Clinical Analytics And Data Management For The Dnp

Management Decision-Making, Big Data and AnalyticsModel Management and Analytics for Large Scale SystemsData Analytics in Medicine: Concepts, Methodologies, Tools, and ApplicationsBig Data Analytics for Sensor-Network Collected IntelligencePractical Guide to Clinical Data Management, Third EditionThe Medical Library Association Guide to Data Management for LibrariansThe Fundamentals of Clinical Data ManagementClinical Research ComputingClinical Research InformaticsHenry's Clinical Diagnosis and Management by Laboratory Methods E-BookData Management and Analytics for Medicine and HealthcareClinical Analytics and Data Management for the DNP, Second EditionManagement of Data in Clinical TrialsBig Data Analytics for Intelligent Healthcare ManagementHealthcare Data Analytics and ManagementHealthcare Business IntelligenceTranscending Horizons Through Innovative Global PracticesFundamentals of Clinical Data ScienceHealthcare AnalyticsImplementing Evidence-Based Practice in HealthcareConducting the DNP ProjectData Management, Analytics and InnovationMedical Data ManagementHealthcare Analytics for Quality and Performance ImprovementFundamentals of Human Resource ManagementHealthcare Data AnalyticsPatient-Centric Analytics in Health CareProposal Writing for Clinical Nursing and DNP Projects, Second EditionLeveraging Biomedical and Healthcare DataThe Data BookRegistries for Evaluating Patient OutcomesData Management for ResearchersClinical Intelligence: the Big Data Analytics Revolution in HealthcareAnalytics in HealthcareClinical Analytics and Data Management for the DNPA Guide to Clinical Drug ResearchExam Prep for: Clinical Analytics and Data Management for Big Data and Health AnalyticsInfonomicsReinventing Clinical Decision Support

Management Decision-Making, Big Data and Analytics

Technological advances and the rise of collaborative, interdisciplinary approaches have changed the practice of research. The 21st century researcher not only faces the challenge of managing increasingly complex datasets, but also new data sharing requirements from funders and journals. Success in today’s research enterprise requires an understanding of how to work effectively with data, yet most researchers have never had any formal training in data management. Libraries have begun developing services and programs to help researchers meet the demands of the data-driven research enterprise, giving librarians exciting new opportunities to use their expertise and skills. The Medical Library Association Guide to Data Management for Librarians highlights the many ways that librarians are addressing researchers’ changing needs at a variety of institutions, including academic, hospital, and government libraries. Each chapter ends with “pearls of wisdom,” a bulleted list of 5-10 takeaway messages from the chapter that will help readers quickly put the ideas from the chapter into practice. From theoretical foundations to practical applications, this book provides a background for librarians who are new to data management as well as new ideas and approaches for experienced data librarians.

Model Management and Analytics for Large Scale Systems

Clinical Research Computing: A Practitioner’s Handbook deals with the nuts-and-bolts of providing informatics and computing support for clinical research. The subjects that the practitioner must be aware of are not only technological and scientific, but also organizational and managerial. Therefore, the author offers case studies based on real life experiences in order to prepare the readers for the challenges they may face during their experiences either supporting clinical research or supporting electronic record systems. Clinical research computing is the application of computational methods to the broad field of clinical research. With the advent of modern digital computing, and the powerful data collection, storage, and analysis that is possible with it, it becomes more relevant to understand the technical details in order to fully seize its opportunities. Offers case studies, based on real-life examples where possible, to engage the readers with more complex examples Provides studies backed by technical details, e.g., schema diagrams, code snippets or algorithms illustrating particular techniques, to give the readers confidence to employ the techniques described in their own settings Offers didactic content organization and an increasing complexity through the chapters

Data Analytics in Medicine: Concepts, Methodologies, Tools, and Applications

Recognized as the definitive book in laboratory medicine since 1908, Henry’s Clinical Diagnosis and Management by Laboratory Methods, edited by Richard A. McPherson, MD and Matthew R. Pincus, MD, PhD, is a comprehensive, multidisciplinary pathology reference that gives you state-of-the-art guidance on lab test selection and interpretation of results. Revisions throughout keep you current on the latest topics in the field, such as biochemical markers of bone metabolism, clinical enzymology, pharmacogenomics, and more! A user-friendly full-color layout puts all the latest, most essential knowledge at your fingertips. Update your understanding of the scientific foundation and clinical application of today's complete range of laboratory tests. Get optimal test results with guidance on error detection, correction, and prevention as well as cost-effective test selection. Reference the information you need quickly and easily thanks to a full-color layout, many new color illustrations and visual aids, and an organization by organ system. Master all the latest approaches in clinical laboratory medicine with new and updated coverage of: the chemical basis for analyte assays and common interferences; lipids and dyslipoproteinemia; markers in the blood for cardiac injury evaluation and related stroke disorders; coagulation testing for antiplatelet drugs such as aspirin and clopidogrel; biochemical markers of bone metabolism; clinical enzymology; hematology and transfusion medicine; medical microbiology; body fluid analysis; and many other rapidly evolving frontiers in the field. Effectively monitor the pace of drug clearing in patients undergoing pharmacogenomic treatments with a new chapter on this groundbreaking new area. Apply the latest best practices in clinical laboratory management with special chapters on organization, work flow, quality control, interpretation of results, informatics, financial management, and establishing a molecular diagnostics laboratory. Confidently prepare for the

upcoming recertification exams for clinical pathologists set to begin in 2016.

