Using mortality data to improve the quality and safety of patient care

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Publication notes

This document is the Health Board's 27th release of data relating to mortality.

As in previous publications, the Health Board is publishing other contextual mortality data sourced from the Office for National Statistics (ONS). This provides context to the risk adjusted figures, and further evidence of the quality of care provided. As this data is published less frequently, it is now presented as a separate document.

All data that appear in the document are also available as Excel tables and charts on our web site[1].

Data has been sourced from the All Wales Benchmarking system and ONS.

[1] http://www.wales.nhs.uk/sitesplus/861/page/68460

Introduction

Quality and Safety

Betsi Cadwaladr University Health Board is committed to delivering safe and high quality healthcare services. Everyone who works for the Health Board has a part to play in driving up standards. We must always put the safety of our patients at the heart of everything we do. To support this, the Board is engaged in a wide range of activities to ensure patient safety, and provide patients with appropriate assurance about the quality and safety of our services.

A key element of this continual cycle of quality improvement is the analysis and understanding of mortality information.

Why are we monitoring these figures?

The Health Board monitors mortality on a regular basis, with any concerns investigated. The focus is on continuous quality improvement and timely intervention to ensure the best outcome for our patients.

Focused on learning we firmly believe that every death deserves a review and have put extensive processes in place to ensure this happens.

What are we measuring?

Crude Mortality

A crude (or unadjusted) mortality rate takes no account of risk factors. The definition is therefore relatively simple (actual deaths in a month ÷ total discharges per month x 100). This figure, stated as a rate per 100 discharges naturally varies by the population served, as well as the mix of specialties provided – for example, Ysbyty Glan Clwyd has a Cancer Treatment Centre. As crude mortality is not affected by the clinical coding process, more recent data is provided.

Common Medical Emergencies

Stroke, heart attack and hip fracture are common medical emergencies associated with mortality. Monitoring mortality for these conditions provides us with further useful information on the quality of care in our hospitals. All three conditions are more prevalent in older people whose health may be more fragile so death cannot always be avoided.

Clinical Coding

Clinical Coding is the process of transcribing a patient's diagnosis and treatment from their case notes onto the Patient Administration System. The quality and timeliness of this data is essential to support reporting. Condition specific indicators reported in this document, such as stroke, heart attack, hip fracture, and the risk adjusted mortality indicators, rely on the clinical coding to define the condition and treatment.

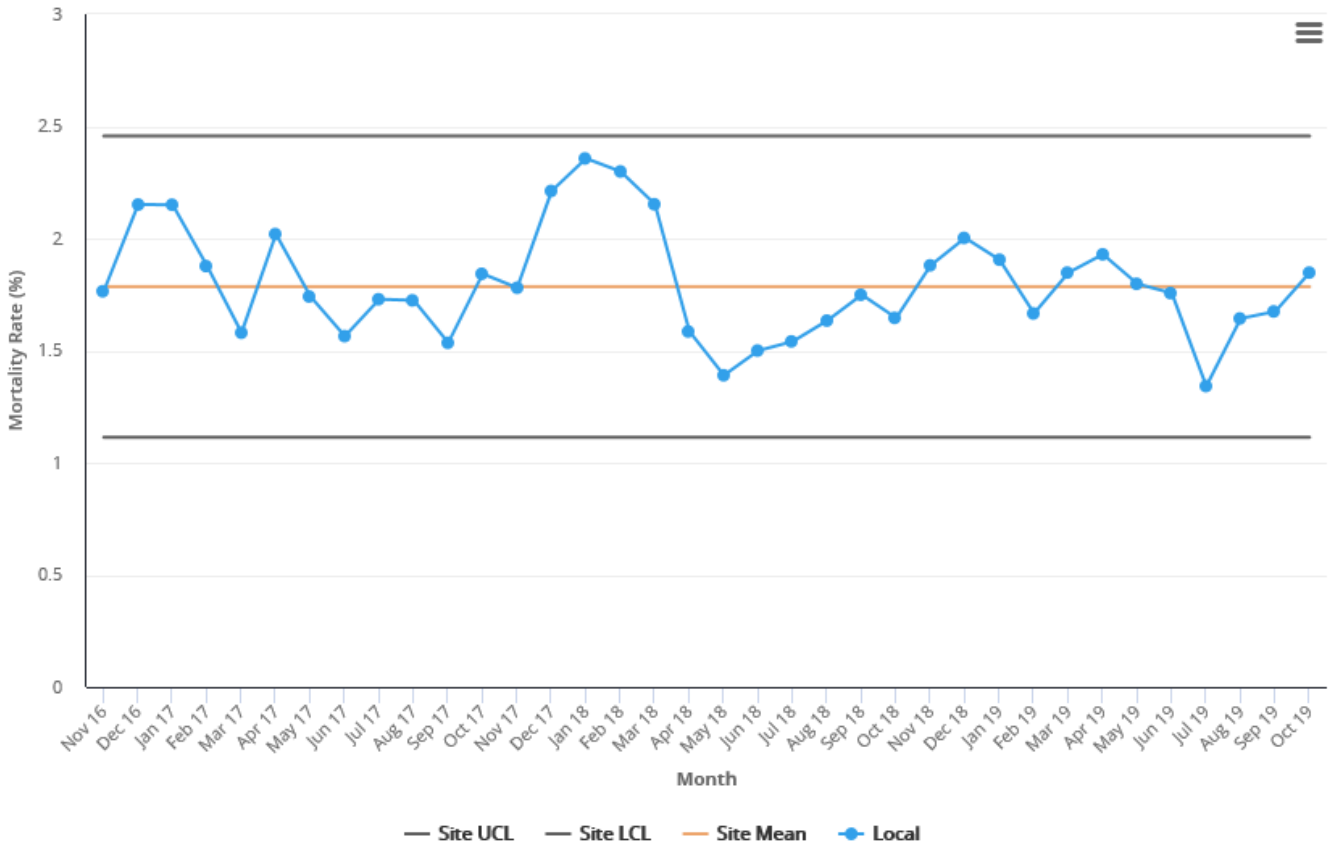
The national target is 95% completeness for any given month within 1 month of episode end date, and 98% for any rolling 12 months within 1 month of episode end date. For the month of September 2019, coding completeness was at 97%. For the 12 month period covered by this report, the Health Board achieved 98% coding completeness.

