

Mortality Review extract from Quality Report October 2018

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By your side

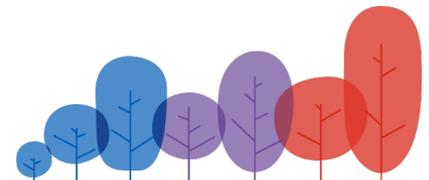
Safe – Key Measures Mortality Review Process at BWC



BWC is committed to learning from deaths, and reducing our mortality rates as much as possible. Due to the unique and specialist nature of our organisation, benchmarking BWC mortality rates nationally, and with other similar providers, is difficult. The main value is in monitoring the overall trends, as individual rates cannot be adjusted accurately enough to be meaningful. Therefore, BWC has an extensive inclusion criteria for cases that will be subject to a detailed mortality review, to ensure we are learning lessons and identifying areas for improvement.

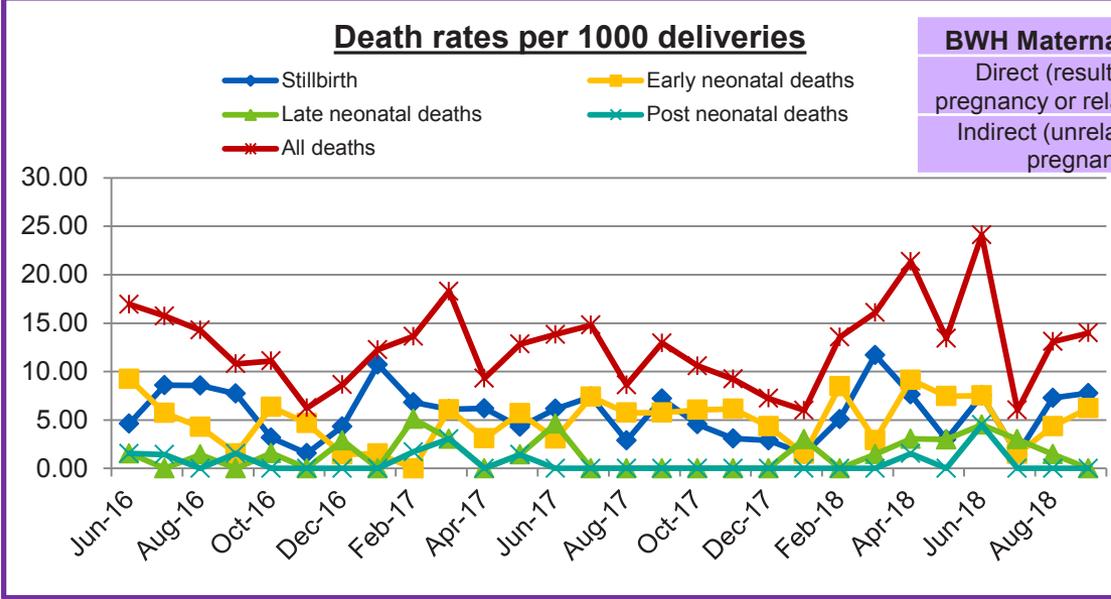
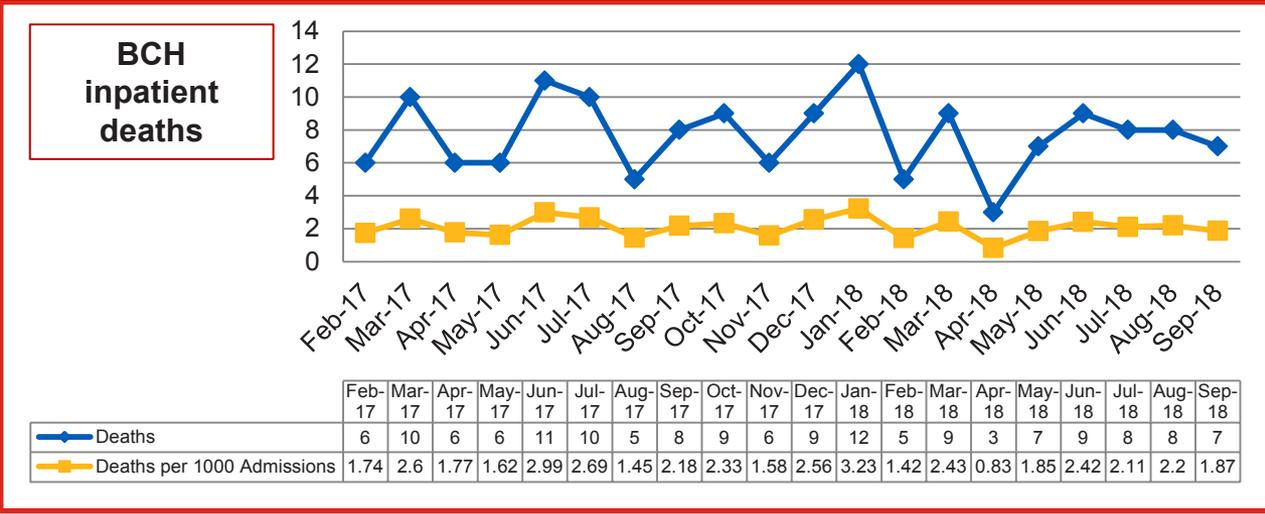
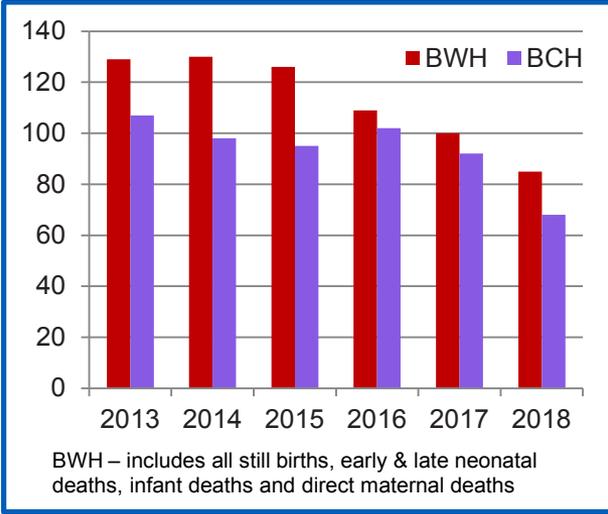
BWC will review all deaths meeting the following criteria:

