

## Case Study

### Achieving good quality data quality at Betsi Cadwaladr University Health Board

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Melissa Baker, Clinical Information Analyst, Betsi Cadwaladr University Health Board

#### Background

**Betsi Cadwaladr University Health Board is the largest health organisation in Wales. It provides primary, community, mental health and acute hospital services to over 650,000 people across the six counties of North Wales.**

It operates three district general hospitals (Ysbyty Gwynedd in Bangor, Ysbyty Glan Clwyd in Bodelwyddan and Wrexham Maelor Hospital) as well as 18 other acute and community hospitals and a network of over 90 health centres, clinics, community health team bases and mental health units. The Health Board also coordinates the work of 115 GP practices and NHS services provided by North Wales dentists, opticians and pharmacies.

#### What challenges were the board facing?

The Welsh Government is now publishing a range of data at Health Board level. This includes data on hospital admissions, cancer incidence and mortality. In addition, Local Health Boards

publish risk adjusted mortality indices in Wales at hospital level online. Betsi Cadwaladr University Health Board recognised that good data quality was an important prerequisite for ensuring accurate indicators were being put into the public domain, but more importantly supported improved patient care and clinical engagement. As a large organisation it had to ensure that correct data was being entered into its patient administration systems and that clinicians were aware of the implications of inaccurate data.



## What was your first step on the improvement journey?

Clinical Information Analyst Melissa Baker says the Board wanted to ensure that the data was an accurate representation of what was happening on the wards so that it could respond to any questions from the Welsh government. A review of coding and mortality was undertaken across the Health Board, starting at hospital level and then working down to specialty level. The data was compared with peers to discover if there was any variation.

*"We found that in one of our hospitals there were higher elective admissions. We looked into this further and found that this was a result of the way patient transfers from a community hospital were being recorded. Ward/administrative staff were recording admissions from community hospitals as elective transfers, which meant the risk profile for these patients was lower. This in turn was having an impact on readmissions and the mortality indicator for that hospital."*

## How did they improve?

Melissa says the first step was to explain to staff why this recording was inaccurate. As a former nurse working in informatics, Melissa was well-placed to explain why the change was needed and set up and led the training programme.

The Health Board took a performance management approach to ensure improvements to this data capture were consistently applied. This encouraged validation checks and reports were sent to wards and departments showing how accurately admissions were being recorded. *"By taking this approach we were able to show the improvement and ensure that the administrative data was an accurate reflection of what was happening,"* says Mel.

In addition, the Board also carried out a review of clinical coding for deceased patients using hospital case notes. This was done for each clinical team with support and guidance provided by the Information Department. One specific example of a change that followed the review was in relation to the coding of ventilated patients. The review found that the incorrect codes were being used. Mel explained and showed the equipment used for ventilation to the coders to help them understand what happens and identify from the clinical notes the differences between non-invasive and invasive ventilation. Another issue that came to light was the coding of patients who were having rehabilitation in community hospitals. Not enough information was being captured to detail their clinical condition. This has now been improved as part of an overall Board-led drive on improving data and clinical coding.

## What benefits have they seen from working with CHKS?

Melissa relied on the support of the Health Board's dedicated CHKS consultant to determine the extent of the variation at hospital level and then monitor improvements in coding. These changes not only had an impact on readmission rates, but also the Health Boards risk adjusted mortality indicator (RAMI). *"We are now more confident that we have a more accurate picture and the coding accuracy is reported to our Mortality Board. This is a high level board consisting of deputy acute medical directors."*

Melissa says CHKS expertise was very helpful when it came to looking back at case notes, by helping her to find variation and analysing the likely impact of this variation. She says that the focus is now on looking carefully at what happened to each patient from a clinical perspective.

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