What does this data tell us?

Health Board wide

For the 12 months to October 2019, the crude mortality rate was 1.76% (1 in 57 patients), compared to the Welsh average of 1.80% (1 in 56 patients).

The following chart shows the monthly rolling crude mortality for the Health Board, which is within the control limits and without special cause for concern.



BCUHB Crude Mortality (average over 12 month)

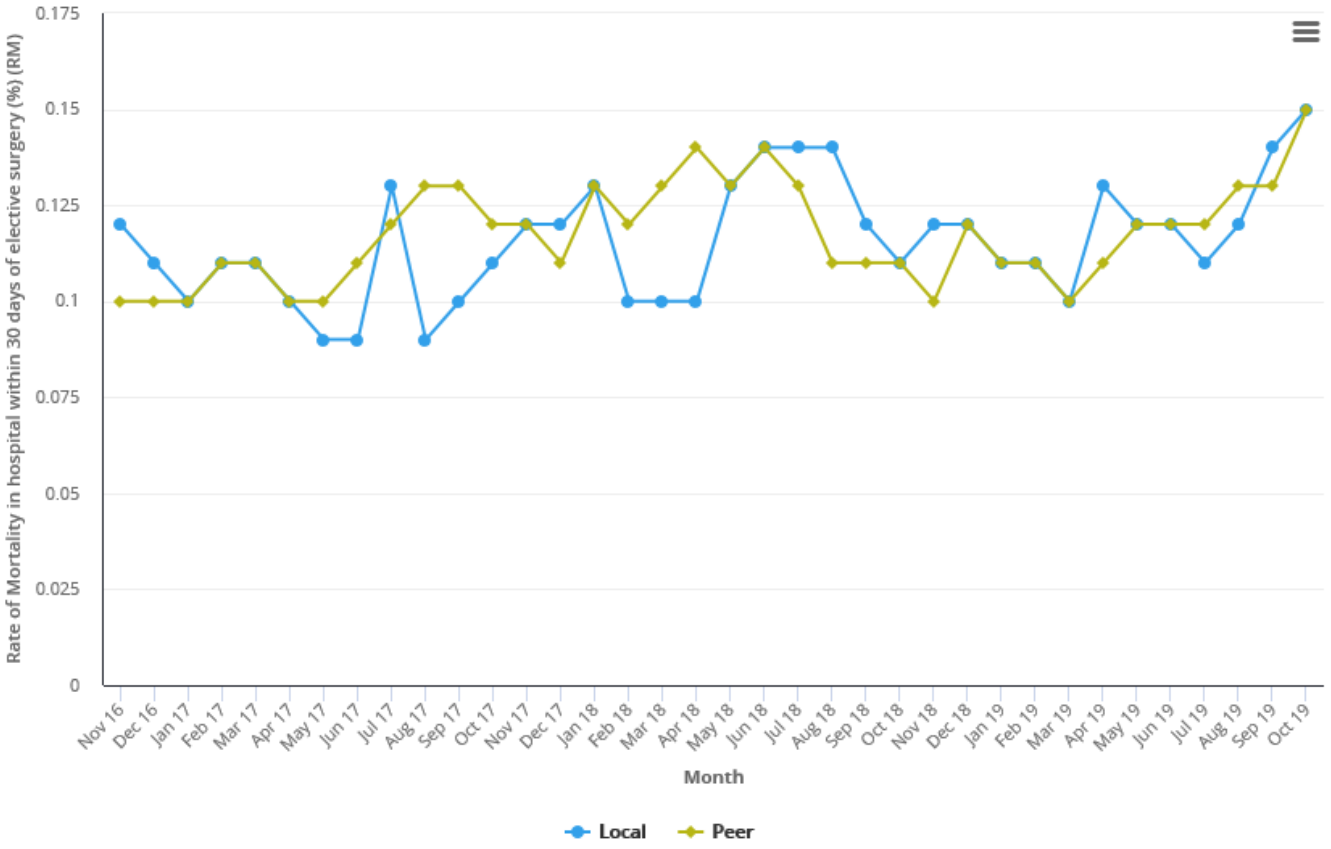
Mortality following Surgery

The following two indicators present information on mortality within 30 days of elective (planned) or non-elective (emergency) surgery. As the measures are not risk adjusted, they will be affected by the type of surgery, and patient population.

