

Explanatory Notes

All cases (locked and unlocked) admitted to hospital between 01 May 2026 and 31 July 2026 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

RAG rating boundaries



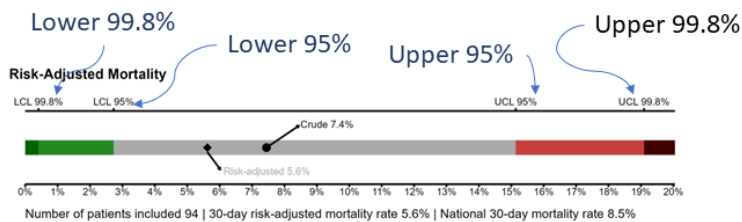
Hospital performance

Number of patients included 38
Data completeness 81.6%
National mean 65%

RAG rated standard and date range

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

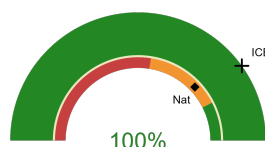


Royal Liverpool University Hospital

2026-27 Reporting Period 4: 01 May 2026 - 31 July 2026

These plots represent patients having an emergency laparotomy during Year 2026-27 Reporting Period 4 of NELA data collection. This version will be made publicly available via the NELA website. Feedback from participating hospitals is welcome.

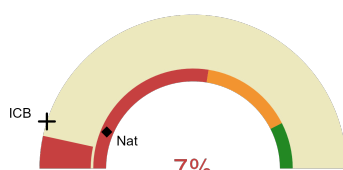
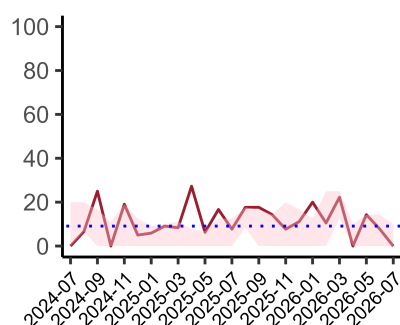
NELA process and outcome measures



Estimated case ascertainment
01 May 2026 - 31 July 2026

Estimated case ascertainment (Based on HES/PEDW Data)

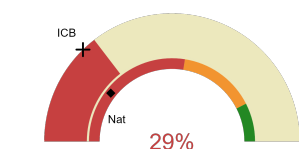
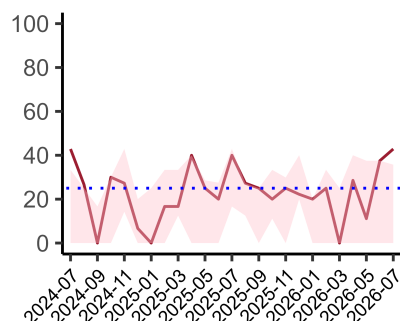
Expected number of cases 59
Total cases entered 59
Cases locked 33
Cases unlocked 26



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 May 2026 - 31 July 2026

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

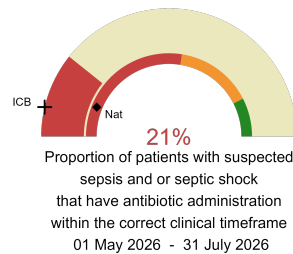
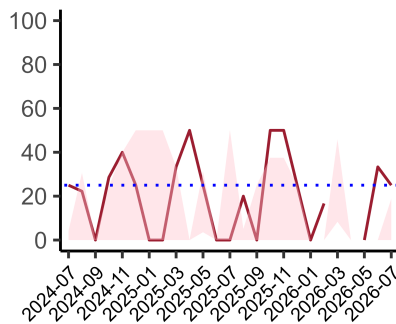
National mean 13%
ICB mean 10%
Number of patients included 44
Data completeness 96%



Proportion of patients with suspected
sepsis or infection that have antibiotic
administration within the correct clinical timeframe
01 May 2026 - 31 July 2026

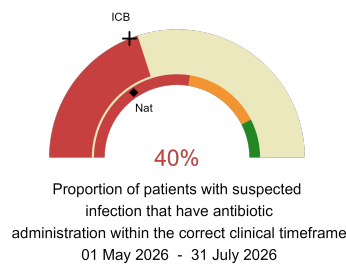
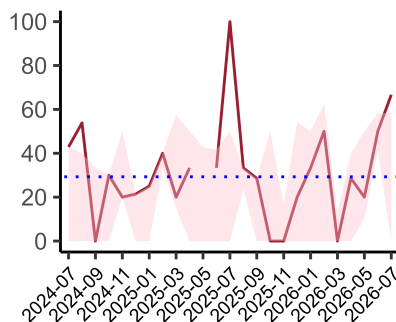
Combined Infection management standard - antibiotic administration within the correct clinical timeframe

