

PREFACE AND ACKNOWLEDGMENTS

Despite the rapid and persistent changes in information technology and its applications to healthcare problems, issues of quality, cost, and access have been with us for more than half a century. As we struggle with solutions to these fundamental problems, we are forced to reexamine and update our use of the information necessary to support management and clinical decision making. In past years, teaching the management of information services could be delegated to a small section of management education. Now, it has become central to all that we do and teach. The chief information officer (CIO) now has a seat with the executive committee for many healthcare delivery organizations. Fortunately for those in the field, the development of new information technologies has raced far ahead of their use in healthcare. The challenge that the CIO and his or her leadership team faces is to understand the potential applications of technology, strategically plan for the selection and implementation of that technology, make sure the participants of the system receive sufficient training to adequately use the technology, and find a way to pay for it.

This text provides an overview of information management and information technology for practicing healthcare executives and managers and for students interested in information technology in healthcare management. Many of these readers will never work directly in information technology, and very few will ever become CIOs. Yet these current and future leaders must understand the basic concepts of this core element of healthcare delivery. To address this need, the text reflects a new approach to addressing leadership needs by providing current and future leaders with the knowledge, skills, and competencies necessary to effectively manage healthcare information systems. These leaders must exhibit competencies in core technologies, including hardware, software, and communication systems; clinical applications of these technologies; and fundamental organizational management. Consequently, we employ terminology to reflect this book's broad vision that information systems must include the management of technology, information, and human resources. The book is suitable as a textbook for a one-semester graduate or advanced undergraduate course in health information systems. It can also serve as a reference for healthcare managers and others involved in the selection and use

of health information systems. Extensive lists of Internet sources are included to provide supplemental information on the major topics covered.

Changes made in this seventh edition will render the organization of this text almost unrecognizable to many. Among the many challenges in writing a textbook on information systems for healthcare management is the absence of widely accepted, consistent terminology defining the nature and scope of information systems. To some, information systems consist of computer hardware and software, communication networks, and other technology. Others insist that it is the software that supports clinical processes. Still others concentrate on the definition, collection, storage, retrieval, analysis, and distribution of clinical and/or administrative healthcare information. These are all valid and vital elements of information systems.

Throughout this book, we employ a broad concept of information systems to include the management of technology, information, and human resources. We will use the term *information management/information technology (IM/IT)* to focus our attention on all major components of information systems. It is this perspective of information systems that has given rise to chapters on leadership, governance, and value delivery that are not often part of textbooks in this area. We recognize that not everybody will agree with this perspective, but we hope that by clarifying the concepts up front, readers will understand our approach.

Consequently, this book is about management and how the management of healthcare organizations can be improved by the *intelligent* use of information. The intelligent use of information in healthcare management does not just happen. The manager must ensure that it occurs in a systematic, formally planned manner. This book, then, deals with two important matters:

1. the management of information resources in healthcare organizations;
and
2. the effective use of information for patient care and organizational management.

Part I, “Aligning IM/IT and Organizational Strategy,” contains five chapters that demonstrate the following:

- How healthcare IM/IT supports business objectives
- How the IM/IT function is led
- Governance models of IM/IT
- The role of IM/IT in coordinating business practices within an organization
- The relationship of healthcare IM/IT to the external environment

Part II, “Blocking and Tackling,” contains two chapters describing the fundamental operations of healthcare IM/IT, including the architecture of IM/IT infrastructure and the delivery of services by Information Technology.

Part III, “Achieving Strategic Competitive Advantage,” imparts in its three chapters the next stage of IM/IT delivery by discussing evolving IM/IT applications, transforming to a knowledge-enabled organization, assessing IM/IT value delivery, and speculating on future issues.

For instructors who choose to use this book in their courses, accompanying resources are available online. For access information, e-mail hap1@ache.org. Contained in these resources are PowerPoint presentations for each chapter, answers to the discussion questions, a test bank for each chapter, and a complex case regarding the design of an electronic medical record in a multispecialty group practice environment.

As in decades past, pressures for more comprehensive, more timely, more accurate, and more relevant management of information continue as the U.S. healthcare system faces the following recurrent problems:

- Healthcare services constitute an ever-increasing portion of the goods and services we produce (the gross domestic product).
- The number of uninsured people living in the United States continues to grow.
- The healthcare system does not consistently produce high-quality care.

Managing the triangle of cost, quality, and access, a national health policy priority, increasingly translates into pressure on individual providers. The system responds with market-driven healthcare reform efforts that have many consequences but, importantly, have led to the development of integrated delivery systems through mergers and acquisitions and to changes in systems of payment for services. Healthcare organizations have grown larger and more complex, and information systems must keep pace with the effects of organizational complexity, continued advances in medical technology, and growing demand for accountability from within and outside the healthcare organization (Gauthier and Serber 2005).

In this pursuit, some jargon often gets in the way of communication and understanding. Throughout this book, careful distinctions are drawn between data and information. As used in this book, *data* are raw facts and figures collected by the organization. *Information*, on the other hand, is defined as data that have been processed and analyzed in a formal, intelligent way so that the results are directly useful to clinicians and managers. All too often, computerized data banks are available, but they are little used because of inadequate planning of information content and structure needed to support management planning and control—organizations become data rich but information poor (Smaltz et al. 2005).

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References

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