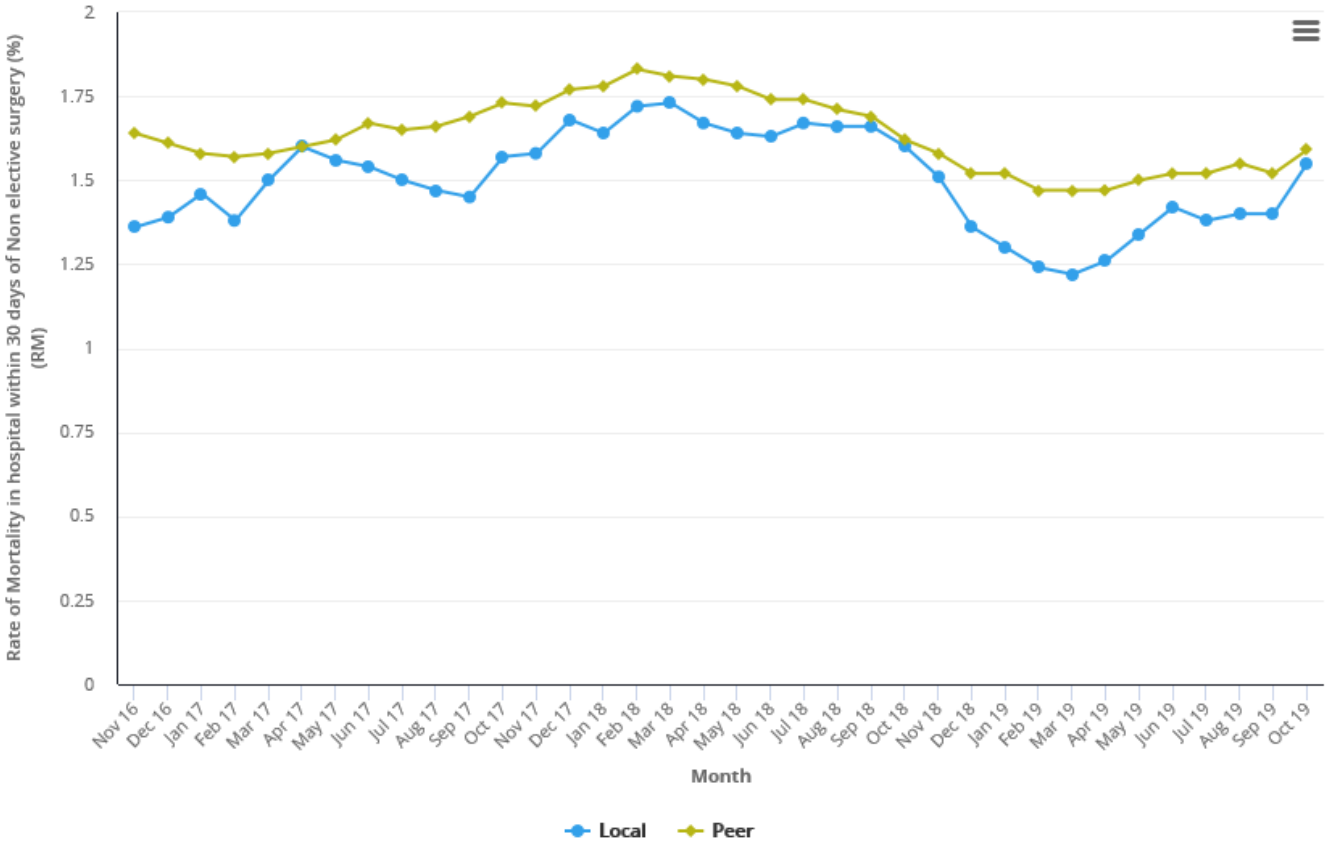
In both elective and non-elective surgery, the mortality rate within 30 days is very low. The 12 months to October 2019 shows a mortality rate of 0.15% for elective surgery (1 in 669 patients), with the Welsh average being 0.16% (1 in 637 patients). For non-elective (emergency) surgery the rate was 1.62% (1 in 62 patients) for BCU and 1.63% (1 in 61 patients) for Wales.

All cases are reviewed as part of the health board's mortality review process.

The following charts show the rolling 12 month elective and non-elective mortality rates.



Elective Surgery Mortality (rolling 12 month)



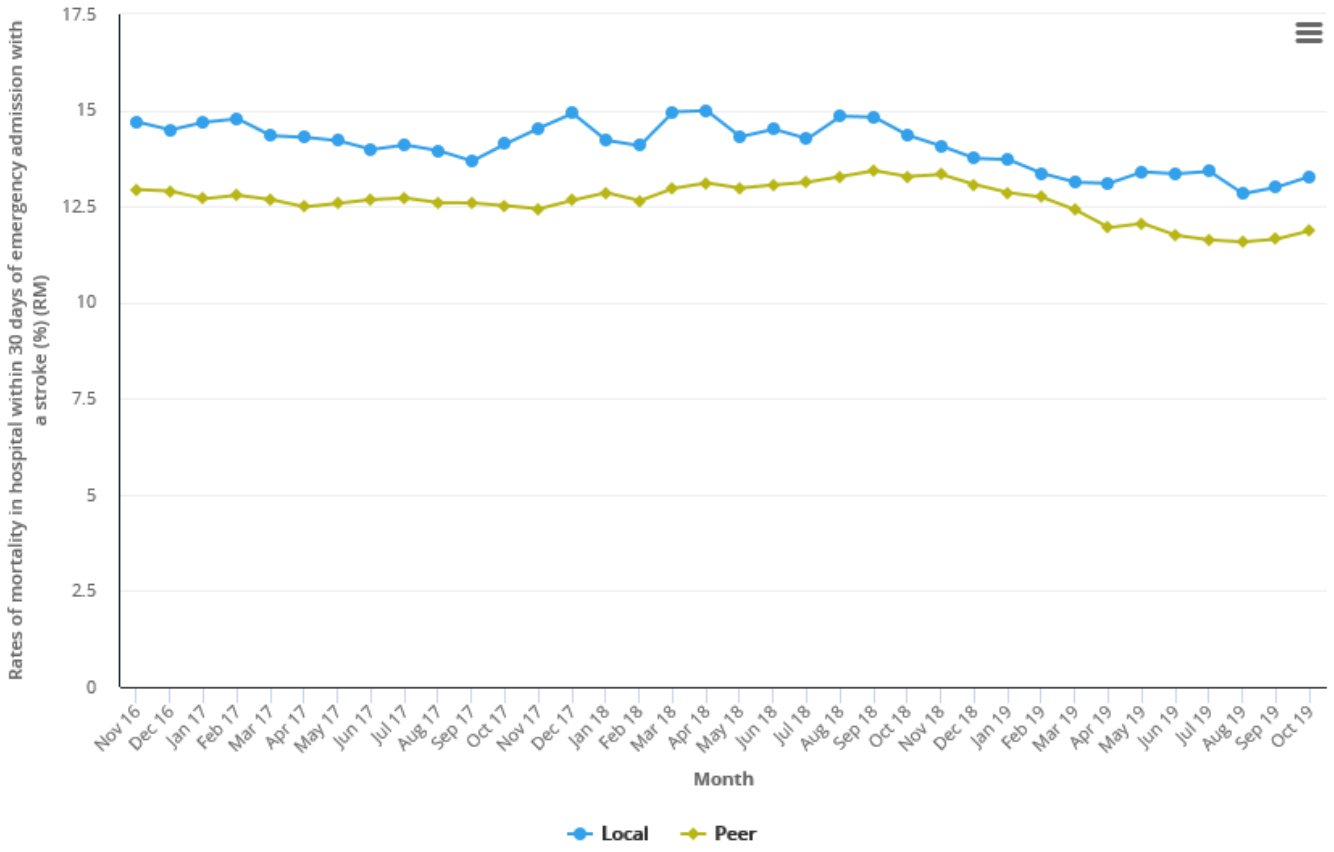
Non-Elective Surgery Mortality (rolling 12 month)

Common medical emergencies

The following indicators present information on mortality following specific medical emergencies (stroke, hip fracture, and heart attack). This provides some information on the quality of care in each hospital. All three conditions are more prevalent in older people whose health may be more fragile so death cannot always be avoided.

