

Health Care Benchmarking And Performance Evaluation An Assessment Using Data Envelopment Analysis Dea International Series In Operations Research Management Science

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Health System Performance Comparison: An Agenda For Policy, Information And Research - Papanicolas, Irene 2013-06-01

This book seeks to identify the current 'state of the art' of health system comparison, identifying data and methodological issues and exploring the current interface between evidence and practice.

[Game Theoretic Risk Analysis of Security Threats](#) - Vicki M. Bier 2008-10-20

Game Theoretic Risk Analysis of Security Threats introduces reliability and risk analysis in the face of threats by intelligent agents. More specifically, game-theoretic models are developed for identifying optimal and/or equilibrium defense and attack strategies in systems of varying degrees of complexity. The book covers applications to networks, including problems in both telecommunications and transportation. However, the book's primary focus is to integrate game theory and

reliability methodologies into a set of techniques to predict, detect, diminish, and stop intentional attacks at targets that vary in complexity. In this book, Bier and Azaiez highlight work by researchers who combine reliability and risk analysis with game theory methods to create a set of functional tools that can be used to offset intentional, intelligent threats (including threats of terrorism and war). These tools will help to address problems of global security and facilitate more cost-effective defensive investments.

[Health Care Criteria for Performance Excellence](#) - Harry S. Hertz 2000-04-01

Whether you are a CEO, a health care executive, a health care professional, a staff member committed to improving your organization, or a health profession student, the Baldrige Health Care Criteria for Performance Excellence can help you prepare for the changes occurring

in today's health care environment. Whether your org. is small or large, involved in ambulance service or health maintenance, the Criteria can help you assess & measure performance on a wide range of key indicators: patient/customer, health care service & outcomes, operational, staff, & financial. You can perform a self-assessment only or also submit an Award app.

Quantitative Models for Performance Evaluation and Benchmarking - Joe Zhu 2014-09-11

The author is one of the prominent researchers in the field of Data Envelopment Analysis (DEA), a powerful data analysis tool that can be used in performance evaluation and benchmarking. This book is based upon the author's years of research and teaching experiences. It is difficult to evaluate an organization's performance when multiple performance metrics are present. The difficulties are further enhanced when the relationships among the performance metrics are complex and involve unknown tradeoffs. This book introduces Data Envelopment Analysis (DEA) as a multiple-measure performance evaluation and benchmarking tool. The focus of performance evaluation and benchmarking is shifted from characterizing performance in terms of single measures to evaluating performance as a multidimensional systems perspective. Conventional and new DEA approaches are presented and discussed using Excel spreadsheets — one of the most effective ways to analyze and evaluate decision alternatives. The user can easily develop and customize new DEA models based upon these spreadsheets. DEA models and approaches are presented to deal with performance evaluation problems in a variety of contexts. For example, a context-dependent DEA measures the relative attractiveness of similar operations/processes/products. Sensitivity analysis techniques can be easily applied, and used to identify critical performance measures. Two-stage network efficiency models can be utilized to study performance of supply chain. DEA benchmarking models extend DEA's ability in performance evaluation. Various cross efficiency approaches are presented to provide peer evaluation scores. This book also provides an easy-to-use DEA software — DEAFrontier. This DEAFrontier is an Add-In

for Microsoft® Excel and provides a custom menu of DEA approaches. This version of DEAFrontier is for use with Excel 97-2013 under Windows and can solve up to 50 DMUs, subject to the capacity of Excel Solver. It is an extremely powerful tool that can assist decision-makers in benchmarking and analyzing complex operational performance issues in manufacturing organizations as well as evaluating processes in banking, retail, franchising, health care, public services and many other industries.

