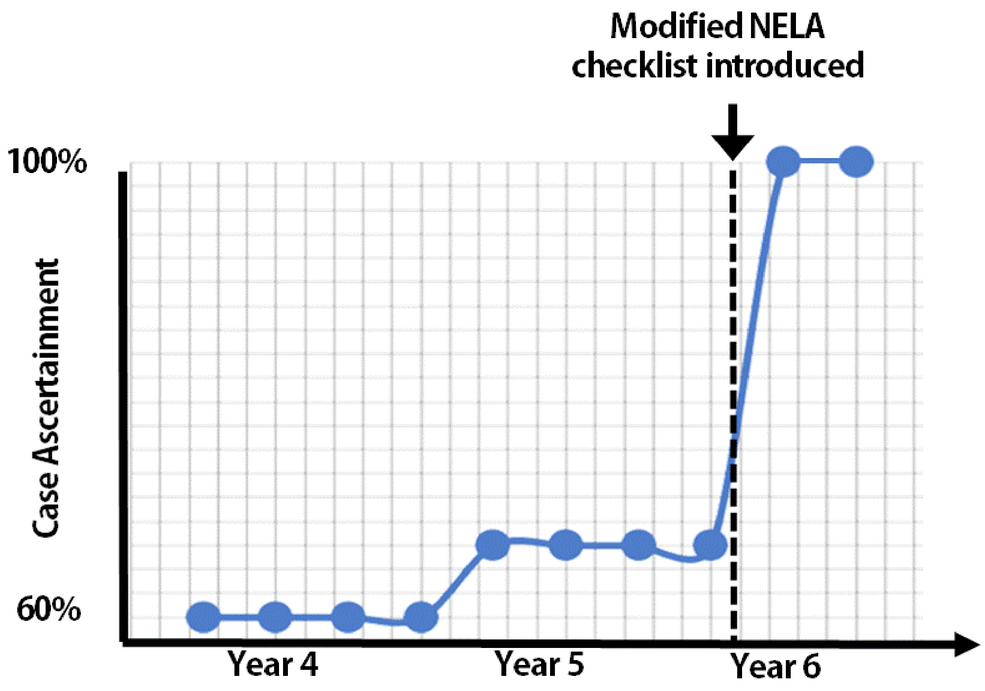


National mortality declining to just **9.5%**

But QEH mortality increasing to **15.1%**

Step 1: Case Ascertainment

We proposed using the WHO safety checklist as a mandatory prompt to ensure NELA started and data collected



Year 6 Q1 - 2 data ascertainment (after new WHO) = **100%**

Year 5 Q3 - 4 data ascertainment (prior to new WHO) = **68%**

The QEH NELA team sought authoritative opinions from NHS Improvement's Patient Safety team and other national leads on patient safety. All confirmed that local adaption was entirely appropriate for important safety issues. Our trust WHO safety surgical checklist was modified to introduce NELA prompts at sign in, time out and sign out.

New NELA prompts at Sign in, Time out and Sign out.

