

Explanatory Notes

All cases (locked and unlocked) admitted to hospital between 01 January 2025 and 31 March 2025 have been included. Only cases where the necessary data are available have been included in the denominator for each individual analysis.

At hospital level, runcharts are compared to hospitals within the same ICB.

The results for process measures for which fewer than 10 cases have available data will not be reported. Instead the value will be marked as 'Insufficient data'.

Mortality

This section defines three key mortality measures for the monthly report. In all cases we include only patients whose surgery-to-discharge interval (Q4.1 - Q7.8) is ≤ 30 days, and we exclude any with missing discharge status (Q7.7) or missing dates (Q4.1/Q7.8).

1. 30-Day Observed (Crude) Mortality Rate

Let

- d = number of patients who **died** within 30 days of surgery,
- N = total number of patients with known discharge status (alive, died, or still in hospital at 60 days).

Then the crude 30-day mortality rate (as a percentage) is

$$\text{Crude 30-day Mortality Rate} = \frac{d}{N} \times 100.$$

2. Standardised Mortality Ratio (SMR)

Let

- $O = d$ = observed deaths within 30 days,
- $E = \sum_i \text{RiskScore}_i$ = sum of individual parsimonious NELA mortality risk scores for all N patients.

The SMR is

$$\text{SMR} = \frac{O}{E}.$$

3. Risk-Adjusted Mortality

Combines the SMR with the **National** 30-day mortality rate for the examined three month period:

$$\text{Risk-Adjusted Mortality} = \text{SMR} \times (\text{National 30-day mortality}) \times 100.$$

For better insight to how these standards have been structured, please refer to the **NELA standards document**.

Quarterly mean performance



Overall performance



Risk-adjusted mortality

Rating boundaries are lower and upper 99.8% and 95% confidence limits



Non-risk-adjusted measures

Rating boundaries are lower and upper national quartiles

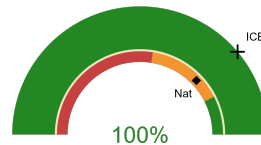


Royal Liverpool University Hospital

2024-25 Reporting Period 10: 01 January 2025 - 31 March 2025

These plots represent patients having an emergency laparotomy during Year 2024-25 Reporting Period 10 of NELA data collection. This version will be made publicly available via the NELA website. Feedback from participating hospitals is welcome.

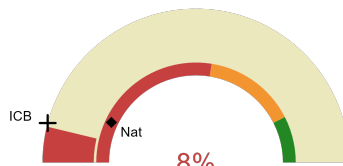
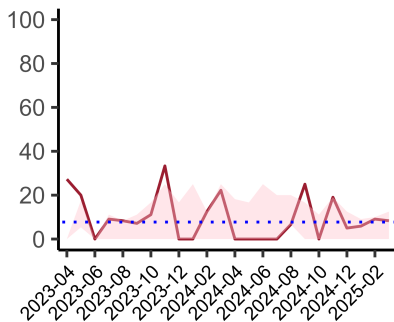
NELA process and outcome measures



Estimated case ascertainment
01 January 2025 - 31 March 2025

**Estimated case ascertainment
(Based on HES/PEDW Data)**

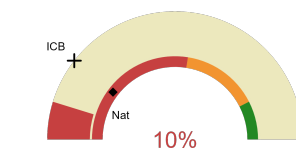
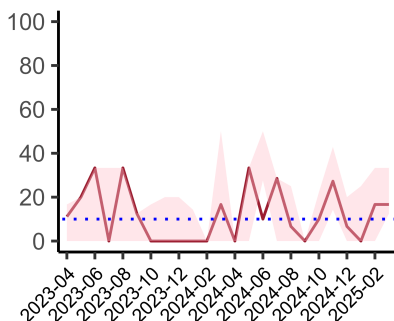
Expected number of cases 47
Total cases entered 50
Cases locked 50
Cases unlocked 0



Proportion of patients who had a CT scan that was reported by a senior radiologist (ST3+) and communicated with the team in the correct time scale before surgery
01 January 2025 - 31 March 2025

CT reported by a senior radiologist (ST3+) and communicated with the team in the correct time scale before surgery.

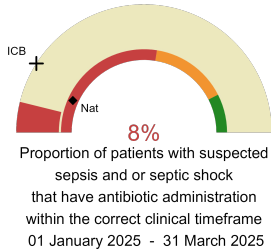
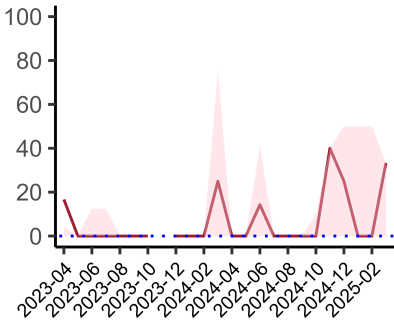
National mean 14%
ICB mean 8%
Number of patients included 40
Data completeness 100%



