

Trust Board Report

Meeting Date:	24 October 2011
Title:	MORTALITY REPORT
Executive Summary:	The report provides a summary of the year end HSMR and SHMI mortality position and includes latest available performance data.
Action Requested:	To Note
Report of:	Dr Jonathan Odum, Medical Director
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Resource Implications:	None identified
Public or Private: (with reasons if private)	Public Session
References: (eg from/to other committees)	
Appendices/ References/ Background Reading	
NHS Constitution: (How it impacts on any decision-making)	<p>In determining this matter, the Board should have regard to the Core principles contained in the Constitution of:</p> <ul style="list-style-type: none"> ✚ Equality of treatment and access to services ✚ High standards of excellence and professionalism ✚ Service user preferences ✚ Cross community working ✚ Best Value ✚ Accountability through local influence and scrutiny

Background Details

1	<p><u>HSMR-</u></p> <p>The HSMR is a method of comparing mortality levels in different years, and for different patient groups within the year, while taking account of differences in casemix. The ratio is of observed to expected deaths (multiplied conventionally by 100). Thus if mortality levels are higher in the population being studied than would be expected, the HSMR will be greater than 100. HSMRs are based on the routinely collected administrative data often known as HES, SUS or CDS.</p> <p>The expected number of deaths in each analysis is the sum of the estimated risks of death for every patient based upon the casemix. The Summary Hospital-Level Mortality Indicator (SHMI) is a variant of the HSMR, a working version has been approved by the DH and will be presented in this report.</p> <p>Measuring hospital performance is complex. It is the advice of the DH that HSMRs and similar indicators should not be used in isolation, but rather considered with as part of a group of analytics</p>
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MORTALITY UPDATE REPORT
October 2011 Trust Board

Introduction

Mortality measures have become a standard part of the assessment of hospital performance and have received increased attention following the Francis Report into Mid Staffordshire NHS Foundation Trust. The National Quality Board expects Trust Boards to have a comprehensive understanding of the factors driving quality in their organisations and it is likely that Commissioners will adopt this approach in future.

This report on behalf of the Trust's Mortality Assurance Review Group (MoRAG) will:

- Set out the background to the Hospital Standardised Mortality Ratio (HSMR) and chart the Trust's previous and current performance.
- Provide an update on the Summary Hospital-Level Mortality Indicator (SHMI) the new indicator developed by the Department of Health's Information Centre.
- Provide an update on Care Quality Commission outlier alert.
- Describe the Trust's mortality surveillance processes.

Background

The hospital standardized mortality ratio (HSMR) compares the observed number of deaths in a given hospital with the expected number of deaths based on national data, after adjustment for factors that affect the risk for in-hospital death, such as age, diagnoses and route of admission.

A HSMR equal to 100 indicates that a hospital's observed mortality rate equals that expected on the basis of its casemix. A ratio greater than 100 theoretically indicates that a hospital's mortality rate exceeds the expected value (i.e., exceeds average value for hospitals with the same types of patients).

The HSMR Construction

$$\text{HSMR} = \frac{\text{Observed Deaths}}{\text{Expected Deaths}} \times 100$$

The Dr Foster HSMR calculation is based upon the 56 major diagnosis groups which account for approximately 80% of hospital activity. Calculating the ratio begins with assigning a probability of dying to each eligible patient who has received care under the 56 diagnosis groups. The expected number of deaths in is the sum of the estimated risks of death for every patient.

Expected Deaths:

Risks take into account those patient characteristics that are most strongly correlated with death and which reflect the patient's risk profile rather than the way in which the hospital has treated them. These factors are:

1. Diagnosis
2. **Levels of Co-morbidity- as described by the Charlson Index of Codes**
3. Age
4. Sex
5. Deprivation
6. Ethnicity
7. Method of Admission
8. Month of Admission
9. Source of Admission
10. **Whether or not palliative care**

2010/11 End of Year HSMR Position

Trust Name	2010/11	2010/11 (rebased)
Trust A	81	90
Trust B	89	99
Trust C	89	98
Trust D	91	101
Trust E	91	101
Trust F	96	107
Trust G	97	108
Trust H	98	108
Trust I	101	112
Trust J	101	110
The Royal Wolverhampton Hospitals NHS Trust	102	113
Trust L	103	114
Trust M	104.5	114
Trust N	105	116
Trust O	105	116

The figure of 102 [113 rebased] will be reported in Dr Foster's Good Hospital Guide in November 2011.

