

Explanatory Notes

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

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

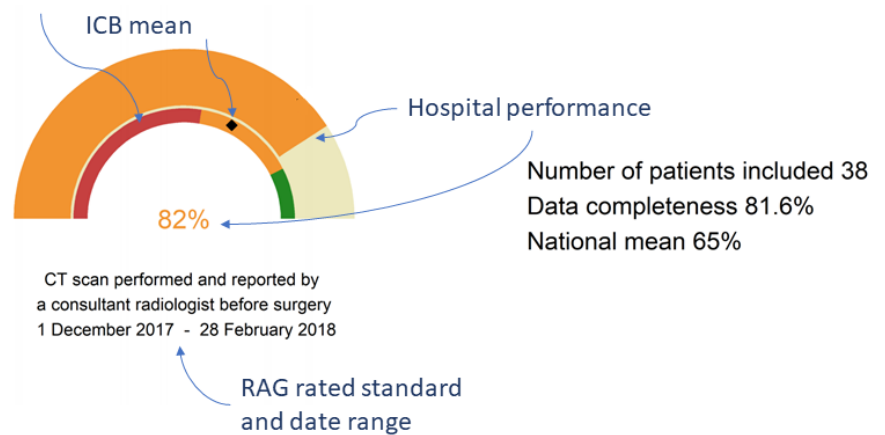
For better insight to how these standards have been structured, please refer to the **NELA standards document**.

Quarterly mean performance



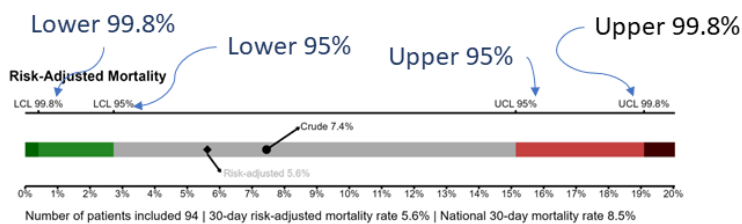
Overall performance

RAG rating boundaries



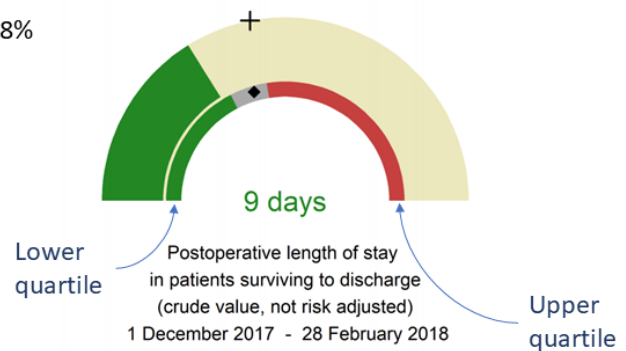
Risk-adjusted mortality

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



Non-risk-adjusted measures

Rating boundaries are lower and upper
national quartiles

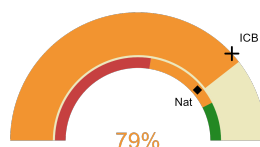


Royal Bolton Hospital

2026-27 Reporting Period 2: 01 March 2026 - 31 May 2026

These plots represent patients having an emergency laparotomy during Year 2026-27 Reporting Period 2 of NELA data collection. This version will be made publicly available via the NELA website. Feedback from participating hospitals is welcome.

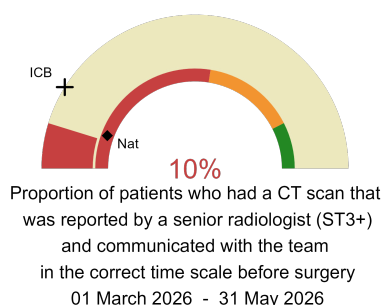
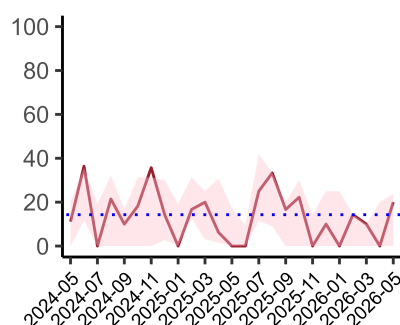
NELA process and outcome measures



Estimated case ascertainment
01 March 2026 - 31 May 2026

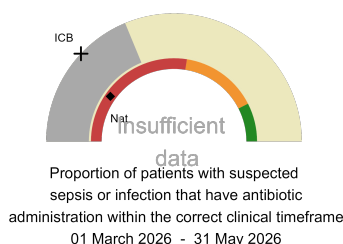
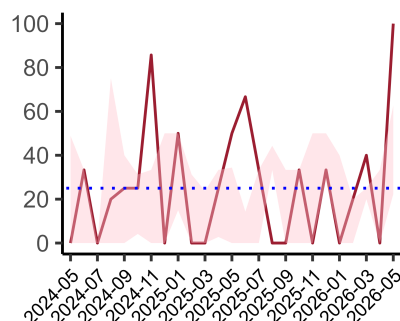
Estimated case ascertainment (Based on HES/PEDW Data)

