

## An epistemology of patient safety research: a framework for study design and interpretation

This series of four articles provides a valuable and timely analysis of methodology for evaluating interventions to improve patient safety and healthcare quality improvement. The first article emphasises the important role for strategic analysis of previous research to maximise the chances of success. It borrows from Donabedian to describe a “causal chain” that explores how an intervention might affect an organisation’s processes and health outcomes. The second article focuses on study design and makes the often-overlooked point that the salient intra-class correlations in cluster studies are smaller with before and after designs than with cross-sectional designs. The authors explore in depth the stepped wedge, a valuable controlled before-and-after design. The third article examines study end points. The causal chain is revisited to argue that end points should be measured at all levels: beyond the level of the intervention for effectiveness, at the level of the intervention for fidelity, and proximal to the intervention to place results in context. The final article advances the argument that all measurements should be integrated and include appropriate, relevant, qualitative data. Such integration can be made explicit by means of a Bayesian approach to produce a comprehensive picture of the effects on an organisation of the intervention. The four-paper series is accompanied by a lively and provocative commentary.

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## Assessing UK doctors’ professional competence by asking patients and colleagues

The UK General Medical Council Patient and Colleague Questionnaires to assess professional performance were tested across a wide range of UK practice settings. To achieve acceptable levels of reliability, a minimum of eight colleague questionnaires and 22 patient questionnaires are required. Both patient and colleague responses were highly skewed toward favourable impressions of doctor performance, with high internal consistency. Patient and colleague assessments provided complementary perspectives of doctors’ performance. Older doctors had lower scores than younger doctors. Doctors from a mental health trust



and doctors providing care in a variety of non-NHS settings had lower patient scores compared with doctors providing care in acute or primary care trust settings. This questionnaire appears to discriminate across a range of professional performance for use in the revalidation of doctors’ registration, with the potential for identifying a minority whose practice ought to be subjected to further scrutiny.

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## A systematic review: scholarly reports of in-hospital adverse events

This systematic review examines the many studies that have been conducted to gain insight into adverse events in hospitals. Employing a formal search that used Embase, Cochrane and Medline, eight studies were eligible and included a total of over 74 000 patient records. Primary end points were the incidence of in-hospital adverse events and likelihood of preventability, while secondary end points included provider of care; location and type; and adverse event outcome. The overall incidence was

9% with 40% appearing to be preventable. Seven percent of such events were fatal; 40% of adverse events were related to surgical operations and 15% were medication-related. The report provides a summary of evidence-based interventions that aim specifically at these categories.

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## Abstracts from the 2007 IHI Scientific Symposium

Starting with this issue, *Quality and Safety in Health Care* will publish abstracts from selected meetings where successful reports of healthcare improvement have been presented. We begin with abstracts of papers that were selected for presentation at the Thirteenth International Scientific Symposium on Improving Quality and Value in Healthcare, which occurred at the 2007 IHI Forum in Orlando, Florida, USA. *Quality and Safety in Health Care* will publish presentation abstracts from the 2008 International Forum on Quality and Safety in Health Care in Paris, France in a forthcoming supplement.

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