

Meeting	Walsall MBC Overview & Scrutiny Committee
Date	3 rd November 2015
Title of Paper	Hospital Mortality Update
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PURPOSE OF THE PAPER

The paper provides an update for the Trust Board on hospital mortality and mortality during the 30 days following discharge from hospital.

SUMMARY OF THE KEY POINTS

- Improving hospital mortality is one of the Trust's key priorities as set out in the Quality & Safety Strategy.
- The most recent published months saw HSMR of 102.92 in April, 93.86 in May and 102.36 in June. Overall HSMR for Q1 is 99.50.
- The Hospital Standardised Mortality Rate (HSMR) published by HED for the FY 2014/15 is 95.92.
- SHMI measures in hospital deaths and those within 30 days of discharge from hospital was published by HSCIC for the period January 14 – December 14, returning a rate of 110 which was banded level 2 "as expected" though has now climbed steadily in the last 4 reporting periods from a low of 96 between October 12 and Sept 13.
- HED SHMI for the month March 2015 is 107.41, April 2015 is 110.54 and May is 102.64. In 2015, SHMI is 107.89 but there has been an elevated SHMI across the country which means Walsall is banded within the green average performance compared to peers.
- It is recognised that the SHMI has been rising over an extended period of time and this represents a risk to patient safety and the Trust. In depth data on the current state of the SHMI is included within this report though it is identified that 7 specific diagnosis groups (UTI, Sepsis, respiratory failure, acute bronchitis, senility, Skin and subcutaneous infections and chronic ulcers of the skin) are the largest contributors to this raised level.

RECOMMENDATIONS

1. NOTE the Trust's current hospital mortality rate & associated commentary.

LINKS	
• Strategic Objectives	Safe, High Quality Care (<i>Patient Promise: In Safe Hands</i>)
• Annual objectives	To reduce hospital mortality rates
• Monitor / CQC / Regulatory Requirements	Mortality rates are reviewed by both CQC and Monitor
IMPACT	
• Patient Experience	
• Quality & Safety	Hospital mortality rate is a key measure of quality and safety of care
• Financial	Resources have been invested in additional consultant and palliative care support
• Workforce	A medical workforce review has been undertaken as part of this plan
• Equality & Diversity	
• Estates	
• IM&T	
• Communications / Engagement	Effective communication will be key to the success of the plan
RISKS	
<ul style="list-style-type: none"> • Failure to deliver continued improvements in hospital mortality risks damaging the reputation of the Trust with its stakeholders • Failure to deliver improvements may present a risk to the continued progress of the Trust's Foundation Trust application 	
PREVIOUS CONSIDERATION	
Mortality Review Group Quality & Safety Committee	

REPORT TO THE TRUST BOARD

29TH OCTOBER 2015

MORTALITY REPORT

HSMR is a key performance indicator for quality of care and safety. Walsall Healthcare receives HSMR data HED (Healthcare Evaluation Data) which is operated from University Hospitals Birmingham. This system utilises data from the SUS and HES systems which are populated from clinical coding records. HSMR is a metric that only looks at 56 key diagnosis in hospital, these 56 diagnosis make 80-90% of the Trusts mortalities. SHMI looks at all deaths in hospital regardless of diagnosis plus all deaths for patients who died in the 30 days following discharge from hospital. The most recent data HSMR data is for June 2015 whilst SHMI data is up to May 2015.

HSMR and SHMI are both measures of quality of care that use patient records to determine a patients mortality risk based on a number of factors including age, gender, diagnosis, comorbidities and background and lifestyle factors. Outcomes are then compared to this risk and when expressed for the entire Trust are done as a number; 100 is considered to be average with anything below 100 showing more patients who would have been expected to die survived (i.e. excellent care) whilst above 100 shows some patients died that may have been expected to survive (potential improvements in care required).

Trust Activity

- 85 inpatients died during September 2015 which is a increase of 40 compared to the previous month and a decrease of 10 compared to the previous September.
- 21 patients died whilst in the A&E department during September 2015; this compares to 13 deaths at or deceased on arrival at A&E during August 2015.
- Inpatient bed days data shows that there were 16,789 bed days during September 2015 compared to 15,254 during August 2015. This would equate to 5.06 deaths per 1000 bed days.

HSMR

HED have published HSMR data up to June 2015. HED rebases on a monthly basis to incorporate the National activity for this month into the overall National picture. For **April HSMR is 102.92, May HSMR is 93.86 and June 2015 HSMR is 102.36**. For the financial year 2014/15 HSMR was 95.92 and for **FYTD 2015/16 HSMR is 99.50**.

