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Conference Abstract

Adopting telehealth innovations: when evidence is not enough

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Abstract

Medical and healthcare practice in the 21st century is expected to be 'evidence-based'. Health services need to assess evidence about new technologies and innovations, but current processes are highly structured and too focussed on 'facts' without a recognition of the values that are incorporated or the beliefs and principles of service users (Stamm and Perednia, 2000,Koch, 2006). In the development, marketing, adoption, and implementation of telehealth , communication, training, cultural sensitivity, and end-user customisation are critical. As Ackerman and colleagues suggest, '[T]elehealth is ultimately a system of systems in scale and complexity (our italics). In using telehealth to implement personalised care, 'we must appreciate system complexity as telehealth moves toward increasing functionality, integration, interoperability, outreach, and quality of service' (2010).

The collection of evidence to demonstrate that an innovation is suitable for adoption within health services is normally the responsibility of the supplier or inventor, often through an evaluation or pilot study. Evaluations are usually designed to answer the questions 'does it work?' and 'does it save money, or offer better benefits for the same money?' For telehealth solutions, many innovations are piloted and performance evaluated, but relatively few pass into mainstream adoption (Joseph et al, 2011).

Telehealth innovations, usually around application, software and user interactions, are based on information and communications technology that may be mature in other domains. In many cases, telehealth innovations are designed to be used by patients or carers in the home and may rely on domestic infrastructure (eg. a broadband or telephone connection). Innovations often include differing healthcare professions and social care providersThese factors contribute to problems in adoption.

Service user involvement in evaluation of applications based innovations lead to modification and enhancement. Rather than this being an opportunity, the formal evaluation-to-adoption process assumes a more constrained 'waterfall' model of product development. Adapting the technology based on user feedback, at the pilot stage, would require a completely new evaluation to be undertaken. In practice therefore, technology providers often offer to market a product they know may be less acceptable to the user.

Secondly, timescales for piloting and evaluation are often longer than the technology lifetime. By the time something has been evaluated, an ICT based innovation could be out of date. Thirdly, and

We consider how evaluation can be improved by:

Learning lessons from other consumer ICT domains;

Engaging users iteratively in 'brief evaluations';

Reflecting the timeframe for the equipment;

Developing comparative processes for evaluating a number of differing systems in parallel;

Setting and evaluating robust outcome objectives for telehealth solutions;

Co-production, private-public,and service-consumer.

We are developing a model to inform the collection of evidence for telehealth innovations, to make it more appropriate to the multi-stakeholder adoption process. This will consider especially lessons learned from other domains, where technology adoption may work more smoothly in spite of similar levels of risks.

Keywords:

Adoption, evidence, evaluation, pilot, co-design

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