Big Data Analytics for Sensor-Network Collected Intelligence

The management of clinical data, from its collection during a trial to its extraction for analysis, has become a critical element in the steps to prepare a regulatory submission and to obtain approval to market a treatment. Groundbreaking on its initial publication nearly fourteen years ago, and evolving with the field in each iteration since then, the third edition of Practical Guide to Clinical Data Management includes important updates to all chapters to reflect the current industry approach to using electronic data capture (EDC) for most studies. See what's new in the Third Edition: A chapter on the clinical trial process that explains the high level flow of a clinical trial from creation of the protocol through the study lock and provides the context for the clinical data management activities that follow Reorganized content reflects an industry trend that divides training and standard operating procedures for clinical data management into the categories of study startup, study conduct, and study closeout Coverage of current industry and Food and Drug Administration (FDA) approaches and concerns The book provides a comprehensive overview of the tasks involved in clinical data management and the computer systems used to perform those tasks. It also details the context of regulations that guide how those systems are used and how those regulations are applied to their installation and maintenance. Keeping the coverage practical rather than academic, the author hones in on the most critical information that impacts clinical trial conduct, providing a full end-to-end overview or introduction for clinical data managers.

Practical Guide to Clinical Data Management, Third Edition

Big Data Analytics for Sensor-Network Collected Intelligence explores state-of-the-art methods for using advanced ICT technologies to perform intelligent analysis on sensor collected data. The book shows how to develop systems that automatically detect natural and human-made events, how to examine people's behaviors, and how to unobtrusively provide better services. It begins by exploring big data architecture and platforms, covering the cloud computing infrastructure and how data is stored and visualized. The book then explores how big data is processed and managed, the key security and privacy issues involved, and the approaches used to ensure data quality. In addition, readers will find a thorough examination of big data analytics, analyzing statistical methods for data analytics and data mining, along with a detailed look at big data intelligence, ubiquitous and mobile computing, and designing intelligence system based on context and situation. Indexing: The books of this series are submitted to EI-Compendex and SCOPUS Contains contributions from noted scholars in computer science and electrical engineering from around the globe Provides a broad overview of recent developments in sensor collected intelligence Edited by a team comprised of leading thinkers in big data analytics

The Medical Library Association Guide to Data Management for Librarians

The successful implementation of evidence into practice is dependent on aligning the available evidence to the particular context through the active ingredient of facilitation. Designed to support the widely recognised PARIHS framework, which works as a guide to plan, action and evaluate the implementation of evidence into practice, this book provides a very practical ‘how-to’ guide for facilitating the whole process. This text discusses: undertaking an initial diagnosis of the context and reaching a consensus on the evidence to be implemented; how to link the research evidence with clinical and patients’ experience and local information in the form of audit data or patient and staff feedback; the range of diagnostic, consensus building and stakeholder consultation methods that can be helpful; a description of facilitator roles and facilitation methods, tools and techniques; some of theories that underpin the PARIHS framework and how these have been integrated to inform a revised version of PARIHS Including internationally-sourced case study examples to illustrate how the facilitation role and facilitation skills have been applied in a range of different health care settings, this is the ideal text for those interested in leading or facilitating evidence based implementation projects, from the planning stage through to evaluation.

The Fundamentals of Clinical Data Management

This open access book comprehensively covers the fundamentals of clinical data science, focusing on data collection, modelling and clinical applications. Topics covered in the first section on data collection include: data sources, data at scale (big data), data stewardship (FAIR data) and related privacy concerns. Aspects of predictive modelling using techniques such as classification, regression or clustering, and prediction model validation will be covered in the second section. The third section covers aspects of (mobile) clinical decision support systems, operational excellence and value-based healthcare. Fundamentals of Clinical Data Science is an essential resource for healthcare professionals and IT consultants intending to develop and refine their skills in personalized medicine, using solutions based on large datasets from electronic health records or telemonitoring programmes. The book’s promise is “no math, no code”and will explain the topics in a style that is optimized for a healthcare audience.

Clinical Research Computing

Praise for the First Edition: “DNP students may struggle with data management, since their projects are not research, but quality improvement, and this book covers the subject well. I recommend it for DNP students for use during their capstone projects." Score: 98, 5 Stars --Doody's Medical Reviews This is the only text to deliver the strong data management knowledge and skills that are required competencies for all DNP students. It enables readers to design data tracking and clinical analytics in order to rigorously evaluate clinical innovations/programs for improving clinical outcomes, and to

document and analyze change. The second edition is greatly expanded and updated to address major changes in our health care environment. Incorporating faculty and student input, it now includes modalities such as SPSS, Excel, and Tableau to address diverse data management tasks. Eleven new chapters cover the use of big data analytics, ongoing progress towards value-based payment, the ACA and its future, shifting of risk and accountability to hospitals and clinicians, advancement of nursing quality indicators, and new requirements for Magnet certification. The text takes the DNP student step by step through the complete process of data management from planning to presentation, and encompasses the scope of skills required for students to apply relevant analytics to systematically and confidently tackle the clinical interventions data obtained as part of the DNP student project. Of particular value is a progressive case study illustrating multiple techniques and methods throughout the chapters. Sample data sets and exercises, along with objectives, references, and examples in each chapter, reinforce information. Key Features: Provides extensive content for rigorously evaluating DNP innovations/projects Takes DNP students through the complete process of data management from planning through presentation Includes a progressive case study illustrating multiple techniques and methods Offers very specific examples of application and utility of techniques Delivers sample data sets, exercises, PowerPoint slides and more, compiled in Supplemental Materials and an Instructor Manual

