Foreward: Health Informatics Research Methods: Principles and Practice

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by Melanie S. Brodnik, PhD, RHIA

Perspectives in Health Information Management has an exclusive excerpt of the book, *Health Informatics Research Methods: Principles and Practice* by Elizabeth J. Layman, PhD, RHIA, CCS, FAHIMA; and Valerie J. Watzlaf, PhD, RHIA, FAHIMA. The text focuses on the practical applications of research in health informatics and health information management.

The book's organization guides readers through the process of conducting research specific to health informatics concepts and functions. Learn more.

Foreword

Research is critical in developing an understanding of how health information technology and systems support the delivery of quality, cost-effective, and safe healthcare. As the nation's healthcare system moves toward increased reliance on automation, electronic health records, and information technology, it is imperative that disciplines such as health informatics and health information management (HIM) validate their body of knowledge through systematic investigation and evaluation based on sound research methods. Health informatics is a broad term that denotes disciplines that encompass the use of computer and information science to manage all aspects of healthcare data and information. HIM as a specific discipline, fits within the broader rubric of health informatics as does nursing, dental, public health, and consumer informatics, to name a few. These disciplines focus on the systems, applications, and technology used to collect, store, process, access, exchange, protect, and disclose healthcare data and information in electronic or paper form. Healthcare data and information are used for primary and secondary purposes such as direct patient care, reimbursement, patient safety, legal issues, healthcare policy, quality improvement, public health, biosurveillance, and healthcare cost containment. As the cost of healthcare continues to rise, so does the demand and use of healthcare data and information to help control costs. What theories, systems, applications, and technologies best support the collection, use, and dissemination of data and information? What is the impact of health information technology on the quality, safety, and cost-effectiveness of healthcare? What is the perceived usefulness of health information technology and the satisfaction levels of its use among healthcare providers? To address these questions, health informatics professionals must have a solid background and understanding of the various research practices and innovative approaches available to them. Until now, no textbooks have specifically addressed research related to health informatics.

Dr. Layman and Dr. Watzlaf along with their chapter authors have skillfully produced a book that provides a clear, distinct discussion of research methods particularly relevant to the HIM field. The book is divided into four sections. The first part provides a historical perspective of research in health informatics followed by an overview of research design methods. These two chapters set the stage for the remaining sections of the book. Part two focuses on the various research methods related to survey, observational, and experimental and quasi- experimental research design. The third part presents research methods related to epidemiology, informatics evaluation and outcomes, and research review and secondary analysis. The discussion of these research methods is followed by chapters devoted to research question development, data collection, and statistical approaches that translate data to information. The last part discusses the grant writing process as well as the organization and management of research protocol data. The last three chapters offer the reader an excellent discussion on grant and proposal writing, ethical considerations when conducting research, and the dissemination of research results.

What I particularly like about the book are the discipline-specific examples that are woven throughout the chapters. These examples illustrate and support how research methods may be used to address a variety of informatics-related questions. These examples are especially important for undergraduate students who are new to practice environments. They help to make the concept of research "real" to the reader. For the graduate student, and practitioner interested in research, this book

provides an excellent view of the steps necessary to conduct quality health informatics research. It also supports the research endeavors of professional organizations such as the American Health Information Management Association (AHIMA), American Medical Informatics Association (AMIA), Health Information and Management Systems Society (HIMSS), and American Nursing Informatics Association (ANIA) by providing their members with a resource for conducting research vital to validating a profession's body of knowledge.

This book will become a significant resource to anyone interested in conducting research in health informatics. It will be a significant reference on my bookshelf as I continue to engage in health informatics research and advise undergraduate and graduate students in their quest for discovery and new knowledge.

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