

Little evidence to support most eHealth technologies, such as electronic patient records

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Despite the wide endorsement of and support for eHealth technologies, such as electronic patient records and e-prescribing, the scientific basis of its benefits -- which are repeatedly made and often uncritically accepted -- remains to be firmly established.

Furthermore, even for the eHealth technologies that have proven to be successful, there is little evidence to show that such tools would continue to be successful beyond the contexts in which they were originally developed. These are the key findings of a study by Aziz Sheikh (University of Edinburgh, Edinburgh, Scotland) and colleagues, and published in this week's [PLoS Medicine](#).

In the study, the authors systematically reviewed the published systematic review literature on eHealth technologies and evaluated the impact of these technologies on the quality and safety of [health care delivery](#). The 53 reviews (out of 108), that the authors selected according to their criteria and critically reviewed, provided the main evidence base for assessing the impact of eHealth technologies in three categories: 1) storing, managing, and transmission of data, such as [electronic patient records](#); 2) clinical decision support, such as e-prescribing; and 3) facilitating care from a distance, such as telehealthcare devices.

The authors found that the evidence base in support of eHealth technologies was weak and inconsistent and, importantly, that there is

insubstantial evidence to support the cost-effectiveness of these technologies. They also found some evidence that introducing these new technologies may sometimes generate new risks, such as prescribing practitioners becoming over-reliant on clinical decision support for e-prescribing or overestimate its functionality, resulting in decreased practitioner performance.

The authors conclude, "in the light of the paucity of evidence in relation to improvements in patient outcomes, as well as the lack of evidence on their cost-effectiveness, it is vital that future eHealth technologies are evaluated against a comprehensive set of measures, ideally throughout all stages of the technology's life cycle." They add: "Such evaluation should be characterised by careful attention to socio-technical factors to maximise the likelihood of successful implementation and adoption."

More information: Black AD, Car J, Pagliari C, Anandan C, Cresswell K, et al. (2011) The Impact of eHealth on the Quality and Safety of Health Care: A Systematic Overview. PLoS Med 8(1): e1000387. [doi:10.1371/journal.pmed.1000387](https://doi.org/10.1371/journal.pmed.1000387)

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