Data Envelopment Analysis in the Financial Services Industry - Joseph C. Paradi 2017-11-21

This book presents the methodology and applications of Data Envelopment Analysis (DEA) in measuring productivity, efficiency and effectiveness in Financial Services firms such as banks, bank branches, stock markets, pension funds, mutual funds, insurance firms, credit unions, risk tolerance, and corporate failure prediction. Financial service DEA research includes banking; insurance businesses; hedge, pension and mutual funds; and credit unions. Significant business transactions among financial service organizations such as bank mergers and acquisitions and valuation of IPOs have also been the focus of DEA research. The book looks at the range of DEA uses for financial services by presenting prior studies, examining the current capabilities reflected in the most recent research, and projecting future new uses of DEA in finance related applications.

Advanced Decision Making Methods Applied to Health Care - Elena Tanfani 2012-06-12

The most difficult part of making decisions in the health care field on all levels (national, regional, institutional, patient) is linked to the very complexity of the system itself, to the intrinsic uncertainty involved and its dynamic nature. This requires not only the ability to analyze and interpret a large amount of information but also arrange it so that it becomes a cognitive base for appropriate decision-making. Moreover, decisions in the health care field are subjected to many challenges and constraints: fast change and uncertain outcomes, aging population, increasing citizen expectations, equity considerations and limited

resources. Operations research, statistical and economic-related quantitative methods supply these decisions making tools and methodology. The contributed book presents a collection of applications to concrete situations detailing the problem area, the methodology employed, the implementation and results. Each topic addressed in the book will be structured in such a way that an interdisciplinary and wide audience will be able to use the materials presented. As an example the book chapters will address health policies issues, planning health services, epidemiology and disease modelling, home-care modelling, logistics in health care, capacity planning, quality and appropriateness.

Health Care Benchmarking and Performance Evaluation - Yasar A. Ozcan 2016-09-20

This new edition continues to emphasize the use of data envelopment analysis (DEA) to create optimization-based benchmarks within hospitals, physician group practices, health maintenance organizations, nursing homes and other health care delivery organizations. Suitable for graduate students learning DEA applications in health care as well as for practicing administrators, it is divided into two sections covering methods and applications. Section I considers efficiency evaluations using DEA; returns to scale; weight restricted (multiplier) models; non-oriented or slack-based models, including in this edition two versions of non-controllable variable models and categorical variable models; longitudinal (panel) evaluations and the effectiveness dimension of performance evaluation. A new chapter then looks at new and advanced models of DEA, including super-efficiency, congestion DEA, network DEA, and dynamic network models. Mathematical formulations of various DEA models are placed in end-of-chapter appendices. Section II then looks at health care applications within particular settings, chapter-by-chapter, including hospitals, physician practices, nursing homes and health maintenance organizations (HMOs). Other chapters then explore home health care and home health agencies; dialysis centers, community mental health centers, community-based your services, organ procurement organizations, aging agencies and dental providers; DEA models to evaluate provider performance for specific treatments,

including stroke, mechanical ventilation and perioperative services. A new chapter then examines international-country-based applications of DEA in health care in 16 different countries, along with OECD and multi-country studies. Most of the existing chapters in this section were expanded with recent applications. Included with the book is online access to a learning version of DEA Solver software, written by Professor Kaoru Tone, which can solve up to 50 DMUs for various DEA models listed in the User's Guide at the end of the book.

Proportional Optimization and Fairness - Wieslaw Kubiak 2008-11-16
Proportional Optimization and Fairness is a long-needed attempt to reconcile optimization with apportionment in just-in-time (JIT) sequences and find the common ground in solving problems ranging from sequencing mixed-model just-in-time assembly lines through just-in-time batch production, balancing workloads in event graphs to bandwidth allocation internet gateways and resource allocation in computer operating systems. The book argues that apportionment theory and optimization based on deviation functions provide natural benchmarks for a process, and then looks at the recent research and developments in the field. Individual chapters look at the theory of apportionment and just-in-time sequences; minimization of just-in-time sequence deviation; optimality of cyclic sequences and the oneness; bottleneck minimization; competition-free instances, Fraenkel's Conjecture, and optimal admission sequences; response time variability; applications to the Liu-Layland Problem and pinwheel scheduling; temporal capacity constraints and supply chain balancing; fair queuing and stride scheduling; and smoothing and batching.

