

EXECUTIVE SUMMARY
REPORT TO THE TRUST HEALTHCARE GOVERNANCE COMMITTEE

HELD 25 MARCH 2013

Subject:	Quarterly Trust Mortality Report – March 2013
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Status	N

PURPOSE OF THE REPORT:

To provide the Committee with a Trust Mortality Report covering current Hospital Standardised Mortality Ratio (HSMR) and Standardised Hospital-level Mortality Indicator (SHMI) values and provide comparator data with other trusts in England.

KEY POINTS:**HSMR 2012/13**

The rolling HSMR for January 2012 – December 2012 of **93.4** for All Admissions is “significantly lower than the national benchmark”. The rebased value for this time period is 98 (94-102)

STH NHSFT	Rolling 12 months HSMR Jan 2012 - Dec 2012
All Admissions	93.4 (89.7 – 97.2)
Elective Admissions	87.9 (70.7 - 108.0)
Non Elective Admissions	93.6 (89.8 - 97.6)

SHMI 2011/12

The most recent information from the IC, published 24 January 2013, covers the period **1 July 2011 to 31 June 2012** and reports a SHMI value for STH of **0.92** (0.89 -1.12 *over-dispersion control limits of 95%*) for an expected 3789 deaths. The next publication is expected Jan 2013.

IMPLICATIONS

	Aim of the STHFT Corporate Strategy 2012-2017	Tick as Appropriate
1	Deliver the best clinical outcomes	√
2	Provide Patient Centred Care	√
3	Employ Caring and Cared for Staff	
4	Spend Public Money Wisely	√
5	Deliver Excellent Research, Education & Innovation	
	CQC Outcome	16 – Assessing and monitoring the quality of service provision

RECOMMENDATION(S):

Note that the current rebased HSMR is 98 - within expected range. The most up to date SHMI value remains at 0.92 and within expected range (as reported by IC) and “lower than expected” as reported by Dr Foster.

Both SHMI and HSMR should continue to be monitored and compared at future meetings. A root cause analysis of the SHMI value is currently underway.

APPROVAL PROCESS

Meeting	Presented by	Approved	Date
HCGC			25 March 2013

Sheffield Teaching Hospitals NHS Foundation Trust

Mortality Report – March 2013

Introduction

This report provides an overview of mortality across Sheffield Teaching Hospitals NHS Foundation Trust as one outcome indicator that contributes to the overall quality of patient care. The report will introduce the reporting of crude mortality alongside the previously reported measures of mortality – the Hospital Standardised Mortality Ratio (HSMR) and the Summary Hospital-level Mortality Indicator (SHMI).

1. Hospital Standardised Mortality Ratio (HSMR)

1.1 Trend analysis

The HSMR is an *indicator* of healthcare quality that measures whether the death rate *at a hospital* is higher or lower than you would expect. We access this information through Dr Foster's Real Time Monitoring Tool (RTM).

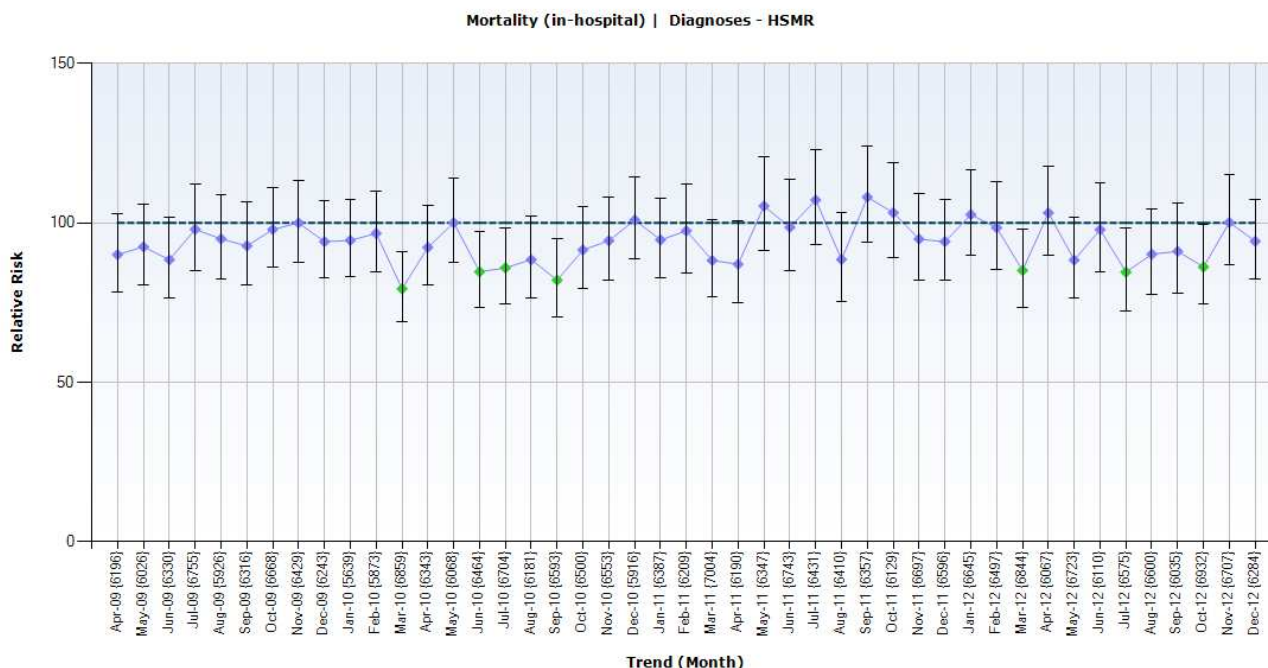
The HSMR compares the expected rate of death in a hospital with the actual rate of death for those patients with diagnoses most commonly resulting in death i.e. *covers the top 56 diagnoses from which 80% of all deaths occur*. Severity of illness, age, sex, deprivation & other factors are taken into account when calculating expected death rate.