Stroke

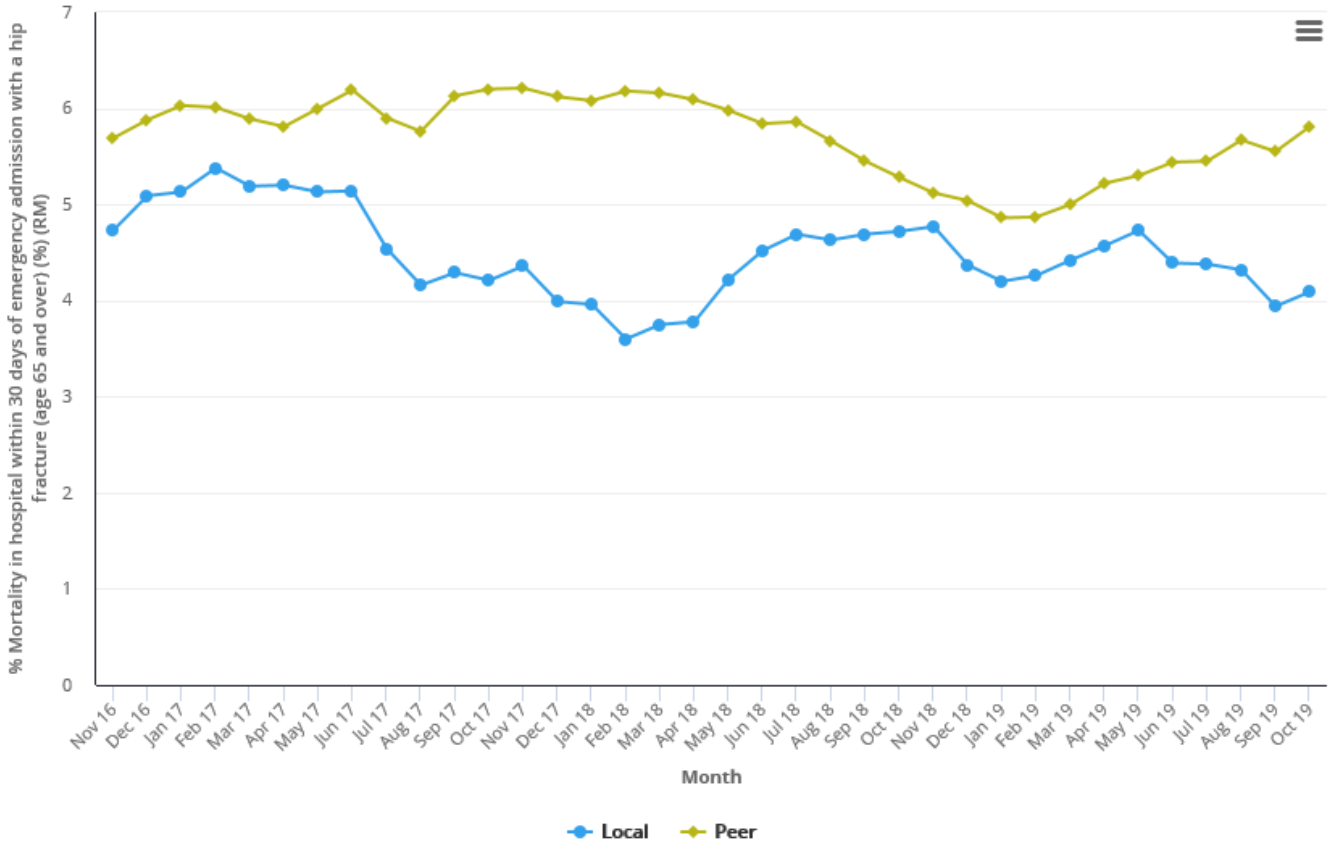
The following chart shows the mortality within 30 days of an admission following a stroke. The latest data shows that 13.60% (1 in 7) patients died within 30 days of being admitted with a stroke, which remains higher than the Welsh average of 12.4% (1 in 8). Flagged, as an area for improvement, actions in progress have yet to impact on crude mortality.



Stroke Mortality (rolling 12 month)