SHMI - HSCIC

SHMI published by the HSCIC has been released for the period from January 2014 to December 2014 which shows a SHMI rate of 110. This is obviously above the expected level of 100 and continues a trend of increasing SHMI seen during the 2014 data period but remains banded as "level 2 as expected". Updated SHMI will be published by HSCIC on October 28th for the 12 month period from April 2014 – March 2015.

SHMI Monthly

HED monthly SHMI has been published up to May 2015; this shows a monthly SHMI of **110.54 for April** and **102.64 for May**. SHMI for the financial year 2014/15 was 109.89 whilst FYTD 2015/16 SHMI is 106.52.

Outcome of Reviews

A review of deaths recorded as fluid and electrolyte deaths was presented which identified improvements in fluid management across the Trust though identified key learning points. The key points were;

- The prescription of fluids has improved significantly and though there remain a few areas where further efforts are required, we can be assured that the focus upon education to Doctors and specifically Junior Doctors on fluid management and prescribing practices have had a the desired outcome of ensuring better fluid management of patients.
- Though prescribing has improved, isolated practices were identified where the route or admission had been marked as IV/subcut which was agreed to be poor practice. It was determined that correct prescribing practice is for one route only to be identified on prescribing charts and this would be disseminated across the Trust to ensure this finding results in a change in practice.
- There remains a concern regarding the recording of fluid balance, despite the introduction of a revised fluid balance chart based upon feedback from staff, it was identified a particular concern about the monitoring of fluid output with particular focus upon the requirement to weigh pads and where patients have urinated into the toilet. It was agreed that fluid output monitoring is vital to good practice and this will be discussed with nursing teams to identify how to address this issue.

Further joint reviews are to be undertaken with GPs on 15/10/2015 to review cases where patients have died within 2 days of admission to identify where there are lessons regarding avoidable admissions to hospital.

SHMI

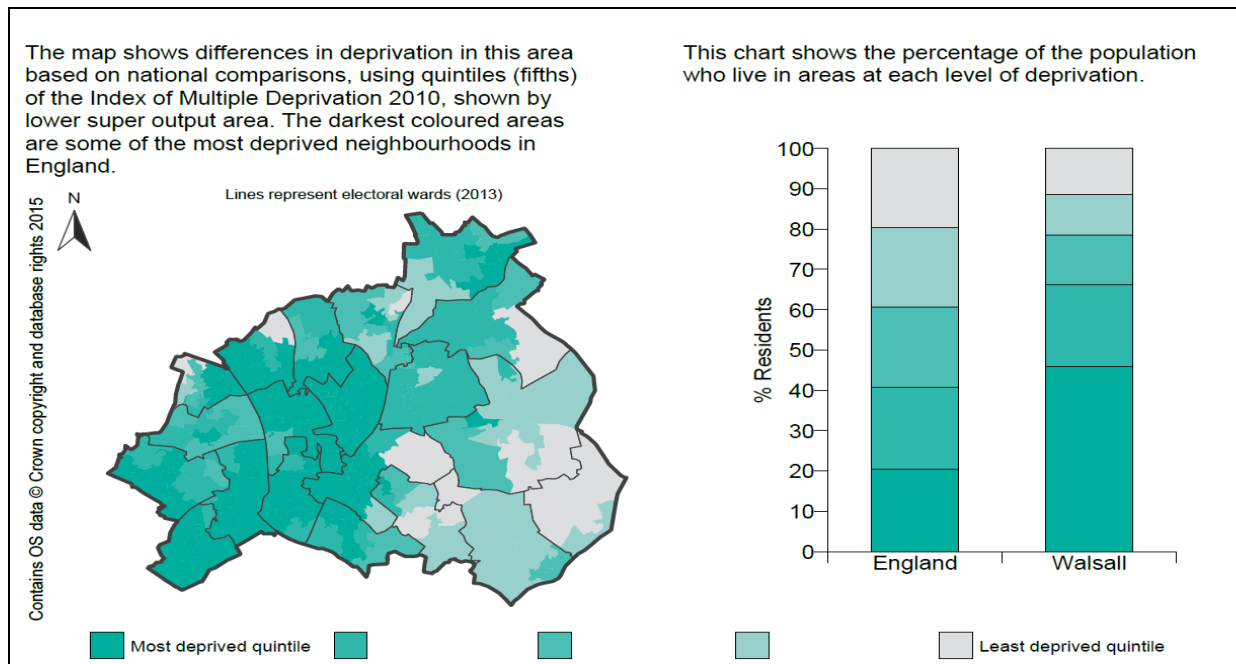
It is recognised that the SHMI measure for Walsall Healthcare is above the expected level in both measures available to the Trust. The differences between the HSMR and SHMI metrics are well known that whilst HSMR focuses upon 56 diagnosis in hospital, SHMI includes all deaths in hospital plus those which occur for patients discharged from hospital during the previous 30 days. However, there are also several other key differences in how the calculation is reached, specifically impacting upon the calculation of patient risk or mortality despite using the same data source. Examples of how this difference manifests are below for patients who died in hospital during May 2015;