- 100% child deaths
- All perinatal deaths >22 weeks, >500g, excluding termination of pregnancy (unless it is a live birth)
- 100% maternal deaths
- All unexpected adult deaths and expected adult deaths in where concerns are raised
- 100% deaths of patients with a learning disability
- All deaths where bereaved families and carers, or staff, have raised a significant concern about the quality of care provision.



Safe – Key Measures

Mortality Rates at BWC



BWH Maternal Deaths	2013	2014	2015	2016	2017	2018
Direct (resulting from pregnancy or related issues)	0	2	1	2	1	1
Indirect (unrelated to the pregnancy)	1	1	0	1	0	0

The investigation concluded that there were no gaps in care.

Definitions

- **Late foetal loss** - baby delivered between 22+0 and 23+6 weeks gestational age showing no signs of life, irrespective of when the death occurred.
- **Stillbirth** - baby born after 24 weeks with no signs of life
- **Early Neonatal Death** - baby of any gestation born with signs of life dying before 7 days
- **Late Neonatal Death** - baby of any gestation born with signs of life dying between 7-28 days
- **Infant Death** – baby dying between 28 days-1 year

Safe – Key Measures

Monthly Mortality at BWC

Number of
deaths in
September
2018

BWH: 9 deaths: 5 still births, and 4 neonatal deaths

BCH: 8 deaths: 7 inpatient deaths and 1 ED death.

FTB: 0 reported deaths

None of the BCH deaths in September have been classed as a SIRI. However, a death from December 2017 was declared as a SIRI in September. This involved a baby who died from a *Streptococcus pyogenes* infection resulting in toxic shock syndrome 5 days after discharge from the BCH ED.

An intrauterine death from September and a death from May 2018 as a result as a Candida infection (declared in Sept) are also being investigated as a SIRI at BWH.

Where the BCH mortality review process identified cases where care was substandard and this may have impacted on the outcome these cases have been included in previous versions of this report. We will now also include such cases for BWH. The classification system used at BCH and BWH is comparable, but not identical. The table below describes the classifications. One BWH case reviewed earlier this year was classed as a Category 3 (Red Grade), as the inquest was pending at the time that the last quarterly update was produced, this case was not included in the quarterly mortality update. Learning from this case has already been shared in previous SI updates and Prevention of Future deaths updates – this case is described on the next slide. 1 BWH cases were classified as a 2 (Amber). None of the BCH case were classified as either Red or Amber.