Hip Fracture

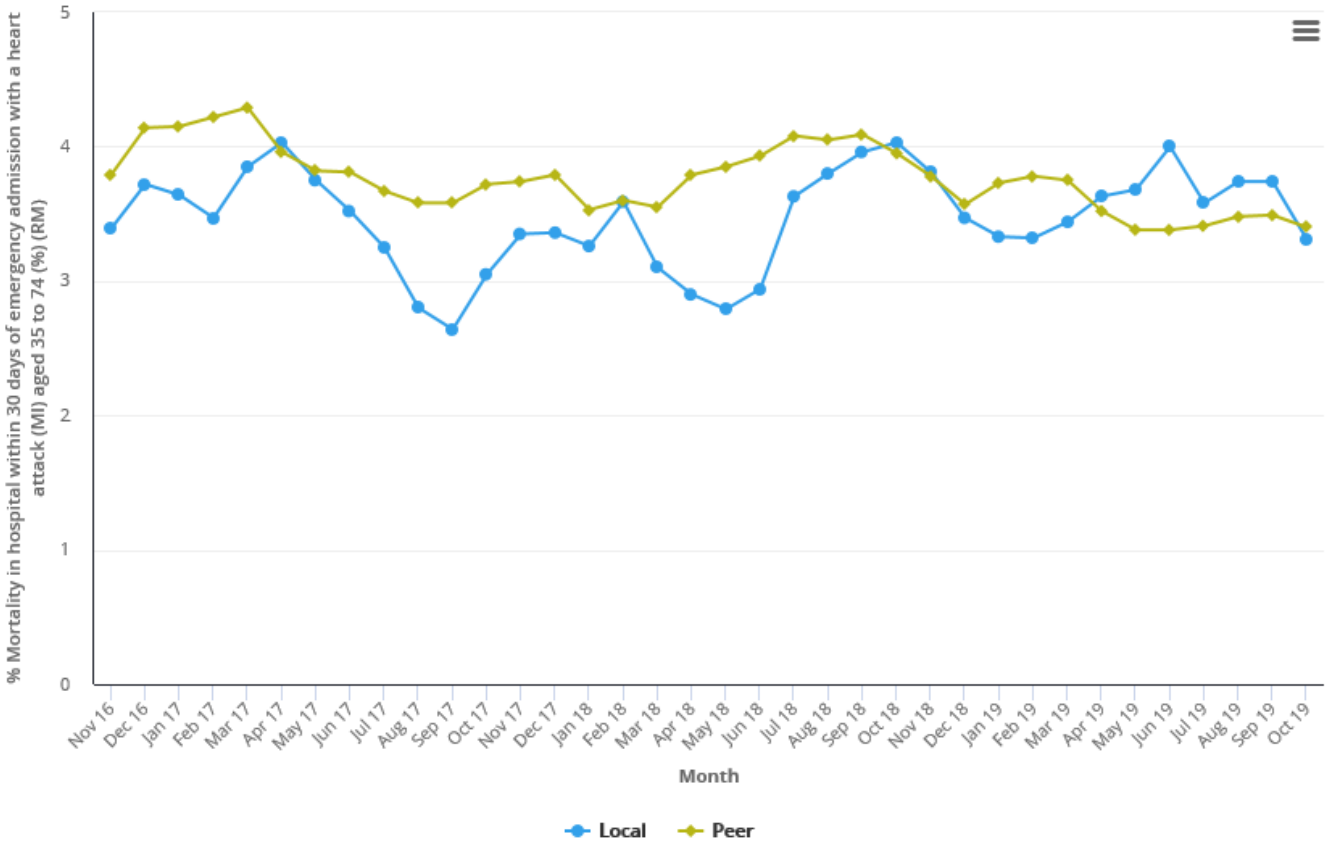
The following chart shows the rolling 12 months mortality within 30 days of admission following a hip fracture (for those aged 65 and over). The latest data shows that 3.97% of patients died (1 in 25 patients), which is better than the Welsh average of 6.0% (1 in 16 patients).



Hip Fracture (rolling 12 month)

Heart Attack

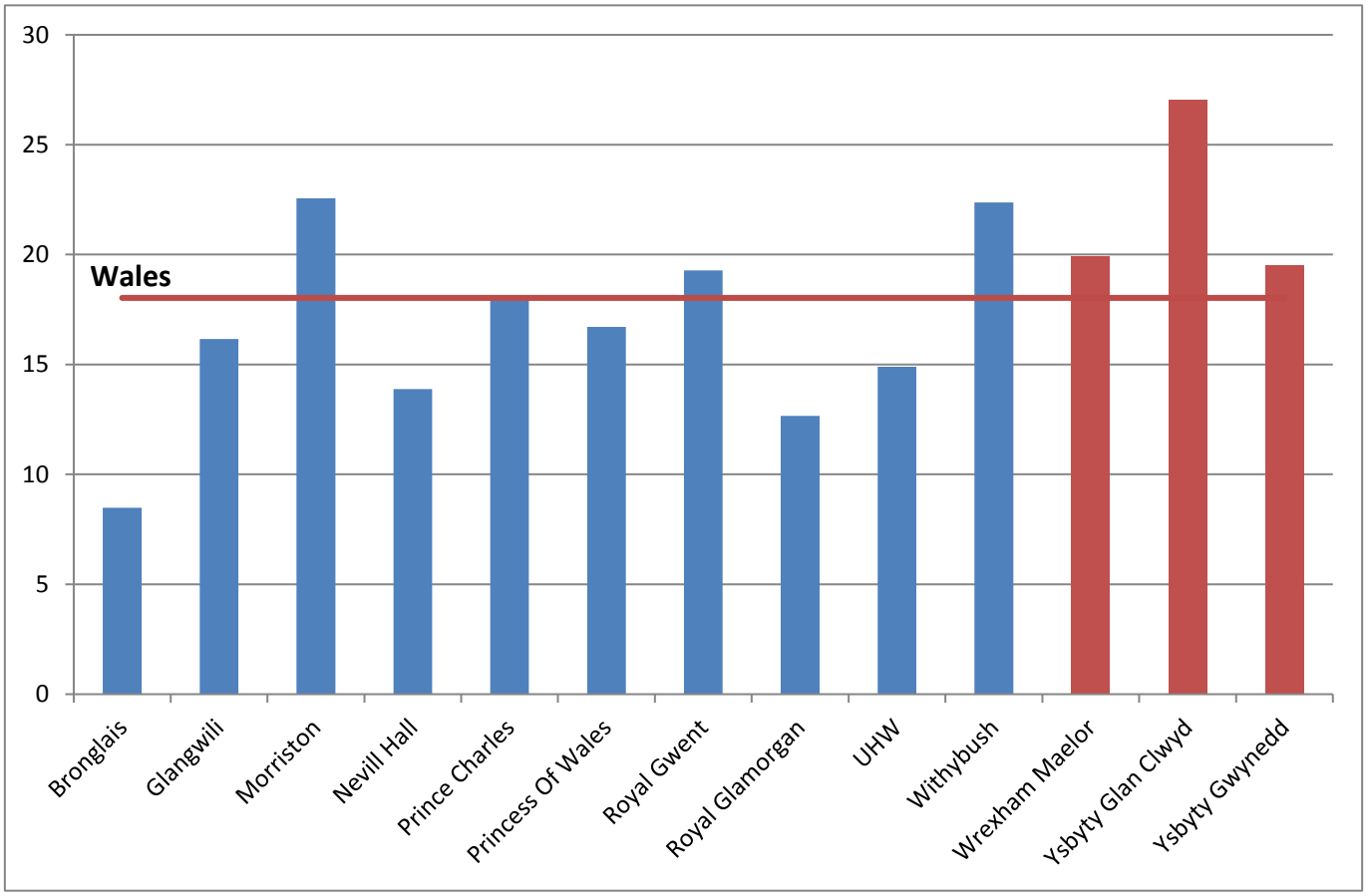
The following chart shows the rolling 12 month mortality within 30 days of admission with a heart attack for patients aged 35 to 74. The latest data shows that 3.6% of patients died (1 in 28), compared to the Welsh average of 3.47% (1 in 29 patients). The Health Board participates in the Myocardial Ischaemia National Audit Project (MINAP), and through this closely monitors the quality of care and delivery of best standards.