HSMR Performance April 2011 to July 2011

For the first 4 months of the year the Trust's HSMR position is 88, with a probable rebased value of 95, this is the second lowest in the West Midlands SHA.

	Actual Death Rate	Expected Death Rate	HSMR	HSMR Rebased
SHA Average	4.23%	4.16%	101	108
RWHT	3.6%	4.0%	88	95

This improvement is due to the observed mortality (crude) being below regional and national levels. The Trust's expected mortality is approaching the levels of its regional and national peers.

It is to be noted that this is only 4 months data and HSMR has been shown to show large in year variation. The Trust will maintain its total vigilance approach to monitoring mortality and continue to put patient safety at the heart of its clinical processes.

Factors Leading to the Improvement in HSMR

Whilst the Trust has invested dedicated resources in improving mortality surveillance, it has also evaluated its clinical coverage and increased the number of consultant staff in EAU and A&E as well as the nursing establishment.

In terms of further plans for improvement, the Trust has begun the process of introducing the following elements of "Gold" standard care:

- 7 day working and cover across all clinical areas but particularly emergency areas.
- Introduce the specialty in-reach model in medicine.
- Review junior doctor numbers across wards.
- Management of the acute medical take (Enhanced medical Handover).
- Review working practices within clinical areas.
- Integrate the emergency portals A/E and EAU.
- Workforce review – new roles and skill mix

- Maximising use of e Rostering
- Safehands
- Rapid improvement events – HAPUs, falls, nutrition
- Matron job plans – 50%clinical
- Real time patient feedback
- Documentation redesign
- Vitalpac modules
- Discharge sign out list – accountability
- Complaints process review/PALs outreach

The Summary Hospital Mortality Indicator (SHMI)

Following the recommendations of the hospital standardised mortality ratios (HSMR) review, the Department of Health has implemented the SHMI as the single hospital-level indicator for the NHS. It will be published across the NHS in November 2011 on NHS Choices and also the Good Hospital Guide.

The key differences between the SHMI and the HSMR are set out below

Key Differences	Hospital Standardised Mortality Ratio (HSMR)	Summary Hospital-Level Mortality Indicator (SHMI)
1	Indicator Developed by Dr Foster Intelligence	Indicator Developed by the NHS Information Centre
2	Counts deaths for the 56 main diagnostic groups (clinical classification system CCS). Circa 80% of In-Hospital Deaths	Counts deaths for ALL 213 diagnostic groups (clinical classification system CCS) . So 100% of In Hospital Deaths
3	Counts only deaths In-Hospital	Counts all Hospital deaths AND deaths within 30 days of Discharge. It is therefore reliant on Office of National Statistics (ONS) mortality data, which is based on Death Certification.
4	Adjusts for Palliative Care Patients, so patients with the palliative Z51.5 code increase the overall "expected death" figure	Does not Adjust for Palliative Care Coding
5	Adjusts for Co-Morbidities using the Charlson Score	Same
6	Adjusts for Age, Sex, Primary Admitting Diagnosis	Same
7	Published Monthly	Published Quarterly due to ONS data lag

The Trust's mortality surveillance team has been working with key stakeholders in the national SHMI working group to better understand the data and is now in a position to report on the 2010/11 figure.