The number of expected deaths is compared with the number of observed (actual) deaths and if the number is the same the HSMR score is a value of 100. If the number of observed deaths is less than expected the HSMR value is below 100; if observed deaths are higher than expected then HSMR is greater than 100.

All hospitals in England are included in the model so that a national benchmark can be calculated. The current benchmarking data in RTM is based on the 2010/11 financial year's Secondary User Services (SUS) data.

Chart 1 depicts monthly HSMR values, as calculated using Dr Foster RTM, over the past 45 months benchmarked to the appropriate year. The points highlighted in green indicate a significantly lower than national average mortality that particular month, where average national mortality is equal to 100.

Chart 1 HSMR Trend (Month) between April 2009 and Dec 2012



1.2 Rolling HSMR Jan 2012 – Dec 2012

Dr Foster reports the annual HSMR in their Hospital Guide to enable comparison of mortality rates across all hospitals in England for any particular year.

Dr Foster Real Time Monitoring enables previewing of the rolling HSMR on a monthly basis. Table 1 indicates the rolling 12 months HSMR from the most up-to-date data available and also shows the split between elective and non-elective admissions.

Table 1

STH NHSFT	Spells	Rolling 12 months HSMR Jan 2012 - Dec 2012
All Admissions	78073	93.4 (89.7 – 97.2)
Elective Admissions	47881	87.9 (70.7 - 108.0)
Non Elective Admissions	30191	93.6 (89.8 - 97.6)