Clinical Research Informatics

Big Data Analytics for Intelligent Healthcare Management covers both the theory and application of hardware platforms and architectures, the development of software methods, techniques and tools, applications and governance, and adoption strategies for the use of big data in healthcare and clinical research. The book provides the latest research findings on the use of big data analytics with statistical and machine learning techniques that analyze huge amounts of real-time healthcare data. Examines the methodology and requirements for development of big data architecture, big data modeling, big data as a service, big data analytics, and more Discusses big data applications for intelligent healthcare management, such as revenue management and pricing, predictive analytics/forecasting, big data integration for medical data, algorithms and techniques, etc. Covers the development of big data tools, such as data, web and text mining, data mining, optimization, machine learning, cloud in big data with Hadoop, big data in IoT, and more

Henry's Clinical Diagnosis and Management by Laboratory Methods E-Book

Model Management and Analytics for Large Scale Systems covers the use of models and related artefacts (such as metamodels and model transformations) as central elements for tackling the complexity of building systems and managing data. With their increased use across diverse settings, the complexity, size, multiplicity and variety of those artefacts has increased. Originally developed for software engineering, these approaches can now be used to simplify the analytics of

large-scale models and automate complex data analysis processes. Those in the field of data science will gain novel insights on the topic of model analytics that go beyond both model-based development and data analytics. This book is aimed at both researchers and practitioners who are interested in model-based development and the analytics of large-scale models, ranging from big data management and analytics, to enterprise domains. The book could also be used in graduate courses on model development, data analytics and data management. Identifies key problems and offers solution approaches and tools that have been developed or are necessary for model management and analytics Explores basic theory and background, current research topics, related challenges and the research directions for model management and analytics Provides a complete overview of model management and analytics frameworks, the different types of analytics (descriptive, diagnostics, predictive and prescriptive), the required modelling and method steps, and important future directions

Data Management and Analytics for Medicine and Healthcare

A “how-to” approach to navigating the strenuous path from DNP plan to completed project. You completed your DNP proposal and have approval to proceed: What’s next? How do you move from proposal phase to conduct and complete your project? This text is the first to discuss the practical steps to implement and complete the project and will help DNP students to systematically transition from plan to action. Written by an author with extensive experience helping students with their quality improvement projects, the text educates readers on the core components of conducting the clinical scholarly project. With a focus on working effectively with clinical staff, the book addresses IRB approval; ethics; working with human subjects; project planning; collecting, analyzing, and interpreting clinical data; disseminating findings; and how to complete the project in a timely manner. It discusses interprofessional collaboration, team building, and how to debrief project participants. Examples of successful scholarly projects and recommendations for project improvement offer additional guidance, along with consideration of common problems that many students face and how to resolve them. Objectives and review questions are provided in selected chapters along with a robust Instructors Guide containing additional active learning strategies for each chapter. Key Features: Delivers practical, step-by-step strategies for implementing and completing the DNP project Focuses on finding and effectively communicating with team members Explains how to collect, analyze, and interpret clinical data Describes how to establish protocol for working with patients Offers chapter objectives, review questions, and case studies demonstrating major content components

Clinical Analytics and Data Management for the DNP, Second Edition

Management of Data in Clinical Trials

Leveraging Biomedical and Healthcare Data: Semantics, Analytics and Knowledge provides an overview of the approaches used in semantic systems biology, introduces novel areas of its application, and describes step-wise protocols for transforming heterogeneous data into useful knowledge that can influence healthcare and biomedical research. Given the astronomical increase in the number of published reports, papers, and datasets over the last few decades, the ability to curate this data has become a new field of biomedical and healthcare research. This book discusses big data text-based mining to better understand the molecular architecture of diseases and to guide health care decision. It will be a valuable resource for bioinformaticians and members of several areas of the biomedical field who are interested in understanding more about how to process and apply great amounts of data to improve their research. Includes at each section resource pages containing a list of available curated raw and processed data that can be used by researchers in the field Provides demonstrative and relevant examples that serve as a general tutorial Presents a list of algorithm names and computational tools available for basic and clinical researchers