Encyclopedia of Health Economics - 2014-02-21

The Encyclopedia of Health Economics offers students, researchers and policymakers objective and detailed empirical analysis and clear reviews of current theories and polices. It helps practitioners such as health care managers and planners by providing accessible overviews into the broad field of health economics, including the economics of designing health service finance and delivery and the economics of public and population health. This encyclopedia provides an organized overview of this diverse

field, providing one trusted source for up-to-date research and analysis of this highly charged and fast-moving subject area. Features research-driven articles that are objective, better-crafted, and more detailed than is currently available in journals and handbooks Combines insights and scholarship across the breadth of health economics, where theory and empirical work increasingly come from non-economists Provides overviews of key policies, theories and programs in easy-to-understand language

Analytics and Decision Support in Health Care Operations

Management - Yasar A. Ozcan 2017-03-20

A compendium of health care quantitative techniques based in Excel Analytics and Decision Support in Health Care Operations is a comprehensive introductory guide to quantitative techniques, with practical Excel-based solutions for strategic health care management. This new third edition has been extensively updated to reflect the continuously evolving field, with new coverage of predictive analytics, geographical information systems, flow process improvement, lean management, six sigma, health provider productivity and benchmarking, project management, simulation, and more. Each chapter includes additional new exercises to illustrate everyday applications, and provides clear direction on data acquisition under a variety of hospital information systems. Instructor support includes updated Excel templates, PowerPoint slides, web based chapter end supplements, and data banks to facilitate classroom instruction, and working administrators will appreciate the depth and breadth of information with clear applicability to everyday situations. The ability to use analytics effectively is a critical skill for anyone involved in the study or practice of health services administration. This book provides a comprehensive set of methods spanning tactical, operational, and strategic decision making and analysis for both current and future health care administrators. Learn critical analytics and decision support techniques specific to health care administration Increase efficiency and effectiveness in problem-solving and decision support Locate appropriate data in different commonly-used hospital information systems Conduct analyses, simulations, productivity

measurements, scheduling, and more From statistical techniques like multiple regression, decision-tree analysis, queuing and simulation, to field-specific applications including surgical suite scheduling, roster management, quality monitoring, and more, analytics play a central role in health care administration. Analytics and Decision Support in Health Care Operations provides essential guidance on these critical skills that every professional needs.

Quantitative Methods in Health Care Management - Yasar A. Ozcan 2009-04-20

Thoroughly revised and updated for Excel®, this second edition of Quantitative Methods in Health Care Management offers a comprehensive introduction to quantitative methods and techniques for the student or new administrator. Its broad range of practical methods and analysis spans operational, tactical, and strategic decisions. Users will find techniques for forecasting, decision-making, facility location, facility layout, reengineering, staffing, scheduling, productivity, resource allocation, supply chain and inventory management, quality control, project management, queuing models for capacity, and simulation. The book's step-by-step approach, use of Excel, and downloadable Excel templates make the text highly practical. Praise for the Second Edition "The second edition of Dr. Ozcan's textbook is comprehensive and well-written with useful illustrative examples that give students and health care professionals a perfect toolkit for quantitative decision making in health care on the road for the twenty-first century. The text helps to explain the complex health care management problems and offer support for decision makers in this field." Marion Rauner, associate professor, School of Business, Economics, and Statistics, University of Vienna. "Quantitative Methods in Health Care Administration, Second Edition covers a broad set of necessary and important topics. It is a valuable text that is easy to teach and learn from." David Belson, professor, Department of Industrial Engineering, Viterbi School of Engineering, University of Southern California.

