

Chapter 5

ICT in Healthcare Management, Developments, and Applications in Turkish Health Sector

Asli Suder

Istanbul Technical University, Turkey

Murat Durucu

Istanbul Technical University, Turkey

ABSTRACT

Information and communication technologies are radically changing the way that healthcare is delivered with the development of e-Health among the most remarkable changes. It plays an increasingly important role in delivering healthcare. Information and communication technology has the potential to effectively support the complexities involved in the communication that takes place both amongst healthcare professionals and their patients in the developed and developing countries. The aim of the chapter is to analyze the recent situation in healthcare management and information communication technology applications in the health industry. This chapter examines the challenges involved in human interaction and a clinical information system and allows for richer communication between the patient and those involved in their health.

INTRODUCTION

The delivery of healthcare has always been influenced by technological developments and innovations (Kluge, 2011). The development of Information and Communication Technology (ICT), make contribution to services for the decision-making process and skilled healthcare professionals. Comprehensive knowledge of patients/clients is essential contributors to the

health projects (Kouri, Karjalainen-Jurvelin, & Kinnunen, 2005). In integrated healthcare, professionals from different organizations work together in a team-oriented way to provide high quality care for a patient (Hägglund, Scandurra, & Koch, 2010). This situation requires high quality of collaborative working relationships, clarity and commonality of objectives, frequent communication among team members, a clear understanding and respect of individual roles and skills within

DOI: 10.4018/978-1-4666-6339-8.ch005

the team, and general flexibility of practitioners (Paquette-Warren, Vingilis, Greenslade, & Newnam, 2006). Healthcare professionals work in an increasingly team-oriented environment, creating a need for development of computer supported cooperative work (Scandurra, Hägglund, & Koch, 2008). Healthcare professionals, including consultants, doctors and nurses, are engaged in what is seen as a health plan for improving the health services. The information-intensive nature of the healthcare industry and the potential of Information Technology (IT) to reduce costs and improve quality of services have increased the focus on IT-based innovations (Sunyoung & Mathiassen, 2007). Electronic communication and data-processing are by no means a new phenomenon in general practice. The raising public expectations, new health technologies, and changing patterns of population needs related to demographic transitions is experienced in every country. Health sector management has the task of confronting these challenges and pursuing effectiveness, efficiency, and equity in the use of limited resources. Financial details differ markedly between countries; it is becoming more noticeable that the central problems of health sectors show a resemblance. Managers perform effectiveness, they attempt to persuade others that through their expertise, they will be able to exert control over others (who are typically situated within an organization) so that desired outcomes are achieved and resources are used efficiently. Healthcare absorbs such a large proportion of public finances that it is not surprising the health system has not escaped cutbacks. There is a pressing need to review healthcare practices to improve hospital operations and bolster their efficiency and effectiveness. Improved operations should provide better cost control, while maintaining the quality of care delivered to the public. Support processes are excellent targets because they do not necessarily have a direct impact on the quality of care provided. Hospital logistics is one such process, the goal of which is to efficiently deliver medical

supplies and pharmaceutical products to the final consumer, patient. The costs of current hospital practices and their impact on the quality of care could be evaluated.

ICT AND GLOBAL HEALTHCARE

ICT has the potential to impact upon almost every aspect of the health sector. Several terms referring to telecommunication have been used during the years as the technology and applications have developed. The information age has made profound changes in society and is slowly entering the healthcare field. Telecommunications technologies and the Internet offer a revolution in management of global healthcare systems and sustainable development. These technologies may contribute significantly to improve global healthcare system performance and to manage diversity and to reduce the inequities that separate the industrialized nations from the developing world. Millions of physicians, healthcare providers, and patients are accessing the Web daily for patient information, consultation, and distant learning. There are many issues which have been raised, such as access to the information, the security of the information, and the quality of the content on the Web. Global electronic health (e-health) has been used for some time as a conceptual term. But the convergence of three recent developments - globalization, global health and, and the network age - has allowed global e-health to emerge as a new reality that has been defined (Scott, Jennett, & Yeo, 2004). The term e-Health encompasses all electronic health data exchange. Applications of e-health to the management of healthcare include the Telehealth, Telemedicine, Telecare, Medical Informatics, Nursing Informatics, and Consumer Health Informatics. Telehealth and telemedicine practices generally fall under the banner of e-Health in a hierarchical-type fashion as shown in Figure 1.

20 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/ict-in-healthcare-management-developments-and-applications-in-turkish-health-sector/116209

Related Content

Knowledge Acquisition Process for Intelligent Decision Support in Critical Health Care

Filipe Portela, Alexandra Cabral, António Abelha, Maria Salazar, César Quintas, José Machado, José Nevesand Manuel Filipe Santos (2015). *Healthcare Administration: Concepts, Methodologies, Tools, and Applications* (pp. 270-284).

www.irma-international.org/chapter/knowledge-acquisition-process-for-intelligent-decision-support-in-critical-health-care/116220

Teamwork in Medical Organizational Cultures

Simona Vasilache (2015). *Healthcare Administration: Concepts, Methodologies, Tools, and Applications* (pp. 905-920).

www.irma-international.org/chapter/teamwork-in-medical-organizational-cultures/116254

Utilization of Primary Health Services in Hong Kong: Inequality, Risk, and Public-Private Interaction

Raymond K. H. Chanand Kang Hu (2015). *Healthcare Administration: Concepts, Methodologies, Tools, and Applications* (pp. 1159-1176).

www.irma-international.org/chapter/utilization-of-primary-health-services-in-hong-kong/116270

Radioactive Waste Management in a Hospital

Chintan Aundhia, Ghanshyam Ratilal Parmar, Chitralli Talele, Dipali Taleleand AvinashKumar Seth (2025). *Hospital Waste Management and Toxicity Evaluation* (pp. 101-132).

www.irma-international.org/chapter/radioactive-waste-management-in-a-hospital/367920

The Assessment of Actions of the Environment and the Impact of Preventive Medicine for Public Health in Poland

Anna Rosiek (2018). *Healthcare Administration for Patient Safety and Engagement* (pp. 106-119).

www.irma-international.org/chapter/the-assessment-of-actions-of-the-environment-and-the-impact-of-preventive-medicine-for-public-health-in-poland/197556