Big Data Analytics for Intelligent Healthcare Management

Amazon, 11 reviews for 5-star average: "Excellent, very helpful, to the point, concise without leaving out important details." "Really helps and is easy to understand." This practical, concise, and accessible guide for graduate students and advanced clinicians delivers step-by-step guidelines for integrating research and best evidence to produce concise, well-written project proposals. Health care professionals in advanced practice are increasingly being asked to be able to deliver clinical project proposals using best evidence for advancing quality patient care. With the same “must know” clinical scholarship tools of the first edition, this revision provides practical guidelines of common project models for developing and writing a tight proposal from start to finish while leaving room for the unique nature of most clinical project topics. The second edition includes a completely new chapter on quality improvement concepts, new project proposal abstracts, and new information specific to the DNP project from the AACN. Using the same three-part organization to walk through the intricacies of planning, writing, and completing scholarly project proposals, this new edition also adds new key features to keep readers engaged with the text and their own ongoing or forthcoming proposal. Chapters have been updated to include websites for additional learning, as well as advice from DNP students who have themselves successfully completed project proposals. Reflective questions, tips for completing proposals, exemplars, and reader activities throughout the book facilitate readers’ greater understanding of projects and subsequent proposals. New to the Second Edition: A new chapter on quality improvement concepts Advice from DNP students who have themselves completed proposals Chapter updates and edits for enhanced clarity Websites for additional learning New information specific to the DNP project based on guidance from the AACN Increased emphasis on the Project Triangle, an important foundational structure Key Features: Provides topflight guidance in proposal writing for DNP and other nursing clinical projects Details parameters for integrating scholarship with clearly communicated professional objectives Contains numerous writing prompts and questions that guide

students in reflective scholarly writing Offers examples of good writing, reflective questions, and tools for self-assessment Offers helpful tips for making proposals concise yet complete

Healthcare Data Analytics and Management

Following the success of the first edition, published in 1995, this fully rewritten A Guide to Clinical Drug Research - Second Edition has been adapted to the most recent guidelines and developments in the field. It continues to provide a wealth of practical advice, ranging from the conception of an idea, planning a study and writing a protocol, through to the conduct of a study, data collection and analysis, and publication. It tells investigators what information they should expect sponsoring companies to provide, particularly when there is only limited information available about a new drug. It also explains what the company can expect of investigators, including the requirements of `good clinical practice'. Unlike other currently available texts on clinical trials and pharmaceutical medicine, A Guide to Clinical Drug Research concentrates on the needs of the practising clinician and research team. It is not restricted to drug investigation, and is relevant to all those involved in clinical research in a variety of settings. Audience: Required reading for clinical researchers and others involved as investigators in a drug project, often sponsored by a pharmacuetical company, plus agents of the sponsoring companies themselves.

Healthcare Business Intelligence

The Data Book: Collection and Management of Research Data is the first practical book written for researchers and research team members covering how to collect and manage data for research. The book covers basic types of data and fundamentals of how data grow, move and change over time. Focusing on pre-publication data collection and handling, the text illustrates use of these key concepts to match data collection and management methods to a particular study, in essence, making good decisions about data. The first section of the book defines data, introduces fundamental types of data that bear on methodology to collect and manage them, and covers data management planning and research reproducibility. The second section covers basic principles of and options for data collection and processing emphasizing error resistance and traceability. The third section focuses on managing the data collection and processing stages of research such that quality is consistent and ultimately capable of supporting conclusions drawn from data. The final section of the book covers principles of data security, sharing, and archival. This book will help graduate students and researchers systematically identify and implement appropriate data collection and handling methods.

Transcending Horizons Through Innovative Global Practices

This book offers a practical introduction to healthcare analytics that does not require a background in data science or statistics. It presents the basics of data, analytics and tools and includes multiple examples of their applications in the field. The book also identifies practical challenges that fuel the need for analytics in healthcare as well as the solutions to address these problems. In the healthcare field, professionals have access to vast amount of data in the form of staff records, electronic patient record, clinical findings, diagnosis, prescription drug, medical imaging procedure, mobile health, resources available, etc. Managing the data and analyzing it to properly understand it and use it to make well-informed decisions can be a challenge for managers and health care professionals. A new generation of applications, sometimes referred to as end-user analytics or self-serve analytics, are specifically designed for non-technical users such as managers and business professionals. The ability to use these increasingly accessible tools with the abundant data requires a basic understanding of the core concepts of data, analytics, and interpretation of outcomes. This book is a resource for such individuals to demystify and learn the basics of data management and analytics for healthcare, while also looking towards future directions in the field.

Fundamentals of Clinical Data Science

Improve patient outcomes, lower costs, reduce fraud—allwith healthcare analytics Healthcare Analytics for Quality and PerformanceImprovement walks your healthcare organization from relying ongeneric reports and dashboards to developing powerful analyticapplications that drive effective decision-making throughout yourorganization. Renowned healthcare analytics leader Trevor Stromereveals in this groundbreaking volume the true potential ofanalytics to harness the vast amounts of data being generated inorder to improve the decision-making ability of healthcare managersand improvement teams. Examines how technology has impacted healthcare delivery Discusses the challenge facing healthcare organizations: toleverage advances in both clinical and information technology toimprove quality and performance while containing costs Explores the tools and techniques to analyze and extract valuefrom healthcare data Demonstrates how the clinical, business, and technologycomponents of healthcare organizations (HCOs) must work together toleverage analytics Other industries are already taking advantage of big data.Healthcare Analytics for Quality and Performance Improvementhelps the healthcare industry make the most of the precious dataalready at its fingertips for long-overdue quality and performanceimprovement.