BCH		BWH	
1.	The care provided was less than adequate; and different management would reasonably be expected to have altered the outcome.	3	Suboptimal care – different management would reasonably be expected to have made a difference to outcome
2.	The care provided was less than adequate; and different management may have altered the outcome.	2	Suboptimal care – different management might have made a difference to outcome
3.	The care provided was less than adequate; and different management would not reasonably be expected to have altered the outcome.	1	Suboptimal care – different management would have made no difference to outcome
4a	Adequate or better than adequate care provided	0	No suboptimal care
4b	Adequate or better than adequate care was provided; different management may have altered the outcome	-	-
U.	The case cannot be classified without significant further investigation (please note that this classification is only used at stage 1 and 2)	-	-

Concerning case – sharing learning



Birmingham Women's
and Children's
NHS Foundation Trust

Summary of the case:

This case involved a neonate who was being cared for in the intensive care section of the Neonatal Unit at BWH. This baby required a change of PN from the initial start-up PN to a formulation that was more appropriate for her age. The new bag of PN was put up and the old bag was left up. One was run through the pump at the correct rate and the other one free flowed into the patient, both through her umbilical line. The baby became fluid overloaded and suffered with respiratory deterioration. Resuscitation was commenced, and during the course of this the clinical team identified the incident. Unfortunately action to prevent harm was not possible, and the baby died.

An **inquest** was held on **20th August 2018** and the Coroner recorded a narrative conclusion: *“Baby died from an inadvertent fluid overload of TPN which was as a result of unsafe staffing levels, a failure to follow the correct procedure and a lack of learning from a previous incident. Death was contributed by neglect.”*

A report to prevent future deaths was issued to the Trust and the commissioners and the Trust is working to provide a response to this.

A Root Cause Analysis was also performed into this case and the report following this investigation is summarised as below:

Key findings:

The RCA group noted that there were multiple combining root causes for this patient's death. The key factors were:

- A number of workforce related issues (equipment & resource factors and team & social factors) including the way that staff are allocated to patients and responding to emergency activity; the ability of senior staff to effectively supervise and support clinical activity; the capacity within the neonatal education team and neonatal governance team.
- Task and communication factors relating to how work is organised across the shift.
- Equipment and resource factors such as the number of access ports available and how lines are labelled.
- Task and training factors relating to how the pump was set up and how staff go through the checking processes.

These factors combined to create a situation where staff who were carrying out a safety critical task (setting up PN), and lost situational awareness. That momentary loss of situational awareness resulted in the PN being set up incorrectly, and the systems of working in place at the time did not afford the prompts to staff which would have allowed them to identify the error before harm was caused.

This death from this cause was classed as preventable. ***This is therefore classed as a Red (Suboptimal care – different management would reasonably be expected to have made a difference to outcome.***

Recommendations:

A large number of recommendations are being implemented to change the way that the workforce is allocated (Workforce Plan); and how they are supported in their roles (Education Plan). Recommendations to change how instructions are given to nursing staff and to try and change the timeliness that laboratory results are available are also being taken forward as are changes to how staffing pressures are escalated within the team. Further training for the team will include Human Factors training and we will develop our simulation training to allow the team to practice team leading and role allocation including allocating support to the family.

Concerning case – sharing learning



Birmingham Women's
and Children's
NHS Foundation Trust

Summary of the case:

Serial scans had been arranged in a woman who was high risk for IUGR. She failed to attend for her scan at 32 weeks. The DNA policy was not followed correctly and the next scan was arranged for 36 weeks instead of next available. She presented with a stillbirth at 35 weeks. A scan at 32 weeks may have identified concerns regarding fetal growth and higher surveillance adopted.

Key findings:

A scan at 32 weeks may have identified concerns regarding fetal growth and higher surveillance adopted. **This case has been classed as an Amber case (i.e. Suboptimal care – different management might have made a difference to outcome).**

Recommendations:

The DNA policy will be reviewed and amended so that it is clearer that when scans are being re-arranged they are arranged for the next possible appointment slot.

External Trust-wide monitoring: SMR (RRM) and PSMR

- Due to delays receiving data from the national HES our external Trust-wide mortality monitoring has not been updated since June.
- The Standardised Paediatric Morality Index (SPMI), does not highlight cause for concern about our clinical outcomes. We are within the thresholds which indicate that there is a low statistical chance that we should be concerned with our mortality rates.
- As the overall trend and our position when compared to peers provides a better indication of whether we should be concerned about our services. Our position compared to Great Ormond Street, Alderhey and Manchester Children's Hospital does not indicate any cause for concern.

External specialty specific monitoring: PICU CUSUM, Cardiac VLAD, Liver CUSUM

- All of these data sets are carefully validated by an external source and so we have a high degree of confidence that the information is valid.
- Neither the PICU CUSUM or the Cardiac surgery VLAD chart indicate that there is any concern with the clinical outcomes in these specialities.
- The liver CUSUM highlighted that we had a series of cases with poor outcomes. This was not sufficient to trigger a concern, however, the liver team decided to escalate this trend and carry out a further review. That review has not identified any gaps in care and that has been shared with the national team who are satisfied that no further action is required.

