

Chapter 10

Caring for our Aging Population: Using CPOE and Telehomecare Systems as a Response to Health Policy Concerns

Sama Al-Khudairy
York University, Canada

ABSTRACT

An increasing senior population and national fiscal challenges affect the provision of healthcare in many ways. Keeping this in mind, the Ontario Ministry of Health and Long-Term Care's recent release of the Ontario Action Plan for Health Care (2012) aims to manage scarce resources and healthcare dollars to improve the health of Ontarians while making care available to seniors closer to home. One highly viable approach to attaining such goals is through the adoption of various healthcare technologies. Computerized Physician Order Entry Systems and Telehomecare are two examples presented in this chapter that describes how health informatics can be used as a solution to policy concerns.

INTRODUCTION

Health studies, at times, tend to be divided into separate categories, namely Health Informatics, Health Management, and Health Policy. These three areas of study, however, are highly intertwined and evidently so. For a clear indication of this link, one needs to simply examine the government's recently released *Ontario Action Plan for Health Care* (Ontario Ministry of Health and Long-Term Care, 2012). This document highlights

problem areas to be tackled in order to ensure a more patient-centered system that considers the province's aging population and fiscal challenges which both effect the ways in which health care is delivered. Among other things, the plan indicates issues of hospital readmissions, misuse of the system, and the increased strain brought upon by an aging population.

In its simplest form, this chapter aims to answer the question of how health informatics relates to health policy, if it does at all. Through the use of secondary resources (i.e., journal articles, government documents and reports), I will attempt to validate what I hypothesize to be a positive

DOI: 10.4018/978-1-4666-4321-5.ch010

correlation between health informatics and health policy and management. This will be accomplished through the use of two forms of health informatics (i.e., Computerized Physician Order Entry Systems [CPOEs], and Telehomecare). More specifically, the examination of various studies on the subject will guide this chapter and assist in describing how informatics in the field of health is capable of responding to healthcare management issues (including quality improvement, cost cutting, and wait time reduction) as well as health policy concerns (more specifically, health promotion and prevention strategies). Following a brief background on the subject, the chapter transitions into the identification of the current healthcare situation as per the needs of the elderly population. By examining issues present within the system and government initiatives in response to the situation at hand, one can begin to understand the needs and ways in which healthcare technologies can help transition Ontario's healthcare system into a better one that provides optimal care.

BACKGROUND

In February of 2012, Ontario's Health Minister Deb Matthews held a conference to discuss the recently release Ontario Action Plan for Health Care with three priorities in mind. That is, to keep Ontarians healthy, speed up their access to family health care and ensure the right care is delivered at the right time and in the right place (Ontario Ministry of Health and Long-Term Care, 2012). With that in mind, the plan sets out a number of goals to be accomplished in the years to come which bear in mind Canada's aging population and fiscal changes. This document is highly influential as it reiterates the various problem areas to be tackled from the view of key health policy players. As such, it will be the main document used in this chapter to describe ways by which health informatics can relate and respond to health policy priorities and concerns.

Among the future goals listed within the action plan is to reduce the cost of healthcare, 25% of which are attributed to preventable illnesses (Ontario Ministry of Health and Long-Term Care, 2012). Furthermore, the issue of patient safety is also, indirectly, touched on through the realization that 140,000 accounts of hospital readmissions in 2009 were made within a month of initial discharge due to a lack of appropriate home care.

A vital indicator of patient safety may be incidents of adverse events. Plainly defined, adverse events are unintentional harm or complications resulting in disability at the time of discharge, death, or prolonged hospital stays, which are a result of health care management rather than the patient's underlying illness (Baker et al., 2004). In particular, adverse drug events (ADEs), involving the unintended and harmful effects of medications on patients, account for a large percentage of adverse events in hospitals (Cadario, 2005; Casey, Moscovice & Davidson, 2006).

In 2000, a study of adverse events in 20 selected acute care hospitals across Canada, estimated that 1.6% of admitted patients experienced serious ADEs (Cadario, 2005). This translates into an approximate 40,000 such incidences each year in acute care hospitals alone. Though a number of these cases may have been unavoidable, the study also found that almost half the cases were considered to be preventable. That is, over 80% of ADEs are categorized as 'type A' in nature, which is dose-related, and is therefore predictable and avoidable. This is enough reason to ensure that ADEs have been recognized as a major healthcare issue requiring immediate attention and intervention.

Another prominent issue that continuously presented itself within this Action Plan, which is also highly related to the former issue presented, was that concerning the health and care of the senior population within Ontario. With the aging of Canada's 'baby-boomers', Ontario will exhibit a doubling of its senior citizens within the next 20 years and it is no secret that as people get

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/caring-for-our-aging-population/78695

Related Content

Application of Fireworks Algorithm in Bioinformatics

Yuchen Zhang, Xiujuan Lei and Ying Tan (2024). *Research Anthology on Bioinformatics, Genomics, and Computational Biology* (pp. 251-281).

www.irma-international.org/chapter/application-fireworks-algorithm-bioinformatics/342530

Hierarchical Density-Based Clustering of White Matter Tracts in the Human Brain

Junming Shao, Klaus Hahn, Qinli Yang, Afra Wohlschläeger, Christian Boehm, Nicholas Myers and Claudia Plant (2010). *International Journal of Knowledge Discovery in Bioinformatics* (pp. 1-25).

www.irma-international.org/article/hierarchical-density-based-clustering-white/49547

Search for Protein Sequence Homologues that Display Considerable Domain Length Variations

Eshita Mutt, Abhijit Mitra and R. Sowdhamini (2011). *International Journal of Knowledge Discovery in Bioinformatics* (pp. 55-77).

www.irma-international.org/article/search-protein-sequence-homologues-display/62301

BMP Signaling in Regenerative Medicine

Julia Zimmer, Elisa Degenkolbe, Britt Wildemann and Petra Seemann (2013). *Bioinformatics: Concepts, Methodologies, Tools, and Applications* (pp. 1252-1281).

www.irma-international.org/chapter/bmp-signaling-regenerative-medicine/76117

Mining Medical Data to Develop Clinical Decision Making Tools in Hemodialysis: Prediction of Cardiovascular Events and Feature Selection using a Random Forest Approach

Jasmine Ion Titapiccolo, Manuela Ferrario, Sergio Cerutti, Carlo Barbieri, Flavio Mari, Emanuele Gatti and Maria G. Signorini (2011). *International Journal of Knowledge Discovery in Bioinformatics* (pp. 1-17).

www.irma-international.org/article/mining-medical-data-develop-clinical/73908