Healthcare Analytics

Healthcare Data Analytics and Management help readers disseminate cutting-edge research that delivers insights into the analytic tools, opportunities, novel strategies, techniques and challenges for handling big data, data analytics and management in healthcare. As the rapidly expanding and heterogeneous nature of healthcare data poses challenges for big

data analytics, this book targets researchers and bioengineers from areas of machine learning, data mining, data management, and healthcare providers, along with clinical researchers and physicians who are interested in the management and analysis of healthcare data. Covers data analysis, management and security concepts and tools in the healthcare domain Highlights electronic medical health records and patient information records Discusses the different techniques to integrate Big data and Internet-of-Things in healthcare, including machine learning and data mining Includes multidisciplinary contributions in relation to healthcare applications and challenges

Implementing Evidence-Based Practice in Healthcare

Data availability is surpassing existing paradigms for governing, managing, analyzing, and interpreting health data. Big Data and Health Analytics provides frameworks, use cases, and examples that illustrate the role of big data and analytics in modern health care, including how public health information can inform health delivery.Written for healt

Conducting the DNP Project

Advancements in data science have created opportunities to sort, manage, and analyze large amounts of data more effectively and efficiently. Applying these new technologies to the healthcare industry, which has vast quantities of patient and medical data and is increasingly becoming more data-reliant, is crucial for refining medical practices and patient care. Data Analytics in Medicine: Concepts, Methodologies, Tools, and Applications is a vital reference source that examines practical applications of healthcare analytics for improved patient care, resource allocation, and medical performance, as well as for diagnosing, predicting, and identifying at-risk populations. Highlighting a range of topics such as data security and privacy, health informatics, and predictive analytics, this multi-volume book is ideally designed for doctors, hospital administrators, nurses, medical professionals, IT specialists, computer engineers, information technologists, biomedical engineers, data-processing specialists, healthcare practitioners, academicians, and researchers interested in current research on the connections between data analytics in the field of medicine.

Data Management, Analytics and Innovation

The purpose of the book is to provide an overview of clinical research (types), activities, and areas where informatics and IT could fit into various activities and business practices. This book will introduce and apply informatics concepts only as they have particular relevance to clinical research settings.

Medical Data Management

This User's Guide is intended to support the design, implementation, analysis, interpretation, and quality evaluation of registries created to increase understanding of patient outcomes. For the purposes of this guide, a patient registry is an organized system that uses observational study methods to collect uniform data (clinical and other) to evaluate specified outcomes for a population defined by a particular disease, condition, or exposure, and that serves one or more predetermined scientific, clinical, or policy purposes. A registry database is a file (or files) derived from the registry. Although registries can serve many purposes, this guide focuses on registries created for one or more of the following purposes: to describe the natural history of disease, to determine clinical effectiveness or cost-effectiveness of health care products and services, to measure or monitor safety and harm, and/or to measure quality of care. Registries are classified according to how their populations are defined. For example, product registries include patients who have been exposed to biopharmaceutical products or medical devices. Health services registries consist of patients who have had a common procedure, clinical encounter, or hospitalization. Disease or condition registries are defined by patients having the same diagnosis, such as cystic fibrosis or heart failure. The User's Guide was created by researchers affiliated with AHRQ's Effective Health Care Program, particularly those who participated in AHRQ's DEcIDE (Developing Evidence to Inform Decisions About Effectiveness) program. Chapters were subject to multiple internal and external independent reviews.

Healthcare Analytics for Quality and Performance Improvement

Papers presented at a conference.

Fundamentals of Human Resource Management

A comprehensive guide to everything scientists need to know about data management, this book is essential for researchers who need to learn how to organize, document and take care of their own data. Researchers in all disciplines are faced with the challenge of managing the growing amounts of digital data that are the foundation of their research. Kristin Briney offers practical advice and clearly explains policies and principles, in an accessible and in-depth text that will allow researchers to understand and achieve the goal of better research data management. Data Management for Researchers includes sections on: * The data problem – an introduction to the growing importance and challenges of using digital data in research. Covers both the inherent problems with managing digital information, as well as how the research landscape is changing to give more value to research datasets and code. * The data lifecycle – a framework for data's place within the research process and how data's role is changing. Greater emphasis on data sharing and data reuse will not only change the way we conduct research but also how we manage research data. * Planning for data management – covers the many aspects of data management and how to put them together in a data management plan. This section also includes sample data management plans. * Documenting your data – an often overlooked part of the data management process, but one

that is critical to good management; data without documentation are frequently unusable. * Organizing your data – explains how to keep your data in order using organizational systems and file naming conventions. This section also covers using a database to organize and analyze content. * Improving data analysis – covers managing information through the analysis process. This section starts by comparing the management of raw and analyzed data and then describes ways to make analysis easier, such as spreadsheet best practices. It also examines practices for research code, including version control systems. * Managing secure and private data – many researchers are dealing with data that require extra security. This section outlines what data falls into this category and some of the policies that apply, before addressing the best practices for keeping data secure. * Short-term storage – deals with the practical matters of storage and backup and covers the many options available. This section also goes through the best practices to insure that data are not lost. * Preserving and archiving your data – digital data can have a long life if properly cared for. This section covers managing data in the long term including choosing good file formats and media, as well as determining who will manage the data after the end of the project. * Sharing/publishing your data – addresses how to make data sharing across research groups easier, as well as how and why to publicly share data. This section covers intellectual property and licenses for datasets, before ending with the altmetrics that measure the impact of publicly shared data. * Reusing data – as more data are shared, it becomes possible to use outside data in your research. This chapter discusses strategies for finding datasets and lays out how to cite data once you have found it. This book is designed for active scientific researchers but it is useful for anyone who wants to get more from their data: academics, educators, professionals or anyone who teaches data management, sharing and preservation. "An excellent practical treatise on the art and practice of data management, this book is essential to any researcher, regardless of subject or discipline." —Robert Buntrock, Chemical Information Bulletin