Mortality and clinical outcome alerts

- Alerts called "Signals" can be located in the HED mortality modules. These alerts are not sent directly to the Trust, instead when the monthly monitoring data is extracted a check is done in the system to establish if there are any current alerts. **No signals have been received in the last quarter.**
- The CQC will at times also issue us with an alert. We will typically receive one for maternity mortality on an annual basis. This is because the nature of our services means that we will typically be an outlier when compared to lower risk maternity units. We have not confirmed that there are any current CQC alerts.

Mortality and clinical outcome alerts

Safe – Key Measures

Mortality Outcomes - External Trends/Benchmarking (continued)



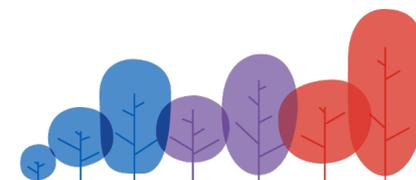
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The data that is available to us through HED includes all of our paediatric activity, both from BCH and BWH. Maternity data is not available on the HED system, for our organisation or any other maternity hospitals. The number of gynaecology deaths at BWH are too low to support statistical analysis. The HED Signals are provided for our information and there is currently no specified response required. The Mortality Review Committee are advised of all alerts.

Alerts are provided at 3 levels. Red, amber and green. Only red alerts indicate that the mortality rate within a specific disease group is higher than would be expected in a time period. Details of all red alerts received from the system will be included in the table below. There have been no recent red alerts.

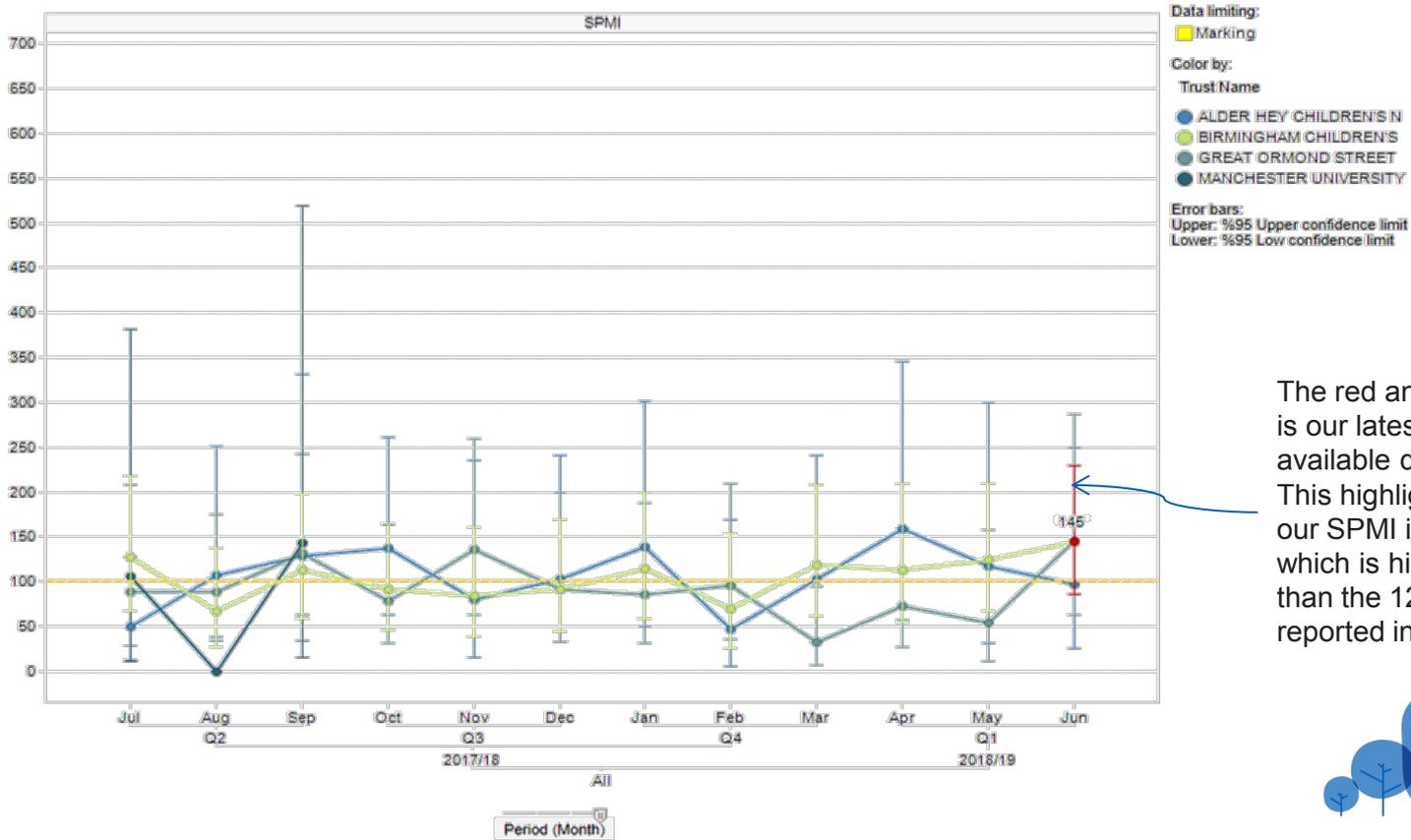
Maternity alerts are informed by the data that is provided through the SCOR (National Confidential Enquiry into Maternal and Perinatal Deaths). When the Trust is an outlier in the SCOR system an alert is sent to us by the CQC. We typically receive one of these each year and the CASC committee recently received the response to last year's alert. No alert has been received today.

