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Prospective Evaluation Strategy for Implementation of a Web-Based Care Planning and Communication System in General Practice

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Abstract

Global burden of chronic disease is increasing rapidly. E-health systems can play an active role to benefit the management of patients with chronic conditions.
HealthConnect SA is conducting a trial of a web-based care planning and communication system. The system is expected to facilitate the communication and collaboration between members of the primary health care team and to improve the health outcomes of the patients. A prospective evaluation methodology using mixed qualitative and quantitative techniques is designed to identify factors which influence the adoption of such a system in primary health care. The evaluation findings will inform the business needs and requirements for implementation of a state-wide online care planning and communication system.

Keywords:

internet, communication, care planning, general practice

Introduction

Global burden of chronic disease is increasing rapidly and is projected to account for 75% of all deaths by 2020 (World Health Organization 2004). Effective prevention and management of chronic conditions is a key policy objective of the Australian health system. It relies on coordinated care from a multidisciplinary team [1]. New chronic disease management items (GP Management Plan and Team Care Arrangement) were introduced as part of the National Chronic Disease Strategy in Australia to support General Practitioners (GPs) in providing care for patients with chronic medical conditions, including patients who need multidisciplinary care [2]. A care plan is a personalized management plan containing details of a patient's problems and needs. It outlines goals, treatment services and strategies to achieve those goals, and planned activities for monitoring progress and for reviewing the care plan. The care plan is developed between the patient, his/her family or nominated representative, and the health care provider (or provider team). The plan can relate to services from one or a number of health care providers or agencies [2].

E-health technologies and systems can play an active role to benefit health care providers and patients. Health*Connect* is an Australian national strategy to improve safety and quality in health care by establishing a range of standardised electronic health information products and services for health service providers and consumers. Health*Connect* South Australia is conducting a 12 month trial of a secure web-based system for communication and collaboration between health care providers involved in care planning. Flinders University is contracted to conduct a formal, independent evaluation of the trial.

Methods

Demonstrating a clear and unambiguous advantage for its users is a critical factor for adoption of an innovative electronic system into clinical practice [3, 4]. Implementing such a system requires attention to timing of events, acquisition and delivery of resources and development of human resource support structure [5].

The trialled web-based system (OzDocsOnline) enables health providers to work together to improve the management of chronic conditions. It is a tool enabling health care providers to create, share and store care plans on a secure server. Patients are able to access their care plans securely via the Internet.
A prospective, formative evaluation methodology using mixed qualitative and quantitative techniques was designed to determine the factors influencing the diffusion of the system in primary health care and to meet the main information needs of HealthConnect SA for the implementation of a state-wide care planning system after the end of the trial.

The evaluation methodology involves collecting data from the following information sources:

Surveys of adopting organizations (General Practices) to determine practice characteristics initial expectations and attitudes to the system towards the end of the trial.

Regular interviews with Division of General Practice liaison officers who disseminate the system to practices in their area to establish progress and issues arising during its implementation.

Case studies to provide in-depth understanding of the effects of implementation of the system in different contexts.

Focus groups with other health providers (allied health, specialists, pharmacists) and consumers to determine their erception of the effects of the system in care planning.

Monitoring Medicare item numbers relevant to care planning.

Monitoring the web-based system to determine extent of use.

The evaluation also aims to assess overall satisfaction and barriers in uptake of the system in different settings in order to make recommendations for improvements.

Results

The trial has been widely promoted and the current participants include three divisions of General Practice from South Australia, 35 general practices, 70 General Practitioners, 200 allied health providers (dietitians, physiotherapists, podiatrists, psychologists, social workers, occupation therapists, etc), 15 specialists / pharmacists and 45 patients with electronic care plans on the system.

Six month after the trial commenced the evaluation showed seven factors that influence the adoption of the innovative electronic care planning system in primary health care:

1/ **Proper timing of events** – implementation at the right moment and proper scheduling of the implementation steps;

2/ **Strong organizational structure** – strong personal relationships between the implementers and the adopters;

3/ **Effective implementation activities** – using wide and effective promotion methods (existing networks, information evenings, newsletters), dissemination of adequate communication/promotion materials;

4/ **Adequate resources** – proper IT equipment and secure broadband connection, prior computer knowledge, prior experience with EPC items, adequate training in the new system;

5/ **Comprehensive and timely support** – central helpdesk support, email address for enquiries, phone/mobile phone support, user manuals for the system;

6/ **Motivated adopters** – financial incentives in the training phase to encourage the uptake of the new system, secure broadband grants;

7/ **High-level system effectiveness** – the system has to:

- Be simple and highly integrated with existing clinical processes and systems (such as Medical Director);
- Be easy for all parties to learn and use;
- Facilitate the communication and collaboration between the health care team;

- Be accessible at each point of care;
- Secure and protective of medical information and patient privacy;
- Make a positive difference to time and revenue for health providers and to health outcomes for patients.

Discussion and conclusion

Adequate evaluation of health informatics initiatives is essential for efficiency and effectiveness of future initiatives [6]. The proposed evaluation methodology identified seven challenging factors in the uptake and use of a secure web-based system for electronic care planning. Addressing these aspects will enhance the likelihood of success of implementation and adoption of suchan innovative system for electronic care planning and communication in primary health care settings.

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