

December 2017



MMUH

HOSPITAL STANDARDISED MORTALITY RATIO 2015: STATISTICAL OUTLIER REPORT

| Ruth Buckley, Quality Manager, MMUH

Mater Misericordiae University Hospital

Eccles Street

Dublin 7

Ireland

Review Team

Ms Ruth Buckley, Quality Manager,

Prof Brendan Kinsley, Executive Clinical Director Ms Deirdre Lynch, HIPE Manger

Prof Conor O'Keane, Clinical Director for Quality & Patient Safety,

Ms Deirdre Lynch, HIPE Manager

Dr Brian McCullagh, Consultant Respiratory Physician,

Report prepared by: Ms Ruth Buckley, Quality Manager, MMUH

Date Issued: December 2017

Approved By:



Mr Gordon Dunne

CEO, Mater Misericordiae University Hospital.

Contents

Background	4
Approach taken to review the statistical outlier.....	4
Time to complete the review	5
Engagement with NOCA.....	6
Key findings.....	6
Active monitoring in hospital	7
Action Plan.....	7

Background

The National Quality Assurance Intelligence System (NQAIS) is a suite of quality assurance/improvement applications that are designed to identify potential learning opportunities and provide an evidence base for informed decision making to optimise health care. NQAIS NAHM (National Audit of Hospital Mortality) is one component of this suite of applications. Individual hospital mortality patterns are analysed and displayed in the context of the national mortality patterns, it provides hospitals with a statistical measure, a Hospital Standardised Mortality Ratio (HSMR), for various diagnosis within the hospital as per the ICD-10-AM (Australian Modification incorporating the Australian Classification of Health Interventions) 6th Edition – 8th Edition. These are further grouped into more manageable diagnostic group for analysis.

The HSMR does not allow hospitals to compare outcomes against one another, but allows comparison against a national average, which is set at 100. Each hospital has an overall SMR and also an SMR for each particular diagnosis group e.g. COPD/Bronchiectasis or Myocardial Infarction. Where an SMR is outside the expected range, hospitals can use this information to interrogate the data provided and their own healthcare records to understand what has contributed to this value, and where necessary identify opportunities for improving patient care.

The MMUH had a number of initial concerns regarding the audit. Concerns were raised that inaccurate interpretation of the data could lead to distress to our patients, reputational damage to the hospital, and create unhelpful media attention. However MMUH engaged in discussions with NOCA and initial technical concerns were addressed.

From this initial engagement with the NOCA HSMR project, we could see the value in having our data reproduced in a format that could enable us to analysis our mortality rates. As a major academic teaching hospital, with a focus on patient safety and quality improvement, the level of data produced by the hospital and complexity of the cases involved could provide a great learning opportunity for all involved.

When the hospital engaged with the audit it was agreed that the data would be a standing agenda item at the monthly Quality and Patient Safety (QPS) Steering Committee as part of a suite of “Quality of Clinical Care Indicators” and presented to the Hospital Board as part of the “Board Quality Dashboard”.

In 2016, when the full year 2015 data was presented at the QPS Steering Committee meeting showing COPD/Bronchiectasis as a statistical outlier, it was unexpected. The recommendation from the QPS committee was for a complete interrogation of the data to include a consultant led clinical review of healthcare records. The audit findings were reported to the Board with the assurance that the data was being analysed.

Approach taken to review the statistical outlier

The initial focus of the review started with interrogation of the COPD/Bronchiectasis data. There were 772 discharges included in the data; 43 actual deaths of which 18 were

statistically calculated as expected as per a logistic regression model within the Audit tool. The data was cross checked against the data produced by our HIPE department. The Quality Manager and HIPE Manager began the initial review to look for any trends in the data e.g. age profile, discharging speciality, number of readmission in the previous 12 months, palliative care status, procedures and co-morbidities.

It was evident from the initial review of data that areas to focus on included;

- Co-morbidities
- Charlson score
- Palliative care
- Those whom had died that were considered low and medium risk of death.

As the full year 2015 data from the mortality audit was produced in the second quarter of 2016 a decision was made to review a selection of 2015 and 2016 healthcare records where COPD/Bronchiectasis was coded as the principal diagnosis. The clinical approach for the healthcare record review was to answer the question “Is there a clinical issue with the management of a diagnosis of COPD/Bronchiectasis within our hospital?”

The healthcare record reviews were done in stages, the first phase of the healthcare record review was carried out by the Clinical Director for Quality & Patient Safety and Executive Clinical Director, and following discussion between the two reviewers they agreed there was a need for a more systematic approach to the review of the healthcare record.

A review of some existing ‘Mortality Screening Tools’ was undertaken. The tools provided useful information but did not completely reflect the themes identified in the Mortality Audit and our initial healthcare record review. Some were very time consuming to complete for routinely reviewing healthcare records. In consultation with the Clinical Director for Quality & Patient Safety and Executive Clinical Director, the Quality Manager developed a succinct ‘Mortality Screening Tool’ incorporating aspect from the international mortality tools, elements of the NOCA HSMR Tool and additional comments noted by both consultants from their initial review of the healthcare records. It was deemed appropriate to include the identification of ‘Ceilings of Care’ by the primary consultant, as discussed with the patient and the family. This ‘Mortality Screening Tool’ was presented to the Quality & Patient Safety Steering Committee and proposed for use for the second phase of the consultant led healthcare record review. The review was conducted by the Clinical Director for Quality & Patient Safety and Executive Clinical Director and a Consultant Respiratory Physician.