Proportion of patients with suspected sepsis or infection that have antibiotic administration within the correct clinical timeframe
01 January 2025 - 31 March 2025

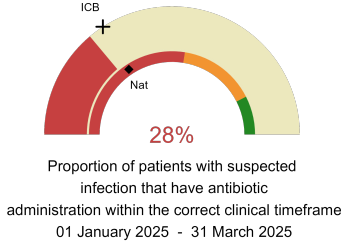
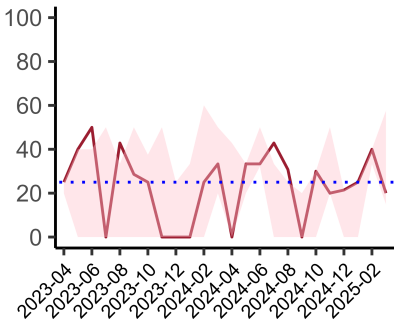
Combined Infection management standard - antibiotic administration within the correct clinical timeframe

National mean 21%
ICB mean 21%
Number of patients included 21
Data completeness 100%



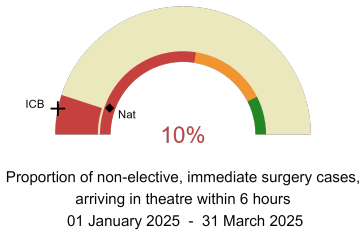
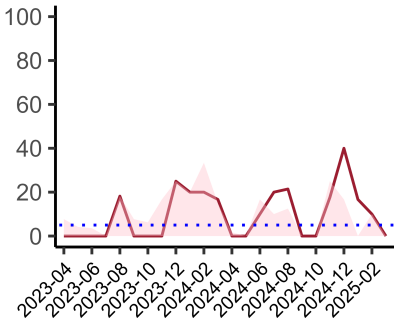
Sepsis/septic shock - antibiotic administration within the correct clinical timeframe

National mean 13%
ICB mean 18%
Number of patients included 13
Data completeness 100%



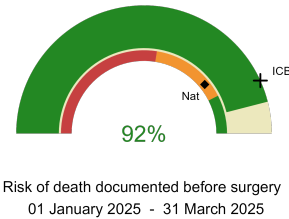
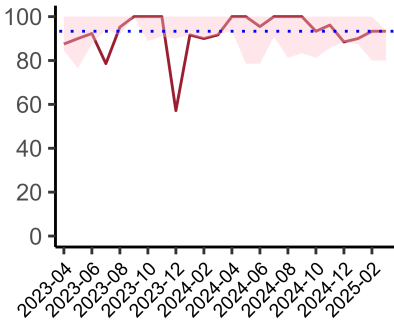
Infection - antibiotic administration within the correct clinical timeframe

National mean 31%
ICB mean 32%
Number of patients included 18
Data completeness 100%



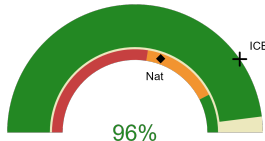
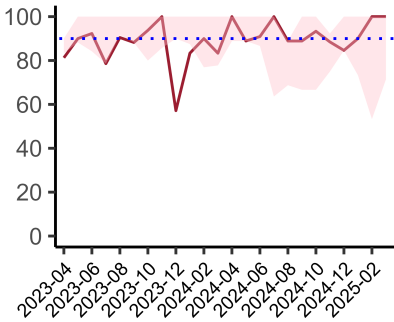
Non-elective, immediate surgery cases, arriving in theatre within 6 hours.

National mean 11%
ICB mean 6%
Number of patients included 30
Data completeness 100%



Risk documented before surgery

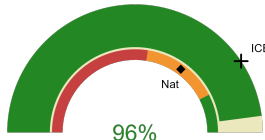
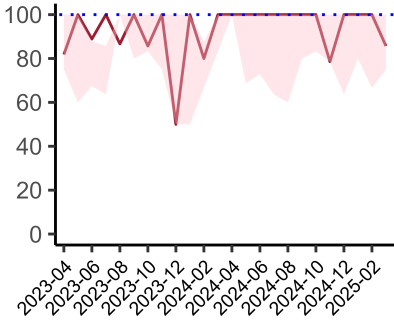
National mean 78%
ICB mean 86%
Number of patients included 50
Data completeness 100%



Risk of death documented after surgery
01 January 2025 - 31 March 2025

Risk documented after surgery

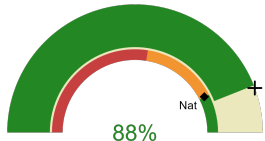
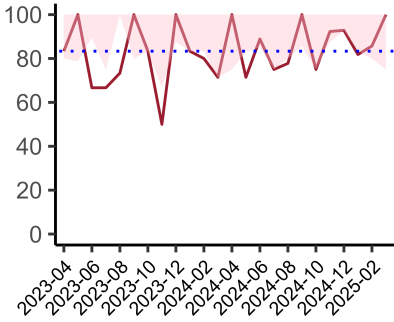
National mean 61%
ICB mean 81%
Number of patients included 50
Data completeness 100%