WHO Surgical Safety Checklist for General Surgery cases only

NELA National Emergency Laparotomy Audit

**For a list of what constitutes a NELA case, please see the reverse of this page

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Sign In (To be read out loud)		Time Out (To be read out loud)		Sign Out (To be read out loud)	
Before induction of anaesthesia, Anaesthetic Lead		**Before start of surgical intervention with all teams present, Surgeon Lead**		**At conclusion of procedure with all teams present, Theatre Staff Lead**	
Has the patient confirmed his / her identity / site / procedure / consent?	☐yes	Have all team members introduced themselves by name and role? *	☐yes	Has name of actual procedure & code been recorded?	☐yes
Is surgical site marked?	☐yes ☐NA	Surgeon, Anaesthetist and Nurse verbally confirm against patients notes and imaging:		Are swabs / instruments and sharps counts correct?	☐yes
Has the patient any allergies?	☐yes ☐no	Identity	☐yes	Have any inserted packs / swabs been removed? (including throat packs)	☐yes ☐NA
Is anaesthesia machine and monitoring check complete? *	☐yes	Correct positioning	☐yes	Specimens labelled / requests completed?	☐yes ☐NA
Patient medication check complete?	☐yes	Planned operation / site / side	☐yes	All teams identify any specific concerns to hand over to Recovery?	☐yes ☐NA
Risk of >500ml blood loss (7ml/kg in children)?	☐yes ☐no	Are the following appropriate to case:		If a NELA case, has the surgical team agreed to complete the NELA webtool?	☐yes ☐NA
Adequate IV access / fluids planned	☐yes ☐no	Antibiotics (within last 60 minutes)	☐yes ☐NA	Have all the patients' regular medications been prescribed?	☐yes ☐no
Availability of any required blood products confirmed? *	☐yes ☐no	Warming	☐yes ☐NA	Has the Electronic Discharge Notice been completed?	☐yes ☐no
Difficult airway/pulmonary aspiration risk anticipated? *	☐yes ☐no	Shaving	☐yes ☐NA		
If yes, is equipment / assistance available? *	☐yes	Glycaemic control	☐yes ☐NA		
Has VTE assessment been completed? *	☐yes ☐NA	ASA grade ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 *		**Patient Name:**	
Female patients aged between 12 years and 55 years?	☐yes	If a NELA case, what is predicted risk of death? ___ %	☐NA	**Hospital / NHS Number**	
Has pregnancy test been performed? ☐yes ☐no ☐NA		VTE prophylaxis undertaken?	☐yes ☐NA	**DOB:**	
Test results: ☐Positive ☐Negative ☐Declined		Is essential imaging displayed? *	☐yes ☐NA	*Or apply patient sticker*	
Are sets / equipment / prosthesis available? *	☐yes	Any critical steps / problems to prepare for?	☐yes ☐no		
Is sterility verified? *	☐yes				
Is this a NELA case?**	☐yes ☐no	Date: / /			
Has a risk of death been calculated?	☐yes ☐NA	Site: ☐QEH ☐UHL ☐PAEDS ☐RS ☐NB			
NELA webtool data entry started?	☐yes ☐no	Theatre: ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7			
If not then staff must contact surgical registrar to do both immediately		*Sections marked with asterisk * may be completed at Team Brief*			
Sign out completed by:		Time out completed by:		Sign out completed by:	

Is this an NELA case?**
Has a risk of death been calculated?
NELA webtool data entry started?
If not then staff must contact surgical registrar to do both immediately.

Top five lessons learnt at Queen Elizabeth Hospital, London

1. Having a mandatory step in clinical care to prompt NELA data collection can dramatically improve case ascertainment.

2. The WHO safety checklist can be locally modified to provide this mandatory step.

3. Better case ascertainment can often, in of itself, reduce a hospital's recorded mortality.

4. When convinced that improvement is possible, the majority of staff will be highly motivated to help drive change.

5. Clinical director, managerial and trust board level.

Other changes made at QEH

- Expanded our core NELA team
- Held monthly NELA meetings
- Attended relevant Association of Surgeons of Great Britain & Ireland (ASGBI) events
- Kept interest and communication through a WhatsApp group
- Agreed critical care admissions criteria that reflected NELA standards
- Engaged across the Trust in to develop fully referenced local guideline with simplified pathway
- Consulted all relevant parties trust-wide
- Gained strong backing from clinical directors
- Presented concerns to join surgical-anaesthetic meetings and stressed the importance of NELA performance

Mortality fallen from **15.1%** to just **8.3%**

Meaning that, if progress is sustained, up to **12** patient deaths can potentially be avoided.

Evidence of improvement in care

Consultant surgeon presence rose from **83% in Year 4 to 100% in Year 6 (Dec-May 2019)**.

Consultant anaesthetist presence **increased from 72% to 97%** in the same period.

Our Trust achieved the Best Practice Tariff target for Year 6, Quarter 1.

Our Year 6 crude mortality (Dec 2018-May 2019) has fallen to just 8.3%. Almost half of our Year 4 mortality.

For more information, contact Imran Sharieff at imran.sharieff@nhs.net

Health Innovation Network South London