Date identified / received	Type of alert (e.g, HED, CQC, other)	Detail of alert (precisely what does it say, what time period and what we are expected to do in response to the alert)	Current status / activity of review process in response to alert	Expected date of completion / closure	Final outcome from review
N/A	N/A	N/A	N/A	N/A	N/A



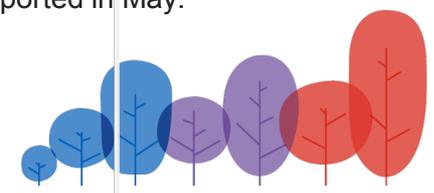
Mortality and external benchmarking information

The data that is provided below and on the following slide is provided from the HED system. This is nationally available data but this is poorly risk adjusted in paediatrics and therefore only useful for monitoring overall patterns. We cannot use the specific standardised figures as an indication that we should be concerned about our services. We had been using the RRM measure for several years, however, we have also been working with the HED providers to develop a paediatric system. This is also likely to suffer from some challenges with risk adjustment, but we anticipate that the figure will be more meaningful than the standard RRM. The RRM tool is no longer available to us and so the data provided is from the Standardised Paediatric Mortality Index (SPMI) that we have been developing with HED.



The HED system has not been updated since July as there is a delay receiving updated date from the NHS Digital. The chart provided below is the June data.

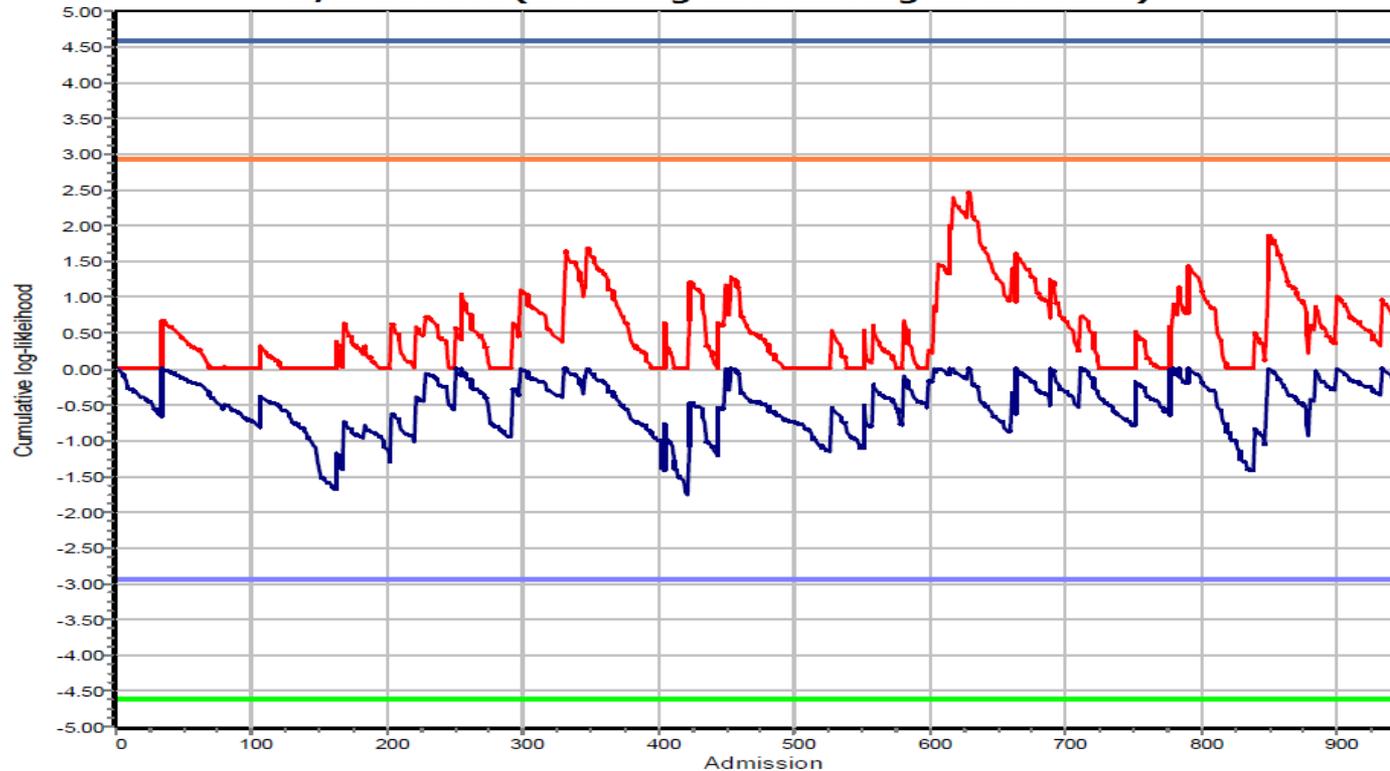
The red annotation is our latest available data. This highlights that our SPMI is 145 which is higher than the 124 reported in May.



