BROMLEY CIVIC CENTRE, STOCKWELL CLOSE, BROMLEY BRI 3UH

TELEPHONE:	020 8464 3333

CONTACT: Helen Long
helen.long@bromley.gov.uk

DIRECT LINE: 020 8313 4595
FAX: 020 8290 0608

DATE: 4 March 2013

Bromley
THE LONDON BOROUGH
www.bromley.gov.uk

To: Members of the
CARE SERVICES POLICY DEVELOPMENT AND SCRUTINY COMMITTEE

Councillor Judi Ellis (Chairman)
Councillor Catherine Rideout (Vice-Chairman)
Councillors Reg Adams, Ruth Bennett, Roger Charsley, John Getgood,
David Jefferys, Mrs Anne Manning and Charles Rideout

Non-Voting Co-opted Members

Brebner Anderson, Disability Voice Bromley
Angela Clayton-Turner, Bromley Mental Health Forum
Angela Harris, Bromley LINk
Brian James, Learning Disability and Looked After Children Representative
Leslie Marks, Bromley Council on Ageing
Lynne Powrie, Carers Bromley

A meeting of the Care Services Policy Development and Scrutiny Committee will be held at on **TUESDAY 12 MARCH 2013 AT 7.00 PM**

MARK BOWEN
Director of Resources

Paper copies of this agenda will not be provided at the meeting.   Copies can be printed off at www.bromley.gov.uk/meetings. Any member of the public requiring a paper copy of the agenda may request one in advance of the meeting by contacting the Clerk to the Committee, giving 24 hours notice before the meeting.

Items marked for information only will not be debated unless a member of the Committee requests a discussion be held, in which case please inform the Clerk 24 hours in advance indicating the aspects of the information item you wish to discuss

---

A G E N D A

6   MORTALITY RATES (Pages 3 - 10)

....

This page is left intentionally blank

Hospital Mortality Rates

Hospital mortality rates are used as a warning sign of a risk that poor quality care may be leading to a higher than expected mortality.

The key measure currently reported is the Hospital Standardised Mortality Ratio (HSMR).

Measuring hospital performance is complex. Mortality rates should not be used in isolation, but rather considered with a basket of other indicators that give a well-rounded view of hospital quality and activity.

HSMR

The HSMR is a calculation used to monitor death rates in a trust. The HSMR is based on a subset of diagnoses which give rise to 80% of in-hospital deaths. HSMRs are based on the routinely collected administrative data often known as Hospital Episode Statistics (HES), Secondary Uses Service Data (SUS) or Commissioning Datasets (CDS).

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.

For all of the 56 diagnosis groups, the observed deaths are the number that have occurred following admission in each NHS Trust during the specified time period.

The expected number of deaths in each analysis is the sum of the estimated risks of death for every patient.

Adjustment for case mix

The HSMR takes 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 include:

- Sex
- Age on admission
- Admission method (non-elective or elective)
- Socio-economic deprivation quintile of the area of residence of the patient
- Diagnosis/procedure subgroup

1

Dr A Marossy
March 2013

- Co-morbidities (based on Charlson score)
- Number of previous emergency admissions
- Year of discharge (financial year)
- Whether or not Palliative care
- Month of admission
- Source of admission

Interpretation of Mortality Rates

The HSMRs are reported monthly, each month's figures reflecting the previous 12 months performance. It is normal that mortality rates fluctuate from month to month as random variation exists in all populations. The random variation may be substantial when the measure, such a rate or percentage, has a small number of events in the numerator or a small denominator. Typically, rates based on large numbers provide stable estimates of the true, underlying rate. Conversely, rates based on small numbers may fluctuate dramatically from year to year, or differ considerably from one small place to another, even when differences are not meaningful. In the case of hospital mortality, we are dealing with small numbers. There is a system to monitor whether these fluctuations are statistically significant, as described below.

In classifying HSMRs as "high", "low" or "within the expected range", statistical banding is used to account for random chance and minimize false positives. 99.8 per cent control limits are used to determine whether an HSMR is high or low. This means that if an HSMR is outside the control limit there is only a small possibility (0.2 percent) that this is due to chance. Only hospitals that 'pass' this control limit test are grouped as high or low and all others are classed as within the expected range.