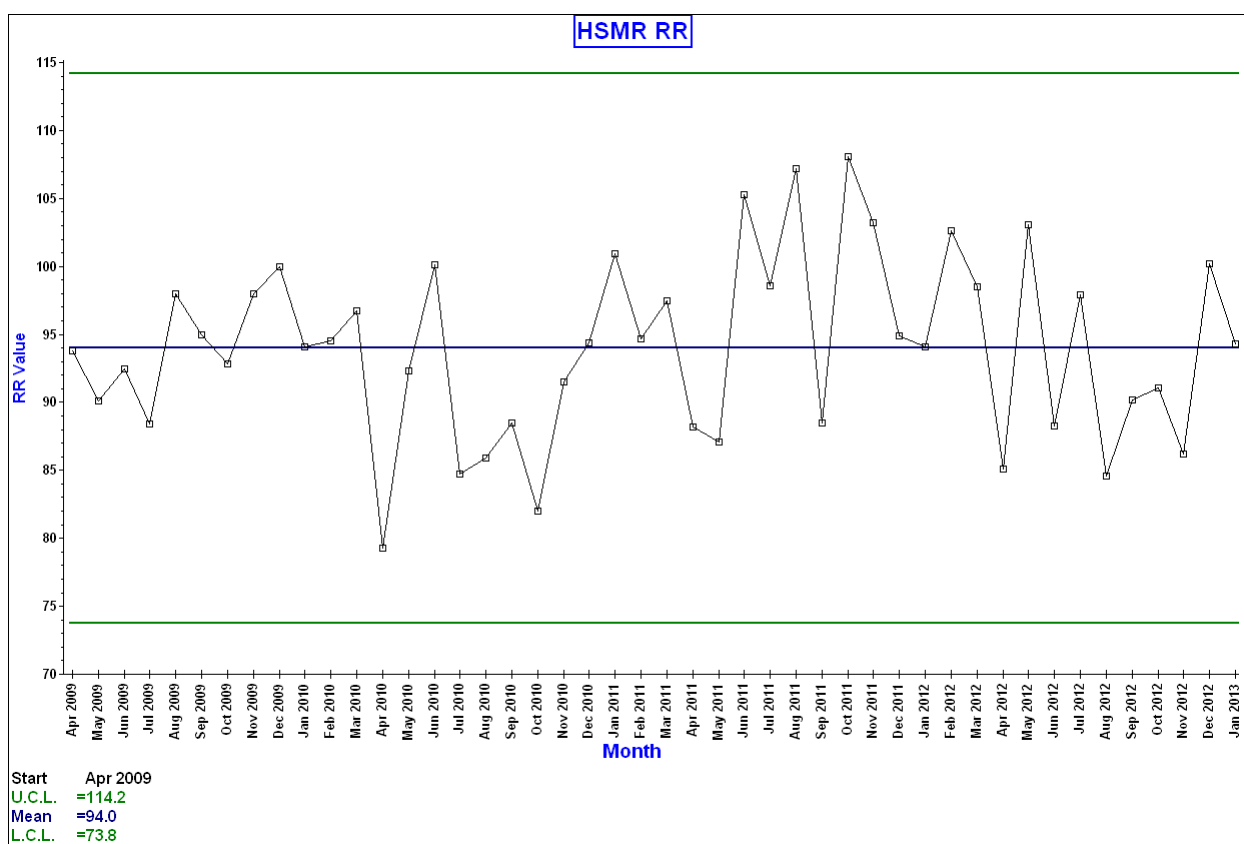
An HSMR for Jan 2012 to Dec 2012 of **93.4** for All Admissions is “significantly lower than the national benchmark”. The rebased value for this period is 98 (94 – 102).

1.3 Statistical Process Control Charts

Chart 2 depicts the average Trust HSMR (94.0) between April 2009 and December 2012 and shows the variability of the actual 45 HSMR values over that time period. This depicts normal variation.

A run of 8 points above or below the average may either indicate a “special cause event” that would need further investigation, or a temporary change that has since returned to a pattern of *normal variation*. The current mortality reporting process will ensure any “special cause events” are identified in real-time & appropriate action taken.