	HSMR Mortality Risk	SHMI Mortality Risk
Patient 1	10.9%	3.6%
Patient 2	13.8%	11.3%
Patient 3	71.3%	39.6%
Patient 4	67.6%	4.4%
Patient 5	35.5%	54%

As the above demonstrates, there are some examples of large variations between the calculated risks of mortality for individual patients which would impact heavily upon the overall calculation of if a death was expected when compared to the National average performance. We have identified 2 key measures where this is particularly noticeable, palliative care and deprivation.

Palliative care coding signifies where a patient has received input and care from a palliative care Consultant during the time leading to their death. It would be incorrect to say that when a patient has palliative care coding applied that they are ignored or discounted from HSMR figures; instead their mortality risk is recalculated to reflect the much greater likelihood of death. In the above examples, patients 1, 3 and 4 were identified as receiving palliative care which shows their calculated risk of mortality is much higher in HSMR than in SHMI where the palliative care code does not alter the calculation of the patient's mortality risk. As a Trust, Walsall Healthcare has invested heavily in a palliative care service to better serve our patients with the support and care they require at the end of their lives, this will invariably mean that a patients level of mortality risk will be lower in the SHMI measure and thus may be recorded as being avoidable despite the individuals condition being clinically identified as terminal.

Another factor which creates a variation between the HSMR and SHMI measures is that of deprivation. All hospital inpatients have a level of deprivation allocated in the HES dataset; this measure is allocated automatically based upon postcode and is calculated using the Carstairs method using census data. Carstairs uses 4 criteria to determine deprivation and assigns a number between 1 and 5 to each electoral ward across the country. As a region, Walsall is identified as having quite high levels of deprivation compared to the average across England, below are reflections of deprivation on a map of the region and the breakdown of population averages by deprivation (taken from Public Health England "Walsall Unitary Authority Health profiles 2015 published June 2nd 2015);



The above demonstrates that Walsall has generally worse health than the average across England, not only in deprivation but across a range of metrics including adult and child obesity, alcohol, smoking, sexually transmitted infections and participation in physical activity; this manifests as a life expectancy gap for men in Walsall of 10.1 years (between the most and least deprived) and 7.5 years for females. However, despite the significant health impacts of deprivation in Walsall, the SHMI metric does not adjust for deprivation whilst the HSMR does; this means that though Walsall patients on average have worse health and greater deprivation than the average in England, this is not referenced within the SHMI measure and as such fails to reflect fully the condition and expected health outcomes of Walsall patients.

These are just 2 factors which impact significantly on how SHMI is calculated and partly provide mitigation for why the Trust SHMI is high and particularly so divergent from the HSMR measure. This is not to say that this fully accounts for any variation, nor that the fundamental driver for improvements identified through mortality reviews should be anything other than patient care, quality and safety. However, this seeks to clarify that SHMI in particular is reflective of a much wider health economy than purely acute hospital care and the discharge process from there; SHMI is to a much greater extent a reflection of the close web of providers across the borough who care for patients throughout their entire lives and not just a indication of quality of care at or close to death. With that in mind, we continue to develop close relationships and promote engagement around this topic with GPs through Commissioners and Public Health.

As stated above, the fundamental driver for mortality reviews remains to assure that the quality of care and treatment is high and any lessons which can be derived to improve upon this are extrapolated and used to improve services for patients. In March 2015, 7 specific diagnosis groups were identified which were thought to have a higher than expected number of deaths; these groups are:

- Septicaemia
- Chronic Ulcer of the Skin
- Respiratory Failure

- Skin And Subcutaneous Tissue Infections
- UTI
- Acute Bronchitis
- Senility & Other Organic Mental Health Disorders

Though there are other groups which also feature on the SHMI with more deaths than expected, these 7 groups have received specific attention. The below detail of each diagnosis use a 12 month SHMI breakdown to the period ending May 2015.

