

TRUST BOARD MEETING - 26 JUNE 2013
Mortality Report

PURPOSE	To provide the Trust Board with an update on mortality.
PREVIOUSLY CONSIDERED BY	Clinical Governance Strategy Committee, Patient Safety Committee, RAQC on 19 June 2013
Objective(s) to which issue relates *	<input checked="" type="checkbox"/> 1. To continuously improve the quality of our services in order to provide the best care and optimise health outcomes for each and every individual accessing the Trust's services <input type="checkbox"/> 2. To excel at customer service, achieving outstanding levels of communication and patient, carer and GP satisfaction <input checked="" type="checkbox"/> 3. To provide and support the best standards of integrated care for the elderly and those with long term conditions by developing key partnerships and services <input checked="" type="checkbox"/> 4. To consolidate services and enhance local access to specialist services in order to deliver high quality, safe, seamless, innovative and integrated services which are sustainable <input type="checkbox"/> 5. To support the continued development of the Mount Vernon Cancer Centre and provision of leading local and tertiary cancer services <input type="checkbox"/> 6. To improve our staff engagement and organisational culture to be amongst the best nationally
Risk Issues (Quality, safety, financial, HR, legal issues, equality issues)	As identified in the report
Healthcare/ National Policy (includes CQC/Monitor)	CQC Compliance
CRR/Board Assurance Framework *	<input type="checkbox"/> Corporate Risk Register <input checked="" type="checkbox"/> BAF
ACTION REQUIRED *	
For approval	<input type="checkbox"/>
For discussion	<input checked="" type="checkbox"/>
For decision	<input type="checkbox"/>
For information	<input type="checkbox"/>
DIRECTOR:	Medical Director
PRESENTED BY:	Medical Director
AUTHOR:	Senior Information & Research Analyst
DATE:	June 2013

We put our patients first We work as a team We value everybody We are open and honest
We strive for excellence and continuous improvement

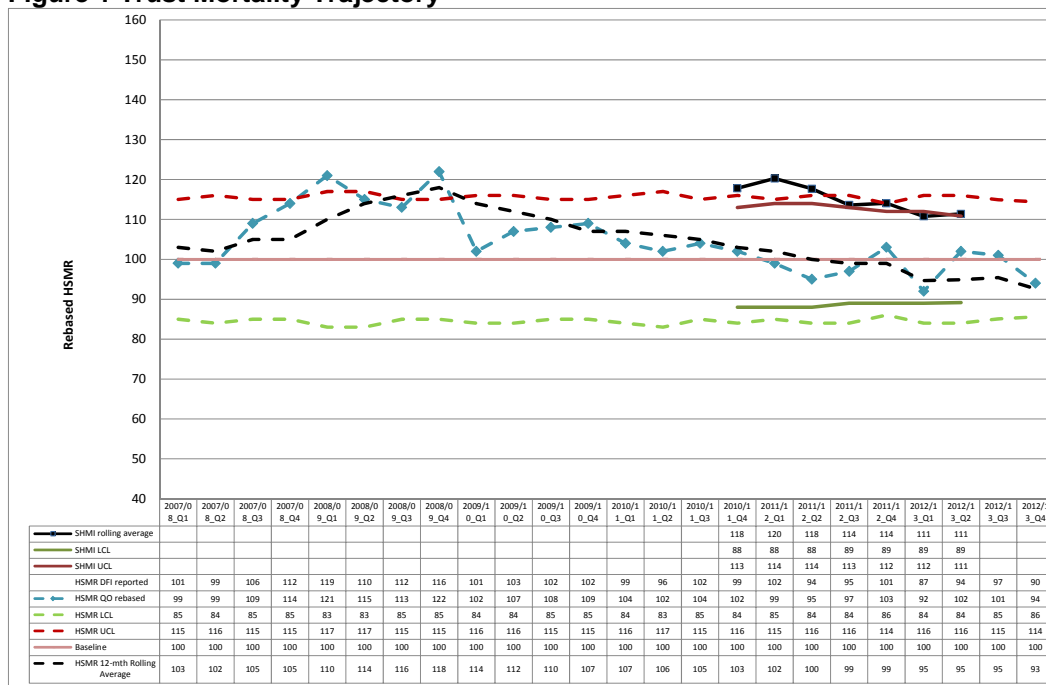
1. MORTALITY UPDATE

1.1 Executive Summary

The mortality data for the full year 2012/13 confirms that there has been a sustained downward trend in mortality rates within East and North Hertfordshire NHS Trust. This will help to provide confidence that the implemented changes to clinical pathways through the ongoing redesign work, supported by improvements in data quality, are having a positive impact on the quality of care provided. As the *Our Changing Hospitals* programme continues, and further clinical pathway redesign takes place along with various Trust wide initiatives it is anticipated that the downward trend in mortality rates will continue helping the Trust to continuously improve the quality of care that is provided.

The chart below (Figure 1) shows the downward trajectory of both rebased HSMR (dotted blue line) and SHMI (solid black line) scores since Q4 2010/11 and demonstrates this sustained progress.

Figure 1 Trust Mortality Trajectory



1.2 Introduction

This report provides an update on mortality data for the full year April 2012 to March 2013.

1.3 Hospital Standardised Mortality Ratio (HSMR)

The Trust's position at year end for 2012/13 is 8th out of the 17 acute trusts (excluding Papworth Hospital) in the East of England (Figure 2) and still alerting green at 92.7. There is likely to be a minor change to this figure in June. Dr Foster predict a rebased position of 97.