Healthcare Data Analytics

Features of statistical and operational research methods and tools being used to improve the healthcare industry With a focus on cutting-edge approaches to the quickly growing field of healthcare, Healthcare Analytics: From Data to Knowledge to Healthcare Improvement provides an integrated and comprehensive treatment on recent research advancements in data-driven healthcare analytics in an effort to provide more personalized and smarter healthcare services. Emphasizing data and healthcare analytics from an operational management and statistical perspective, the book details how analytical methods and tools can be utilized to enhance healthcare quality and operational efficiency. Organized into two main sections, Part I features biomedical and health informatics and specifically addresses the analytics of genomic and proteomic data; physiological signals from patient-monitoring systems; data uncertainty in clinical laboratory tests; predictive modeling; disease modeling for sepsis; and the design of cyber infrastructures for early prediction of epidemic events. Part II focuses on healthcare delivery systems, including system advances for transforming clinic workflow and patient care; macro analysis of patient flow distribution; intensive care units; primary care; demand and resource allocation;

mathematical models for predicting patient readmission and postoperative outcome; physician–patient interactions; insurance claims; and the role of social media in healthcare. Healthcare Analytics: From Data to Knowledge to Healthcare Improvement also features: • Contributions from well-known international experts who shed light on new approaches in this growing area • Discussions on contemporary methods and techniques to address the handling of rich and large-scale healthcare data as well as the overall optimization of healthcare system operations • Numerous real-world examples and case studies that emphasize the vast potential of statistical and operational research tools and techniques to address the big data environment within the healthcare industry • Plentiful applications that showcase analytical methods and tools tailored for successful healthcare systems modeling and improvement The book is an ideal reference for academics and practitioners in operations research, management science, applied mathematics, statistics, business, industrial and systems engineering, healthcare systems, and economics. Healthcare Analytics: From Data to Knowledge to Healthcare Improvement is also appropriate for graduate-level courses typically offered within operations research, industrial engineering, business, and public health departments.

Patient-Centric Analytics in Health Care

This book presents the latest findings in the areas of data management and smart computing, big data management, artificial intelligence and data analytics, along with advances in network technologies. Gathering peer-reviewed research papers presented at the Fourth International Conference on Data Management, Analytics and Innovation (ICDMAI 2020), held on 17–19 January 2020 at the United Services Institute (USI), New Delhi, India, it addresses cutting-edge topics and discusses challenges and solutions for future development. Featuring original, unpublished contributions by respected experts from around the globe, the book is mainly intended for a professional audience of researchers and practitioners in academia and industry.

Proposal Writing for Clinical Nursing and DNP Projects, Second Edition

This book offers concepts, methods and a framework to analyze healthcare data in new ways to improve patient health outcomes, improve population health and reduce costs. The framework takes the reader step-by-step through data warehouse and data management architectures, analytics algorithms and modeling techniques for applications in predictive medicine, optimization, machine learning, natural language processing, classification and data clustering. This book introduces the reader to data science for healthcare. It provides a clinical perspective to data including sources of open healthcare data, clinical prediction rules and much more.

Leveraging Biomedical and Healthcare Data

Fundamentals of Human Resource Management: People, Data, and Analytics provides a current, succinct, and interesting introduction to the world of HRM with a special emphasis on how data can help managers make better decisions about the people in their organizations. Authors Talya Bauer, Berrin Erdogan, David Caughlin, and Donald Truxillo use cutting-edge case studies and contemporary examples to illustrate key concepts and trends. A variety of exercises give students hands-on opportunities to practice their problem-solving, ethical decision-making, and data literacy skills. Non-HR majors and HR majors alike will learn best practices for managing talent in today’s ever-evolving workplace.

The Data Book

Medical Data Management is a systematic introduction to the basic methodology of professional clinical data management. It emphasizes generic methods of medical documentation applicable to such diverse tasks as the electronic patient record, maintaining a clinical trials database, and building a tumor registry. This book is for all students in medical informatics and health information management, and it is ideal for both the undergraduate and the graduate levels. The book also guides professionals in the design and use of clinical information systems in various health care settings. It is an invaluable resource for all health care professionals involved in designing, assessing, adapting, or using clinical data management systems in hospitals, outpatient clinics, study centers, health plans, etc. The book combines a consistent theoretical foundation of medical documentation methods outlining their practical applicability in real clinical data management systems. Two new chapters detail hospital information systems and clinical trials. There is a focus on the international classification of diseases (ICD-9 and -10) systems, as well as a discussion on the difference between the two codes. All chapters feature exercises, bullet points, and a summary to provide the reader with essential points to remember. New to the Third Edition is a comprehensive section comprised of a combined Thesaurus and Glossary which aims to clarify the unclear and sometimes inconsistent terminology surrounding the topic.