- To be high, a hospital must have an HSMR above 100 and have this value above the upper control limit. A hospital with an HSMR above 100 but with the data point within the control limits is classed as 'within the expected range.'
- To be low, a hospital must have an HSMR below 100 and have this value below the lower control limit. A hospital with an HSMR above 100, but with the data point within the control limits, is classed as 'within the expected range.'

SLHT Performance

Figures for hospital mortality rates are produced monthly by the Dr Foster Toolkit. All the mortality indicators are available for the Trust overall and HSMRs for the individual hospital units.

In the 2012 Dr Foster Hospital Guide, SLHT was shown to perform within the expected range for all four mortality indicators, as in the table below:

Table 1 SLHT Mortality Indicators 2011

Trust	SHMI	HSMR	Deaths in Low Risk Conditions	Deaths after Surgery
SLHT	99	96	0.70	93
Target	<100	<100	<1.0	<100

More detail is available for HSMRs. The table below shows HSMRs by month between April and November 2012 (the HSMR figure for each month shows the position for the previous 12 months) for SLHT overall, and for the constituent hospitals (PRU, QEH and QMS). Graphs 1 to 4 show the trend in HSMR by month as well as the control limits.

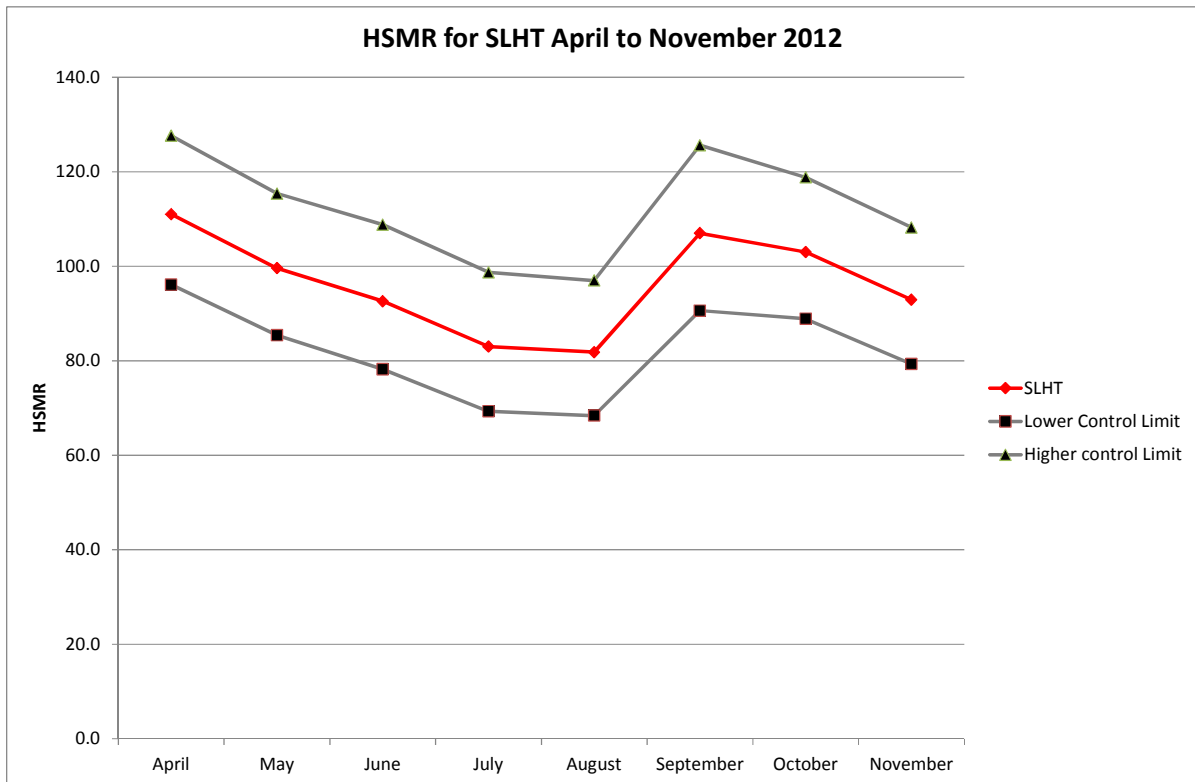*Table 2 HSMRs by Site April to Nov. 2012*

