Chapter 48
Strategic Information System Planning in Healthcare Organizations

Theresa Lee
University of Toronto, Canada

Amir Hossein Ghapanchi
Griffith University, Australia & Institute for Integrated and Intelligent Systems, Australia

Amir Talaei-Khoei
University of Technology Sydney, Australia

Pradeep Ray
Asia Pacific ubiquitous Healthcare Research Centre (APuHC), UNSW, Australia

ABSTRACT

The healthcare industry is a critical and growing part of economies worldwide. To provide better quality of care, and value for money, billions of dollars are being spent on bettering information systems in healthcare organizations. Strategic Information System Planning (SISP) is instrumental in making informed decisions to achieve the health organizations' goals and objectives. This paper undertakes a systematic review to gain insight into existing studies on SISP in healthcare organizations. Our systematic review of papers on SISP from 1985 to 2011 examines the background and trend of research into SISP in the healthcare industry, classification of topics in SISP, as well as sets of tools and guidelines to aid practitioners and the research community alike.

INTRODUCTION

Healthcare is a critical social and economic component of modern economies. Healthcare spending accounts for a substantial portion of gross domestic product (GDP) in industrialized countries (OECD, 2011). Social, political and economic concerns, such as an aging population structure in industrialized nations, alongside rising costs of healthcare and healthcare technology, are resulting in pressures on

cost-control as well as improved patient care. To deal with this pressing health policy issue, an increasing amount of attention is being paid to management practices of the healthcare industry to make informed decisions (Agarwal, Gao, DesRoches, & Jha, 2010). In particular, information systems (IS) are being put in to place so that healthcare organizations and systems can be held accountable for these decisions (Jaana, Teitelbaum, & Roffey, 2011; A. Winter et al., 2000). IS and Information Technology (IT) have become fundamental in the delivery of healthcare. IS investments in healthcare, have the potential to not only improve operational efficiency, but also service quality, patient satisfaction and quality of care (Bush, Lederer, Li, Palmisano, & Rao, 2009). As IS is looked upon as a key investment to addressing rising challenges of cost-control and quality improvement in the health care industry, use of IS in the healthcare industry has become an increasingly important and rapidly growing area of research.

The increasing role of IS and IT in healthcare is apparent in many geographic regions. In Europe, information and communication technology (ICT) for health is an emerging market estimated to be worth 60 billion Euros, and growing faster than all other health markets (European Commission & Reding, 2009). Canada expects to spend CAD$10 billion in the implementation of an electronic health record for all citizens (Canadian Institute for Health Information, 2009). In the United States alone, greater adoption of IS in healthcare could yield US$162 billion per year in savings (R. Taylor et al., 2005). The growing body of literature on IS and IT in healthcare reveals that IS has much to offer in managing healthcare costs, improving the quality of care, making healthcare systems safer, more affordable and accessible (Agarwal et al., 2010; Chiasson & Davidson, 2004; Fichman, Kohli, & Krishnan, 2011). IS is uniquely positioned to capture, store, process and communicate timely information to decision makers to coordinate healthcare at both individual and population levels (Fichman et al., 2011). Significant increases in IT spending in recent years have generated growing interest in its effects on cost structure, healthcare quality, and patient privacy (Chiasson & Davidson, 2004). Despite the potential benefits that IS can deliver to healthcare organizations, healthcare organizations face challenges in getting value from their IS investments. Effective use and beneficial outcomes from IS are not guaranteed and systems continue to fail to meet expectations in some way (Bush et al., 2009; Heeks, 2006).

The success of IS may depend on the extent to which healthcare organizations consider objectives and strategies in their information planning process (Bush et al., 2009). The definition of success for healthcare information systems has been a topic of interest in the research and practice community. Van der Meijden et al. (2003) have conducted a review and provided different items that need to be considered in definition of success; namely system quality; usage; user satisfaction; individual impact; organizational impact. Lau et al. (2010) have systematically looked at the factors influencing the success of information systems in healthcare settings. They indicated in-house system, developers as users, integrated decision support, benchmark practices; and also contextual issues such as provider knowledge & perception, incentives, legislation as concerns related to success of IS in healthcare settings. In addition to that, Paré et al. (2006) has indicated ownership as a strong driver for the success of clinical information systems. A way to identify objectives and strategies in the IS planning process is to use strategic information system planning (SISP). SISP is the process of identifying information systems that will assist a business in executing its organizational plans and realizing its business goals, to help information executives and top management identify strategic applications and align IT with organization needs (A. Winter et al., 2000). In coordination with an organization's business strategy and overall strategy, SISP can give directives for the construction and development of information systems, providing competitive advantage for the healthcare organizations (A. Winter et al., 2000).

Related Content

Programming Global Strategy to Maximize Net Income Modeling Legal Conditions and Corporate Values
Federico Trigosand Eduardo Manuel López (2017). *International Journal of Productivity Management and Assessment Technologies (pp. 39-57).*
www.irma-international.org/article/programming-global-strategy-to-maximize-net-income-modeling-legal-conditions-and-corporate-values/182801

Soft Systems Methodology in IT-Related Organizational Change
 (2021). *Applications of Soft Systems Methodology for Organizational Change (pp. 32-54).*
www.irma-international.org/chapter/soft-systems-methodology-in-it-related-organizational-change/259193

Technique for Risk Identification of Software Acquisition and Information Technologies
Gloria Piedad Gasca-Hurtado, Jaime Alberto Echeverri Ariasand María Clara Gómez (2018). *Global Business Expansion: Concepts, Methodologies, Tools, and Applications (pp. 1337-1352).*
www.irma-international.org/chapter/technique-for-risk-identification-of-software-acquisition-and-information-technologies/202274

The Relationships Among Environmental Turbulence and Socio-Technical Risk Factors Affecting Project Risks and Performance in NPD Project Teams
Jengchung Victor Chen, Andree E. Widjajaand Bianca Chen (2018). *Global Business Expansion: Concepts, Methodologies, Tools, and Applications (pp. 1353-1373).*
www.irma-international.org/chapter/the-relationships-among-environmental-turbulence-and-socio-technical-risk-factors-affecting-project-risks-and-performance-in-npd-project-teams/202275

Analyzing Enterprise Attribute-Dependent KPIs/KGIs by Bayesian Network-Leveraging LDA
Yutaka Iwakami, Hironori Takumaand Motoi Iwashita (2021). *International Journal of Project Management and Productivity Assessment (pp. 48-67).*
www.irma-international.org/article/analyzing-enterprise-attribute-dependent-kpiskgis-by-bayesian-network-leveraging-lda/278760