

## Monitoring the Quality and Safety of our Patient Care

Hywel Dda University Health Board has to make sure that the care given to the patients who use our services is safe. This is a top priority of the Board and we also want to be as transparent as we can be by sharing with all staff and the public the main issues which need improvement, examples of high quality services and what information we use to monitor services.

Every year the University Health Board publishes its Annual Quality Statement which describes what has been achieved over the previous year and what needs to be improved for the following year. Last year's Annual Quality Statement is available here.

<http://www.wales.nhs.uk/sitesplus/862/opendoc/221822/&E46C57BE-B043-9C0F-51942331E18D3198>

The University Health Board's clinical teams participate in clinical audits which look at the quality and safety of our clinical services, compare the results with national standards and other hospitals and then identify areas where care and services can be improved. The University Health Board also monitors a range of measures, regularly updated and reviewed through our Quality and Safety Committee, to provide assurance to our Board on patient safety. Below are some examples of how we have improved the quality and safety of the care that we deliver.

### 1. Enhanced Recovery after Surgery (ERAS)

The aim of the programme is to improve patient outcomes following orthopaedic surgery in Carmarthenshire by ensuring that all patients follow the ERAS programme.

#### *Improvements achieved*

- Baseline audit undertaken to identify current practice in the care of orthopaedic patients which helped to identify the key target areas for improvement
- All orthopaedic patients follow the ERAS programme - it is an everyday pathway for ALL patients without exception
- Since the commencement of ERAS an audit has shown:
  - 51% of total hip replacements met their planned date of discharge (previously 30%)
  - 94% of total hip replacements mobilised day of surgery met their planned date of discharge
  - 42% of total knee replacements met their planned date of discharge (previously 30%)
  - 62% of total knee replacements mobilised on the day of surgery met their planned date of discharge.

### 2. Ceredigion Bone Health Service

- The aim of this service is to provide an integrated service covering primary, social and secondary care to identify people at high risk of fracture and to target assessments and interventions to reduce the risk of future fractures.

#### *Improvements achieved*

- Weekly ward round to identify fragility fracture patients, assess and treat. Supported by laboratory tests - an agreed list of routine tests to aid quick decision making
- Ensure assessments are undertaken on all steroid users in primary care
- Work with care homes on calcium and vitamin D3 evidence

- Undertake assessments in Bronglais Hospital out-patient department
  - 2012 – 334 new patient assessments undertaken
  - 2012 – 350 follow ups
- Assessment of all patients attending movement disorder clinic for bone health and fracture risk reduction
- All x-rays of the spine reviewed and mail merge letters sent to referrers to remind them of best practice.

The National Hip Fracture Database (NHFD) Annual Report 2013 commended Bronglais Hospital for having a better than expected case mix adjusted 30 day mortality. The mortality rate is 3.1.%, which is between two and three standard deviations lower than the national average of 8.2%.

### **3. Senior Medical Review of All Patients' Notes Who Have Died**

In 2009 the University Health Board was aware of a higher than expected Risk Adjusted Mortality Index (RAMI). A group of clinicians and managers met to look at the data and decide whether there actually was a higher than expected number of patients dying in hospital, or whether there could be other explanations for the RAMI. After an in-depth review of the whole process surrounding data collection for the RAMI, the group concluded that the high figure most probably came from the way data was being collected and sent to CHKS (the organisation which produces our RAMI score). Improvements were made over the following year to the data collection systems. In addition, the University Health Board set up a system to examine the notes of all patients dying in its hospitals to see if clinical processes could be improved. Since then over 8,000 notes have been reviewed, and where care can be improved lessons have been learnt by the clinical teams involved. The University Health Board's RAMI fell in response to all these changes and had continued to fall after the re-basing in July 2012.

### **Measures of the Quality and Safety of Patient Care in Hywel Dda University Health Board**

The following are explanations of some of the measures which Hywel Dda University Health Board is using to ensure that the care we deliver patients is safe.

Appendix 1 contains the full set of data that is being used in line with the rest of Wales to ensure that the care that we deliver is safe: <http://www.wales.nhs.uk/sitesplus/862/appendoc/243068>

Appendix 2 provides some explanatory guidance statement on RAMI by CHKS:

<http://www.wales.nhs.uk/sitesplus/documents/862/Appendix%201%20-%20RAMI%20Explanation%20from%20CHKS.pdf>

#### **Risk Adjusted Mortality Index (RAMI)**

The Risk Adjusted Mortality Index (RAMI) is a statistical tool by which an estimate is made of probability of death for all admitted patients. It is derived from a large database of contributing Hospitals across the UK. Taking into account factors such as age, sex, diagnoses, procedure, clinical grouping and admission type, it allows a calculation of risk of death. From this prediction it calculates the number in a population who would be expected to die. The figure itself is a comparison between the numbers of patients predicted to die and those who actually die. Where the numbers are the same, the RAMI will be reported as 100

The 2013 RAMI uses a model based on UK data from and is presented as a 12 month rolling average which changes each month. Each year the methodology for the calculation changes which is why there are different figures for RAMI 12, RAMI 13 and RAMI 14. The number relates to which year's methodology is being used for the calculation.