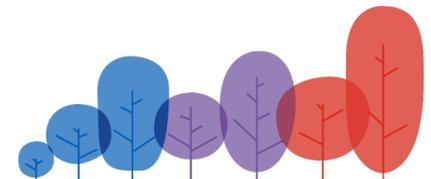
Mortality and external benchmarking information (continued)

1ST JAN – 30TH SEPT 2018

1/2 CUSUM (Doubling and Halving of the odds)



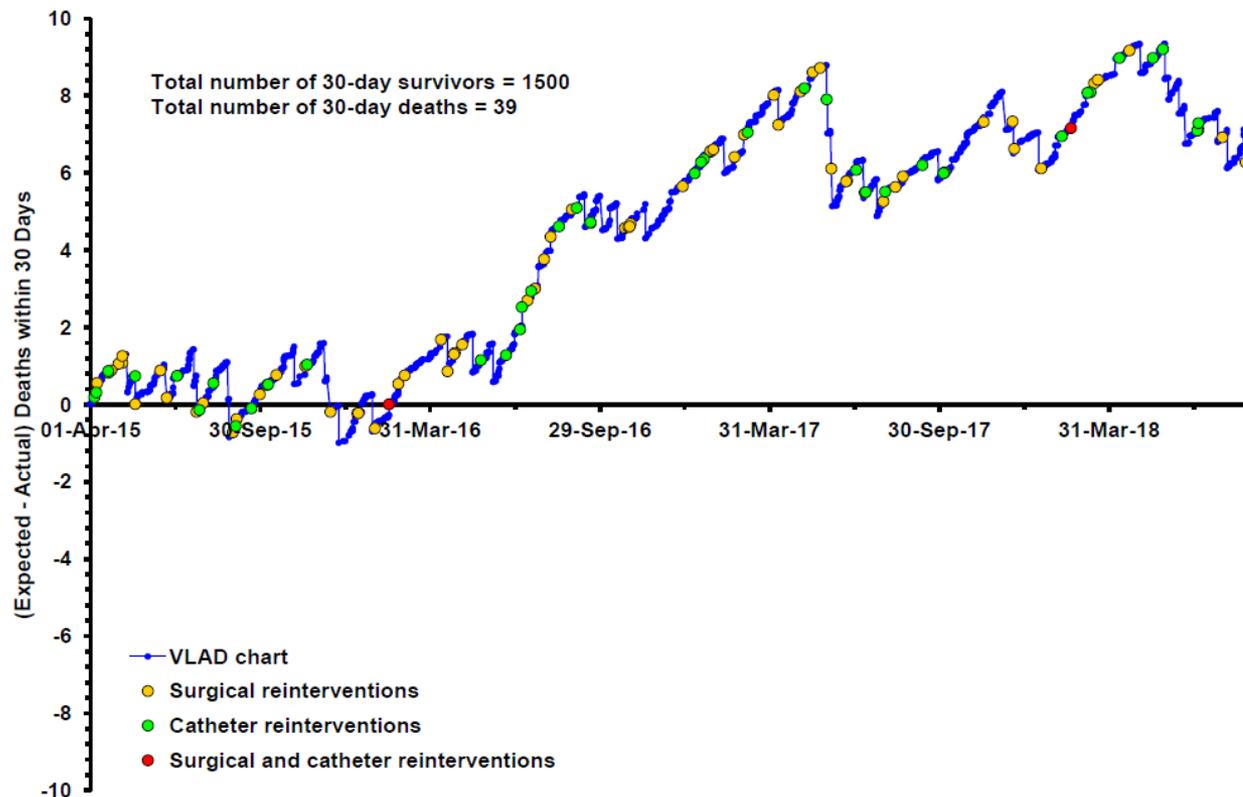
This chart represents the clinical outcome for patients cared for on the PICU. Movement towards the top of the chart indicates that the patient's outcome was better than expected and movement towards the bottom indicates that the patient's outcome was worse than expected. The chart does not highlight any cause for concern.