Registries for Evaluating Patient Outcomes

"The Fundamentals of Clinical Data Management" is a manual for Sponsors, CROs, Investigators, Clinical Trial Monitors and Managers and Clinical Research Professionals to learn the basic concepts of Clinical Data Management. This book will focus on the topic which includes: Clinical Information Flow, Roles and Responsibilities of CDM Personnel, Guidelines Associated with CDM, Data Management Plan, CRF Designing, Data Collection, Cleaning and Data Validation, Study setup and Database Designing, Laboratory Data and Adverse Event Data Management, Report Creation and Data Closure, Data Archiving, Privacy and Security etc.

Data Management for Researchers

This book constitutes the thoroughly refereed conference proceedings of the Third International Workshop on Data Management and Analytics for Medicine and Healthcare, DMAH 2017, in Munich, Germany, in September 2017, held in conjunction with the 43rd International Conference on Very Large Data Bases, VLDB 2017. The 9 revised full papers presented together with 2 keynote abstracts were carefully reviewed and selected from 16 initial submissions. The papers are organized in topical sections on data privacy and trustability for electronic health records; biomedical data management and Integration; online mining of Health related data; and clinical data analytics.

Clinical Intelligence: the Big Data Analytics Revolution in Healthcare

"DNP students may struggle with data management, since their projects are not research, but quality improvement, and this book covers the subject well. I recommend it for DNP students for use during their capstone projects." Score: 98, 5 Stars.--Doody's Medical Reviews Strong data management knowledge and skills are a requirement for every DNP. This unique text focuses on fostering the rigorous, meticulous data management skills that can improve care experience, health outcomes, and cost savings worldwide. It provides a knowledge base, describes the regulatory and ethical context, outlines a process to guide evaluation, presents a compendium of resources, and includes examples of evaluation of translation. It takes the DNP student step by step through the complete process of data management, including planning, data collection, data governance and cleansing, analysis, and data presentation. Moreover, the text continues the process of establishing a sturdy clinical data management (CDM) skill base by presenting techniques for ongoing project monitoring after analysis and evaluation are concluded. A progressive case study illustrates multiple techniques throughout each chapter, enabling students to apply what they have learned to their own DNP projects. The book features information from professors who are highly experienced in teaching CDM as well as a renowned scholar of population health analytics. The text provides very specific examples of techniques using SPSSÆ software that is familiar to graduate nursing students. Chapters include objectives, references, and examples from translation projects to assist students to learn and apply chapter content. Appendices describe numerous tools and practical strategies compiled by the authors over several years of teaching CDM to DNP students. Key Features: Meets the specific data management needs of the DNP student from planning to presentation Presents a wide selection of data display options through frequent illustrations of SPSS data Uses a progressive case study to illustrate multiple techniques and methods throughout chapters Provides substantial content necessary for the DNP student to rigorously evaluate DNP innovations/projects Includes very specific examples of the application and utility of these techniques using software that is familiar to graduate nursing students

Analytics in Healthcare

Solid business intelligence guidance uniquely designed for healthcare organizations Increasing regulatory pressures on

healthcare organizations have created a national conversation on data, reporting and analytics in healthcare. Behind the scenes, business intelligence (BI) and data warehousing (DW) capabilities are key drivers that empower these functions. Healthcare Business Intelligence is designed as a guidebook for healthcare organizations dipping their toes into the areas of business intelligence and data warehousing. This volume is essential in how a BI capability can ease the increasing regulatory reporting pressures on all healthcare organizations. Explores the five tenets of healthcare business intelligence Offers tips for creating a BI team Identifies what healthcare organizations should focus on first Shows you how to gain support for your BI program Provides tools and techniques that will jump start your BI Program Explains how to market and maintain your BI Program The risk associated with doing BI/DW wrong is high, and failures are well documented. Healthcare Business Intelligence helps you get it right, with expert guidance on getting your BI program started and successfully keep it going.

Clinical Analytics and Data Management for the DNP

This book takes an in-depth look at the emerging technologies that are transforming the way clinicians manage patients, while at the same time emphasizing that the best practitioners use both artificial and human intelligence to make decisions. AI and machine learning are explored at length, with plain clinical English explanations of convolutional neural networks, back propagation, and digital image analysis. Real-world examples of how these tools are being employed are also discussed, including their value in diagnosing diabetic retinopathy, melanoma, breast cancer, cancer metastasis, and colorectal cancer, as well as in managing severe sepsis. With all the enthusiasm about AI and machine learning, it was also necessary to outline some of criticisms, obstacles, and limitations of these new tools. Among the criticisms discussed: the relative lack of hard scientific evidence supporting some of the latest algorithms and the so-called black box problem. A chapter on data analytics takes a deep dive into new ways to conduct subgroup analysis and how it’s forcing healthcare executives to rethink the way they apply the results of large clinical trials to everyday medical practice. This re-evaluation is slowly affecting the way diabetes, heart disease, hypertension, and cancer are treated. The research discussed also suggests that data analytics will impact emergency medicine, medication management, and healthcare costs. An examination of the diagnostic reasoning process itself looks at how diagnostic errors are measured, what technological and cognitive errors are to blame, and what solutions are most likely to improve the process. It explores Type 1 and Type 2 reasoning methods; cognitive mistakes like availability bias, affective bias, and anchoring; and potential solutions such as the Human Diagnosis Project. Finally, the book explores the role of systems biology and precision medicine in clinical decision support and provides several case studies of how next generation AI is transforming patient care.