National mean 21%
ICB mean 25%
Number of patients included 24
Data completeness 100%



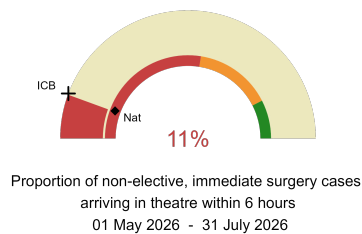
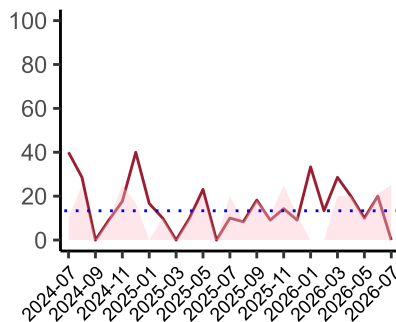
Sepsis/septic shock - antibiotic administration within the correct clinical timeframe

National mean 12%
ICB mean 7%
Number of patients included 14
Data completeness 100%



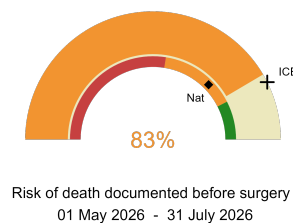
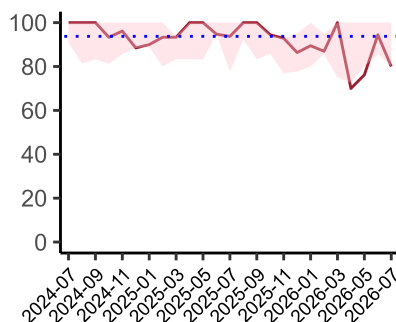
Infection - antibiotic administration within the correct clinical timeframe

National mean 31%
ICB mean 38%
Number of patients included 10
Data completeness 42%



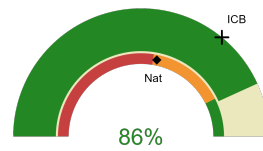
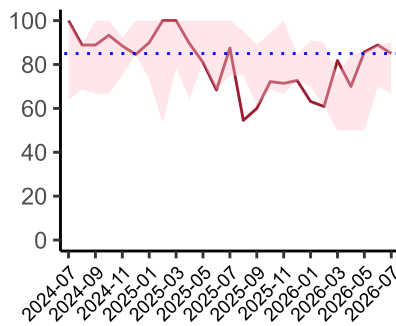
Non-elective, immediate surgery cases, arriving in theatre within 6 hours.

National mean 11%
ICB mean 11%
Number of patients included 36
Data completeness 100%



Risk documented before surgery

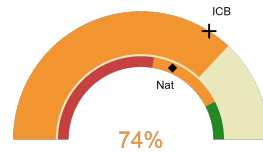
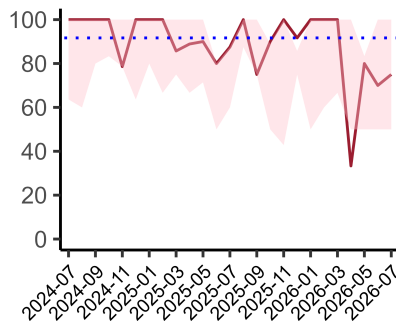
National mean 75%
ICB mean 85%
Number of patients included 59
Data completeness 100%



Risk of death documented after surgery
01 May 2026 - 31 July 2026

Risk documented after surgery

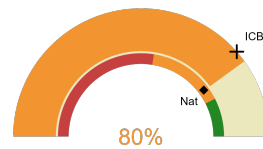
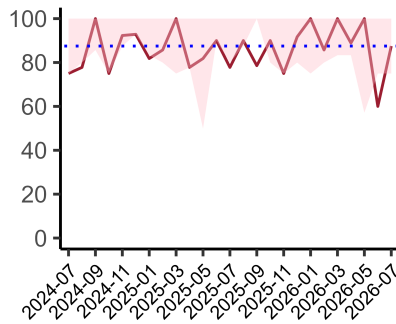
National mean 56%
ICB mean 72%
Number of patients included 59
Data completeness 100%