Figure 2: HSMR (April 2012 – March 2013) East of England

Peer (SHA)	Spells	Superspells	Deaths		Relative Risk		
			Obs.	Exp.	HSMR	Low	High
Independent Sector Activity (not LSC)	16,598	16,598	1	3.3	30.3		
Papworth Hospital NHS Foundation Trust	14,201	12,371	139	192.7	72.1	60.6	85.2
Cambridge University Hospitals NHS Foundation Trust	45,908	45,099	1,092	1400.1	78	73.4	82.8
West Suffolk NHS Foundation Trust	18,694	18,594	751	940.5	79.9	74.2	85.8
Hinchingbrooke Health Care NHS Trust	13,302	13,194	429	523.3	82	74.4	90.1
James Paget University Hospitals NHS Foundation Trust	17,064	16,811	838	1004.2	83.4	77.9	89.3
Ipswich Hospital NHS Trust	29,461	29,339	999	1177.8	84.8	79.6	90.2
Southend University Hospital NHS Foundation Trust	33,558	33,429	1,165	1335.9	87.2	82.3	92.4
Peterborough and Stamford Hospitals NHS Foundation Trust	27,381	27,275	1,109	1209.1	91.7	86.4	97.3
East and North Hertfordshire NHS Trust	30,737	30,486	1,462	1576.8	92.7	88.0	97.6
The Princess Alexandra Hospital NHS Trust	19,774	19,561	901	935	96.4	90.2	102.9
Mid Essex Hospital Services NHS Trust	25,306	25,062	1,037	1059.8	97.8	92.0	104.0
Luton and Dunstable Hospital NHS Foundation Trust	24,562	24,404	1,008	1020.2	98.8	92.8	105.1
Norfolk and Norwich University Hospitals NHS Foundation Trust	57,606	56,923	2,049	2067.5	99.1	94.9	103.5
Bedford Hospital NHS Trust	14,868	14,601	751	757.6	99.1	92.2	106.5
Colchester Hospital University NHS Foundation Trust	23,084	22,894	1,337	1331.5	100.4	95.1	105.9
The Queen Elizabeth Hospital, Kings Lynn, NHS Foundation Trust	24,388	24,244	1,038	1025.6	101.2	95.1	107.6
Basildon and Thurrock University Hospitals NHS Foundation Trust	26,014	24,987	1,321	1284.7	102.8	97.4	108.5
West Hertfordshire Hospitals NHS Trust	26,560	26,350	1,341	1271.2	105.5	99.9	111.3
NHS Community Trusts	5,067	3,095	352	213.2	165.1		
ALL	494,133	485,317	19,120	20,330	94	92.7	95.4

1.3.1 HSMR Trends for Trust and Divisions April 2011 to March 2013

At year end the average Trust's HSMR is below 100 for each Division with particularly good performance in Cancer and Surgery and amber performance in the remaining 2 divisions.

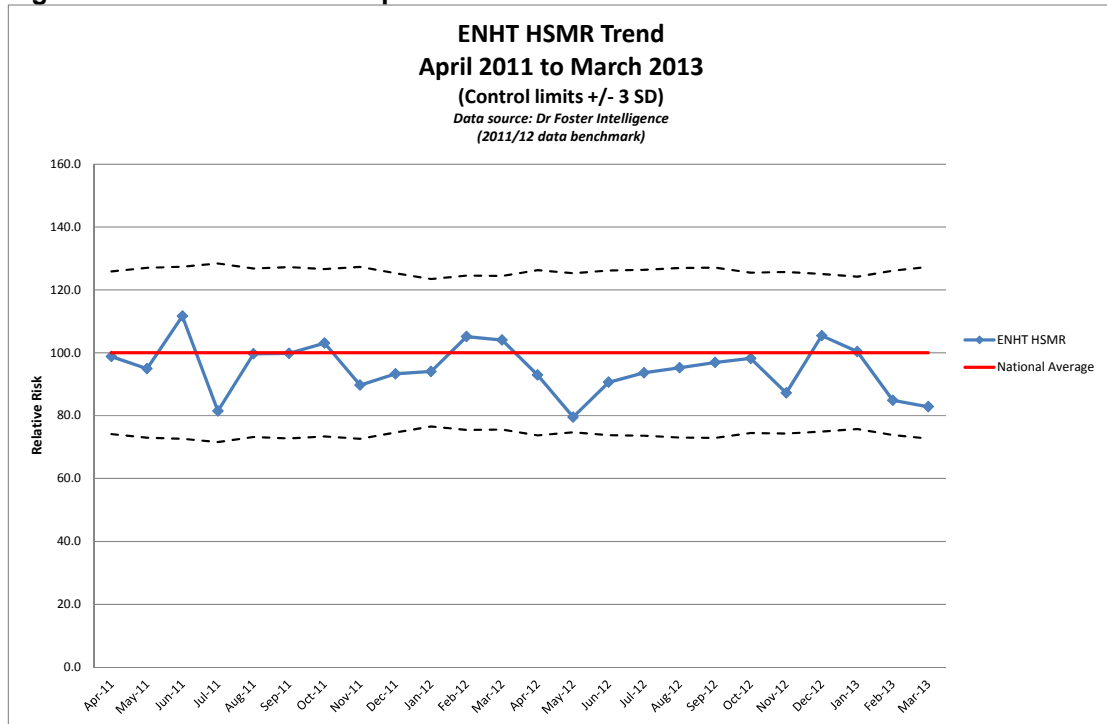
Figure 3: Monthly Trust and Divisional HSMR April 2012 to March 2013

	April 2012	May 2012	June 2012	July 2012	Aug 2012	Sept 2012	Oct 2012	Nov 2012	Dec 2012	Jan 2013	Feb 2013	Mar 2013	HSMR YTD
Trust	92.6	81.2	90.6	93.4	95.3	96.9	98.2	87.3	105.4	100.4	84.9	82.9	92.6
Medicine	90.2	94.6	98.3	96.3	98.7	101.1	102.8	92	115.2	110.5	88.5	98.3	99.4
Surgery	107.6	62.8	79.8	107.3	105.3	111.1	82.7	81.3	80	70.8	62.8	26.8	83.5

Womens & Children Cancer	0.0	0.0	90.9	0.0	142.9	250.0	0.0	333.3	181.8	100	0.0	0.0	87.4
	87.8	27.3	69.9	57.7	55.6	49.4	90.4	60.2	61.7	68.1	94.2	35.0	61.7

The following 5 charts show the HSMR trends for the Trust and the Divisions from April 2011 to March 2013.