Heart Attack (rolling 12 month)

Emergency Department Mortality

The following chart shows the number of deaths per 10,000 attendances for each major Emergency Department (A&E). It should be emphasised the figures reported are a crude mortality, and unlike deaths elsewhere in the hospital, no attempt is made to 'standardise'. As such there is no accommodation for factors such as age and severity of illness, factors known to impact on the risk of death.



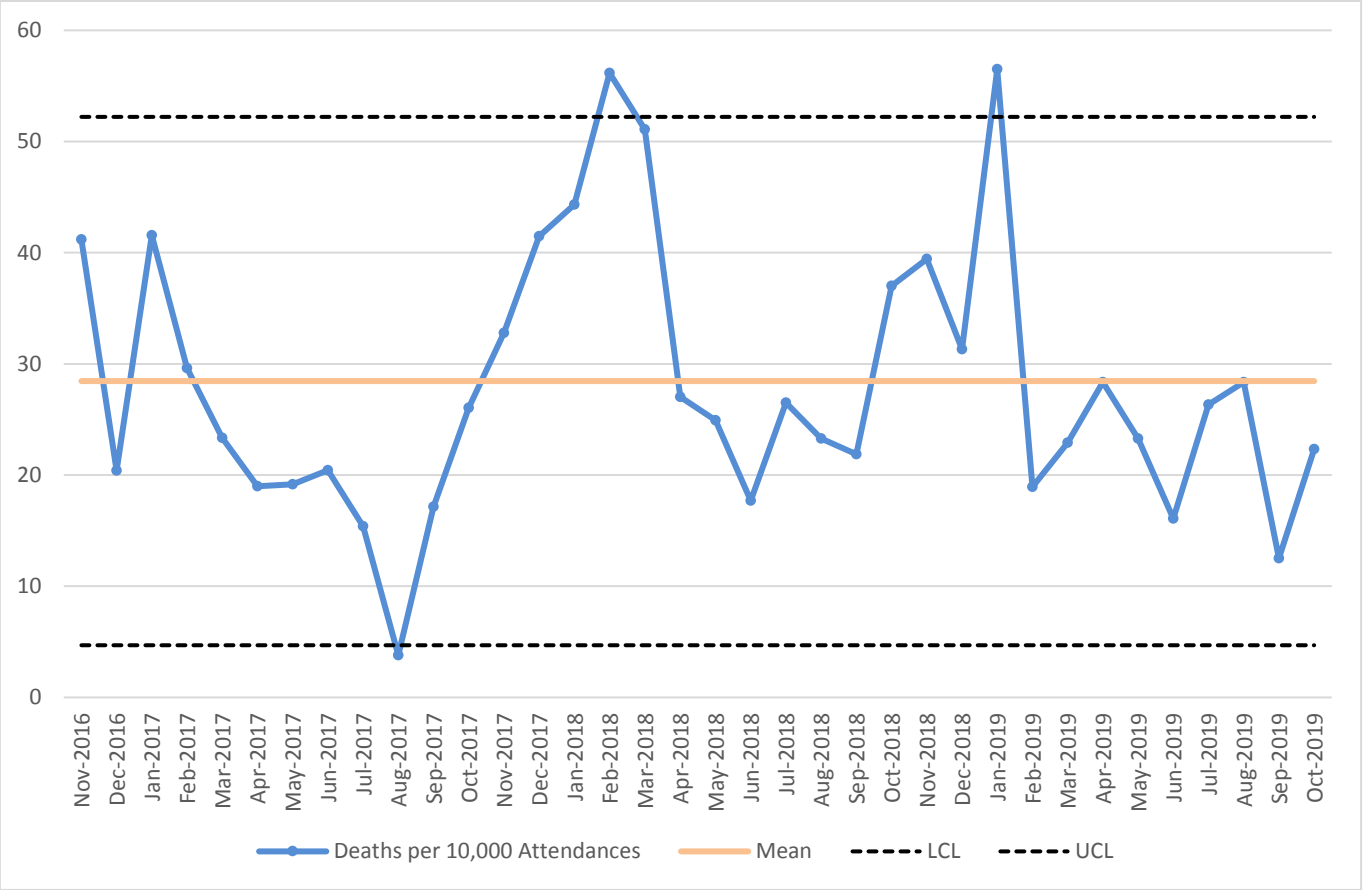
Deaths per 10,000 attendances

Emergency Department (Major Units) Crude Mortality Rates

(Rolling 12 months to May-19)

The 3 major departments in North Wales are highlighted in red. The Welsh average is 18 deaths per 10,000 attendances. The latest data shows the highest number of deaths at Ysbyty Glan Clwyd (27.1 deaths per 10,000 attendances), whilst the lowest are at Bronglais.

The following chart shows the Emergency Department mortality per 10,000 attendances for Ysbyty Glan Clwyd over the past three years.