Performance Evaluation and Benchmarking - Lizy Kurian John 2018-10-03

Computer and microprocessor architectures are advancing at an astounding pace. However, increasing demands on performance coupled with a wide variety of specialized operating environments act to slow this pace by complicating the performance evaluation process. Carefully balancing efficiency and accuracy is key to avoid slowdowns, and such a balance can be achieved with an in-depth understanding of the available evaluation methodologies. *Performance Evaluation and Benchmarking* outlines a variety of evaluation methods and benchmark suites, considering their strengths, weaknesses, and when each is appropriate to use. Following a general overview of important performance analysis techniques, the book surveys contemporary benchmark suites for specific areas, such as Java, embedded systems, CPUs, and Web servers. Subsequent chapters explain how to choose appropriate averages for reporting metrics and provide a detailed treatment of statistical methods, including a summary of statistics, how to apply statistical sampling for simulation, how to apply SimPoint, and a comprehensive overview of statistical simulation. The discussion then turns to benchmark subsetting methodologies and the fundamentals of analytical modeling, including queuing models and Petri nets. Three chapters devoted to hardware performance counters conclude the book. Supplying abundant illustrations, examples, and case studies, *Performance Evaluation and Benchmarking* offers a firm foundation in evaluation methods along with up-to-date techniques that are necessary to develop next-generation architectures.

Worker and Public Health and Safety - Sara Lal 2021-06-18

This book on "Worker and Public Health and Safety: Current Views" brings together current scholarly work and opinions in the form of original papers and reviews related to this field of study. It provides important and recent scientific reading as well as topical medical and occupational information and research in areas of immediate relevance, such as chronic and occupational diseases, worker safety and performance, job strain, workload, injuries, accident and errors, risks and management, fitness, burnout, psychological and mental disorders including stress, therapy, job satisfaction, musculoskeletal symptoms and

pain, socio-economic factors, dust pollution, pesticides, noise, pathogens, and related areas.

Data Envelopment Analysis with R - Farhad Hosseinzadeh Lotfi 2019-07-23

This book introduces readers to the use of R codes for optimization problems. First, it provides the necessary background to understand data envelopment analysis (DEA), with a special emphasis on fuzzy DEA. It then describes DEA models, including fuzzy DEA models, and shows how to use them to solve optimization problems with R. Further, it discusses the main advantages of R in optimization problems, and provides R codes based on real-world data sets throughout. Offering a comprehensive review of DEA and fuzzy DEA models and the corresponding R codes, this practice-oriented reference guide is intended for masters and Ph.D. students in various disciplines, as well as practitioners and researchers.

Financial Management for Nurse Managers and Executives - E-Book - Cheryl Jones 2012-07-08

Covering the financial topics all nurse managers need to know and use, this book explains how financial management fits into the healthcare organization. Topics include accounting principles, cost analysis, planning and control management of the organization's financial resources, and the use of management tools. In addition to current issues, this edition also addresses future directions in financial management. Nursing-focused content thoroughly describes health care finance and accounting from the nurse manager's point of view. Numerous worksheets and tables including healthcare spreadsheets, budgets, and calculations illustrate numerous financial and accounting methods. Chapter opener features include learning objectives and an overview of chapter content to help you organize and summarize your notes. Key concepts definitions found at the end of each chapter help summarize your understanding of chapter content. Suggested Readings found at the end of each chapter give additional reading and research opportunities. NEW! Major revision of chapter 2 (The Health Care Environment), with additions on healthcare reform, initiatives to stop paying for hospital or provider errors, hospice payment, and funding for

nursing education; plus updates of health care expenditure and pay for performance; provide a strong start to this new edition. NEW! Major revision of chapter 5 (Quality, Costs, and Financing), with updates to quality-financing, Magnet organizations, and access to care, provides the most up-to-date information possible. NEW! Reorganization and expansion of content in chapter 15 (Performance Budgeting) with updated examples better illustrates how performance budgeting could be used in a pay-for-performance environment. NEW! Major revision of the variance analysis discussion in chapter 16 (Controlling Operating Results) offers a different approach for computation of variances that is easier to understand. NEW! Addition of comparative effectiveness research to chapter 18 (Benchmarking, Productivity, and Cost Benefit and Cost Effectiveness Analysis) covers a recently developed approach informs health-care decisions by providing evidence on the effectiveness of different treatment options. NEW! Addition of nursing intensity weights, another approach for costing nursing services, to chapter 9 (Determining Health Care Costs and Prices), lets you make decisions about what method works best for you.

