

CASE STUDY

NORTH CUMBRIA UNIVERSITY HOSPITALS NHS TRUST

Using Quality Investigator to improve mortality
and patient care

SNAPSHOT

Before

North Cumbria University Hospitals NHS Trust (NCUH) was among 11 trusts placed in 'special measures' by NHS England in June 2013.

NCUH had increasingly higher than expected levels of mortality for two years which was causing concern for the regulatory body and management at the trust.



After

Using Quality Investigator to examine and identify influences on poor outcomes, the trust reduced its mortality ratio to within expected levels and improved patient care.

By the third financial year the trust had reduced its Hospital Standardised Mortality Ratio (HSMR) from 117.89 to 103.83 and was no longer in the special measures regime.

01. CHALLENGE

North Cumbria University Hospitals NHS Trust (NCUH) was not expecting to find itself named among 19 of the poorest-performing trusts in England based on its Hospital Standardised Mortality Ratio (HSMR) and Summary Hospital-level Mortality Index (SHMI) in Dr Foster's Hospital Guide 2011.

At the time, its data management tools from another provider had not identified the extent of its problems – or how it could focus its efforts to turn things around.

NCUH's high overall HSMR was further complicated by wide variation across diagnoses and between its two hospital sites in Carlisle and Whitehaven, geographically distant from each other in one of the most sparsely populated regions of England.

As part of a wider review of 1,100 deaths to identify high-risk patient pathways, the trust appointed Dr Foster to review its data to identify where the focus areas

should be, with the aim of identifying where improvements could be made to clinical practice and patient care. Like many trusts in this situation, they felt it was important to unravel the root causes of the raised HSMR, distinguishing coding issues from potential clinical care problems.

The trust's high HSMR over a number of years served as a warning sign that was subsequently acted on by the Department of Health, which asked Sir Bruce Keogh to conduct a review of trusts with higher than expected mortality rates. Following this, in June 2013, NCUH was among 11 trusts placed in 'special measures' by NHS England.

"We as a trust were 'outside the pack' in terms of mortality. That's come down to be around the national mean and the trend in terms of mortality ratios suggests we are doing the right thing on patient pathways. Driving mortality improvements is an ongoing process, so you need a continuous supply of data that is continually updated to allow you to continue on the journey of improvement."

Clive Graham

NCUH's Associate Medical Director for Safety and Quality

02. SOLUTION

The local Dr Foster team worked with the trust using its Quality Investigator product to examine in-hospital mortality for all inpatient admissions and identified the influences on the poor outcomes in particular patient pathways.

The tool allows for customisation of functionality to reflect an organisation's specific requirements and preferred areas of focus – by site, diagnosis group, procedure and consultant.

Using Quality Investigator's ability to drill down into data at a very granular level, Dr Foster was able to assist the NCUH team to examine patient pathways in detail.

This highlighted inconsistencies relating to the initial diagnosis by clinicians and subsequent data coding. In some instances, patients were being recorded according to the symptoms they presented with, rather than recognised diagnoses.

The trust also used Quality Investigator to look into its recording of Finished

Consultant Episodes (FCEs) to identify and re-code instances where patients had multiple FCEs per healthspell, indicating errors in transfers of care.

Dr Foster worked closely with NCUH's incoming Medical Director, Jeremy Rushmer, to further identify the influencers on mortality, such as the 'weekend effect' observable in particular specialities.

In addition, local commissioners in Cumbria also had access to Quality Investigator, enabling the acute trust to collaborate with them to ensure that care provision better matched the needs of the local population, with positive implications for the sustainability of the local health economy as a whole.

03. BENEFITS

NCUH has seen a step change in performance against HSMR.

Through better use of data and changes in clinical pathways, the trust brought about real improvements in patient outcomes.

Through working with Dr Foster and the use of Quality Investigator, the importance of correct documentation and coding across the patient pathway has been embedded across clinical teams throughout the trust.

Based on the drill down data and review information, during 2013 a number of changes were made which included:

- Centralisation of vascular, orthopaedic and emergency surgery to one site
- Commencement of primary percutaneous coronary intervention (PCI) within the trust on one site
- Introduction of the acute physician model and care bundles.

For two consecutive financial years between 2011 and 2013 the trust had a statistically above-expected HSMR. At the end of the third financial year studied, 2013/14, the trust was statistically as expected, having reduced its HSMR from 117.89 to 103.83. The trust's overall crude mortality rate also reduced in line with the reduction in HSMR.

The improvement in HSMR has been particularly marked in coronary atherosclerosis and other heart disease, and further improvements in outcomes have been realised for a number of other diagnosis groups.

Dr Foster's report, 'Is Special Measures Working?', published in February 2015, confirmed that NCUH's HSMR showed a consistent downward trend from the start of 2012 to Q2 2014.

"We find Dr Foster's combination of knowledgeable experts and powerful tools enormously helpful in our work to improve the quality of care we are providing to our patients. With Dr Foster's help we've made significant progress in understanding quality and its drivers, and identifying how we can make sustainable improvements in our hospitals. Dr Foster's insightful analysis, practical recommendations and ongoing support help us extract maximum value from our data, and their impact is far-reaching."

Dr Jeremy Rushmer
Medical Director, North Cumbria University Hospitals NHS Trust

HSMR: Rolling 12 Month Trend Relative Risk