Mortality and external benchmarking information (continued)

Cardiac VLAD

VLAD Chart from 01/04/2015 to 31/08/2018



This chart represents the clinical outcome for patients who have undergone cardiac surgery. Each data point represents an operation, with the yellow, green and red ones representing when a re-intervention was needed.

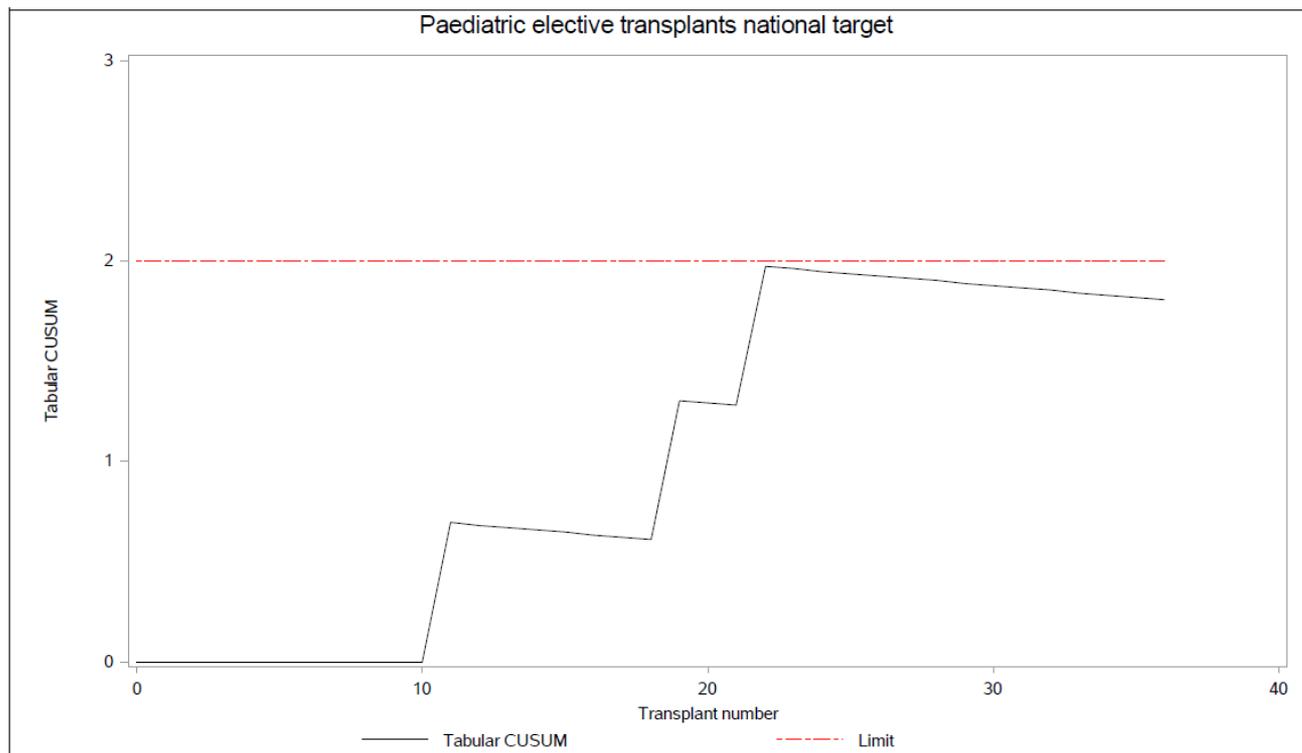
A move towards the top of the chart represents a clinical outcome that was better than expected, and a move towards the bottom represents an outcome that was worse than expected. The chart shows that overall the outcomes are better than expected and this chart does not highlight any cause for concern.