Admitted to critical care following surgery when the risk of death ≥ 5% (Excludes patients who died in theatre or with a decision to palliate)
01 January 2025 - 31 March 2025

Admitted to Critical Care (risk of death ≥ 5%)

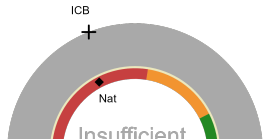
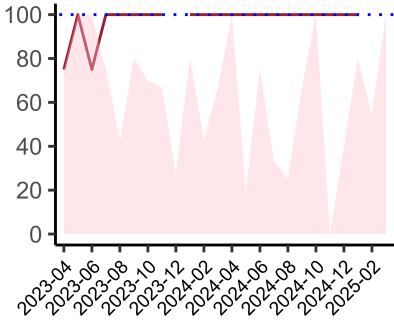
National mean 70%
ICB mean 81%
Number of patients included 24
Data completeness 100%



Consultant surgeon and anaesthetist present in theatre when risk of death ≥ 5%
01 January 2025 - 31 March 2025

Consultant Anaesthetist & Consultant Surgeon in theatre (risk of death ≥ 5%)

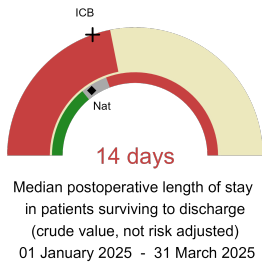
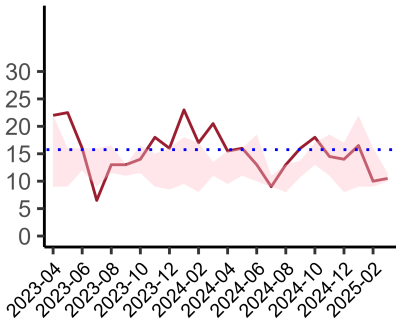
National mean 85%
ICB mean 89%
Number of patients included 25
Data completeness 68%



Perioperative assessment by a care of the older person specialist
01 January 2025 - 31 March 2025

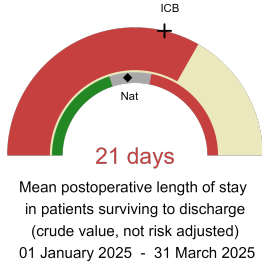
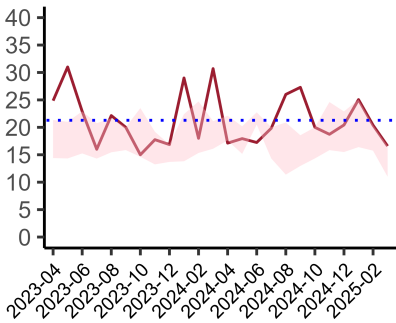
Perioperative Assessment by a member of the geriatrician-led multidisciplinary team for patient aged 65 or over and frail (CFS ≥ 5) or 80+

National mean 35%
ICB mean 38%
Number of patients included 8
Data completeness 100%



Median postoperative length of stay

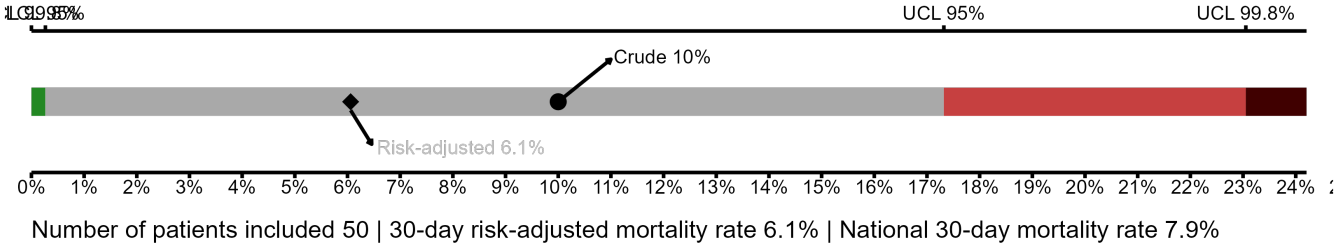
National median 10 days
ICB median 13 days
Number of patients included 43
Data completeness 100%



Mean postoperative length of stay

National mean 15 days
ICB mean 18 days
Number of patients included 43
Data completeness 100%

Risk-Adjusted Mortality



Integrated Care Board

Royal Liverpool University Hospital is part of the NHS Cheshire And Merseyside Integrated Care Board ICB. This comprises Southport District General Hospital, Whiston Hospital, Warrington Hospital, Arrowe Park Hospital, Macclesfield District General Hospital, Aintree University Hospital, Leighton Hospital, Countess of Chester Hospital, Royal Liverpool University Hospital.