Figure 4: Trust HSMR trend April 2011 to March 2013



Performance within the Divisions shows a predictable month on month variability.

Figure 5: Medicine Division HSMR trend April 2011 to March 2013

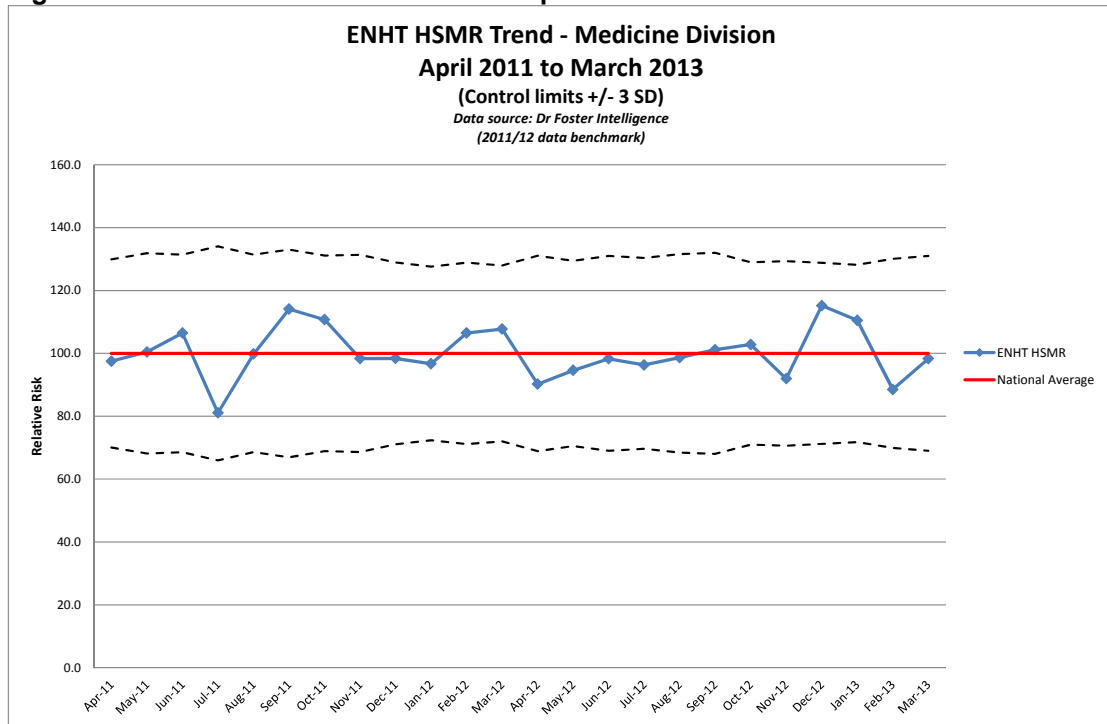