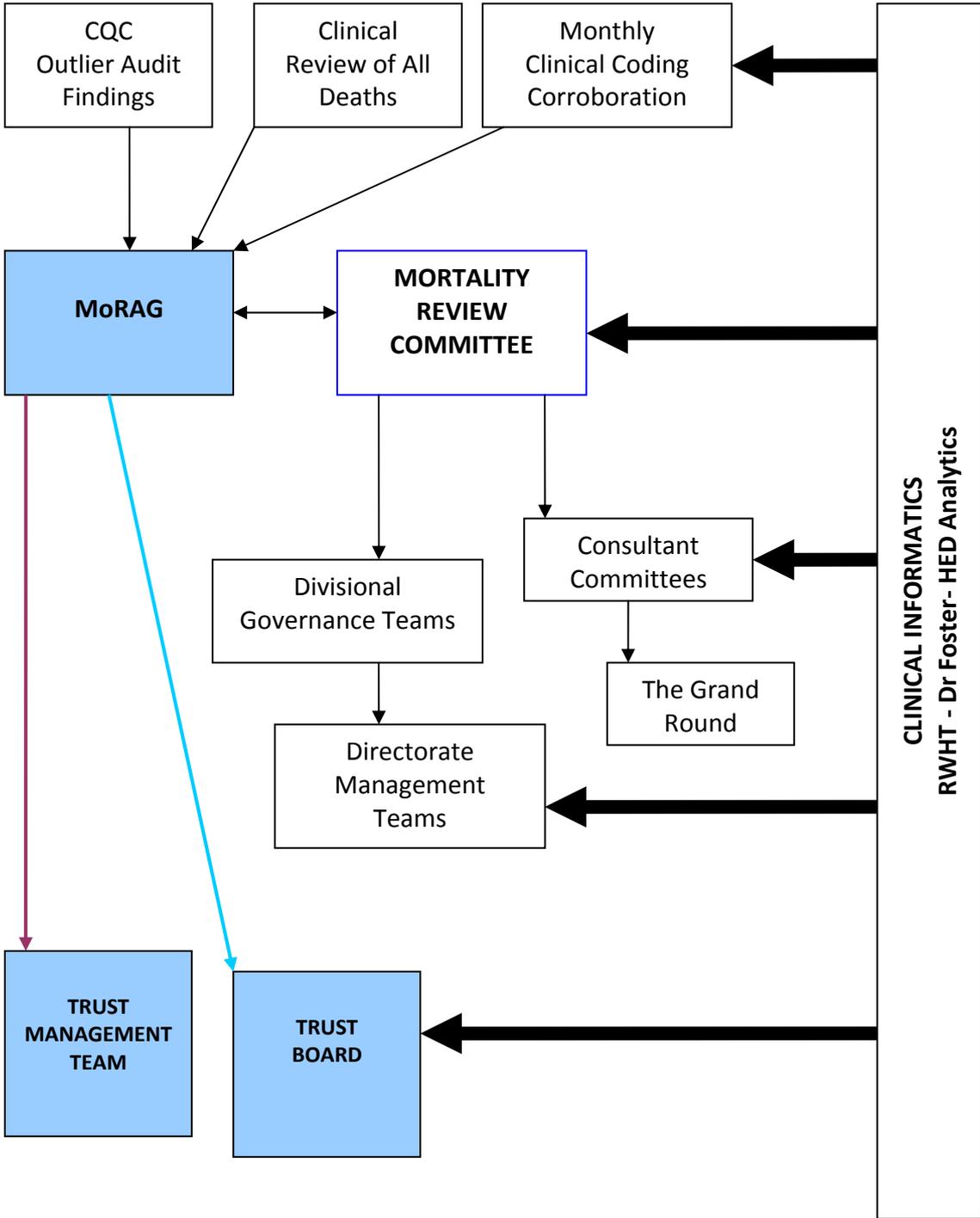
The time series graph shows a final aggregate SHMI of [111] for 2010/11 which is comparable to its HSMR position for the same period. Both indicators place trust in the bottom quartile in the region for 2010/11. The next publication of the SHMI will occur in January 2012 for the previous quarter.

The processes used to bring HSMR down to representative levels are set out below.

