Implementing Scanned Medical Record Systems in Australia: A Structured Case Study on Envisioned Changes to Elective Admissions Process in a Victorian Hospital

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ABSTRACT

In recent years, influenced by the pervasive power of technology, standards and mandates, Australian hospitals have begun exploring digital forms of keeping this record. The main rationale is the ease of accessing different data sources at the same time by varied staff members. The initial step in this transition was implementation of scanned medical record systems, which converts the paper based records to digitised form, which required process flow redesign and changes to existing modes of work. For maximising the benefits of scanning implementation and to better prepare for the changes, Austin Hospital in the State of Victoria commissioned this research focused on elective admissions area. This structured case study redesigned existing processes that constituted the flow of external patient forms and recommended a set of best practices at the same time highlighting the significance of user participation in maximising the potential benefits anticipated. In the absence of published academic studies focused on Victorian hospitals, this study has become a conduit for other departments in the hospital as well as other hospitals in the incursion.

Keywords: Australia, Change Management, Elective Admission Process, Electronic Health Records, Process Redesign, Scanned Medical Records, Victoria

1. INTRODUCTION

Information Communication Technologies (ICT) has permeated every industry sector over the past few decades and the health sector has been no exception. In the health domain, ICT influence is seemingly significant in the area of electronic health records. A study by Ludwick and Doucette (2009) in seven countries revealed that the adoption rates for medical records are on the rise amidst concerns regarding privacy and safety of patients. In Australia, the federal
government announced in its budget plan for 2010-2011 to spend AUD467 million (USD400 million) over 2 years, to create an electronic health record for every Australian (Li, 2010), who opts for the same. In the State of Victoria, the government has implemented HealthSMART, an AUD360 million whole-of-health ICT strategy to modernise and replace ICT systems in the Public Sector (HealthSMART, 2010). In alignment with government vision, many of the health services in Australia had begun launching initiatives to implement electronic health records. This research is scoped to Australia, and is focused on the State of Victoria.

2. THE MILIEU

The Australian Standard AS 2828 pertaining to paper based health care records (Standards, 1999) define that a health care record is the primary instrument used to document the evidence of care provided now and in the future. It also provides a means of communication to other health care professionals. The methods of collecting and storing health information has transitioned from paper, to microfilms and further taken on new electronic forms (Bailey, 1997). The paper based medical record which was established within the hospital system in Australia, has evolved with varied influences including changes in clinical practice, statutory obligations, Standards Australia, Professional Colleges and Associations (Carine & Walker, 1997) and in recent years, with the pervasive power of ICTs (Ludwick & Doucette, 2008). Scanning technology is being used to build computerised patient records or CPR, as the first step of digitisation, towards transitioning into an Electronic Health Record or EHR (Chin, 1999).

An electronic longitudinal collection of personal health information, usually based on the individual, entered or accepted by health care provider, which can be distributed over a number of sites of aggregated at a particular source. The information is organised primarily to support continuing, efficient and quality health care. The record is under the control of the consumer and is stored and transmitted securely. Health Information Network for Australia (HINA) report (NEHRT, 2000)

The Medical Records Institute has developed five different levels to explain the automation process in the transition towards an EHR (Lewis & Mitchell 1998, p. 31), better known as the five levels of automation (Table 1) in the transition towards a fully Electronic Health Record system.

While scanning technology has been prevalent for many years for managing paper record storage (Myjer & Madamba, 2002), this research refers to Scanning as Level 2 automation as represented in Table 1, in the transition towards a fully electronic health record system or EHR. Scanning technology is regarded as a step to overcome some of the difficulties and act as a building block for the transition towards a fully EHR (Rhodes & Dougherty, 2003). The existing paper based records are “scanned” into a repository, where they are combined with the hospital information systems to form a comprehensive medical record (Cottrell, 2005). The Scanning process assists in eliminating errors in data entry, and at the same time addresses the need for upgrading health data.

Over the past decade, it was becoming obvious that the paper based record system is unable to supply health care professionals with all the patient information they require in a way that allows for optimum outcomes (Thakkar & Davis, 2006). One of the main weaknesses of the paper based record is that only one person, at one location can access the information at any given point of time, resulting in the sharing of information amongst healthcare professionals a cumbersome and cost inefficient task (Zeng, 2008). Conversely, the implementation of EHR within the health care system is driven by a desire to improve clinical and workflow efficiency, to share patient clinical information, to improve the quality of information by having better linkage to all caregivers, to reduce the need for file space and suppliers; and reduce the consuming time spent on retrieval and filing.
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