Figure 6: Surgery Division HSMR trend April 2011 to March 2013

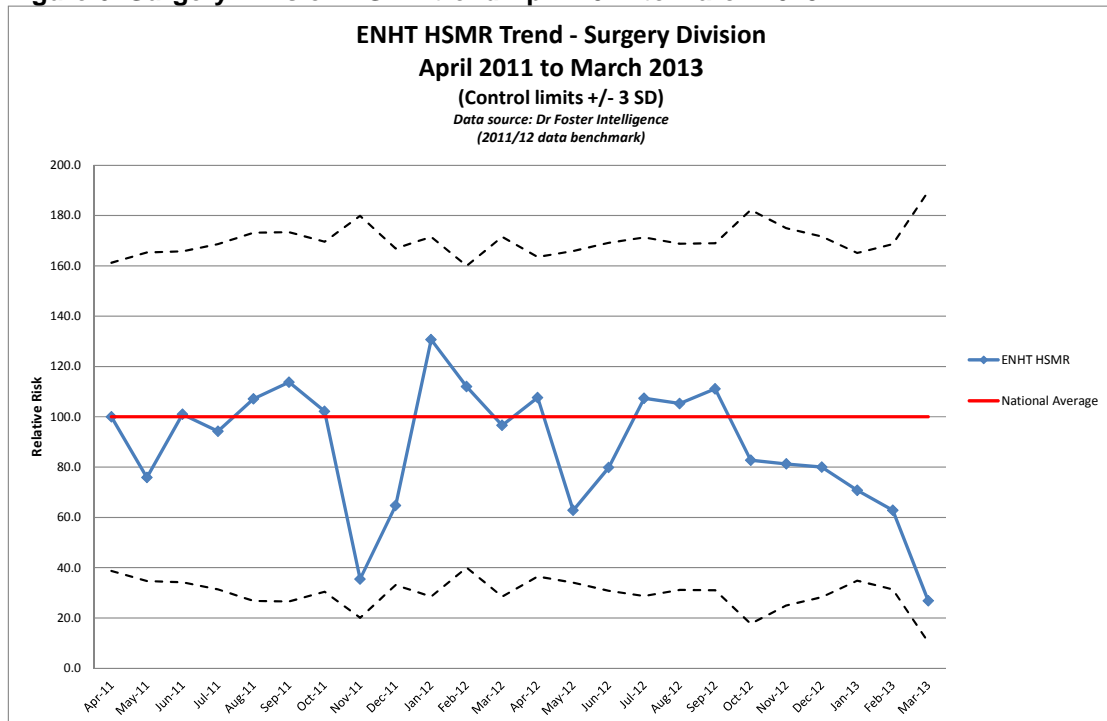


Figure 7: Women's & Children's Division HSMR trend April 2011 to March 2013

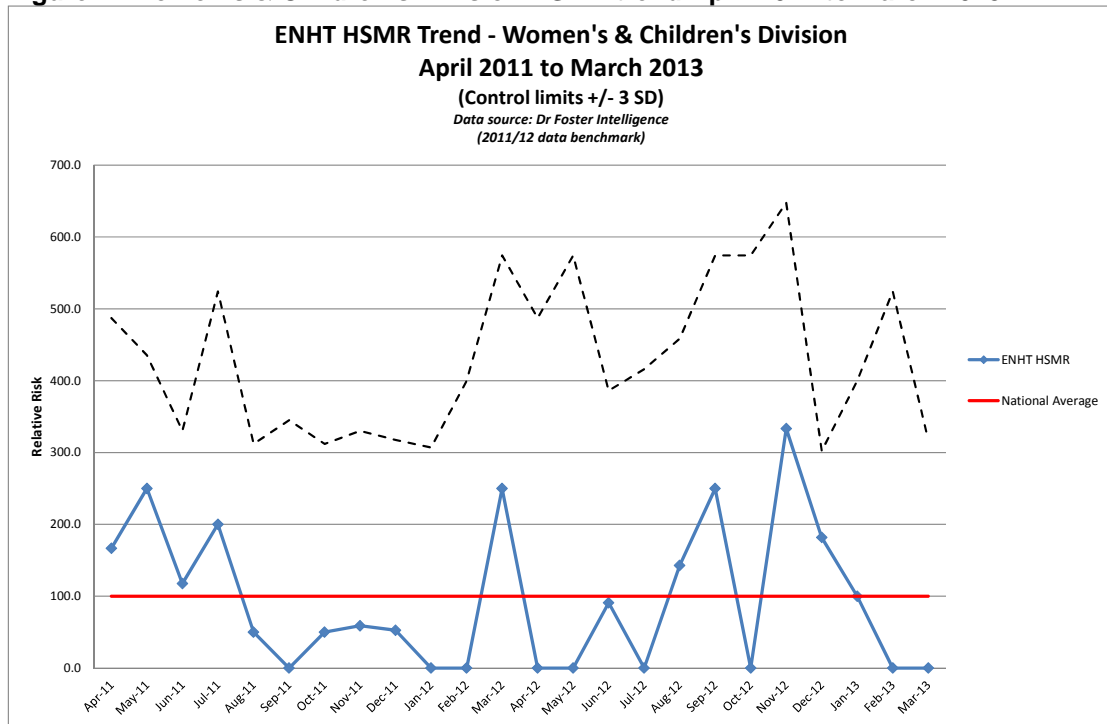
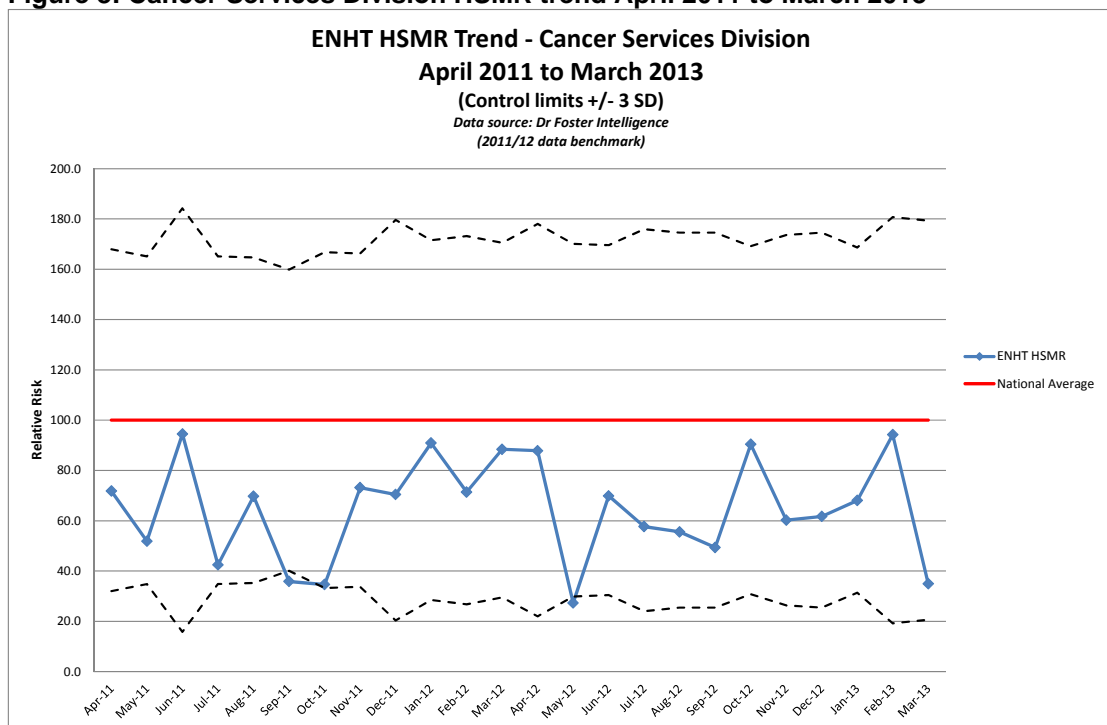