Surveillance Recommendations	RWHT	Evidence
Not blaming Coding , looking at clinical process	✓	All submissions to the CQC clearly set out our approach to HSMR.
Developing an internal trigger tool to identify avoidable deaths	✓	Completed
Monitor regularly – monthly, bi-monthly	✓	Established under the Mortality Review Assurance Group (MoRAG) and the Mortality Review Committee.
Report to the board quarterly, report to the executive monthly	✓	Board Assurance Committee and QSSC and MORAG.
Form or use existing regular reporting groups such as mortality and morbidity meetings and	✓	Mortality Review Assurance Group (MoRAG) Mortality Review Committee Directorate Level Meetings
Patient safety committees which normally include external delegates including PCTs	✓	Mortality Information is regularly shared with commissioners and views are pro-actively sought. The Director of Public Health at NHS Wolverhampton attends Mortality Meetings.
Flag and audit every in-hospital death to directorates	✓	The Mortality Review Committee provides systematic feedback at a directorate level each month based on individual spell data.
Investigate each alert in an open and transparent way	✓	All alerts are clinically led and follow clear governance arrangements.
Involving clinicians in any investigation i.e. at mortality and morbidity meetings	✓	All alerts are clinically led and follow clear governance arrangements.
Be open with commissioners and the SHA/Monitor through the formation or use of your patient safety committee	✓	Mortality Information is regularly shared with commissioners and views are pro-actively sought.
Use Real-Time Monitoring tools to feedback to directorates	✓	The trust uses all available monitoring tools.
Procedural and diagnostic SMRs	✓	Procedural and diagnostic SMRs are populated on a monthly dashboard and reviewed at the Mortality Review Committee.

The Trust has used a set of evidence based improvement strategies based on published mortality literature.

RWHT MORTALITY INFORMATION FLOWS



Mortality Assurance Review Group (MoRAG): Medical Director (chair), 1 Non Executive Director, Director of Nursing, Associate Director, Director of Governance, Chief Operating Officer and Chief Executive.

Mortality Review Committee: Director of Governance (chair), Medical Director, Associate Director, Informatics, Consultants in EAU, Respiratory, ENT, PCT Public Health Director.

Summary of CQC Alerts

Mortality Issue	RWHT Response	Outcome
<p>Pulmonary Heart Disease ICD-10 diagnosis of I26.9- <i>Pulmonary Embolism without mention of acute cor pulmonale</i>- Higher than expected mortality of Patients admitted as an emergency in the over 70 category</p> <p>Alert by:</p> <p>Dr Foster Intelligence Unit: August 2008 Healthcare Commission: March 2009</p>	<p>As part of trust's standard monitoring process, RWHT conducted in-depth analyses of 14 cases using the NHS institutes Global Trigger Tool and mortality review matrix forms.</p> <ol style="list-style-type: none"> 1. Established that no single clinician was at fault 2. Thromboprophylaxis mismanagement ruled out 3. Several of these patients were at the end of life with terminal illness. 4. 3 patient's diagnosis of pulmonary embolism was questionable. 5. 2 deaths were identified as being potentially avoidable, although both had multiple co-morbidities and were classed as complex. The lessons learnt and areas of concerns escalated to Quality and Safety Committee (a formal subgroup of the trust board). 	<p>The Trust's executive management team and mortality committee were satisfied that the reported high mortality rates in I26.9 were risk assessed, the explanations explored and appropriate actions were taken by the clinical team to ensure the safety of patients.</p> <p>The CQC formally wrote to the trust in August 2009 to acknowledge that the matter was closed and that they were satisfied with the trust process.</p>
<p>Septicemia (except in labor) Most Deaths from septicaemia coded as A41.9 (unspecified septicaemia).</p> <p>Alert by:</p> <p>Dr Foster Intelligence Unit: December 2008 Healthcare Commission: 21 May 2009</p>	<p>As part of trust's standard monitoring process RWHT conducted in-depth analyses incorporating case note reviews using the NHS institute's Global Trigger Tool and mortality review matrix forms. The following was established</p> <ol style="list-style-type: none"> 1. The proportion of deaths coded as A41.9 (unspecified septicaemia) has remained stable over the last three years. 2. The vast majority of patients had several co-morbidities and that septicaemia was the last in a series of illnesses suffered by the patients. 3. Case note analysis found that there was NO evidence of sub standard care and it was noted that the majority of cases had serious co morbidities. 4. The coding of unspecified septicaemia was accurate. 	<p>The Trust's executive management team and mortality committee were satisfied that the number of deaths with patients coded as A41.9 (unspecified septicaemia) was risk assessed and the explanations were scrutinised and understood. The Trust was accepted the ongoing actions undertaken by the clinical team to ensure the safety of patients.</p> <p>The CQC formally wrote to the trust in August 2009 to acknowledge that the matter was closed and that they were satisfied with the trust process.</p>