Month of Discharge	SLHT	PRUH	QEH	QMS
April	111.0	109.4	114.4	89.0
May	99.6	97.1	102.5	95.8
June	92.6	101.6	81.4	0.0
July	83.0	69.5	100.8	42.8
August	81.8	76.2	87.1	75.7
September	107.0	106.7	110.7	0.0
October	103.0	97.8	110.0	84.1
November	92.9	84.8	105.0	0.0

Table 3 shows the actual number of deaths by month for SLHT, as well as the expected number of deaths. The expected number of deaths is calculated using information about the age, sex, and diagnosis of the patients admitted. This is an estimate, as evidenced by the use of decimal places – it is not possible to have 0.4 of a death. As with all estimates, it is necessary to allow a margin of error to allow for factors which have not been included in the calculation of the estimate and also to allow for random variation. The higher and lower level control limits allow for this margin of error, as shown in graphs 1 to 4.
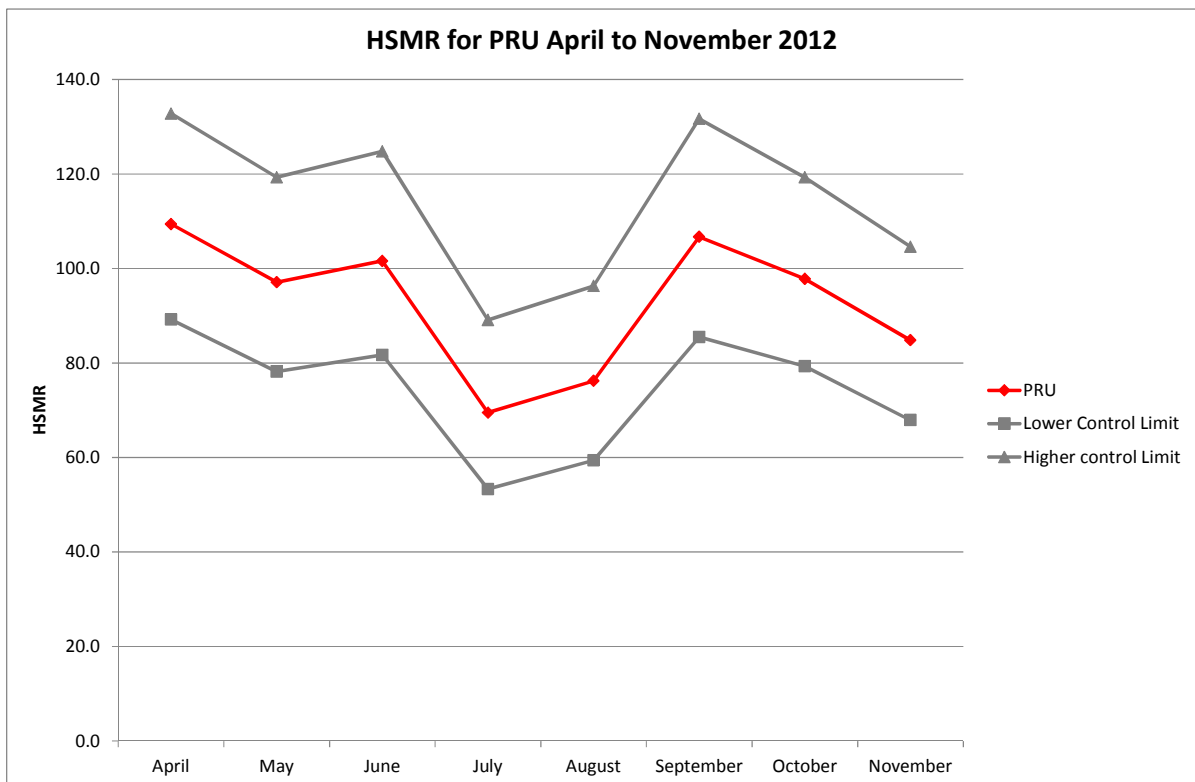
Table 3 Actual and Expected Numbers of Deaths at SLHT April to Nov. 2012