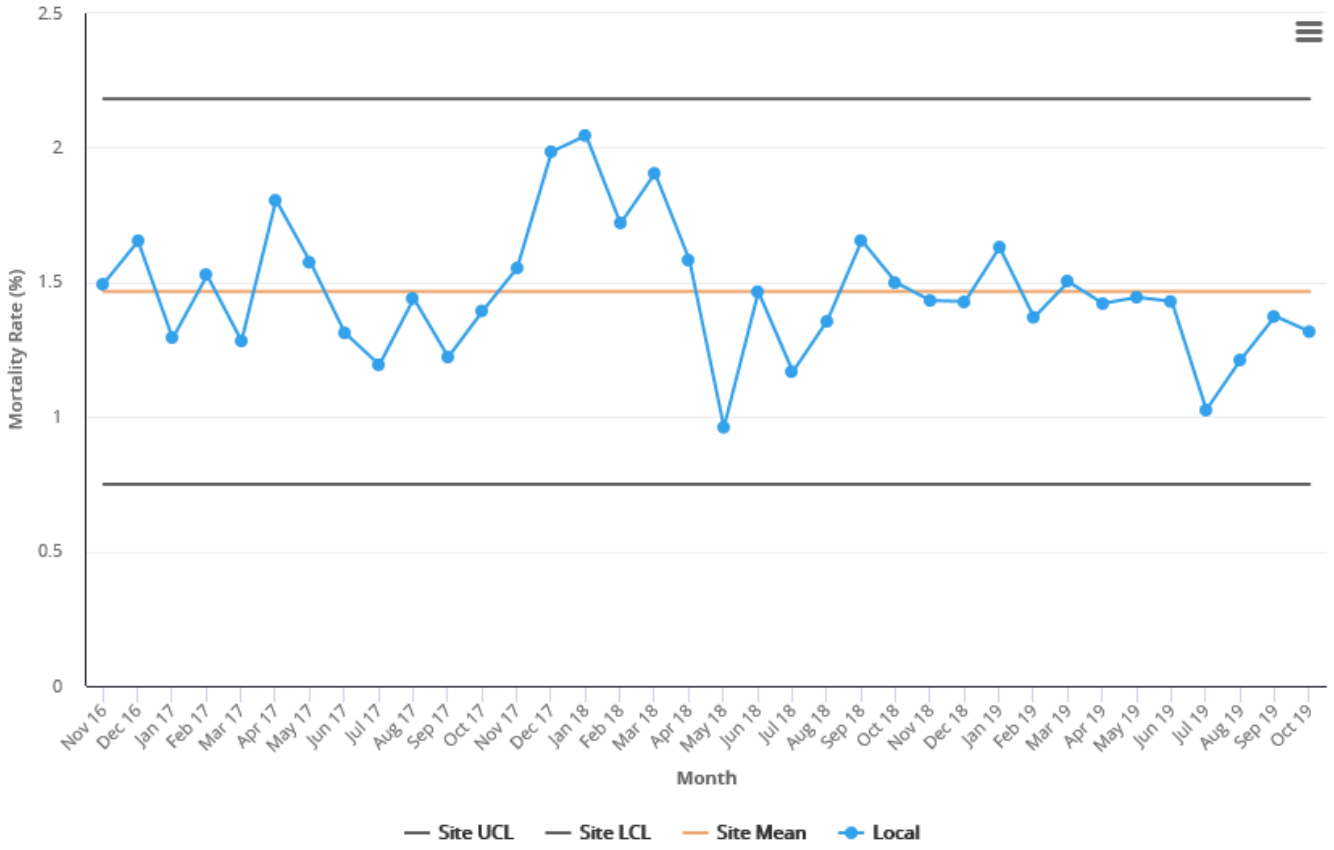


Deaths per 10,000 (YGC)

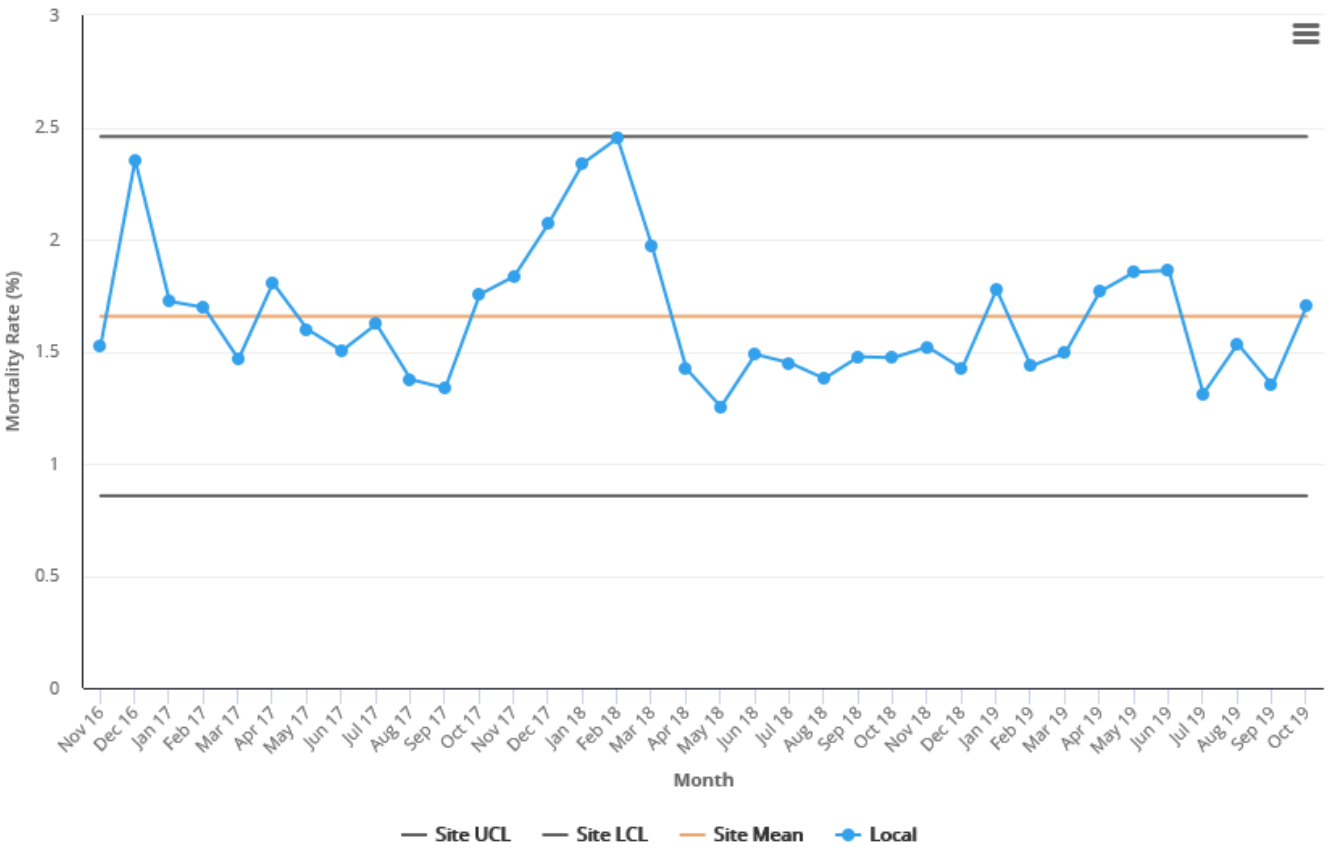
Work is progressing to address those amenable to improvement, with the caveat, mortality ultimately may still remain higher when all such concerns are addressed.

