



Royal College  
of Physicians

National Mortality Case  
Record Review Programme

# The National Mortality Case Record Review (NMCRR) Programme

## Structured Judgement Mortality Review – the science background

2018

Supported by



Commissioned by HQIP and funded by NHS Improvement



## Structured Judgement Mortality Review – the science background

The science base for Structured Judgement Review (SJR) builds on a long history of retrospective case record review methods development. This methodological work centres on questions concerning the ways clinical judgements on care provision can be described both quantitatively and qualitatively, and also on how a focus can be brought onto a particular point in care. Some of the key issues underpinning the development of explicit structured judgement review within a phase-of-care framework are discussed here.

Hulka *et al* (1979) contributed to the early methods debate by describing two forms of quality measurement in a study of ambulatory care peer review – explicit criteria and implicit written judgements. Explicit criteria were developed to ask binary questions – for example ‘was the blood pressure measured, yes or no’ or ‘was the systolic blood pressure above 140 mmHg, yes or no’. Implicit judgements might take the form of statements about the care of the blood pressure, such as ‘treatment being given to manage the blood pressure is x’. But usually these statements did not include an explicit comment about what the reviewer thought of the value of the treatment. Because the statements were therefore ‘implicit’ it was often left to the reader of the review to determine whether or not the reviewer thought the treatment was appropriate.

A combination of explicit criteria and implicit written judgements subsequently formed the basis of North American peer review and British medical audit programmes for a long period. For example, a large study in British General Practice during the 1980s used this combination of methods to assess quality of care, with explicit criteria being based on clinical standards set by groups of General Practitioners (The North of England Study of Standards and Performance in General Practice, 1 and 2 (1992)).

The concept of a process of care framework that would provide a phase of care structure for case note review was developed by Rubenstein *et al* (1989)). It was subsequently used in the assessment of nursing care quality using both explicit criteria and implicit statements (Pearson *et al* (2000)) and later, for example, in such areas as the assessment of cardiac surgery deaths (Shannon *et al* (2012)).

Advances in the development of explicit review criteria came with the use of structured methods to seek professional views on criteria selection (for example, Campbell *et al* (1999)) and later through the structured development of review criteria derived from evidence-based clinical guidelines (Hutchinson *et al* (2003)).

In the early 1990s the by-now well established trend of using implicit review judgements as a key component of peer review and quality assessment began to raise concerns about the replicability (repeatability) of written implicit judgements of care. That is, when two clinicians from the same clinical background reviewed the same clinical record, it became apparent that implicit statements on quality of care could be divergent, with agreement at levels of no more than 60% to 70%. However, it could be argued that it may not be possible to improve on this level of agreement within the setting of retrospective case note review.

Hofer and colleagues (2000) showed that this divergence was not just because of the review method *per se*, but that it also reflected the diversity of clinical judgements between two or more clinicians reviewing a case. There were, in effect, measurable levels of dis-agreement between reviewers, referred to as inter-rater reliability. Lilford and colleagues (2007) supported the concerns about disagreement though a systematic review of the literature on inter-rater reliability in case note review, with Zegers *et al* (2010) later adding further confirmation from the results of a large study of adverse events in hospitals in the Netherlands.

Partly as a result of these issues about agreement between clinical reviewers, a large study was commissioned by the NHS Health Technology Research Programme in England to explore the question of which review methods were most appropriate for quality and safety review, and under what circumstances (Hutchinson *et al* (1)(2010), (Hutchinson *et al* (2)(2010)).

In this study, evidence-based review criteria and structured implicit review methods were to be used to review the quality and safety of care of 1566 acute care patients across English 20 hospitals. Initial study development work indicated that the written implicit review criteria statements often did not include enough clarity on whether care was expressly thought to be good or poor for the study team to understand how reviewers had come to their judgements on care. Agreement (inter-rater reliability) was similar to that of other studies in the field.

A reviewer training programme was therefore developed with the aim of enhancing the understandability (interpretability) of the judgement comments. Reviewers were asked to be more explicit in their judgement comments, for example using a form of words such as ‘this was good care because etc.’ This approach to case record review that was subsequently entitled ‘explicit judgement review’.

The structured explicit judgement review approach was explored and refined in more detail through the analysis of a sub-set of 119 cases – those who died in hospital among the overall cohort of 1566 study cases (Hutchinson *et al* (2013)). Results demonstrated a strong relationship between the qualitative explicit judgements and phase of care scores ( $p < 0.0001$ ). For over 80% of the 119 cases care was judged at least satisfactory and was of high quality for half of the cases. Care for people who had died during the index admission was similarly as good as for those people who were discharged from hospital.

Based on this body of R&D evidence, explicit structured judgement review, supported by a training course, has been used in a number of hospitals in the NHS Yorkshire and the Humber region since 2014 (Hutchinson *et al* (2015)). This method was subsequently chosen as the basis for the Royal College of Physicians National Mortality Case Record Review Programme in 2016.

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January 2018  
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