Figure 8: Cancer Services Division HSMR trend April 2011 to March 2013



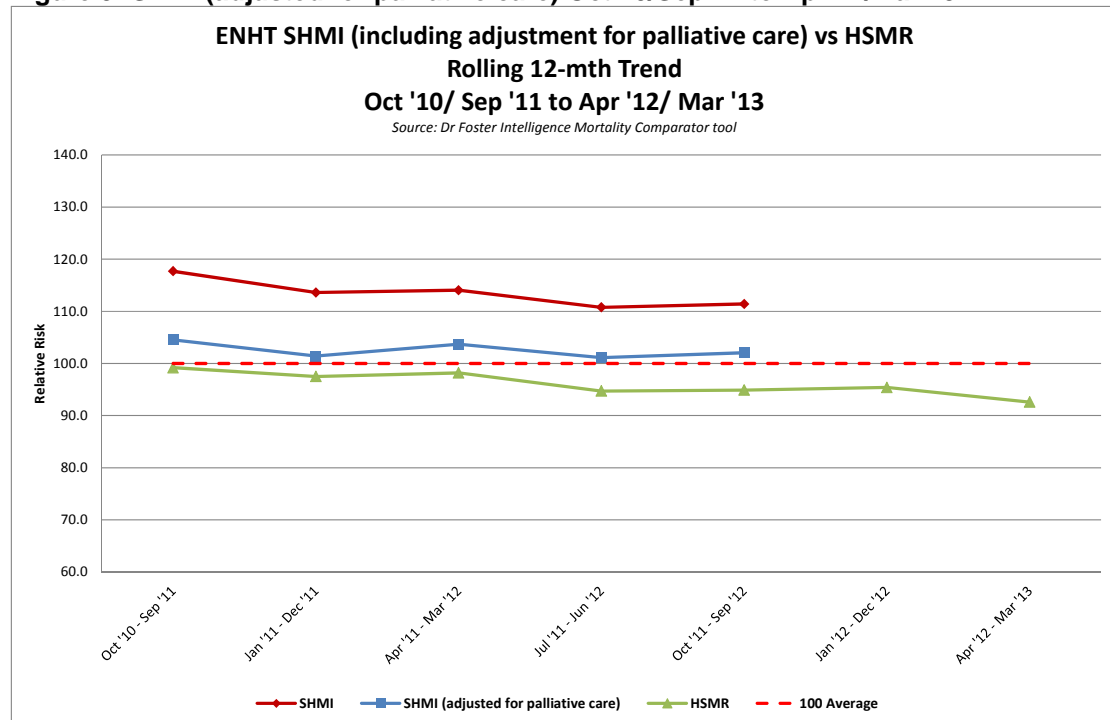
1.4. Standardised Hospital Mortality Index (SHMI)

The SHMI is published by the National Information Centre on a quarterly basis and the reporting period lags approximately 6 months behind the HSMR.

The latest SHMI published for the period October 2011 to September 2012 was 111.4, as reported in April 2013. This places the Trust in 129th position nationally out of 142 Trusts and is just significantly elevated.

The chart below shows the Trust trend for SHMI, SHMI (adjusted for palliative care) and HSMR for the same time periods.

Figure 9: SHMI (adjusted for palliative care) Oct 10/Sep 11 to Apr 12/Mar 13



The next SHMI will cover the period January to December 2012 and is due to be published by the NHS Information Centre and Dr Foster Intelligence at the end of July 2013. It is probable that this will see a slight rise in SHMI but this should be followed by a definite fall in October 2013 when the SHMI data for Q4 2011/2 is removed (see Fig. 10) and the new SHMI quarter for Q4 2012/3 will be markedly lower.

Figure 10: Quarterly SHMI

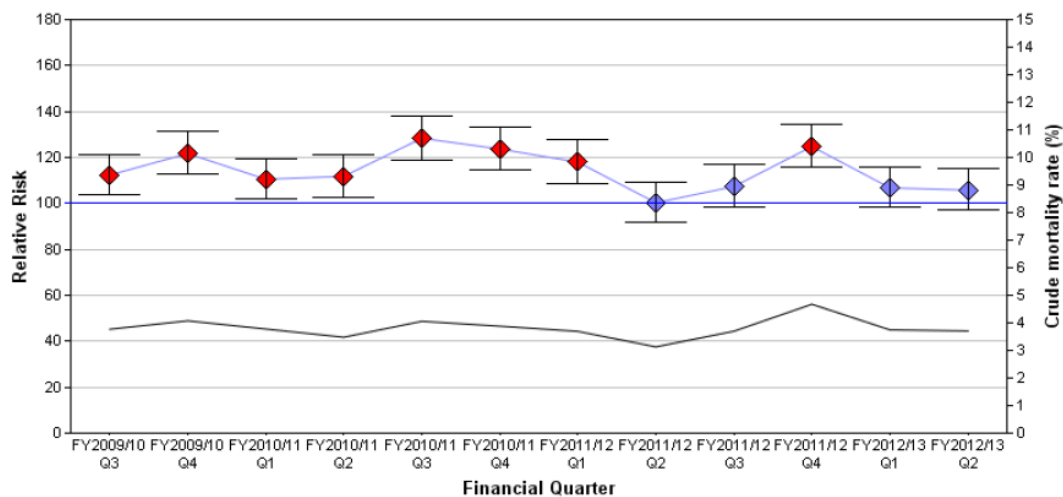


Figure 11 SHMI versus HSMR October 2011 – September 2012

Collection	SHMI Spells	SHMI	Obs	Exp	95% CI	SMR	Obs	Exp	95% CI	SHMI Rank	SMR Rank	SHMI - SMR
(28) Multiple myeloma	59	265.19	17	6.41	154.39-424.62	96.5	12	12.44	49.81-168.58	81	52	168.69
(113) Other connective tissue disease	686	213.08	14	6.57	116.39-357.53	98.68	11	11.15	49.19-176.58	79	54	114.4
(92) Biliary tract disease	726	219.56	25	11.39	142.05-324.13	144.49	19	13.15	86.95-225.65	80	76	75.07
(124) Intracranial injury	70	187.61	19	10.13	112.90-292.99	140.58	20	14.23	85.83-217.12	78	74	47.03
(22) Cancer of prostate, testis, or other male genital organs	685	140.88	39	27.68	100.17-192.59	100.36	24	23.91	64.29-149.34	68	55	40.52
(89) Intestinal obstruction without hernia	160	144.38	24	16.62	92.48-214.83	114.03	18	15.79	67.54-180.22	70	62	30.35
(121) Fracture of upper limb	943	159.01	9	5.66	72.56-301.87	132.46	7	5.28	53.07-272.94	74	72	26.55
(101) Urinary tract infections	1260	130.41	99	75.92	105.99-158.77	106.68	70	65.62	83.16-134.79	60	59	23.73
(73) Pneumonia	1280	122.81	360	293.14	110.45-136.18	100.79	321	318.49	90.06-112.44	53	56	22.02
(57) Acute myocardial infarction	309	135.6	41	30.24	97.30-183.96	118.7	36	30.33	83.12-164.33	63	65	16.9
(93) Liver disease, alcohol-related	50	143.79	12	8.35	74.21-251.19	128.15	13	10.14	68.17-219.15	69	71	15.64
(35) Diabetes mellitus with complications	257	156.04	11	7.05	77.79-279.23	141.16	10	7.08	67.58-259.62	73	75	14.88
(107) Skin and subcutaneous tissue infections	632	125.41	13	10.37	66.71-214.47	115.83	12	10.36	59.78-202.35	55	63	9.58
(96) Gastrointestinal haemorrhage	400	129.13	35	27.11	89.93-179.59	120.22	26	21.63	78.51-176.15	58	68	8.91
(23) Cancer of bladder	417	138.67	19	13.7	83.45-216.56	135.44	15	11.08	75.75-223.40	65	73	3.23
(79) Respiratory failure, (adult	75	146.5	36	24.57	102.59-202.83	146.57	36	24.56	102.64-202.93	72	77	-0.07
(129) Complications of surgical procedures or medical care	538	174.74	12	6.87	90.19-305.25	176.33	9	5.1	80.46-334.76	77	80	-1.59
(2) Septicemia (except in labour)	153	144.42	56	38.78	109.08-187.54	147.78	47	31.8	108.57-196.52	71	78	-3.36
(27) Leukaemias	133	137.42	18	13.1	81.40-217.19	164.58	21	12.76	101.84-251.60	64	79	-27.16
(120) Fracture of neck of femur (hip)	465	124.98	57	45.61	94.65-161.93	89.28	46	51.52	65.36-119.09	54	45	35.7
(66) Acute cerebrovascular disease	621	118.6	139	117.2	99.70-140.03	98.3	131	133.27	82.18-116.64	50	53	20.3
(99) Acute and unspecified renal failure	267	117.71	63	53.52	90.45-150.61	96.23	51	53	71.65-126.53	49	51	21.48
(65) Congestive cardiac failure	432	117.28	89	75.89	94.18-144.32	102.64	75	73.07	80.73-128.66	48	57	14.64

