

NEWS RELEASE
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40% reduction in crude in-hospital mortality from heart attacks since 2007

The National Office of Clinical Audit (NOCA) announces the publication of their second report from the National Audit of Hospital Mortality (NAHM). The report presents information across six medical conditions¹: acute myocardial infarction (AMI) / heart attack, heart failure, ischaemic stroke, haemorrhagic stroke, chronic obstructive pulmonary disease (COPD) and pneumonia. NAHM collects data from 44 publicly funded hospitals in Ireland.

This report cannot be used to compare hospitals to one another. No two hospitals are expected to be the same, as hospitals have very different case mix or patient profiles.

Dr Brian Creedon, NAHM Clinical Lead said “Hospitals realise the importance of monitoring mortality data in their hospitals and using this to improve the quality of care they provide to their patients”. He added “NOCA works closely with hospitals and welcomes the commitment shown to shared learning and transparency in this report”.

KEY FINDINGS

- This report presents crude in-hospital mortality rates² over the last 10 years, between 2007 and 2016, for the six medical conditions included.
 - In AMI there was a significant reduction (40%) in deaths per 100 admissions from 9.3 in 2007 to 5.6 in 2016.
 - For heart failure, there was a small but significant reduction (16%) in deaths per 100 admissions from 9.5 in 2007 to 8 in 2016.
 - For ischaemic stroke, there was a significant reduction (36%) in deaths per 100 admissions from 15.2 in 2007 to 9.8 in 2016.
 - There was no significant reduction in deaths per 100 admissions for haemorrhagic stroke.
 - For COPD, there was a small but significant reduction (22%) in deaths per 100 admissions from 4.6 in 2007 to 3.6 in 2016.
 - For pneumonia, there was a small but significant reduction (20%) in deaths per 100 admissions from 13.8 in 2007 to 11.1 in 2016.
- This report also presents standardised mortality ratios (SMR) for in-hospital mortality in 2016 (2014-2016 combined for haemorrhagic stroke). All hospitals were within the expected range for heart failure, haemorrhagic stroke, COPD and pneumonia. There was one hospital outside the expected range for AMI and one hospital outside the expected range for ischaemic stroke. Both hospitals carried out detailed reviews and a summary of their findings are contained in the report.

Margaret Murphy, Patient Advocate for World Health Organisation commented “The sharing of reviews and learning through the medium of this report is to be welcomed as beneficial for all hospitals while also contributing to relevant improvement in the quality and safety of patient care”.

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.

ENDS

NOTES TO EDITOR

Copies of the report will be available to download from www.noca.ie/publications
For further information or comment, contact NOCA at 01 402 8577 or nahm@nocai.ie

¹ The NAHM tool allows all hospitals to view and monitor all diagnoses. Diagnoses included in this report have met specific inclusion criteria, as set out in the main report on Page 22.

² Crude in-hospital mortality rate: this is a measure of the number of deaths per 100 admissions.

What is an SMR?

Standardised Mortality Ratio (SMR) is an important measurement tool that compares hospital mortality with the overall national average rate for that speciality or diagnosis. SMRs are calculated as a ratio of the actual number of deaths to the expected number of deaths among patients in acute hospitals, presented with control limits set at 99.8%. The expected number of deaths is calculated using statistical methods to risk adjust for factors that are known to impact in-hospital mortality.

- age
- gender
- the presence of certain co-morbidities based on the Charlson index (e.g. congestive heart failure, dementia, COPD)
- emergency or non-emergency admission
- admission source (home, nursing home or other hospital)
- emergency admissions within the preceding 12 months
- receipt of palliative care (as indicated on HIPE)
- indicator of deprivation (medical card)

The SMR provides a starting point to assess mortality rates and identify areas for potential improvement.

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).

Does an SMR outside of control limits mean the hospital in question is unsafe?

No it does not mean a hospital is unsafe.

Where a hospital's SMR is unexpectedly high or low, further examination is warranted. 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 could happen for many reasons:

- Data collection
- Differences in patient case mix (not accounted for by Charlson Index)
- Differences in service delivery
- Or quality of care

Hospitals should investigate an SMR which is outside the expected range to see if a reason can be identified for this result. The purpose of the SMR is to provide hospitals with a means to review their mortality and to support their efforts to identify potential areas for improvement.

How is this report different to NHQRS published by the DoH?

NHQRS uses the OECD methodology that allows for between hospital and between country comparisons. It applies a standardisation measure known as Age and Sex Standardised Death Rate (ASDR) and is presented with 95% Confidence Intervals.

In contrast, NAHM utilises a different methodology that allows analysis of their own hospital data that may indicate issues of quality of care, service resourcing or even data quality. Hospitals can compare themselves with the national SMR rate. It applies Standardised Mortality Ratio (SMR) and adjusts for six further variables (in addition to age and gender) with 99.8% Confidence limits/Intervals.