Expected number of cases 38
Total cases entered 30
Cases locked 30
Cases unlocked 0



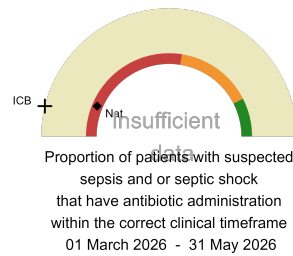
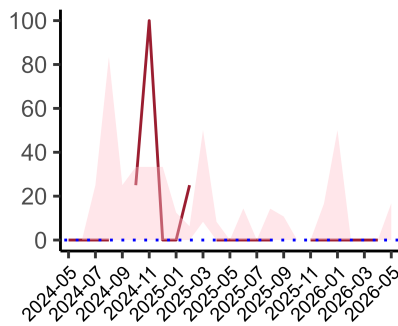
CT reported by a senior radiologist (ST3+) and communicated with the team in the correct time scale before surgery.

National mean 11%
ICB mean 18%
Number of patients included 21
Data completeness 83%



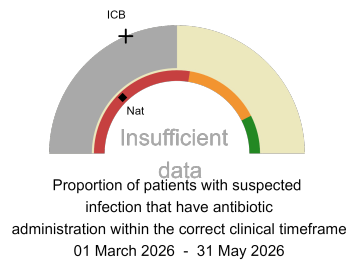
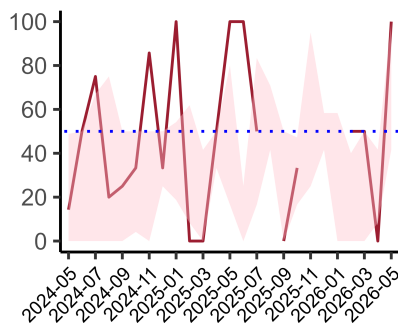
Combined Infection management standard - antibiotic administration within the correct clinical timeframe

National mean 20%
ICB mean 24%
Number of patients included 8
Data completeness 100%



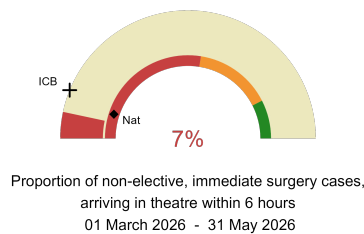
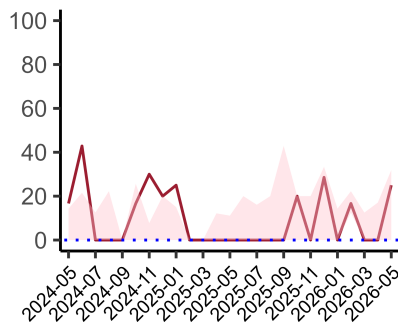
Sepsis/septic shock - antibiotic administration within the correct clinical timeframe

National mean 13%
ICB mean 8%
Number of patients included 2
Data completeness 100%



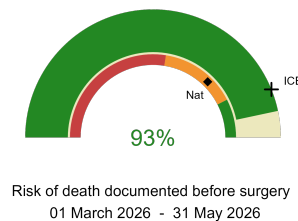
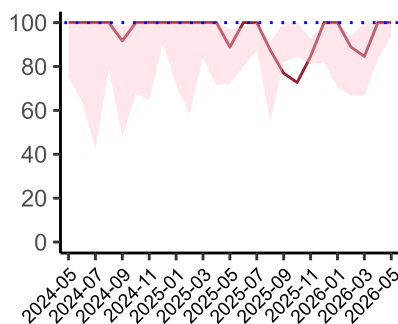
Infection - antibiotic administration within the correct clinical timeframe

National mean 25%
ICB mean 37%
Number of patients included 6
Data completeness 75%



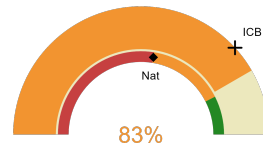
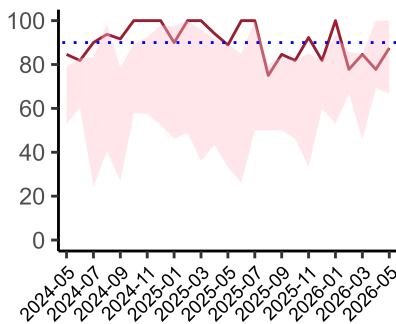
Non-elective, immediate surgery cases, arriving in theatre within 6 hours.