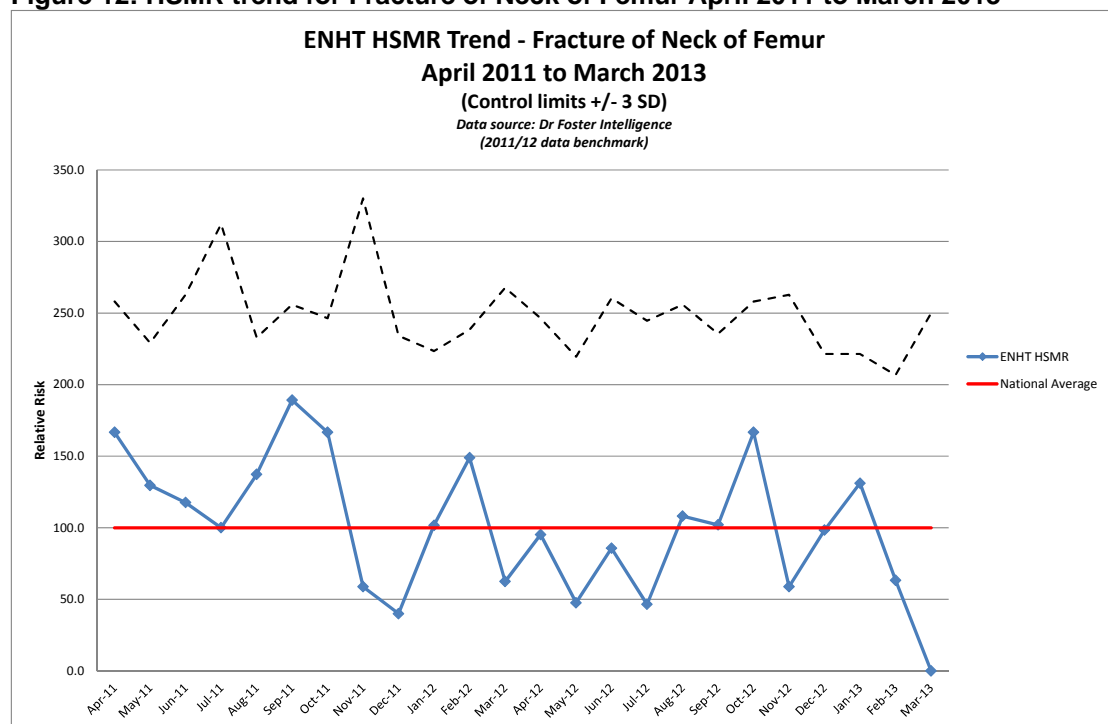
Figure 11 shows the difference between SHMI and Standardised Mortality Rate (SMR) for certain CCS groups which includes all those that are statistically elevated. These CCS groups have been identified as the green ones are all in the CQUINs programme this year and the grey ones were formally studied following CQC HSMR alerts in early 2012. The rank for both SHMI and SMR is an internal ranking comparing individual CCS group figure with all CCS group scores. The last column in the table is the difference between SHMI and SMR and should be used as a stimulus for further understanding and improvement for these diagnostic groups.

1.5. Update by Specific Cases

1.5.1. Fractured Neck of Femur (#NOF)

The #NOF HSMR continues to improve. The number of actual deaths for 2012/13 was 48 against an expected rate of 58 giving a relative rate of 82.8. Dr Foster have expressed an interest in using this pathway improvement as a case study. There does however remain a high variation between the HSMR and the SHMI. For the period October 2011 to September 2012 the HSMR was 89.3 and the SHMI 125. #NOF has been included in the CQUIN monitoring this year and will be added to the next CQUIN report.