Chart 2



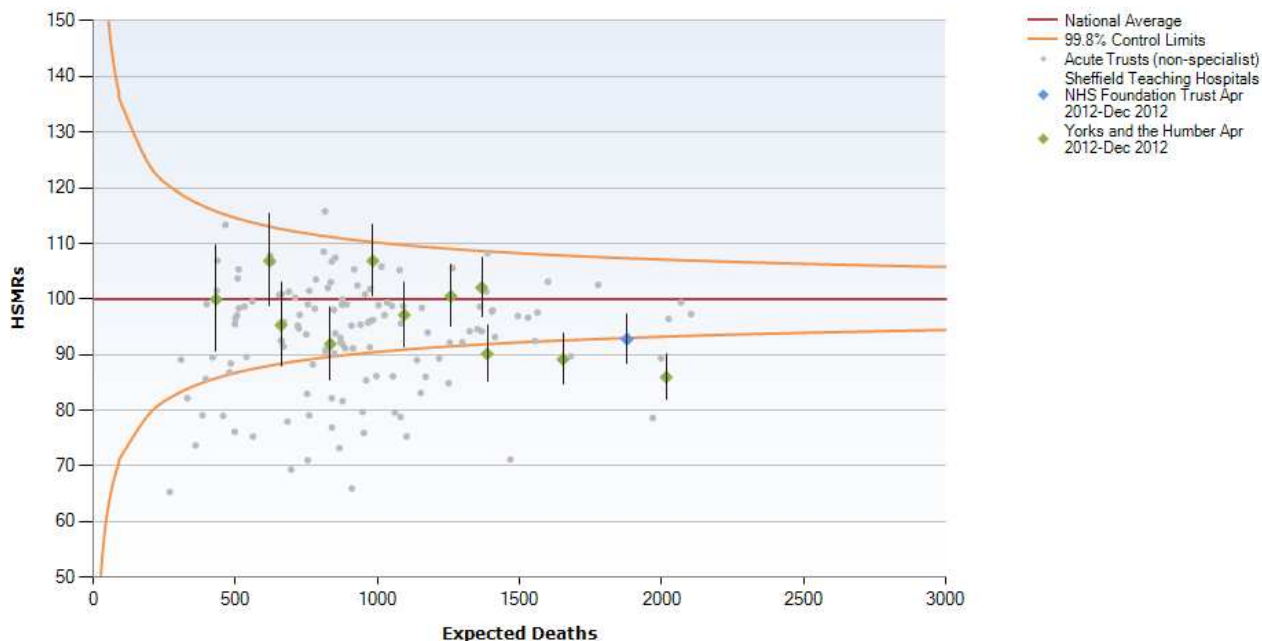
1.4 HSMR Comparator Charts and Tables

Dr Foster enables HSMR comparisons to be made with other trusts in England. Any peers may be compared.

The funnel plot below (chart 3) shows relative HSMR values for **April 2012 – December 2012 (the YTD)** for all the Trusts in Yorkshire and the Humber set against the “background” values for all acute trusts. Sheffield Teaching Hospitals is highlighted in blue.

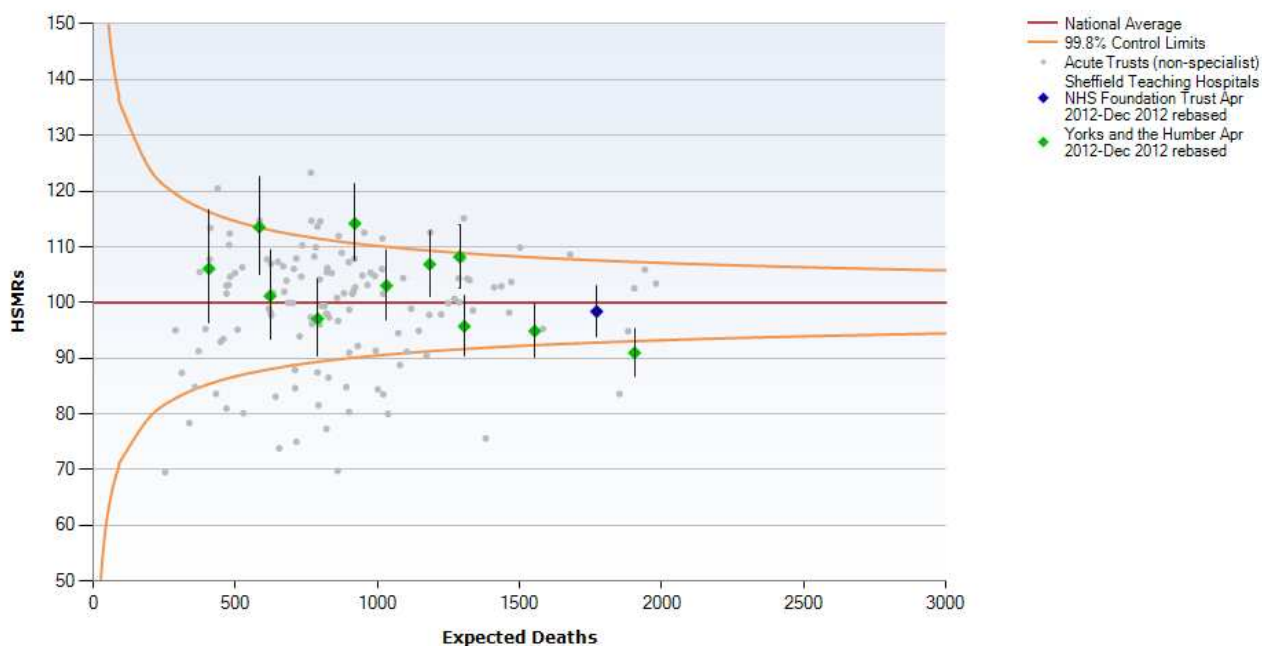
Chart 3

The background points show the HSMR for the **current financial year** for each acute non-specialist trust in England. The value for Sheffield Teaching Hospitals NHS Foundation Trust is **93 (88-97)**



... and the relative *anticipated* re-based HSMR value for the same period is **98 (94 – 103)** as shown on chart 4

Chart 4



2. Standardised Hospital-level Mortality Indicator (SHMI)

2.1 Rolling SHMI 1 April 2011 to 31 March 2012

The SHMI is an *indicator* of healthcare quality that measures whether the death rate at a hospital *and up to 30 days from discharge* is higher or lower than expected.