Multiple Criteria Decision Making - Y. Ilker Topcu 2021-03-24

Data and its processed state 'information' have become an indispensable resource for virtually all aspects of business, education, etc. Consequently, decisions regarding the handling of this data, transforming it into meaningful information, and ultimately arriving at the best course of action have taken on a new importance. This book highlights a selection of cutting-edge research on decision making presented at the 25th International Conference on Multiple Criteria Decision Making (MCDM 2019), held in Istanbul, Turkey.

Public Sector Accountants and Quantum Leap: How Far We Can Survive in Industrial Revolution 4.0? - Akhmad Solikin 2020-08-07

The Industrial Revolution 4.0 will not only cause job losses, but will also create new workspaces that may not exist today. It also needs to be considered by accountants in government because the processes of budget planning, budget execution, and financial reporting have used a large number of information systems. In the era of the Industrial

Revolution 4.0, the changes will be faster, marked by the emergence of such systems as supercomputers, smart robots, cloud computing, big data systems, genetic engineering and the development of neurotechnology that allows humans to optimize brain function further. Industrial Revolution 4.0 will disrupt the accounting profession. This proceedings provides selected papers/research on government accounting, accountability and integrity public sector accounting, financial accounting, accounting information system, auditing and assurance, corporate sustainability, forensic and management accounting, public and corporate finance, taxation and customs, open innovation in public sector accounting. The proceedings provide details beyond what is possible to be included in an oral presentation and constitute a concise but timely medium for the dissemination of recent research results. It will be invaluable to professionals and academics in the field of accounting, finance and the public sector to get an understanding of recent research.

Performance Management in Health Care - Jan Walburg 2006

An exploration of the theoretical and philosophical background of performance development, this edited collection focuses sharply on the practical aspects associated with it within the healthcare sector.

Quantitative Models for Performance Evaluation and Benchmarking - Joe Zhu 2008-10-20

Managers are often under great pressure to improve the performance of their organizations. To improve performance, one needs to constantly evaluate operations or processes related to producing products, providing services, and marketing and selling products. Performance evaluation and benchmarking are a widely used method to identify and adopt best practices as a means to improve performance and increase productivity, and are particularly valuable when no objective or engineered standard is available to define efficient and effective performance. For this reason, benchmarking is often used in managing service operations, because service standards (benchmarks) are more difficult to define than manufacturing standards. Benchmarks can be established but they are somewhat limited as they work with single

measurements one at a time. It is difficult to evaluate an organization's performance when there are multiple inputs and outputs to the system. The difficulties are further enhanced when the relationships between the inputs and the outputs are complex and involve unknown tradeoffs. It is critical to show benchmarks where multiple measurements exist. The current book introduces the methodology of data envelopment analysis (DEA) and its uses in performance evaluation and benchmarking under the context of multiple performance measures.

Health Management - Krzysztof Smigorski 2011-12-14

The development in our understanding of health management ensures unprecedented possibilities in terms of explaining the causes of diseases and effective treatment. However, increased capabilities create new issues. Both, researchers and clinicians, as well as managers of healthcare units face new challenges: increasing validity and reliability of clinical trials, effectively distributing medical products, managing hospitals and clinics flexibly, and managing treatment processes efficiently. The aim of this book is to present issues relating to health management in a way that would be satisfying for academicians and practitioners. It is designed to be a forum for the experts in the thematic area to exchange viewpoints, and to present health management's state-of-art as a scientific and professional domain.