Respiratory Failure	Expected Deaths: 16.5	SHMI: 145.88
Total Actual Deaths: 24	Total Hospital Deaths: 24	Total Deaths in 30 days post discharge: 0
Key Points <ul style="list-style-type: none"> • 9 patients in this group were aged 64 or under; 7 of whom were males. • SHMI for Jan 15 – May 15 is 124.78. 		
Actions <ul style="list-style-type: none"> • Await review by Dr Balagopal & Dr Selvaraj with findings and recommendations. 		

Septicaemia	Expected Deaths: 71.8	SHMI: 132.39
Total Actual Deaths: 95	Total Hospital Deaths: 77	Total Deaths in 30 days post discharge: 18
Key Points <ul style="list-style-type: none"> • Septicaemia has been recognised previously as a diagnosis group with higher than expected deaths. • Actions have been put into place to increase both the awareness and usage of the Sepsis Care Bundle and Sepsis 6 principles. • A recent audit has highlighted improved compliance to these Sepsis6 guidelines, particularly the administration of IV ABx within 1 hour. In 2015, the SHMI has been reducing following the implementation of these actions, in particularly the A&E and AMU areas. • SHMI for Jan 15 – May 15 is 115.91. 		
Actions <ul style="list-style-type: none"> • Continue current programme of work with widened scope across the entire Trust to increase awareness of sepsis. 		

UTI	Expected Deaths: 88.2	SHMI: 108.89
Total Actual Deaths: 96	Total Hospital Deaths: 63	Total Deaths in 30 days post discharge: 33
Key Points <ul style="list-style-type: none"> • Almost 1/3 of deaths occur within the 30 days of discharge from hospital. • 16 patients had a LOS of 0-2 days which may show some patients could have been better managed in their own home or in the community by GP's. • 7 of the 33 patients who died in the 30 days following discharge from hospital were receiving palliative care. • There were 23 patients who were included within this group that had a long LOS of over 28 days including 12 with a LOS of over 50 days. • SHMI for Jan 15 – May 15 is 126.06. 		
Actions		

- Discuss numbers in CCG GP review meeting to establish methodology to review cases with short LOS and death outside hospital.
- Raise awareness of UTI care bundle across Trust to ensure excellent consistent quality of care in acute hospital.

Acute Bronchitis	Expected Deaths: 64.1	SHMI: 109.21
Total Actual Deaths: 70	Total Hospital Deaths: 45	Total Deaths in 30 days post discharge: 25
Key Points <ul style="list-style-type: none"> • The SHMI in this group has reduced over the months since initially identified as an area of concern. • 16 patients were identified to have had long LOS in hospital (28 days+) with 1 patient who had a LOS of over 200 days that died very soon after discharge with palliative care. • SHMI for Jan 15 – May 15 is 111.82. 		
Actions <ul style="list-style-type: none"> • Await review by Dr Balagopal & Dr Selvaraj with findings and recommendations. 		

Senility & Organic MH disorders	Expected Deaths: 13.9	SHMI: 122.07
Total Actual Deaths: 17	Total Hospital Deaths: 12	Total Deaths in 30 days post discharge: 5
Key Points <ul style="list-style-type: none"> • 10 of the 17 patients were female. • 12 of the 17 patients had palliative care treatment, including all 6 patient with a long LOS over 28 days, 2 of whom died following discharge from hospital. • SHMI for Jan 15 – May 15 is 111.53. 		
Actions <ul style="list-style-type: none"> • Order case review of all deaths by Elderly Care physician to identify actions. 		

