

Electronic patient records are not a panacea

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Large-scale electronic patient record (EPR) programmes promise much but sometimes deliver little, according to a new study by UCL researchers that reviewed findings from hundreds of previous studies from all over the world.

The major literature review, published today in the US journal *Milbank Quarterly*, identifies fundamental and often overlooked tensions in the design and implementation of EPR programmes. The findings have implications for President Obama's election promise of "a computerized medical record for every American within five years", and for other large-scale EPR programmes around the world.

First author Professor Trish Greenhalgh of UCL's Department of Open Learning said: "EPRs are often depicted as the cornerstone of a modern health service. According to many policy documents and political speeches, they will make healthcare better, safer, cheaper and more integrated. Implementing them will make lost records, duplication of effort, mistaken identity and drug administration errors a thing of the past.

"Yet clinicians and managers the world over struggle to implement EPR systems. Depressingly, outside the world of the carefully-controlled trial, between 50 and 80 per cent of EPR projects fail - and the larger the project, the more likely it is to fail. This comprehensive review suggests that the EPR is a complex technology introduced into a complex system - and that only a small proportion of the research to date has been capable of addressing these complexities.

"Our results provide no simple solutions to the problem of failed EPR projects, nor do they support an anti-technology policy of returning to paper. Rather, they suggest it is time for researchers and policymakers to move beyond simplistic, technology-push models and consider how to capture the messiness and unpredictability of the real world."

Key findings of the new review include:

- While secondary work like audit and billing may be made more efficient by EPRs, primary clinical work can be made less efficient;
- Paper, far from being technologically obsolete, can offer greater flexibility for many aspects of clinical work than the types of electronic record currently available;
- Smaller, more local EPR systems appear to be more efficient and effective than larger ones in many situations and settings;
- Seamless integration between different EPR systems is unlikely ever to happen, as human input will probably always be required to re-contextualise information for different uses.

Co-author Dr Henry Potts from UCL's Centre for Health Informatics and Multiprofessional Education (CHIME), added: "There has been considerable prior debate in the media and among academics about the benefits and hazards of EPR systems. We believe the next generation of research should focus on how human imagination, flexibility and collaboration can work with electronic systems and help overcome their inherent limitations, thereby allowing us to realise the full potential of EPR systems."

"In the US, the debate over these issues is just beginning and it's important that [policymakers](#) worldwide pay attention to the problems and issues we raise in order to avoid costly mistakes."

The research was sponsored by the Medical Research Council, the UK Department of Health and the UK NIHR Service Delivery and Organisation programme. The full text of the paper is available for downloading free of charge at Milbank.org.

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