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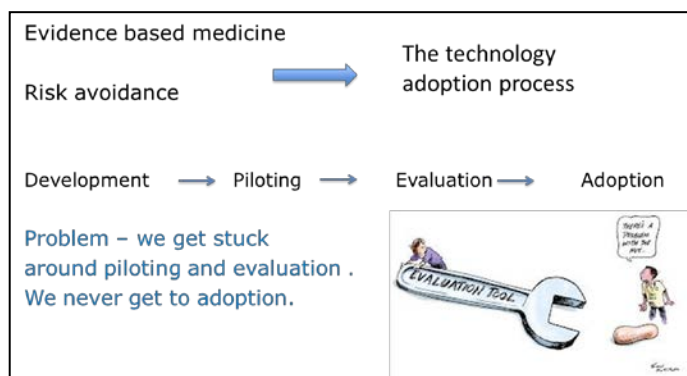
## The Stakeholder Empowered Adoption Model (SEAM) for Telehealth

### Technology adoption issues in telehealth

Evidence based medicine and the highly structured regulatory system that protects us from risks mean that many good innovations get stuck in the pilot/evaluation stage and never become adopted as mainstream services.

There are particular problems with telehealth. Firstly, the technology is mature in other domains, but often has short product lifecycles, so that a conventional RCT approach

simply takes too long. Secondly, the users are not just healthcare staff, they are also patients and service users (or their families), so the stakeholder group is complex. There could be more than one professional group, or healthcare organisation involved. Some elements of the solution (e.g. a smartphone) may not even be owned and maintained by the patient.



All these stakeholders influence if and how the innovation is adopted, although the transactional relationship just involves two of them (the commissioners and the supplier). In many cases, telehealth solutions that provide significant patient benefits may be obstructed as they cause real implementation problems in someone's work flow.

### The Stakeholder Empowered Adoption Model

In brief, the model provides a process for stakeholder values, benefits and goals to be incorporated into an evaluative pilot so that appropriate evidence is collected to enable adoption to take place<sup>i</sup>.

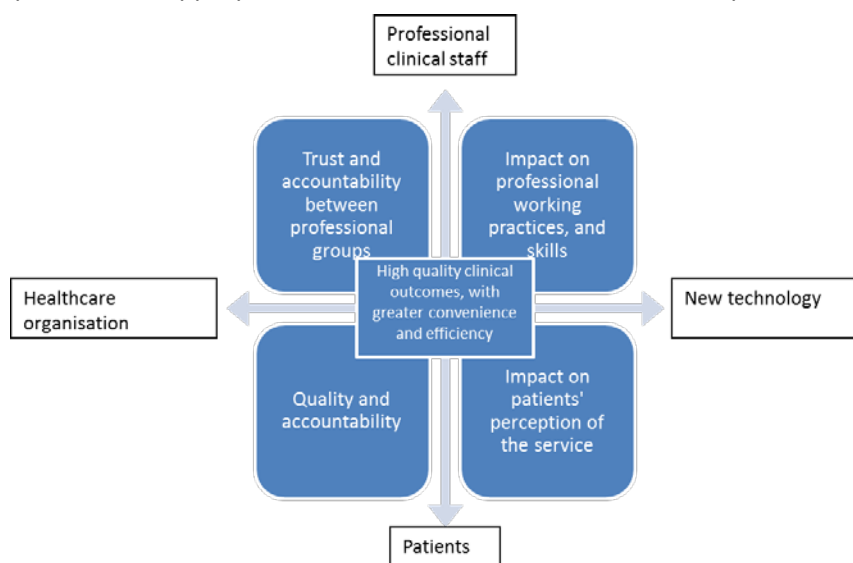


Figure 1: The framework for understanding values of and impact on each stakeholder group within the Stakeholder Empowered Adoption Model

Initial work has identified some of the barriers to adoption of case studies where pilots have been ostensibly 'successful'. These include shift of a task from one professional group to another, requiring additional shifts in the one and loss of posts in another; difficulties in responding to additional out of hours or emergency communications from patients; work schedules that do not allow time for emails/messages/phone interactions. Interestingly, although telehealth is a disruptive technology to patients as well as to health professionals, the disruption is generally perceived to be outweighed by the benefits to patients.

The SEA Model uses 'values' alongside more conventional 'evidence' to ensure that the impact on and benefits to each stakeholder group are identified and can be used to make sure the right evidence is gathered, then used appropriately to design a service that can be adopted.

### Using the model in practice

SEAM provides a rigorous academic framework to perform an objective analysis of stakeholder needs. Within the model, there is a process for working alongside stakeholders before, during and after a pilot to ensure that the benefits and appropriate evidence is available to each of the decision makers. The University of Cumbria can offer evaluative adoption support on a consultancy or research basis, with a remit to publish the work and present it objectively to commissioners and policy makers. Key to the process is a focus on implementation, with an iterative and action based approach to evaluation.

Where appropriate, we also provide training for clinical staff, particularly nurses and allied health professionals, in telehealth topics (eg. introduction to the technology, IT basics, supporting 'empowered patients', designing self-management programmes, ethical issues in telehealth).

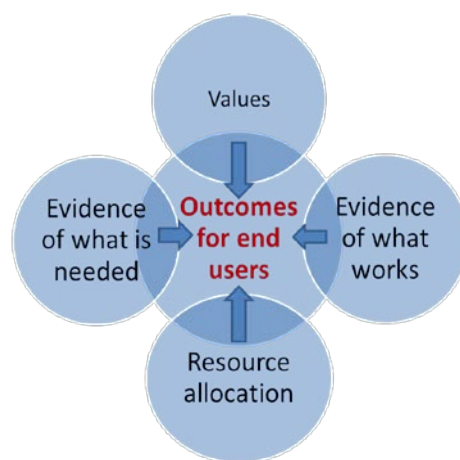


Figure 2: Using a values approach in combination with evidence to understand impacts on end users and stakeholders

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<sup>i</sup> For more information see Marshall, C.Heginbotham. *Adopting telehealth innovations: when evidence is not enough*. The Kings Fund International Congress on Telehealth and Telecare July 2013. <http://view6.workcast.net/?cpak=9103627766822086&pak=3108794281894367> and submitted as a peer reviewed journal article to the International Journal of Integrated Care.