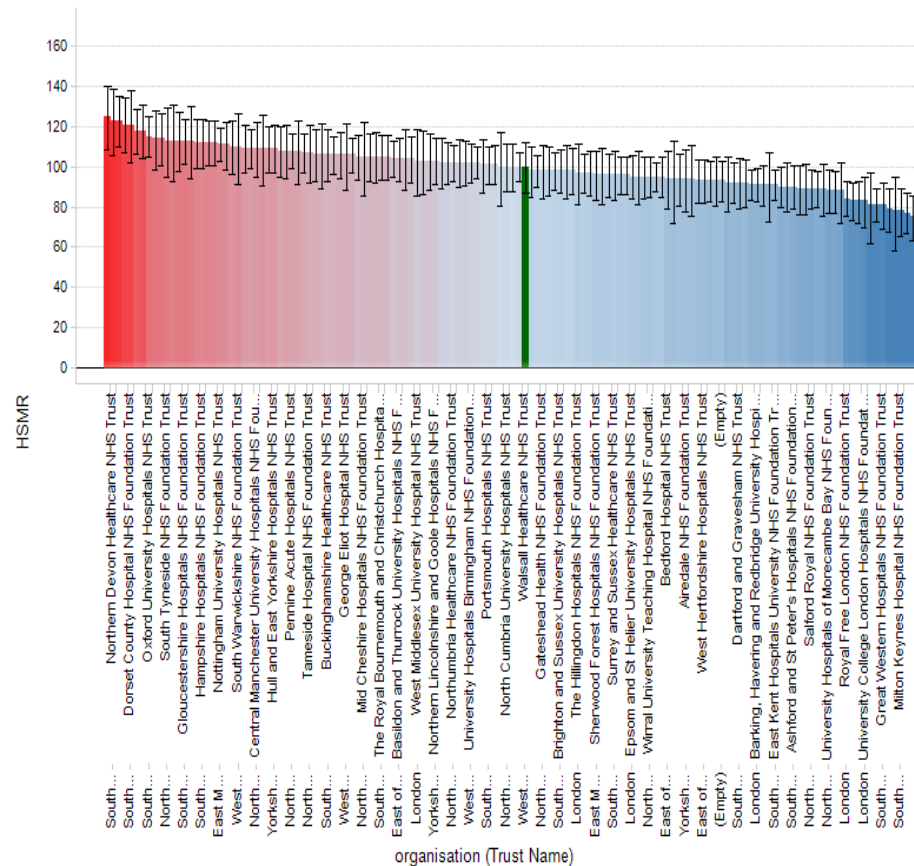
Skin & Subcutaneous Tissue Infections	Expected Deaths: 9.8	SHMI: 163.31
Total Actual Deaths: 16	Total Hospital Deaths: 10	Total Deaths in 30 days post discharge: 6
Key Points <ul style="list-style-type: none"> • A previous review of this group in 2014 identified that the majority of these cases were patient who had skin infections such as cellulitis and pressure ulcers recorded in the first FCE but the patients died later during their hospital stay of other conditions unrelated to their pressure ulcer or similar. • 11 of the 16 cases were identified to have been for admissions to hospital during July-December 2014. Following the commencement of coding quality reviews by Dr Newson during 2015 may have remedied what was a data quality issue. • SHMI for Jan 15 – May 15 is 160.6. 		
Actions <ul style="list-style-type: none"> • Refer for discussion at Quality and Safety Steering Group for action. 		

Chronic Ulcer of the Skin	Expected Deaths: 6.4	SHMI: 248.39
Total Actual Deaths: 16	Total Hospital Deaths: 13	Total Deaths in 30 days post discharge: 3
Key Points <ul style="list-style-type: none"> In 2012, the Trust received a request from CQC regarding a high number of mortalities recorded as Decubitus Ulcer. SHMI for Jan 15 – May 15 is 207.21. 		
Actions <ul style="list-style-type: none"> Refer for discussion at Quality and Safety Steering Group for action. 		

Month	Performance			HSMR				SHMI				
	Bed days	Hospital Inpatient Deaths	Per 1000 bed days	HSMR Spells	Deaths HSMR Basket	Expected HSMR Deaths	HSMR	Deaths in hospital	Deaths 30 days discharge	SHMI Monthly	SHMI adjusted Palliative Care	Crude All Diag
Apr-14	16552	87	5.13	1591	77	85	90.27	86	36	101.05	90.16	4.84%
May-14	17609	94	5.33	1606	84	87	95.65	94	36	106.55	92.87	5.23%
Jun-14	17958	101	5.56	1483	88	81	108.49	101	30	115.39	98.84	5.93%
Jul-14	17380	83	5.06	1756	78	93	83.16	81	42	93.36	80.82	4.44%
Aug-14	15620	83	5.31	1487	71	73	97.15	83	38	109.49	96.46	4.77%
Sep-14	17989	95	5.2	1568	82	83	97.96	94	38	107.73	95.78	5.23%
Oct-14	17146	109	6.29	1650	92	88	103.61	108	30	115.1	101.31	5.58%
Nov-14	16688	106	6.29	1671	91	83	109.27	105	43	125.08	108.02	5.45%
Dec-14	17957	125	8.29	1808	120	121	98.15	124	58	118.94	106.39	6.64%
Jan-15	18861	139	7.31	1834	126	125	100.26	139	49	117.53	105.16	6.87%
Feb-15	16277	95	5.59	1628	84	91	92.20	91	30	98.67	87.01	5.16%
Mar-15	18692	90	4.81	1716	72	95	75.37	89	51	107.41	95.53	4.20%
Apr-15	18054	95	5.26	1636	87	84	102.92	94	45	110.54	97.00	5.32%
May-15	17329	98	5.65	1740	86	91	93.86	97	37	102.64	90.31	4.94%
Jun-15	16516	88	5.32	1701	82	80	102.36					4.82%
Jul-15	17685	65	3.68									
Aug-15	15254	45	2.95									
Sep-15	16789	85	5.06									