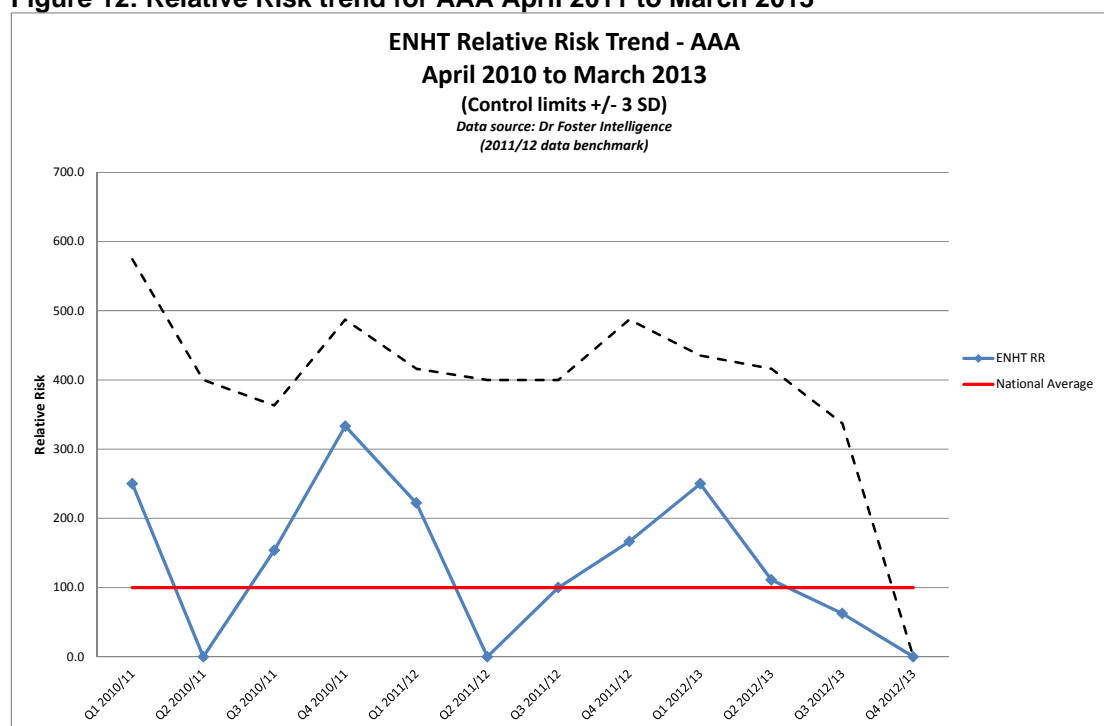
Figure 12: HSMR trend for Fracture of Neck of Femur April 2011 to March 2013



1.5.2 Abdominal Aortic Aneurysm Repair (AAA)

The chart below shows a quarterly relative risk trend for all AAA procedures. The numbers are small, and include 4 deaths against an expected 3.2 giving a relative risk of 125.4 for the period April 2012 to March 2013. The SHMI for the CCS group aortic, peripheral and visceral artery aneurysms for the period October 2011 to September 2012 is 86.5.

Figure 12: Relative Risk trend for AAA April 2011 to March 2013



1.5.3 Paediatrics

Concern was raised following Dr Foster data showing an unduly high paediatric mortality rate which has been investigated. The number of paediatric deaths during the full year 2012/13 for all diagnosis groups showed 17 deaths against an expected number of 11.5. 14 of these deaths were for babies <1 day old.

19 sets of notes were reviewed by a Consultant Neonatal Paediatrician, the Head of Coding and the Patient Systems Manager. Any baby that is born and has taken a breath but is unwell is registered or admitted under the Neonatal classification.

Following the review, it was concluded that there were 3 Acute Paediatric deaths and only 3 true neonatal deaths. The remainder were either stillborn or dead on arrival (DOA). The review identified it was purely a coding issue and not related to the quality of clinical care provided.. Data correction (either coding or PAS) was required on each episode.

Changes to the coding practice following this review include:

- A specific agreed pathway and practice written for the validation and coding of Paediatric deaths.
- Coding of the Paediatric mortalities will incorporate case notes, Death Certificates, the discharge summaries on the Badger System (Standardised Electronic Neonatal database) and the Ciconia Maternity System (CMiS).
- Additionally, stillbirths will be reviewed when the post mortem report is available. This means that the stillbirths will be coded immediately after the death but the coding may change after the post mortem review and may not be initially reflected in the Dr Foster report.

- Paediatric mortality coding reviews will be carried out in future according to specialty i.e. Acute Paediatrics, Maternity for stillborns and DOA, or Neonates
- Review of HSMR on Acute Paediatrics dashboard at monthly Rolling Half Day.

1.5.4. CQUIN Pathway Monitoring

Mortality monitoring of 5 pathways currently under review as part of the CQUIN agreement is ongoing. The pathways are shown below and the data for 2012/13 are included in Appendix 1. All pathways bar Respiratory Infections will continue into 2013/4.

CQUIN Pathways	2011/12	2012/13	SHMI Oct '11 – Sep '12	HSMR Oct '11 – Sep '12
Acute Renal Failure	113	89.3	177.7	99
Congestive Heart Failure	108.1	96.7	117.3	102.6
Respiratory Infections	99.7	101.7	117.7	95.2
Septicaemia	122	89	144.4	138.6
Urinary Tract Infection	106.1	81.8	130.4	108.6

The following are the agreed additional CQUINs for 2013/14. One pathway remains to be agreed.

CQUIN Pathways	2012/13	SHMI Oct '11 – Sep '12	HSMR Oct '11 – Sep '12
Pneumonia (replacing Respiratory Infections)	96.1	122.8	100.1
Acute Myocardial Infarction (AMI)	126.4	135.6	118.9
Acute Cerebrovascular Disease (includes stroke)	96.2	118.6	98.1
Fracture of Neck of Femur (#NOF)	82.8	124.98	89.3

Monthly monitoring of progress for these additional CQUINs will be included in the next report.

A specific piece of work is currently being undertaken by clinicians to review the rise in HSMR in Respiratory and a report, including any resulting actions, has been requested. The patient pathway has recently been revised by the setting up of new respiratory 'in reach'/ front door teams to support patients at the point of A&E attendance.

1.6. CUSUM Alerts

There have been no new CUSUM alerts since April 2012.

1.7. Summary of Key Issues

- Overall HSMR performance has improved in past 12 months
- Improvement and monitoring of 5 CQUIN mortality pathways continues with 4 additional diagnostic groups for 2013/14.
- Mortality monitoring is ongoing with regular reporting to DEC, RAQC and Trust Board and PCT

- Regular joint meetings with NHS Hertfordshire to improve mortality rates
- Attendance at the East of England NHS Dr Foster User Group meetings.
- Lessons learned through participation in Keogh Mortality review to follow.