Peer Review Benchmarking: - Robert J. Marder 2016-12-01

Peer Review Benchmarking: Pursuing Medical Staff Excellence Robert J. Marder, MD Looking for metrics and real-world processes to assess your peer review program? Peer Review Benchmarking: Pursuing Medical Staff Excellence offers the tools you need to analyze and redesign your peer review processes. Learn how to quantify your peer review data to measure the success of peer review at your organization and how to best share this information with various departments and committees. Once you use the data to determine what elements of your peer review process you need to redesign, read the case studies in this book from organizations who embarked on peer review redesign and learn from their triumphs and mistakes. This book will help you improve your peer review program by: Integrating redesign of hospital peer review

structures for fairness, efficiency, and effectiveness Reducing bias in case review and OPPE Enhancing organizational sharing of peer review information to improve patient care Determining the best structure for your peer review committee

Applied Cyber-Physical Systems - Sang C. Suh 2013-08-13

Applied Cyber-Physical Systems presents the latest methods and technologies in the area of cyber-physical systems including medical and biological applications. Cyber-physical systems (CPS) integrate computing and communication capabilities by monitoring, and controlling the physical systems via embedded hardware and computers. This book brings together unique contributions from renowned experts on cyber-physical systems research and education with applications. It also addresses the major challenges in CPS, and then provides a resolution with various diverse applications as examples. Advanced-level students and researchers focused on computer science, engineering and biomedicine will find this to be a useful secondary text book or reference, as will professionals working in this field.

Hospital Performance in Brazil - Gerard Martin La Forgia 2008-01-01

Drawing on an eclectic array of research and evaluative studies culled from a mix of sources, this volume analyzes Brazilian hospital performance along several policy dimensions including resource allocation and use within hospitals, hospital payment mechanisms, organizational and governance arrangements, management practices, and regulation and quality. An agenda for hospital reform is proposed which synthesizes priorities that are integral to improving hospital performance-and which should be considered for implementation in the near and medium term.

Health Decision Support Systems - Joseph K. H. Tan 1998

This textbook is a logical continuation of Dr. Tan's first book, Health Management Information Systems. For graduate level and upper level undergraduate courses, it explains the use of health decision support systems throughout the health care industry, citing examples from hospitals, managed care organizations and long term care facilities. This book includes learning objectives, case studies and review questions. A n

Instructor's guide is also available.

Health Care Operations Management - James R. Langabeer II

2015-01-30

Health Care Operations Management: A Systems Perspective, Second Edition provides comprehensive and practical coverage of all aspects of operations management specific to the healthcare industry. It covers everything from hospital finances to project management, patient flows, performance management, process improvement, and supply chain management. This is an ideal text for university courses in healthcare management at all levels. It is also an excellent professional reference for healthcare administrators, clinical support managers, and supply chain professionals. The Second Edition has been thoroughly updated with the most recent data, statistics, and references. It also offers expanded coverage of quality, financial, and systems management, as well as a new chapter entitled "Operational Metrics in Health Care Organization".

Research in the Decision Sciences for Global Business - European Decision Sciences Institute 2015-02-18

This volume brings together important new research in decision science, capturing the crucial role of local context in a globalized, standardized world. Assembling the best work presented at the 2013 Conference of the European Decision Sciences Institute, it considers classic decision science problems from a new perspective, offering insights for improving decision-making in government, business, healthcare, education, manufacturing, the military, and beyond. The papers in Common Disciplines that Separate Us embrace the duality of globally determined local contexts, offering new approaches to decision-making related to: Strengthening national economic competitiveness Reforming the public sector and higher education Deploying information technology more effectively throughout government Making healthcare policy that achieves better outcomes at lower cost Analyzing social networks Improving processes via data visualization, modeling, and simulation Gaining more value from enterprise business intelligence Offshoring, nearshoring, "right shoring," and other key manufacturing decisions

Improving supply chain performance And much more The papers collected here will be valuable to wide audiences of faculty, researchers, and students in diverse programs covering business, public administration, and economics; and for others interested in the frontiers of decision science.