HSMR Current Position

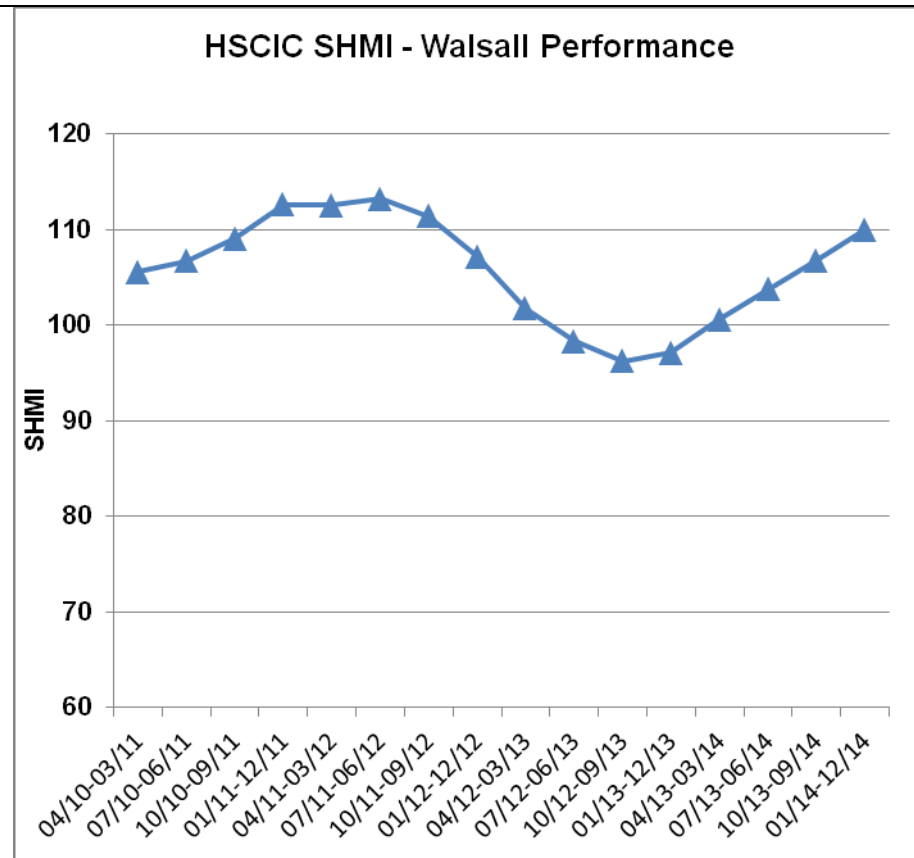
FYTD 15/16 HSMR National Peers Comparison



HSMR Compared to Black Country & Birmingham Peers

Trust Name	HSMR FY 2014	HSMR FYTD 2015	HSMR June 15 (Most recent month)
Shrewsbury & Telford	91.76	95.42	86.82
Sandwell	93.55	108.77	97.18
George Eliot	94.23	106.12	82.42
Walsall	95.92	99.5	102.36
UHB	96.67	101.65	112.06
HEFT	99.3	95.45	94.80
Dudley	100.95	112.05	100.46
Burton	103.03	94.05	86.37
North Staffs	103.28	100.49	93.38
Royal Wolverhampton	105.05	105.1	95.94
South Warwickshire	105.29	110.44	117.59
Coventry & Warwickshire	107.64	111.91	112.06
Worcestershire	108.38	101.25	79.82
Wye Valley	114.48	112.99	137.05

