Chapter 56
Clever Health:
A Study on the Adoption and Impact of an eHealth Initiative in Rural Australia

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ABSTRACT

This chapter reports on the evaluation of Clever Health, an Australian e-health project. The evaluation took place from mid-2007 through 2010 and consisted of both qualitative and quantitative approaches to capture awareness, expectations, and use of Clever Health components—which included video-conferencing for patient care, professional development, and peer support—and to compare initial perceptions and expectations to perceived changes in awareness and uptake of Clever Health components. The study found that while use of components increased at a satisfactory pace, health services and professionals struggled with change management issues, which, in turn, impacted changing work practices. Findings suggest that it is imperative to address and integrate the human factors of e-health delivery in the rollout of future e-health programs. The study proposes a robust evaluation framework for future telemedicine projects that uses a patient-centred unit of analysis and examines the costs and benefits that accrue for different stakeholders.

INTRODUCTION

One of the more significant developments over the past two decades has been the emergence and widespread adoption and diffusion of Information and Communication Technologies (ICT). During the past two decades, society has been witnessing an ICT and knowledge revolution as the result of the rapid development of ICT. The arrival of digitised telephone networks and the computer modem in the 1980s facilitated the electronic retrieval, transmission and exchange of data, thereby transforming computers into veritable gateways to information. Soon thereafter, globally connected computer networks formation of the Internet and the world wide Web, commonly referred to as "the Web", started linking and exchanging information via the Internet, allowing millions of people around the world to access, contribute and retrieve information as well as interact with one another online (Negroponte, 1995).

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ICT has captured the attention of health care providers as well as health policy makers, who are encouraging the use of ICT to address issues such as inequality of access to health care, the need to reduce health care delivery costs, and the potential of ICT-enabled healthcare to improve standards of health care (Obstfelder et al, 2007). As well as from capital investments, the Australian Government is investing in electronic health records and new technology that will allow primary health care practitioners to deliver better and safer services. Given Australia's dispersed geography, improvements in technology are expected to enable more services to be provided within patients' homes, allowing for greater convenience to people in regional, rural and remote locations. This could, for example, enable a patient with heart disease who usually needs to travel to see their cardiologist, use local videoconference facilities instead (Commonwealth of Australia, 2011).

A particular strength of e-health – interchangeably referred to in this chapter as telemedicine, encompassing the use of ICT and Web-based technologies to remotely manage, deliver, access or enhance health services – is the capacity to increase and/or provide access to healthcare services previously unavailable in rural and remote locations. However, a recent national study (Moffatt & Eley, 2011) on the perceived use and usefulness of telemedicine from the perspective of users and providers identified a number of barriers that hinder the uptake of e-health as the preferred mode of service delivery. The latter authors raise issues in the domains of policy priority, education and training, lack of funding, lack of time in terms of workload implications, poor infrastructure in terms of Internet access in rural Australia, and lack of access to equipment and skills as the most significant barriers.

Although Moffatt & Eley (2011) conclude that telemedicine is not a rational response to the current climate with a reported preference for conventional service delivery, e-health initiatives continue to lead and traverse new ground in the areas of electronic service delivery and patient care. As it is important to widely share the lessons learned from such initiatives, this chapter reports on the evaluation of Clever Health, an e-health project funded by the Federal Government of Australia and administered by the Grampians Rural Health Alliance Network from mid 2007 through 2010. The evaluation took place over a two-year period and consisted of both qualitative and quantitative approaches to capture awareness, expectations and projected use of Clever Health components – which included video-conferencing, eLearning, patient care, and peer support – and to compare initial perceptions and expectations to perceived changes in awareness, uptake and impact of Clever Health components.

BACKGROUND

In late 2006, the Grampians Rural Health Alliance (GRHA) led a consortium of agencies in applying for a A$3.385 million grant under the Clever Networks program managed by the Australian Government to use technologies such as Video-Conferencing (VC) to provide more effective patient treatment, better peer support for health professionals in the GHRA network and the continued development of high quality health services in the region.

The Grampians region of Victoria stretches from the urban fringe of Melbourne to the South Australian border, including major regional centres such as Ballarat as well as some of the most sparsely populated areas of Victoria. The GRHA network in the Grampians region encompasses 12 public Health Services – almost all of which are multi-campus and three of which are major hospitals – two stand-alone community health agencies and five bush-nursing centres. There are approximately 2500 healthcare workers in connected health services, providing a comprehensive