A systematic review of electronic patient records using the meta-narrative approach: empirical findings and methodological challenges

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Systematic reviews are central to the enterprise of evidence-based medicine (EBM). However, traditional 'Cochrane' reviews have major limitations, especially when dealing with heterogeneous methodologies or an applied setting. The meta-narrative review (see Soc Sci Med 2005; 61: 417-30) is one of several new methods that seek to address pragmatic policy-level questions via broad-based literature reviews.

Inspired by Kuhn, meta-narrative review takes a historical and paradigmatic approach to considering different areas of research activity. As an interpretive tool, the approach seeks distinct research traditions, each with its own meta-narrative. We then use these 'stories of how research unfolded' as a way of making sense of a diverse literature. Incommensurability between different traditions is seen not as a problem to be lamented or resolved but as a window to higher-order explanations about the nuances of empirical data and what these nuances mean for different applied situations.

Having originally developed the meta-narrative method for a study of the diffusion of innovations in healthcare, we are now applying it in a review of the electronic patient record (EPR) in an organizational context. We have collated some 600 papers and books across multiple research traditions including health informatics, information systems research, computer-supported cooperative work (CSCW) and sociology. This very contemporary topic area is raising interesting methodological questions. For example, the EPR literature does not comprise as cleanly delineable traditions for four main reasons:

1. Information and communications technology research is a particularly fast-moving field, so paradigm shifts are relatively common (*e.g.* the rise of CSCW out of human-computer interaction research).
2. In the electronic age, it is easy for researchers to explore beyond their own discipline and 'borrow' theories, ideas and methods from elsewhere. Journal editors may commission overviews from experts in another tradition; authors may explicitly address an audience in another tradition. Research traditions can begin to converge (*e.g.* papers bringing together CSCW, information systems research and STS).
3. Some researchers are adept 'boundary spanners', writing for a number of different academic audiences and adapting their theoretical pedigree to fit (*e.g.* Marc Berg).
4. Some traditions are characterized not by a single unified paradigm but by active dialogue between competing paradigms (*e.g.* 'hard' versus 'soft' perspectives on knowledge management).

This work contributes to the STS literature by critically questioning the nature of rigour in secondary research. The EBM movement values 'Cochrane' reviews because they meet positivist criteria (*e.g.* they are rational, objective, replicable, data-led, and transferable across contexts). In contrast, the meta-narrative review is interpretive, reflexive, problem-oriented and work-led, and makes no claim to either replicability or transferability. Rigour is redefined in terms of plausibility, authenticity and usefulness – raising the radical suggestion that the evidence base for key policy decisions can never be set in stone.