Big Data Analysis on Global Community Formation and Isolation - Yuichi Ikeda 2021-06-12

In this book, the authors analyze big data on global interdependence caused by the flows of commodities, money, and people, using a network science approach to obtain differing views of globalization and to clarify the facts on isolation of communities. Globalization reduces international economic inequality, i.e., it allows emerging countries to catch up while it increases relative poverty in some advanced countries. How should this trade-off between international and domestic inequalities be resolved? At the same time, the reduction of biocultural diversity caused by globalization needs to be avoided. What kind of change is required in local communities to conserve biocultural diversity? On the issue of commodity flow, research results of the supply-chain network, isolation in industry, and resource flows and stocks are presented in this book. For monetary flow, ownership networks, value-added networks, and profit shifting were studied; and regarding the flow of people, linkage of ethnic groups, immigrant assimilation, and refugees were examined. Based on the resulting view of globalization and isolation, the development of the isolation index using machine learning is discussed. Finally, recommendations for evidence-based policymaking in the United Nations are considered.

Medicaid Managed Behavioral Health Care Benchmarking Project - 2003

Performance Measurement for Health System Improvement - Peter C. Smith 2010-01-07

In a world where there is increasing demand for the performance of health providers to be measured, there is a need for a more strategic vision of the role that performance measurement can play in securing

health system improvement. This volume meets this need by presenting the opportunities and challenges associated with performance measurement in a framework that is clear and easy to understand. It examines the various levels at which health system performance is undertaken, the technical instruments and tools available, and the implications using these may have for those charged with the governance of the health system. Technical material is presented in an accessible way and is illustrated with examples from all over the world.

Performance Measurement for Health System Improvement is an authoritative and practical guide for policy makers, regulators, patient groups and researchers.

Intelligent Systems for Sustainable Person-Centered Healthcare - Dalia Kriksciuniene 2022

This open access book establishes a dialog among the medical and intelligent system domains for igniting transition toward a sustainable and cost-effective healthcare. The Person-Centered Care (PCC) positions a person in the center of a healthcare system, instead of defining a patient as a set of diagnoses and treatment episodes. The PCC-based conceptual background triggers enhanced application of Artificial Intelligence, as it dissolves the limits of processing traditional medical data records, clinical tests and surveys. Enhanced knowledge for diagnosing, treatment and rehabilitation is captured and utilized by inclusion of data sources characterizing personal lifestyle, and health literacy, and it involves insights derived from smart ambience and wearables data, community networks, and the caregivers' feedback. The book discusses intelligent systems and their applications for healthcare data analysis, decision making and process design tasks. The measurement systems and efficiency evaluation models analyze ability of intelligent healthcare system to monitor person health and improving quality of life. .

Benchmarking in Health Care - Joint Commission Resources, Inc
2011-11-30

Benchmarking--comparing one's performance against internal or external sources--can be the cornerstone of many performance improvement

initiatives in health care organizations. These projects are carried out for a variety of reasons: to enhance patient outcomes, streamline patient care delivery systems, reduce costs, and comply with local, state, or national initiatives, including accreditation and health care reform requirements. For organizations to successfully accomplish these objectives, they must be able to benchmark their performance within their facilities, over time, and against other organizations. Benchmarking in Health Care is an updated edition of a JCR best seller that provides organizations with step-by-step instructions to successfully design and implement benchmarking projects in their facilities as part of comprehensive performance improvement programs. Topics covered include the following: * Defining internal and external benchmarking * Complying with Joint Commission and Joint Commission * International benchmarking-related standards * Planning and organizing a benchmarking project, including gaining leadership support and assembling and organizing a team * Choosing appropriate benchmarking partners * Identifying and using appropriate global benchmarking databases * Collecting, analyzing, benchmarking, and presenting data * Using benchmarking data to drive improvement * Case studies from organizations around the world that are using benchmarking projects as integral components of performance improvement initiatives Help your staff to design and implement a successful benchmarking project in your organization!

Managing Service Productivity - Ali Emrouznejad 2014-07-31

This volume describes how frontier efficiency methodologies such as Data Envelopment Analysis (DEA) and other techniques such as multi-criteria decision making can help service industries to improve their performance by providing a ranking of best-practice efficient service units and by identifying sources of inefficiency for each service unit. It explains how they can be used to determine potential improvement targets for each of the inefficient service units, to identify peers for each service organization and to provide a basis for continuous performance improvement. Presenting applications in a variety of industries, this book will be useful for the service management to improve service

productivity, profitability, sustainability and quality and effectiveness of service deliveries. A free trial version of the World's leading Data Envelopment Analysis Software (PIM-DEA) is available for readers of this book.