Month of Discharge	Actual No. of Deaths	Expected No. of Deaths	HSMR
April	198	178.4	111.0
May	176	176.7	99.6
June	147	158.8	92.6
July	128	154.1	83.0
August	132	161.4	81.8
September	150	140.1	107.0
October	189	183.4	103.0
November	165	177.6	92.9

Graph 1

HSMR for SLHT April to November 2012

Graph 2

HSMR for PRU April to November 2012

Dr A Marossy
March 2013

Graph 3

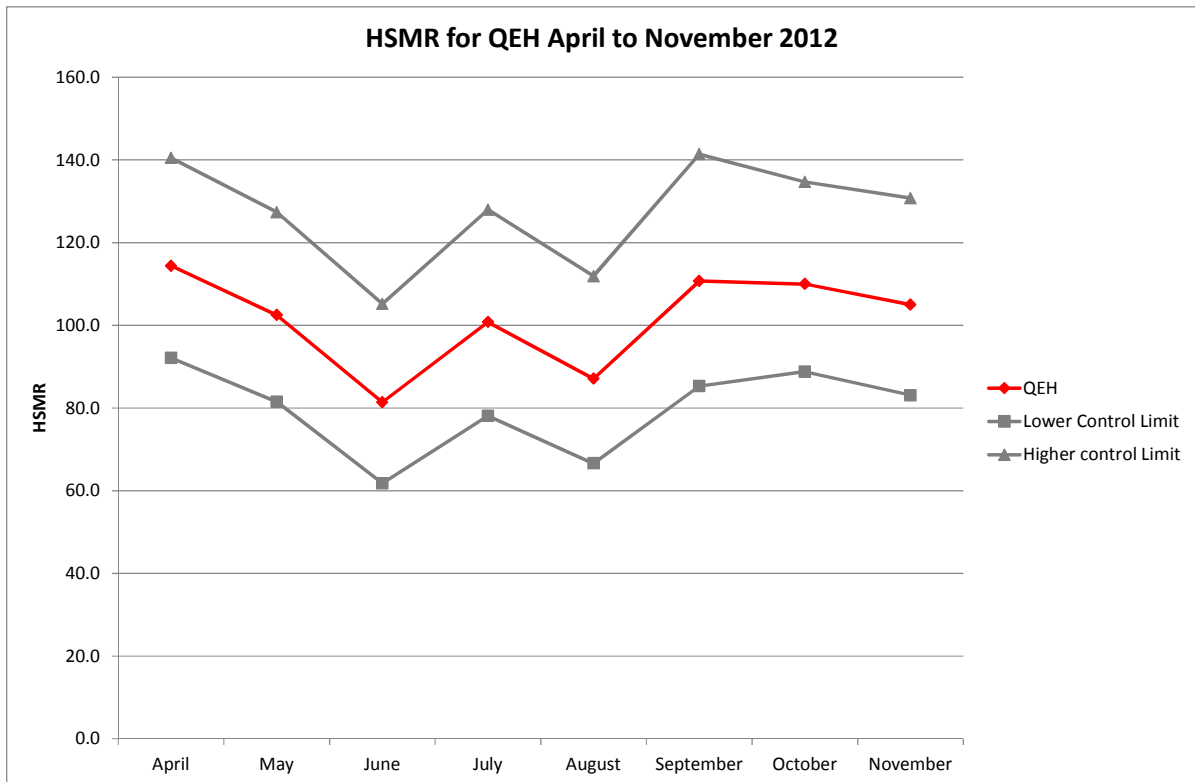**HSMR for QEH April to November 2012**

Graph 4

HSMR for QMS April to November 2012
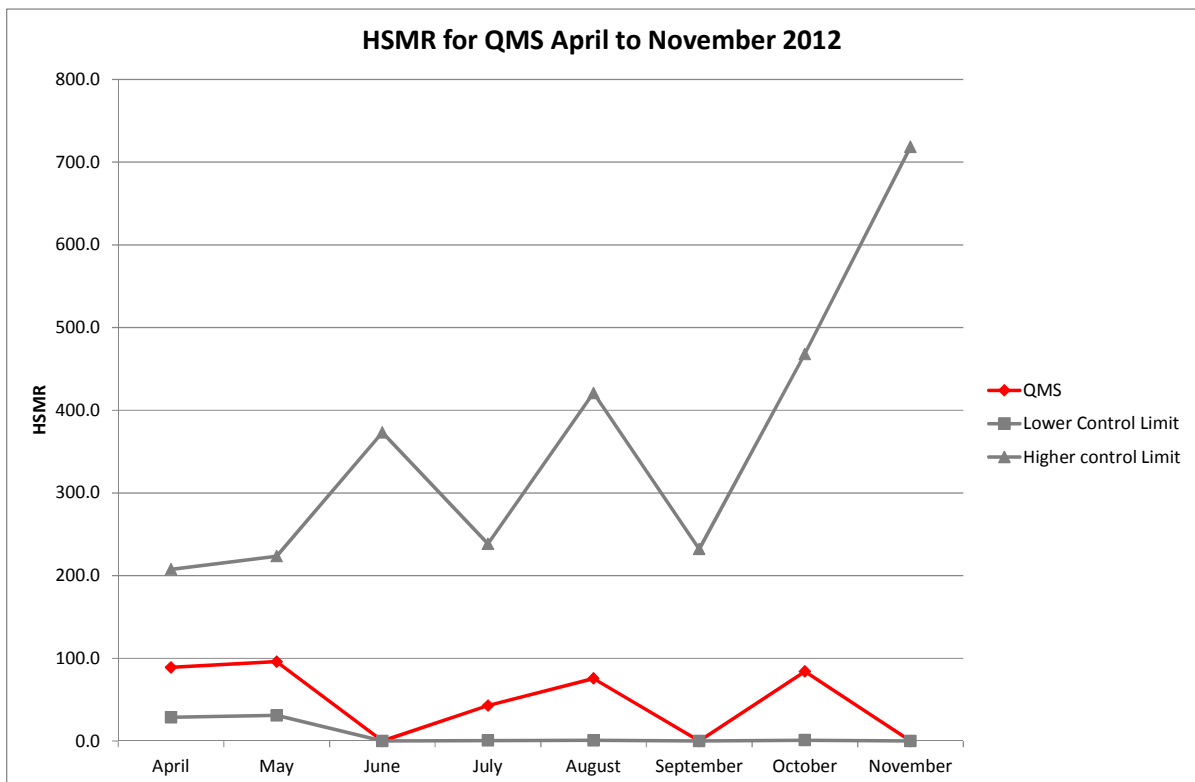
It can be seen that, although there is month by month variation, which at times exceeds the standard of 100, the actual performance is always within the control limits. SLHT has not been an outlier with respect to the time period illustrated.

Mortality Alerts – not the same as HSMRs

The Dr Foster Unit at Imperial College London is an independent academic unit funded in part by Dr Foster Intelligence. This unit writes to trusts when an alert occurs on cumulative sum charts, another kind of statistical process control chart for a variety of individual diagnosis and procedure groups. These charts are run each month, and alerts are considered with a probability of a false alarm less than 0.1% (this is a higher threshold than the default of 1% on the RTM tool) and other restrictions are also applied to exclude some diagnoses including cancer and vague symptoms and signs. They also exclude diagnostic procedures such as endoscopies and alerts with fewer than five deaths.

When the Trust receives a mortality alert, a review is carried out of all the deaths in the relevant category over the relevant time period to ascertain possible avoidable issues. This review involves clinical staff.

Dr Agnes Marossy

Public Health Department

March 2013

This page is left intentionally blank