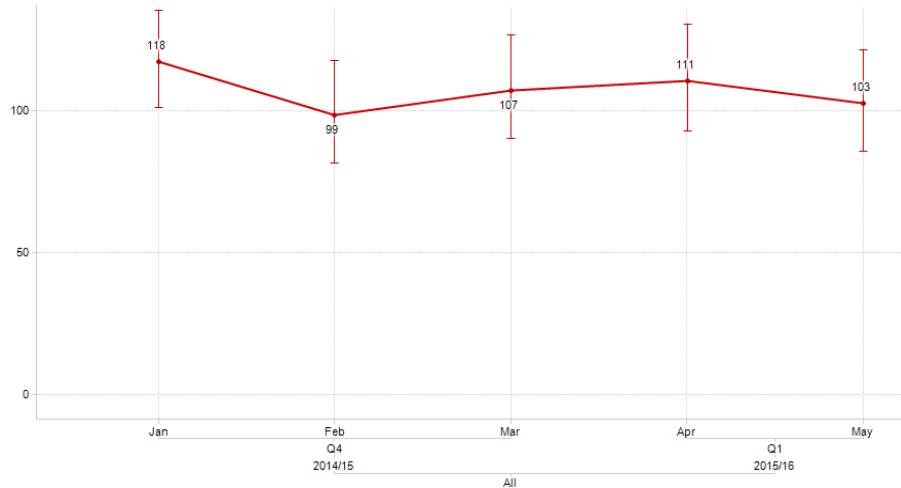
SHMI HSCIC Current Position



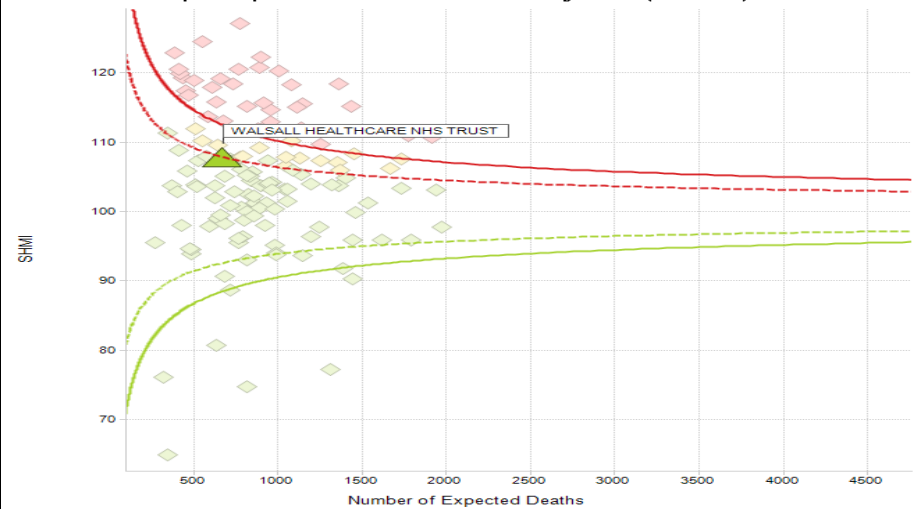
HSCIC SHMI compared to Peers Latest Publication		
Peers	SHMI	National Rank
Sandwell and West Birmingham Hospitals NHS Trust	96	34
Burton Hospitals NHS Foundation Trust	96	35
The Royal Wolverhampton NHS Trust	98	50
Heart Of England NHS Foundation Trust	99	53
Shrewsbury and Telford Hospital NHS Trust	100	60
George Eliot Hospital NHS Trust	101	65
University Hospital Of North Staffordshire NHS Trust	102	82
University Hospitals Birmingham NHS Foundation Trust	103	89
University Hospitals Coventry and Warwickshire NHS Trust	104	95
The Dudley Group NHS Foundation Trust	104	96
South Warwickshire NHS Foundation Trust	105	106
Worcestershire Acute Hospitals NHS Trust	110	125
Walsall Healthcare NHS Trust	110	126
Wye Valley NHS Trust	118	135