Mortality by District General Hospital (DGH)

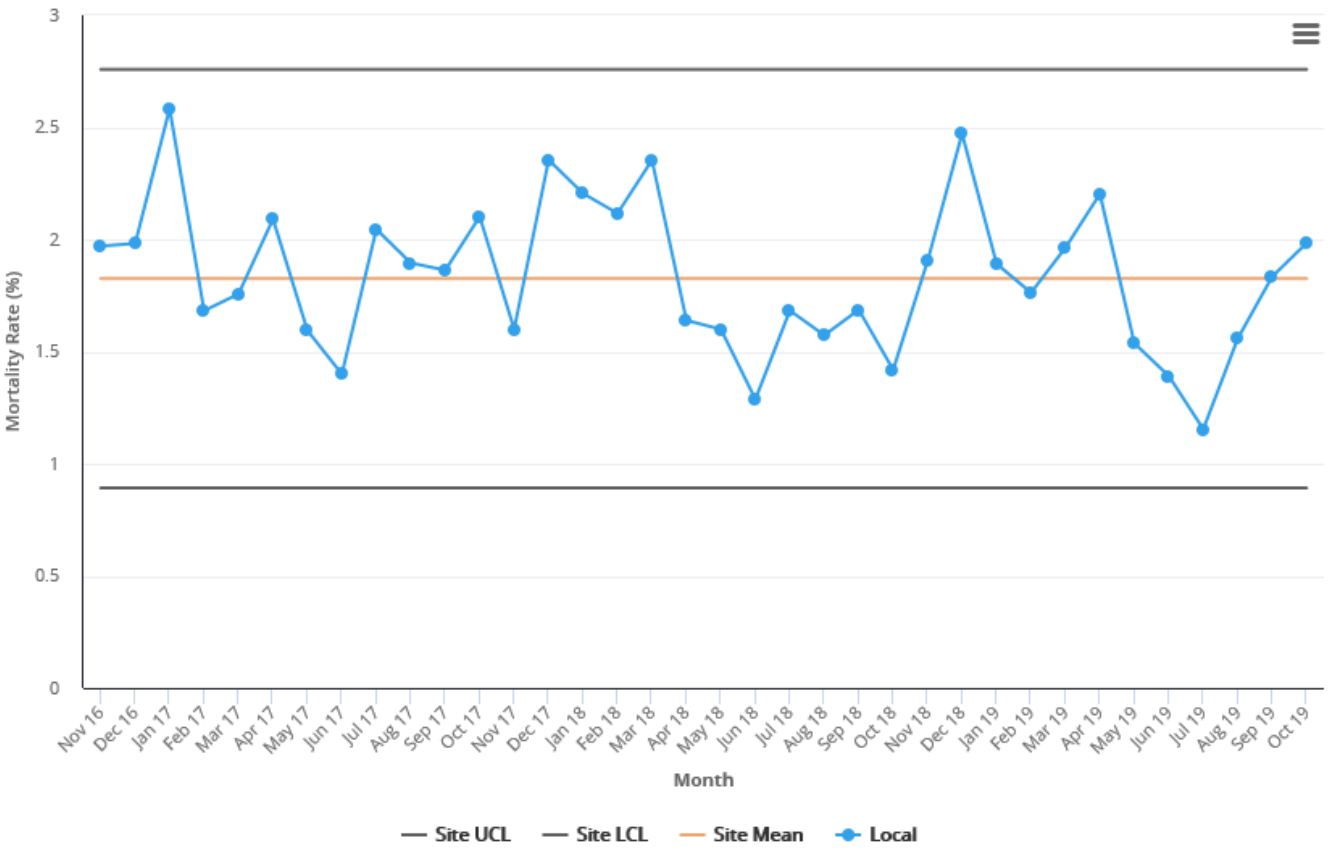
BCUHB provides major DGH services at three hospitals, Ysbyty Gwynedd, Glan Clwyd and Wrexham Maelor. The following charts show the individual monthly crude mortality figures for the last three years. Increased mortality is to be expected in the winter months.



Ysbyty Gwynedd Crude Mortality (rolling 12 month)



Ysbyty Glan Clwyd Crude Mortality (rolling 12 month)



Wrexham Maelor Crude Mortality (rolling 12 month)

Other Mortality Indicators

Detailed, longer term analysis provided by Public Health Wales of other mortality indicators that are measured in Wales is available on our web site[2].

[2] http://www.wales.nhs.uk/sitesplus/861/page/68460