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A meta-narrative review of electronic patient records

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Policymakers in the UK and US continue to present the electronic patient record (EPR) as a panacea for improving and reforming healthcare, themes common to many large scale IT projects which have gone before. Yet the promises of numerous EPR programmes, big and small, have been challenged by failed adoptions. Heterogeneity in methods and epistemologies presents a challenge for the traditional 'Cochrane' approach to reviewing the relevant literature. Most prior reviews have been within a single disciplinary perspective and come to very different conclusions.

The meta-narrative review (see *Soc Sci Med* 2005; 61: 417-30) seeks to address pragmatic policy-level questions. While having a broadly realist approach, the meta-narrative review differs in taking a historical and paradigmatic approach to considering different areas of research activity. As an interpretive tool, we seek 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.

We are carrying out a meta-narrative review of the electronic patient record in an organisational context. We have collated over 500 papers and books across multiple research traditions including health informatics, information systems research, computer-supported cooperative work (CSCW) and science & technology studies (STS). This very contemporary topic area raises methodological questions. The EPR literature cannot be as neatly divided into discrete and recognisable research traditions as in previous work. Information technology research is a particularly fast-moving field, so we can observe paradigm shifts, research traditions converging, active dialogue between competing paradigms and individual researchers who span disciplinary boundaries.

At time of writing, the review is still in progress, but preliminary results suggest some key factors in understanding EPR adoption and its effects. Much of the informatics literature espouses a techno-utopian vision based on a model of technological determinism, but research in other disciplines stresses recursive models, where technology adapts to context and context adapts to technology. There have been different approaches to the competing affordances of paper and electronic media, with health informatics focusing on the advantages of electronic media while CSCW and technology structuration research stress that paper has advantages too.

Many disciplines stress the EPR as something that supports work rather than as a container of separable and objective knowledge. As different health care professionals (HCPs) do different work, they have different requirements of the EPR. The EPR often promotes administrative functions over direct clinical functions. Co-operative work between different

HCPs can entail translation and negotiation, thus the EPR is a communicative, boundary object rather than an agreed or agreeable common account. Attempts to integrate and standardise can paradoxically lead to a certain level of fragmentation.

Policymakers' view of medical work and their expectations for the EPR are often at odds with what researchers, from different traditions using different methods, observe. These results may have broader implications for IT projects beyond health care.

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<http://www.campbellcollaboration.org/artman2/uploads/1/Pearson_extending_boundaries.pdf>