## Welsh RAMI 2013

The Welsh RAMI scores are derived from RAMI outcomes for the 18 major acute hospitals across Wales. The average RAMI scores for these hospitals are recalibrated to 100 for the baseline period (12 months) and reflect the difference between this average and the whole population of England, Wales and Northern Ireland.

The purpose of calculating a Welsh RAMI is an attempt to reduce the impact of known differences between Wales, England and Northern Ireland which influence the outcomes of the statistical model used by CHKS. For example, there are known differences between Wales and the rest of the UK in service configuration, healthcare delivery, end of life care delivery and the quality and consistency of data. Therefore the Welsh RAMI seeks to provide an alternative and unique view of mortality for Welsh hospitals, albeit still influenced by predicted risk from the whole population.

## Summary Hospital-level Mortality Indicator (SHMI)

The SHMI is a ratio of the observed number of deaths to the expected number of deaths for a hospital. The expected number of deaths is calculated from a risk adjusted model with a patient case mix of age, gender, admission method, year index, Charlson Comorbidity Index and diagnosis grouping. The observed number of deaths is the total number of finished provider spells for the hospital which resulted in a death, either in hospital or within 30 days (inclusive) of discharge from the hospital. If the patient is treated by another hospital within 30 days of discharge, their death is attributed to the last non-specialist acute hospital to treat them.

## Crude Mortality

Crude Mortality figures take no account of risk factors, in contrast to the RAMI. The definition is therefore far simpler ( $\text{Actual Deaths in a month} \div \text{Total Discharges per month} \times 100$ ), but is affected by the number of patients treated and is presented as a 12 month rolling average which changes each month;

## Condition Specific Mortality Indicators

In order to further understand the crude mortality within hospital, five condition specific measures have been developed;

1. Rate of deaths in hospital within 30 days of emergency admission with a heart attack (MI) aged 35 to 74
2. Rate of deaths in hospital within 30 days of emergency admission with a hip fracture (NoF) aged >64
3. Rate of deaths in hospital within 30 days of emergency admission with a stroke.
4. Rate of deaths in hospital within 30 days of elective surgery
5. Rate of deaths in hospital within 30 days of non-elective surgery
- 6.

These indicators are likely to show a strong relationship with socio-economic factors outside the influence of the NHS, and this will need to be borne in mind when making comparisons across Health Boards using these indicators.

The measures assess mortality within a 30 day period from the date of the index admission. This standard time period is necessary so that the outcome for each patient is measured uniformly. The measures use a 30 day time frame because outcomes occurring within 30 days of admission can be influenced by hospital care and the early transition to the outpatient setting. The use of the 30 day time frame is a clinically meaningful period for hospitals to collaborate with their communities in an effort to reduce mortality.

## Clinical Coding

One of the major factors affecting the RAMI calculation is up to date clinical coding. Hywel Dda University Health Board has always placed significant importance on clinical coding and its affect upon patient safety. The University Health Board has invested in clinical coders over the last two years to ensure that the timeliness of the coding is within the national targets.

### **So what does all this data mean?**

The data based on the RAMI 2013/14 dataset relating to Glangwili General Hospital was unexpected and caused us great concern. Patient safety is the top priority for Hywel Dda University Health Board and we take this data very seriously. Our clinical teams are working in exactly the same way, it is only the calculation methodology that has changed resulting in the RAMI 13/14 and the Welsh RAMI 13/14 figures for that hospital being higher than expected. An extensive review of the RAMI data has been undertaken to understand this change and involved reviewing patients' notes and the clinical coding used and also other available quality and safety measures. The findings of the review were presented to a public board meeting in September 2014.

Item 17i RAMI Report Front Sheet - <http://www.wales.nhs.uk/sitesplus/862/opendoc/248833>

Item 17ii RAMI Report - <http://www.wales.nhs.uk/sitesplus/862/opendoc/248834>

The Medical Director is also leading an internal quality and safety improvement team which will work with the clinicians in Glangwili General Hospital to understand the data better. The difference in the use of the Z518 code (patients on end of life care pathway) as shown in this data is forming part of the investigation. An update was provided to the public board meeting in January 2015.

Item 14 Quality and Safety Measures including Risk Adjusted Mortality Index (RAMI) 14 - Glangwili General Hospital SBAR 29.01.15 - <http://www.wales.nhs.uk/sitesplus/862/opendoc/257227>

We need to understand all the other data that measures hospital safety and consider it together with this data, but because each hospital scores differently under each measure, we need to understand the significance of the data before making any unfounded assumptions. We strongly believe we can get a better picture from reviewing the care of all patients who died in hospital which gives a much more rounded picture than any single mathematical number and will continue to do this.

As soon as the outcomes of these reviews are known, the University Health Board will take appropriate action and communicate any proposed changes.