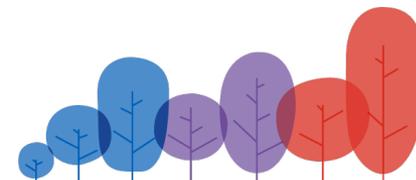
Mortality and external benchmarking information (continued)

Liver transplant CUSUM

90 day mortality of liver transplant patients at Birmingham
from 1 January 2016 to 30 April 2018

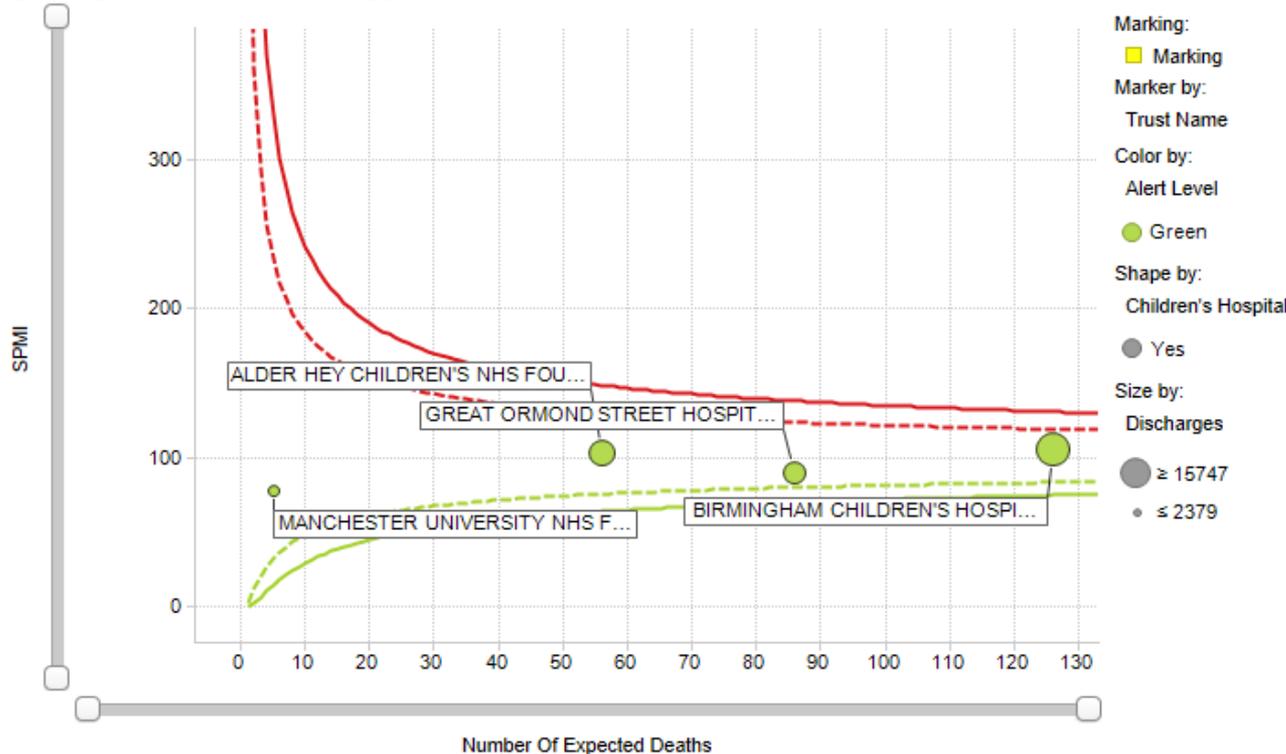


This chart represents the clinical outcome for patients who have undergone a liver transplant. We approached the limit line earlier this quarter and therefore carried out a further review of our cases and shared the outcome of the review with NHS Blood and Transplant. We have not identified any concerns with our care. NHS Blood and Transplant have responded to advise that no further action is required.



Mortality and external benchmarking information (continued)

Please note that funnel plot is only valid when SPMI score is 100 for all the organisations (shown below) as a whole. It can be verified through highlighting all data items and checking grand total in Tab 3 breakdown table.



The funnel plot to the left is produced using the paediatric standardised mortality rate data set from the HED system. As mentioned above there are also some concerns with the validity of this data and the tool has not yet been validated. This has however been developed by HED in conjunction with BCH colleagues to improve the validity of data available to us. The RRM measure that we have previously monitored is no longer available.

The funnel plot demonstrates that all 4 of the selected organisations are within the trigger limits which would indicate that our mortality rates are within the expected boundaries.

The HED system has not been updated since July as there is a delay receiving updated date from the NHS Digital. The chart provided below is the June data