Admitted to critical care following surgery when the
risk of death $\geq 5\%$ (Excludes patients who
died in theatre or with a decision to palliate)
01 May 2026 - 31 July 2026

Admitted to Critical Care (risk of death $\geq 5\%$)

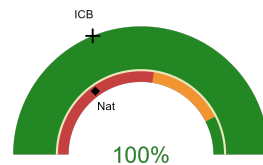
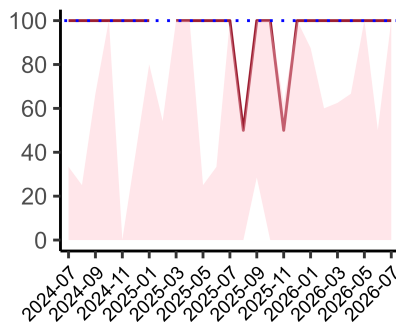
National mean 63%
ICB mean 68%
Number of patients included 23
Data completeness 100%



Consultant surgeon and anaesthetist present in
theatre when risk of death $\geq 5\%$
01 May 2026 - 31 July 2026

Consultant Anaesthetist & Consultant Surgeon in theatre (risk of death $\geq 5\%$)

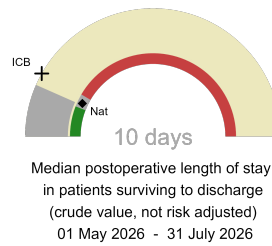
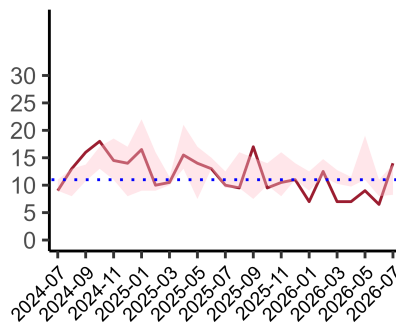
National mean 80%
ICB mean 77%
Number of patients included 25
Data completeness 64%



Perioperative assessment by a care of the older
person specialist
01 May 2026 - 31 July 2026

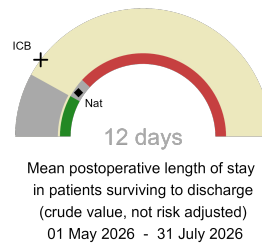
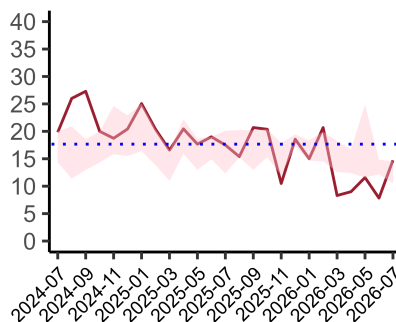
Perioperative Assessment by a member of the geriatrician- led multidisciplinary team for patient aged 65 or over and frail (CFS ≥ 5) or 80+

National mean 30%
ICB mean 38%
Number of patients included 10
Data completeness 100%



Median postoperative length of stay

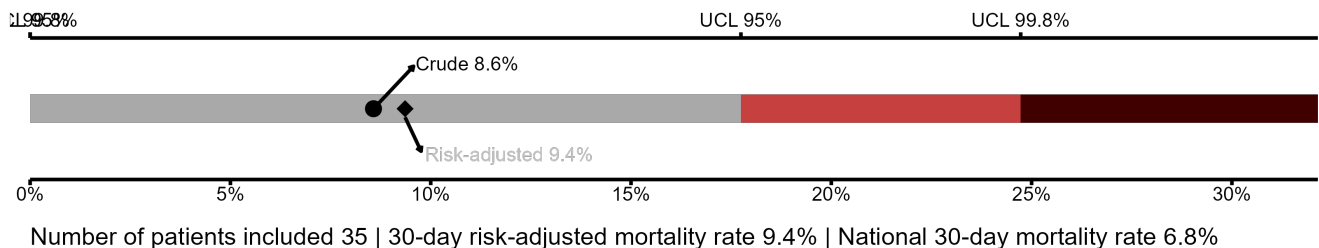
National median 10 days
ICB median 12 days
Number of patients included 32
Data completeness 100%



Mean postoperative length of stay

National mean 14 days
ICB mean 15 days
Number of patients included 32
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.