

Preface

Information systems have great potential to reduce healthcare costs and improve outcomes. The purpose of this special issue is to offer a forum for theory-driven research that explores the role of Information Systems in the delivery of healthcare in its diverse organizational and regulatory settings. In addition to the embedded role of Information Technology (IT) in clinical and diagnostics equipment, Information Systems are uniquely positioned to capture, store, process, and communicate timely information to decision makers for better coordination of healthcare at both the individual and population levels. For example, data mining and decision support capabilities can identify potential adverse events for an individual patient while also contributing to the population's health by providing insights into the causes of disease complications. Despite its importance, the healthcare domain has been underrepresented in leading IS journals. However, interest is increasing, as demonstrated by the proliferation of healthcare tracks in IS conferences, special interest groups, and announcements of special issues among leading journals.

The healthcare delivery systems share similar characteristics with most service and productive organizations but also exhibit specific characteristics, which are related to the complexity and diversity of healthcare production, including the dissimilar ways healthcare professionals discharge their clinical tasks. New requirements and technological advances occurring in healthcare, information systems, and information technology have influenced the evolving role of healthcare information systems and related technology. Relevant aspects that took place in the evolution of systems and technology in order to appropriately support healthcare organizations are:

- The diverse organizational healthcare environment of information systems, which need to be adapted to multiple types of healthcare organizations.
- Dynamic changes in the required role of information systems, following changes in the role and dynamics of all levels of healthcare delivery and management.
- The need for integration of information systems within healthcare organizations, which are also organized as networks.
- Technological advances in systems structure and communications, facilitating the implementation of integrated healthcare networks.

This special issue covers cutting edge research topics of utmost real-world importance in the specific domain of healthcare information systems, and presents studies from leading researchers and practitioners in the field.

The covered topics include computer based simulation and modeling for healthcare treatment, training, and optimization, role of healthcare information systems in improving care in different national health systems, role of healthcare information systems in fostering improved health and healthier lifestyles, challenges and impact of data standards on healthcare delivery, role of information technology in evidence-based medicine, information systems in personalized medicine, e-health Policy, privacy, security and trust issues with e-health solutions, mobile healthcare initiatives and social media in healthcare.

This book is an excellent source of comprehensive knowledge and literature on the topic of distributed health and e-health applications.

All of us who worked on the book hope that readers will find it useful.

Dionysios-Dimitrios Koutsouris, Ph.D
Athina A. Lazakidou, Ph.D

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Koutsouris, D.-D.; Lazakidou, A.A. (Eds.)

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