HED Monthly SHMI Current Position

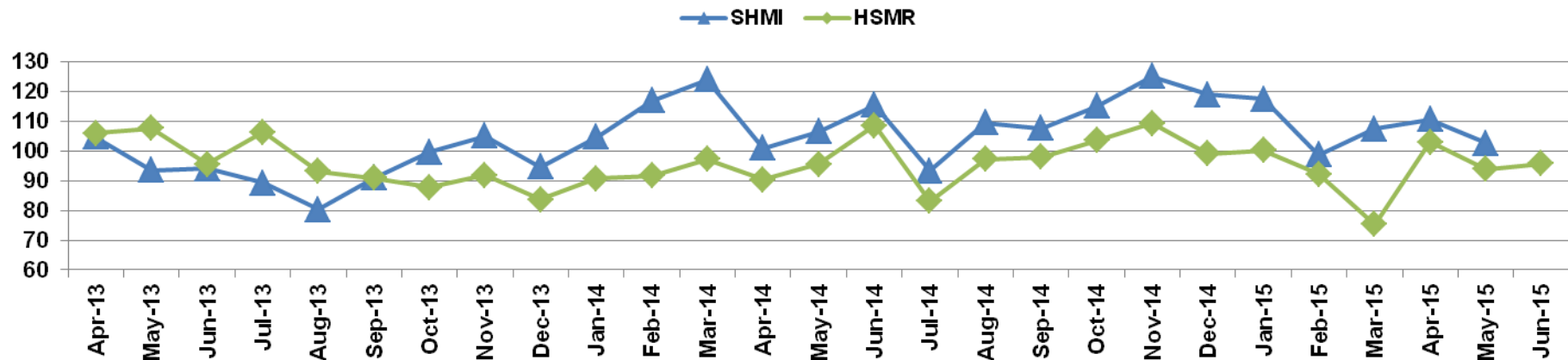
Monthly SHMI 2015



SHMI 2015 compared to National Peers



HSMR compared to Monthly HED SHMI



Appendix 1 – HSMR diagnosis Group from HED system FYTD 2015

Nb; # signifies data where the number of cases or patients is below 9 and has been anonymised in accordance with the principles of small numbers to ensure it is not possible to identify individuals.

Diagnosis group	Spells	Observed Deaths	Expected Deaths	Relative Risk
Pneumonia	308	50	49.56	100.9
Acute cerebrovascular disease	103	19	17.44	108.93
Urinary tract infections	373	19	16.42	115.68
Chronic obstructive pulmonary disease and bronchiectasis	251	18	12.57	143.2
Congestive heart failure; non-hypertensive	103	15	14.72	101.88
Septicaemia (except in labour)	82	15	16.42	91.35
Acute and unspecified renal failure	75	11	12.66	86.86
Aspiration pneumonitis; food/vomitus	47	11	13.55	81.2
Acute myocardial infarction	66	9	7.16	125.79
Fracture of neck of femur (hip)	94	#	7.04	99.38
Acute bronchitis	218	#	8.16	73.5
Cancer of bronchus; lung	31	#	6.21	96.65
Fluid and electrolyte disorders	51	#	2.69	222.73
Gastrointestinal haemorrhage	156	#	4.94	101.19
Other liver diseases	49	#	2.47	202.25
Other lower respiratory disease	98	#	3.61	138.45
Other gastrointestinal disorders	384	#	2.3	173.69
Peripheral and visceral atherosclerosis	15	#	3.21	124.49
Respiratory failure; insufficiency; arrest (adult)	12	#	2.49	160.4
Biliary tract disease	219	#	4.43	67.65
Cancer of bladder	74	#	1.51	198.77
Chronic ulcer of skin	21	#	1.24	241.9
Cancer of rectum and anus	26	#	0.84	237.89
Cardiac arrest and ventricular fibrillation	#	#	1.33	150.11
Intestinal obstruction without hernia	33	#	3.31	60.36
Other circulatory disease	38	#	1.27	157.23
Other perinatal conditions	154	#	3.72	53.74
Peritonitis and intestinal abscess	#	#	1.62	123.44
Secondary malignancies	42	#	4.27	46.81
Senility and organic mental disorders	20	#	2.88	69.41
Cancer of colon	27	#	0.6	165.68
Cancer of prostate	42	#	0.79	126.32
Coronary atherosclerosis and other heart disease	203	#	2.72	36.82
Deficiency and other anaemia	290	#	1.59	62.96
Liver disease; alcohol-related	19	#	1.93	51.72
Malignant neoplasm without specification of site	#	#	1.63	61.4
Non-Hodgkin's lymphoma	19	#	1.39	72.2
Non-infectious gastroenteritis	29	#	0.53	190.14
Other fractures	53	#	1.98	50.49
Pulmonary heart disease	30	#	1.3	76.73
Syncope	83	#	0.22	447.35

Diagnosis group	Spells	Observed Deaths	Expected Deaths	Relative Risk
Abdominal pain	384	0	0.49	0
Aortic; peripheral; and visceral artery aneurysms	#	0	0.38	0
Cancer of breast	48	0	0.45	0
Cancer of oesophagus	19	0	0.65	0
Cancer of ovary	#	0	0.22	0
Cancer of pancreas	#	0	0.99	0
Cancer of stomach	#	0	0.63	0
Cardiac dysrhythmias	151	0	1.31	0
Chronic renal failure	#	0	0.88	0
Complication of device; implant or graft	68	0	0.45	0
Intracranial injury	10	0	0.94	0
Leukaemia's	60	0	0.1	0
Other upper respiratory disease	129	0	0.53	0
Pleurisy; pneumothorax; pulmonary collapse	31	0	1.95	0
Skin and subcutaneous tissue infections	195	0	1.53	0