A Guide to Clinical Drug Research

Accessible and concise, this exciting new textbook examines data analytics from a managerial and organizational perspective and looks at how they can help managers become more effective decision-makers. The book successfully combines theory with practical application, featuring case studies, examples and a 'critical incidents' feature that make these topics engaging and relevant for students of business and management. The book features chapters on cutting-edge topics, including: • Big data • Analytics • Managing emerging technologies and decision-making • Managing the ethics, security, privacy and legal aspects of data-driven decision-making The book is accompanied by an Instructor's Manual, PowerPoint slides and access to journal articles. Suitable for management students studying business analytics and decision-making at undergraduate, postgraduate and MBA levels.

Exam Prep for: Clinical Analytics and Data Management for

At the intersection of computer science and healthcare, data analytics has emerged as a promising tool for solving problems across many healthcare-related disciplines. Supplying a comprehensive overview of recent healthcare analytics research, Healthcare Data Analytics provides a clear understanding of the analytical techniques currently available to solve healthcare problems. The book details novel techniques for acquiring, handling, retrieving, and making best use of healthcare data. It analyzes recent developments in healthcare computing and discusses emerging technologies that can help improve the health and well-being of patients. Written by prominent researchers and experts working in the healthcare domain, the book sheds light on many of the computational challenges in the field of medical informatics. Each chapter in the book is structured as a "survey-style" article discussing the prominent research issues and the advances made on that research topic. The book is divided into three major categories: Healthcare Data Sources and Basic Analytics - details the various healthcare data sources and analytical techniques used in the processing and analysis of such data Advanced Data Analytics for Healthcare - covers advanced analytical methods, including clinical prediction models, temporal pattern mining methods, and visual analytics Applications and Practical Systems for Healthcare - covers the applications of data analytics to pervasive healthcare, fraud detection, and drug discovery along with systems for medical imaging and decision support Computer scientists are usually not trained in domain-specific medical concepts, whereas medical practitioners and researchers have limited exposure to the data analytics area. The contents of this book will help to bring together these diverse communities by carefully and comprehensively discussing the most relevant contributions from each domain.

Big Data and Health Analytics

Using a patient-centric approach, Patient-Centric Analytics in Health Care identifies how analytics can drive value in terms of managing quality, access, and cost of care for patients across diverse health-care settings.

Infonomics

Many senior executives talk about information as one of their most important assets, but few behave as if it is. They report to the board on the health of their workforce, their financials, their customers, and their partnerships, but rarely the health of their information assets. Corporations typically exhibit greater discipline in tracking and accounting for their office furniture than their data. Infonomics is the theory, study, and discipline of asserting economic significance to information. It strives to apply both economic and asset management principles and practices to the valuation, handling, and deployment of information assets. This book specifically shows: CEOs and business leaders how to more fully wield information as a corporate asset CIOs how to improve the flow and accessibility of information CFOs how to help their organizations measure the actual and latent value in their information assets. More directly, this book is for the burgeoning force of chief data officers (CDOs) and other information and analytics leaders in their valiant struggle to help their organizations become more infosavvy. Author Douglas Laney has spent years researching and developing Infonomics and advising organizations on the infinite opportunities to monetize, manage, and measure information. This book delivers a set of new ideas, frameworks, evidence, and even approaches adapted from other disciplines on how to administer, wield, and understand the value of information. Infonomics can help organizations not only to better develop, sell, and market their offerings, but to transform their organizations altogether.

Reinventing Clinical Decision Support

A valuable new edition of the trusted, practical guide to managing data in clinical trials Regardless of size, type, or complexity, accurate results for any clinical trial are ultimately determined by the quality of the collected data. Management of Data in Clinical Trials, Second Edition explores data management and trial organization as the keys to developing an accurate and reliable clinical trial. With a focus on the traditional aspects of data collection as well as recent advances in technology, this new edition provides a complete and accessible guide to the management structure of a clinical trial, from planning and development to design and analysis. Practical approaches that result in the collection of complete and timely data are also provided. While maintaining a comprehensive overview of the knowledge and tools that are essential for the organization of a modern clinical trial, the author has expanded the topical coverage in the Second Edition to reflect the possible uses of recent advances in technology in the data collection process. In addition, the Second Edition discusses the impact of international regulations governing the conduct of clinical trials and provides guidelines on ensuring compliance with national requirements. Newly featured topics include: The growing availability of "off-the-shelf" solutions for clinical trials Potential models for collaboration in the conduct of clinical trials between academia and the pharmaceutical industry The increasing use of the Internet in the collection of data and management of trials Regulatory requirements worldwide and compliance with the ICH Good Clinical Practice (GCP) Guidelines Development of Standard

Operating Procedures for the conduct of clinical trials Complete with chapter summaries that reinforce key points as well as over one hundred examples, Management of Data in Clinical Trials, Second Edition is an ideal resource for practitioners in the clinical research community who are involved in the development of clinical trials, including data managers, research associates, data coordinators, physicians, and statisticians. This book also serves as an excellent supplemental text for courses in clinical trials at both the undergraduate and graduate levels.

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