Time to complete the review

The consultant review of healthcare records took three months; it was accommodated as not to interfere with clinical workload. The review was coordinated by the Quality Manager.

On completion of this internal review, the hospital also sought external opinion from Prof Tim McDonnell, Consultant Respiratory Physician and HSE National Clinical Lead for COPD programme as to the internal findings.

Engagement with NOCA

Engaging with NOCA on the Mortality audit before the tool was launched had been extremely beneficial. It created a positive working relationship enabling open and honest discussions and learning for both organisations.

When the statistical outlier was identified, we were confident in how to manage the process and had a clear purpose for reviewing the data. There had been consultations between NOCA and the broader hospital management team along with telephone and email conversations with the audit coordinators. The findings were reported to the Quality & Patient Steering committee and NOCA, this engagement with NOCA supported our interpretation of the findings and helped guide our learning.

Key findings

Review of healthcare records did not identify any concerns as to the clinical management of patients with COPD/Bronchiectasis.

The review of both the NOCA Mortality tool data and the healthcare records did identify a number of other learning opportunities. The number of deaths within each diagnosis is small and accuracy in the capturing of the principal diagnosis is crucial to providing consistent information for data quality and the provision of an accurate HSMR.

The learning from the systematic review indicated that the interpretation of coding of the principal diagnosis from the clinical notes is challenging due to the complexity of presenting symptoms and existing co-morbidities. In this review, it raised the appropriate application of coding the principal diagnosis at admission as COPD/Bronchiectasis versus that of Pneumonia. A number of patients on admission had pneumonia in the context of a significant history of COPD. In the documentation, some had the significant history of COPD inappropriately placed as the principal diagnosis with the diagnosis of pneumonia as secondary.

It was evident that in the absence of a documented clinical summary of the episode of care for deceased patients, there was some ambiguity as to the exact principal diagnosis in the context of multiple co-morbidities. In the absence of clear documentation, the Clinical Coders when assigning the clinical codes, are guided by the ICD 10 AM Classification and ACS & Irish coding standards which states, *“When there are two or more interrelated conditions (such as disease in the same ICD -10-AM chapter or manifestations characteristically associated with certain disease) potentially meeting the definition of principal diagnosis. If no further information is available, code as the principal diagnosis the first mentioned diagnosis (World Health Organisation 2011, pp.133-134)”*. Improvements are required in the documentation by clinicians as to the principal diagnosis in the context of multiple co-morbidities.

In MMUH, patients are coded as palliative as per the Irish Coding Standard (ICS 0224) for palliative care stating *“the code Z51.5 is to be coded when there is documentation that the patient has been seen or attended to by the palliative Care team as the phrase ‘for palliation’ may not be used”*.

From our reviews, it was identified that a number of the patients who were well known to the admitting team had progressive respiratory decline over a number of years, many had at this last admission been identified as nearing end of life and “Ceilings of care” for comfort and support had been discussed with patient and family. This group of patients continued their care under their admitting team, with the option for consults by specialist palliative care services but due to at times limited resources within specialist palliative care, these patients were not always referred to the specialist palliative care service hence, and not specifically coded as palliative.

This finding prompted further exploration into the appropriate use of the palliative care code. We engaged with our Consultant in Specialist Palliative Care to consider how best to reflect within the coding the complexity of patients whom are identified as reaching end of life and whose care is managed by their primary consultant without specialist palliative care input. We believe there are possibly some inconsistencies in use of the palliative care coding nationally and guidance is required from the Palliative Care programme as to standardise use of the Code. In the interim, the hospital has decided to continue with Z51.5 coding as is, until further clarification has been provided nationally through the Palliative Care programme.

This has been raised with NOCA and is included in their focus of work.

Active monitoring in hospital

We have continued to monitor the HSMR data issued quarterly through NOCA. Mortality data is presented monthly at the Quality & Patient Safety Steering committee meetings. A number of consultants have carried out clinical healthcare record reviews covering diagnosis such as, Urosepsis, Biliary tract disease, Cardiovascular disease and Acute Myocardial Infarction. Again, it was noted that the clarity within the documentation as to the principal diagnosis was at times difficult for the HIPE coders to interpret in the context of multiple morbidities.

Action Plan

The Hospital is actively seeking to implement the lessons learned from the clinical healthcare records review. One of the primary improvement actions is the introduction of the discharge summary for deceased patients outlining their entire episode of care. We have developed the discharge summary and are piloting its use prior to complete roll out. This will take a number of months to complete.

Carrying out consultant led review of deaths with HIPE department to validate principal diagnosis. This is initially with QPS Clinical Director with a view to roll out at directorate level.

To follow the Palliative care programme recommendations with regard to the standardise use of the Palliative Code.

Ospidéal Ollscoile
Mater Misericordiae
Siúracha na Trócaire

Sráid Eccles, Baile Átha Cliath 7, Éire



Mater Misericordiae
University Hospital
Sisters of Mercy

Eccles Street, Dublin 7, Ireland