

NATIONAL AUDIT OF **HOSPITAL MORTALITY REPORT** LAYPERSONS INFORMATION

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NOCA LAUNCHES ITS FIRST REPORT ON IN-HOSPITAL MORTALITY

People die every day and especially people with serious illness die in hospitals. Most deaths that occur in hospital are inevitable because of the severity of illness. It is important that hospitals are monitoring their mortality. The National Audit of Hospital Mortality (NAHM) enables hospitals to do this.

This is the first report from NAHM in the National Office of Clinical Audit (NOCA). It outlines how the audit is used by hospitals and presents information across a number of key diagnoses, namely heart attack (acute myocardial infarction), heart failure, stroke (ischaemic and haemorrhagic stroke) and chronic lung disease (chronic obstructive pulmonary disease (COPD) and bronchiectasis). This report presents in-hospital mortality in a clear and transparent manner, which will be of interest to patients, the public at large and health care professionals.

BACKGROUND TO THE NATIONAL AUDIT OF HOSPITAL MORTALITY

National clinical audit is an ongoing review of clinical practice measuring structures, processes and outcomes against clinical standards to make improvements in quality of care. This is now an essential component to improving the quality of modern healthcare. Over the last two decades, in-hospital mortality patterns have been used internationally as one indicator of the quality of care. While there are a number of similar ways of doing this, the standardised mortality ratio (SMR) is the most commonly used approach for looking at hospital mortality patterns within a country.

The SMR is the ratio between the observed number of patients who die in hospital and the number that would be expected to die in hospital on the basis of the overall national rate. It is based on the primary reason a patient is admitted to hospital. Importantly this does not infer the cause of death.

The information comes from the Hospital In-Patient Enquiry (HIPE) system, which contains clinical and administrative data on patients who have been admitted to hospital and is routinely collected by all publicly funded acute hospitals. Personal information i.e. information which could be used to identify a patient such as name, address and date of birth, is not taken from the hospital system and is not used in this audit. **Patient confidentiality and privacy is fully protected in this manner.**

To ensure that “like is compared with like” across the diversity of hospitals, factors that potentially may directly influence the outcome are adjusted for in the analysis, for example, patient age and the presence of other serious illnesses to calculate the number of expected deaths.

This is an important measure which can be used to screen for safety and quality issues in hospitals. However, the quality of the Irish health service cannot be measured by one indicator alone. SMRs are most useful when used as part of a broader measurement strategy, including other indicators which are important to patients.

CURRENT STATUS OF THE NATIONAL AUDIT OF HOSPITAL MORTALITY

The National Audit of Hospital Mortality (NAHM) was deployed to 44 publicly funded acute hospitals in Ireland during 2015 and 2016. Standalone maternity hospitals are not included. NOCA works with the National Perinatal Epidemiology Centre who implement national clinical audits in maternity services. Patients who only attend the Emergency Department (ED) are not included in this analysis. Internationally the norm is to only include patients following admission to a hospital ward. While NOCA currently does not have a specific audit of ED, information on patients admitted via the ED is captured in some of our other audits such as major trauma audit, Irish Hip Fracture Database audit. NAHM does not extend to private hospitals as they do not use the HIPE system.

NAHM was deployed under the governance structures established by NOCA, working with the HSE Health Intelligence Unit and Quality Improvement Division.

WHO IS THE NATIONAL OFFICE OF CLINICAL AUDIT?

NOCA was established in 2012 to create sustainable clinical audit programmes at national level. NOCA enables those who manage and deliver healthcare to improve the quality of care through national clinical audit. NOCA is funded by the Health Service Executive Quality Improvement Division, governed by an independent voluntary board and operationally supported by the Royal College of Surgeons in Ireland. NOCA, working with the HSE Health Intelligence Unit and Quality Improvement Division.

WHO IS THE NAHM REPORT AIMED AT?

The report aims to provide patients, families, the public and the wider health system with an account of NAHM and its findings across the five key diagnoses; heart attack, heart failure, ischaemic and haemorrhagic stroke, COPD and bronchiectasis. Hospitals are monitoring their mortality patterns and structures exist to investigate areas of concern and implement improvements as required.

KEY FINDINGS

This report presents a crude in-hospital mortality rate between 2005 and 2015.

- In AMI there was a significant reduction in deaths per 100 admissions from 11.1 deaths in 2005 to 5.9 in 2015.
- For heart failure, there was a small but significant reduction from 9.6 deaths in 2005 to 7.9 in 2015.
- For ischaemic stroke, there was a small but significant reduction from 14.2 deaths in 2005 to 10.5 in 2015.
- There was almost no change for haemorrhagic stroke and COPD & bronchiectasis.

All hospitals were within the expected range for AMI, heart failure, ischaemic and haemorrhagic stroke with one hospital outside the range for COPD & bronchiectasis. Senior Management and Clinicians in this hospital have accepted this and are currently reviewing their information in greater detail. They have provided a commentary to the report. This shows the value of the audit; it is by carrying out a detailed review that hospitals can identify if there are deficits in care and make appropriate changes and improvements.

KEY RECOMMENDATIONS

Recommendations arising from this report can be broadly categorised as:

- **Supporting hospitals to review quality of care;** NAHM should be used by clinicians, hospital managers and their Boards as a quality improvement tool for the targeted review of hospital mortality patterns. This should be done in the wider context of quality tools, such as patient experience and complaints, staff feedback and safety incident reporting.
- **Improving the data for NAHM;** continued and increased collaboration between clinicians and clinical coders (the administrative staff who extract information from the medical records) and use of a patient discharge summary for all in-hospital mortality will improve the quality of medical records as well as the recording and coding of hospital data.
- **Improving NAHM and NAHM reports;** changing NAHM in response to feedback from hospitals, HSE National Clinical Programmes and international developments, as well as expanding future NAHM reports to include other less common disease categories where sufficient volume of data is present to support the statistical result.

HOW SHOULD THE NAHM REPORT BE USED?

An SMR is presented within an expected range for the individual key diagnosis. No two hospitals are expected to be the same, as hospitals have very different case mix or patient profiles. The SMR is an important tool which can be used to screen for safety and quality issues in hospitals which should be used as part of a broader measurement strategy, including indicators which are important to patients.

If a hospital's actual mortality level for a diagnosis is within the expected range, it means that the number of patients who died was within the expected range based on the patient profile. If a hospital's actual mortality level for a diagnosis is outside the expected range, it means that more patients died than was expected. This indicates a difference from the expected range that is unlikely to have arisen by chance alone, rather than a definitive problem with the quality of care. This should trigger further analysis and review in the hospital. By doing this, hospitals can make significant improvements.

HOW SHOULD THE NAHM REPORT NOT BE USED?

This report cannot be used to compare hospitals. No two hospitals are expected to be the same, as hospitals have very different case mix or patient profiles. Some hospitals will have greater numbers of patients with severe conditions e.g. hospitals such as specialist referral centres may only admit patients with more complicated conditions.

SMRs, because of their statistical properties, **can only be used to examine mortality patterns within a hospital and not to compare hospitals with each other.** Furthermore, SMRs cannot be used to generate a league table of hospital mortality (e.g. attempting to rank highest to lowest).

To download the full report, please visit
<https://www.noca.ie/publications>

National Office of Clinical Audit, 2nd Floor,
Ardilaun House, 111 St Stephens Green, Dublin 2

Tel: + (353) 1 4028577
Email: nahm@nocai.ie

NCCA National Office of
Clinical Audit



+353 1 4028577



nahm@noca.ie



@noca_irl



www.noca.ie