	5. Detailed Bacteriology of the cases did not reveal any anomalies.	
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Mortality Issue	RWHT Response	Outcome
<p>Lobar, atypical or viral pneumonia Emergency admissions coded in HRG D13 (Lobar, atypical or viral pneumonia with complications and co-morbidities)</p> <p>Alert by: Care Quality Commission: September 2009</p>	<p>As part of trust's standard monitoring process RWHT conducted case note analyses of 34 patients which represent a 10% sample of the patients that died from pneumonia in 2008-9 who had the primary code J18.1 and J18.9. The following was established</p> <ol style="list-style-type: none"> 1. None of the 34 cases were avoidable 2. 5 of the 34 cases were miscoded and did not show any evidence of Pneumonia. 3. Of the 29 remaining cases, a further 5 had significant co-morbidities which were not listed on the KMR1 4. Only 4 cases out of 34 had a microbiological cause found for Pneumonia 	<p>The Trust's executive management team and mortality committee were satisfied that the reported high mortality rates in Emergency admissions coded in HRG D13 were clinically risk assessed and the explanations were scrutinised and understood. The seven recommendations by the Pneumonia clinical audit were implemented and are actively monitored by the Trust's governance processes to ensure the safety of patients.</p> <p>The CQC formally wrote to the trust in January 2010 to acknowledge that the matter was closed and that they were satisfied with the trust process.</p>
<p>Septicemia (except in labor) Most Deaths from septicaemia coded as A41.9 (unspecified septicaemia).</p> <p>March 2011</p>	<p>As part of trust's standard monitoring process RWHT conducted case note analyses of 39 cases.</p> <ol style="list-style-type: none"> 1. None of the 39 cases were avoidable 	<p>The CQC formally wrote to the trust in June 2010 to acknowledge that the matter was closed and that they were satisfied with the trust process</p>
<p>HRG D99 Complex Elderly Patients with Pneumonia</p> <p>June 2011</p>	<p>As part of trust's standard monitoring process RWHT conducted case note analyses of 30 cases.</p> <ol style="list-style-type: none"> 1. 9/31 could not be classed as respiratory deaths by resident specialists. 2. (27/31) did not reveal any clinical issues and the patients received appropriate clinical care. 3. 4] cases that revealed clinical and process errors 	<p>The Trust is awaiting the response from the CQC</p>
<p>A range of Complex Elderly HRGs</p> <ul style="list-style-type: none"> • Cardiac Care • Stroke • Acute Kidney Injury <p>August 2011</p>	<p>As part of trust's standard monitoring process RWHT conducted case note analyses of 60 cases.</p> <ol style="list-style-type: none"> 1. None of the 60 cases were avoidable 2. There were no cases in which a DH listed Never Event occurred. 3. There were 8 cases where there were 	<p>The Trust is awaiting the response from the CQC</p>

	clinical process or system errors.	
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Conclusion

The board is asked to note:

- The Trust's HSMR and SHMI performance for 2010/11 which will be published in the Good Hospital Guide.
- The Trust's improvement in HSMR performance for the first 4 months of this financial year.
- That the trust stance on mortality surveillance is one of **total vigilance** and includes looking at clinical processes, coding architecture and following evidence based improvement strategies.

The board is asked to note the responses to the CQC alerts.