It is a ratio between the actual (observed) number of deaths at the trust and the number that would be expected to die on the basis of average England figures, given the characteristics of patients treated there. The value produced is evaluated as to whether the mortality within the trust can be described as either 'as expected', 'lower than expected' or 'higher than expected'. This is the "banding". One SHMI value is calculated for each trust. The baseline SHMI value is 1.

Developed by the NHS Information Centre (IC) with an industry-wide panel of experts the SHMI methodology is similar to the Dr Foster HSMR but with 3 key differences;

- The SHMI measures in-hospital deaths and deaths outside of hospital for a period of up to 30 days where HSMR measures in-hospital deaths only.
- The SHMI uses 100% of diagnosis groups whereas HSMR uses only 56 groups that account for approx 80% of deaths
- The SHMI does not take into account Palliative Care whereas the HSMR does.

SHMI is the standard indicator for reporting hospital mortality across the NHS (<http://www.ic.nhs.uk/services/SHMI>) and reported quarterly on NHS Choices.

The most recent information from the IC, published 24 January 2013, covers the period **1 July 2011 to 31 June 2012** and reports a SHMI value for STH of **0.92** (0.89 -1.12 *over-dispersion control limits of 95%*) for an expected 3789 deaths and is the lowest current SHMI value in Yorkshire and the Humber.

The next update is due for release by the IC in April 2013.

2.2 SHMI Trend Analysis

Table 3

Date	SHMI Value	Over-dispersion Range (95% CL)	OD Banding
April 2010 – March 2011	0.86	0.95 – 1.05	Lower than expected
July 2010 – June 2011	0.87	0.95 – 1.04	Lower than expected
October 2010 – September 2011	0.90	0.88 – 1.13	As expected
January 2011 – December 2011	0.92	0.89 – 1.12	As expected
April 2011 – March 2012	0.92	0.89 – 1.12	As expected
July 2011 – June 2012	0.92	0.89 – 1.12	As expected

Source Clinical Indicator Previewer, IC. Values are rolling one year periods, six months in arrears. Next update due April 2013

The rolling 12 month SHMI values by quarter for STH since April 2010 have steadily increased and then reached a plateau (table 3). SHMI undergoes rebasing quarterly, hence the figures above are rebased values. Assuming our crude mortality is not altering and neither is our case-mix, one possible explanation for the Trust to move into control rather than being "lower than expected" is that other trusts are improving their mortality and therefore the mean mortality rate for a given condition, age group etc improves. As ours stays the same our SHMI may appear to climb. This is one explanation for what we have observed.

Nevertheless a root cause analysis is being carried out to explore this further and the results will be reported via the Trust Mortality Review Group.

To note:

Dr Foster report SHMI using different confidence limits to those used by the IC and Dr Foster classify the SHMI for STH as significantly “lower than expected” i.e.

Provider	Spells	Observed	Expected	SHMI value	LL	UL	Banding
STH NHSFT	102790	3493	3803	0.92	0.88	0.94	Lower than expected

Source Dr Foster Intelligence

2.3 SHMI & HSMR Comparator Tables

Because the most up to date information for SHMI lags behind the most recent information for HSMR, both the SHMI and HSMR values (rebased) for the period **July 2011 to June 2012** for Sheffield and other large teaching hospitals (Picker comparators) are provided in Table 4 for comparative purposes

Table 4

Peer July 2011 – June 2012	SHMI	HSMR
University College London Hospitals NHS Foundation Trust	0.71	73.3
Guys & St Thomas NHS Foundation Trust	0.88	71.4
Leeds Teaching Hospital NHS Trust	0.92	88.8
Sheffield Teaching Hospitals NHS Foundation Trust	0.92	98.2
Nottingham University Hospital NHS Trust	0.94	102.2
University Hospitals Bristol NHS Foundation Trust	0.94	90.5
The Newcastle Upon Tyne Hospitals NHS Foundation Trust	0.94	94.0
University Hospitals Birmingham NHS Foundation Trust	1.06	114.9
University Hospital of North Staffordshire NHS Trust	1.05	100.7
University Hospitals of Leicester NHS Trust	1.05	101.8
Manchester University Hospitals NHS Foundation Trust	1.10	114.6

Source: Dr Foster