1.8. Recommendation

The Trust Board is asked to note the ongoing improvement in mortality rates within the Trust.

Appendix 1

CQUIN Pathway Monitoring

1 Acute Renal Failure

Full year 2011/12: HSMR – Relative risk 113.0

Crude mortality 25.8%

For 2012/13:

Period	HSMR - Relative Risk			HSMR Crude Mortality		SHMI Oct '11 - Sep '12
	Mar Update	May Update	Change	Count	Rate	
Apr-12	109.3	109.3	0.0	3	15.8%	117.7
May-12	95.9	120.7	24.8	4	23.5%	
Jun-12	55.1	55.1	0.0	3	9.7%	99.0
Jul-12	57.2	57.2	0.0	2	8.7%	
Aug-12	106.2	107.1	0.9	4	18.2%	
Sep-12	105.8	120.3	14.5	5	18.5%	
Oct-12	140.3	140.3	0.0	8	33.3%	
Nov-12	0	0	0.0	0	0.0%	
Dec-12	107	97	-10.0	4	22.2%	
Jan-13	57.5	48.4	-9.1	3	10.0%	
Feb-13		106.7		4	16.0%	
Mar-13		90.1		4	15.4%	
2012/13	86.8	89.3	2.5	44	15.8%	

2 Congestive Heart Failure

Full year 2011/12: HSMR – Relative risk 108.1

Crude mortality 18.6%

For 2012/13:

Period	HSMR - Relative Risk			HSMR Crude Mortality		SHMI Oct '11 - Sep '12
	Mar Update	May Update	Change	Count	Rate	
Apr-12	138.4	138.4	0.0	7	19.4%	117.3
May-12	52.1	52.1	0.0	3	8.1%	
Jun-12	118.1	118.1	0.0	7	19.4%	102.6
Jul-12	95.8	95.2	-0.6	6	14.3%	
Aug-12	130.4	130.4	0.0	11	32.4%	
Sep-12	70.5	70.5	0.0	4	10.5%	
Oct-12	90.7	90.7	0.0	4	15.4%	
Nov-12	75.7	75.7	0.0	5	13.5%	
Dec-12	119.2	119.2	0.0	4	22.2%	
Jan-13	79.1	79.1	0.0	4	14.3%	
Feb-13		72.8		2	8.0%	
Mar-13		106.6		4	14.8%	
2012/13	97.3	96.7	-0.6	61	15.9%	

3 Respiratory Infections

These figures are derived from HSMR diagnostic categories including acute bronchitis, congestive obstructive pulmonary disease and pneumonia.

Full year 2011/12: HSMR – Relative risk 99.7 Crude mortality 14.8%

For 2012/13:

Period	HSMR - Relative Risk			HSMR Crude Mortality		SHMI Oct '11 - Sep '12
	Mar Update	May Update	Change	Count	Rate	
Apr-12	83.7	86	2.3	32	12.4%	117.7
May-12	99	98.7	-0.3	41	16.0%	
Jun-12	77.1	77.4	0.3	22	10.5%	95.2
Jul-12	97.6	94.2	-3.4	26	13.0%	
Aug-12	109.5	109.7	0.2	23	13.6%	
Sep-12	96.4	96.4	0.0	22	14.8%	
Oct-12	105.5	102.6	-2.9	32	13.7%	
Nov-12	117	116.6	-0.4	39	12.7%	
Dec-12	114.6	112.8	-1.8	41	12.0%	
Jan-13	124	123.6	-0.4	54	14.2%	
Feb-13		88		32	11.0%	
Mar-13		107.3		36	12.6%	
2012/13	103.2	101.7	-1.5	400	13.0%	

4 Septicaemia

Full year 2011/12: HSMR – Relative risk 122 Crude mortality 27.0%

For 2012/13:

Period	HSMR - Relative Risk			HSMR Crude Mortality		SHMI Oct '11 - Sep '12
	Mar Update	May Update	Change	Count	Rate	
Apr-12	81.8	81.8	0.0	2	16.7%	144.4
May-12	154.9	133.8	-21.1	4	30.8%	
Jun-12	248.3	227.9	-20.4	5	41.7%	138.6
Jul-12	58.4	58.4	0.0	2	13.3%	
Aug-12	144.3	144.3	0.0	6	31.6%	
Sep-12	134.9	103.9	-31.0	3	25.0%	
Oct-12	49.1	49.1	0.0	2	10.5%	
Nov-12	28.1	29.9	1.8	1	7.1%	
Dec-12	87.6	87.6	0.0	4	23.5%	
Jan-13	141.3	117.8	-23.5	5	35.7%	
Feb-13		50.3		2	15.4%	
Mar-13		30.8		1	7.7%	
2012/13	108.2	89	-19.2	37	21.4%	

5 Urinary Tract Infection

Full year 2011/12: HSMR – Relative risk 106.1

Crude mortality 5.0%

For the year-to-date 2012/13:

Period	HSMR - Relative Risk		
	Mar Update	May Update	Change
Apr-12	62.2	61.8	-0.4
May-12	132	147.3	15.3
Jun-12	130.2	141.6	11.4
Jul-12	118.5	117.1	-1.4
Aug-12	87.3	104.7	17.4
Sep-12	84.6	84.7	0.1
Oct-12	62.7	62.7	0.0
Nov-12	42.9	42.9	0.0
Dec-12	23.8	23.8	0.0
Jan-13	77.5	81.8	4.3
Feb-13		99.4	
Mar-13		0.0	
2012/13	81.8	81.8	0.0

HSMR Crude Mortality	
Count	Rate
4	3.8%
8	7.3%
10	7.6%
6	4.2%
6	5.0%
5	4.2%
5	4.0%
3	2.5%
1	1.1%
8	6.0%
7	6.4%
0	0.0%
63	4.5%

SHMI Oct '11 - Sep '12
130.4

HSMR Oct '11 - Sep '12
108.6