National mean 10%
ICB mean 12%
Number of patients included 15
Data completeness 100%



Risk documented before surgery

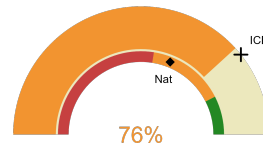
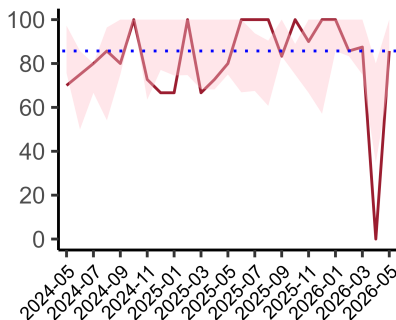
National mean 75%
ICB mean 88%
Number of patients included 30
Data completeness 100%



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

Risk documented after surgery

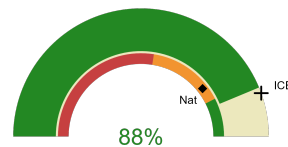
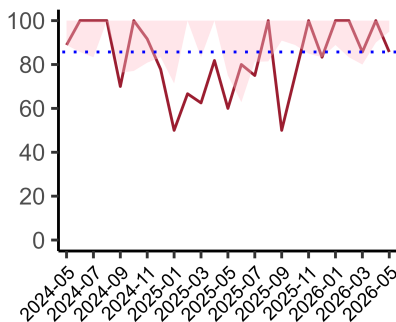
National mean 55%
ICB mean 76%
Number of patients included 30
Data completeness 100%



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 March 2026 - 31 May 2026

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

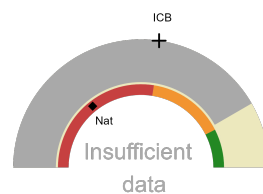
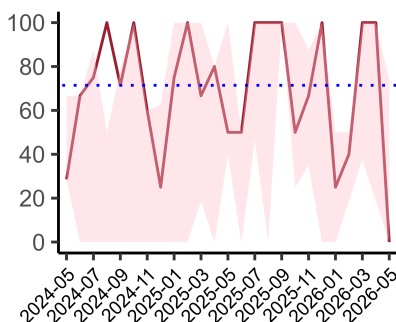
National mean 62%
ICB mean 79%
Number of patients included 17
Data completeness 100%



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

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

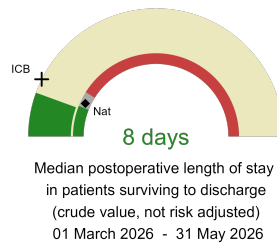
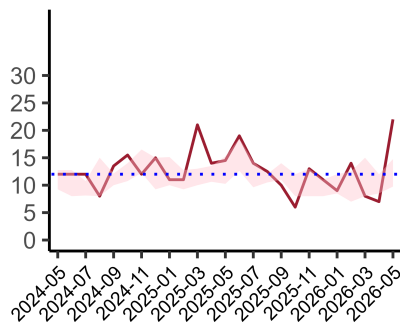
National mean 79%
ICB mean 89%
Number of patients included 16
Data completeness 76%



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

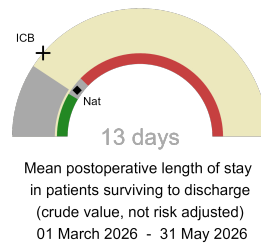
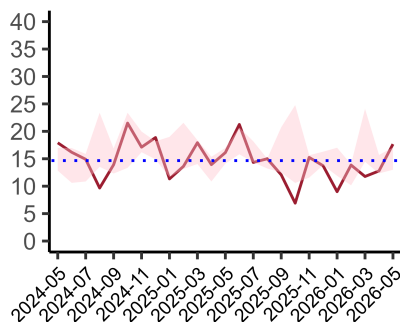
Perioperative Assessment by a member of the geriatrician-led multidisciplinary team for patient aged 65 or over and frail (CFS ≥ 5) or 80+

National mean 29%
ICB mean 55%
Number of patients included 6
Data completeness 100%



Median postoperative length of stay

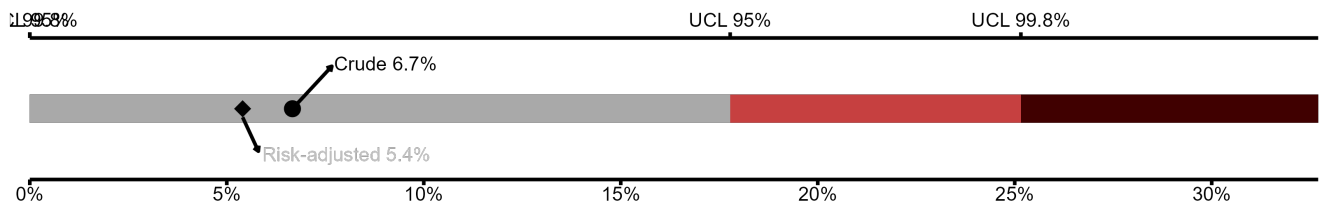
National median 10 days
ICB median 11 days
Number of patients included 28
Data completeness 100%



Mean postoperative length of stay

National mean 15 days
ICB mean 16 days
Number of patients included 28
Data completeness 100%

Risk-Adjusted Mortality



Number of patients included 30 | 30-day risk-adjusted mortality rate 5.4% | National 30-day mortality rate 6.1%

Integrated Care Board

Royal Bolton Hospital is part of the NHS Greater Manchester Integrated Care Board ICB. This comprises Salford Royal Hospital, Stepping Hill Hospital, Tameside General Hospital, The Christie, The Royal Oldham Hospital, North Manchester General Hospital, Wythenshawe Hospital, Royal Albert Edward Infirmary, Manchester Royal Infirmary, Royal Bolton Hospital.