Operations Research Applications in Health Care Management - Cengiz Kahraman 2017-12-08

This book offers a comprehensive reference guide to operations research theory and applications in health care systems. It provides readers with all the necessary tools for solving health care problems. The respective chapters, written by prominent researchers, explain a wealth of both basic and advanced concepts of operations research for the management of operating rooms, intensive care units, supply chain, emergency medical service, human resources, lean health care, and procurement. To foster a better understanding, the chapters include relevant examples or case studies. Taken together, they form an excellent reference guide for researchers, lecturers and postgraduate students pursuing research on health care management problems. The book presents a dynamic snapshot on the field that is expected to stimulate new directions and stimulate new ideas and developments.

Handbook of Industrial and Systems Engineering, Second Edition - Adedeji B. Badiru 2013-10-11

A new edition of a bestselling industrial and systems engineering reference, *Handbook of Industrial and Systems Engineering, Second Edition* provides students, researchers, and practitioners with easy access to a wide range of industrial engineering tools and techniques in a concise format. This edition expands the breadth and depth of coverage, emphasizing new systems engineering tools, techniques, and models. See What's New in the Second Edition: Section covering safety, reliability, and quality Section on operations research, queuing, logistics, and scheduling Expanded appendix to include conversion factors and engineering, systems, and statistical formulae Topics such as control charts, engineering economy, health operational efficiency, healthcare systems, human systems integration, Lean systems, logistics transportation, manufacturing systems, material handling systems,

process view of work, and Six Sigma techniques The premise of the handbook remains: to expand the breadth and depth of coverage beyond the traditional handbooks on industrial engineering. The book begins with a general introduction with specific reference to the origin of industrial engineering and the ties to the Industrial Revolution. It covers the fundamentals of industrial engineering and the fundamentals of systems engineering. Building on this foundation, it presents chapters on manufacturing, production systems, and ergonomics, then goes on to discuss economic and financial analysis, management, information engineering, and decision making. Two new sections examine safety, reliability, quality, operations research, queuing, logistics, and scheduling. The book provides an updated collation of the body of knowledge of industrial and systems engineering. The handbook has been substantively expanded from the 36 seminal chapters in the first edition to 56 landmark chapters in the second edition. In addition to the 20 new chapters, 11 of the chapters in the first edition have been updated with new materials. Filling the gap that exists between the traditional and modern practice of industrial and systems engineering, the handbook provides a one-stop resource for teaching, research, and practice.

Performance Evaluation and Benchmarking of Intelligent Systems

- Raj Madhavan 2009-09-18

To design and develop capable, dependable, and affordable intelligent systems, their performance must be measurable. Scientific methodologies for standardization and benchmarking are crucial for quantitatively evaluating the performance of emerging robotic and intelligent systems' technologies. There is currently no accepted standard for quantitatively measuring the performance of these systems against user-defined requirements; and furthermore, there is no consensus on what objective evaluation procedures need to be followed to understand the performance of these systems. The lack of reproducible and repeatable test methods has precluded researchers working towards a common goal from exchanging and communicating results, inter-comparing system performance, and leveraging previous work that could

otherwise avoid duplication and expedite technology transfer. Currently, this lack of cohesion in the community hinders progress in many domains, such as manufacturing, service, healthcare, and security. By providing the research community with access to standardized tools, reference data sets, and open source libraries of solutions, researchers and consumers will be able to evaluate the cost and benefits associated with intelligent systems and associated technologies. In this vein, the edited book volume addresses performance evaluation and metrics for intelligent systems, in general, while emphasizing the need and solutions for standardized methods. To the knowledge of the editors, there is not a single book on the market that is solely dedicated to the subject of performance evaluation and benchmarking of intelligent systems.

Evaluating Improvement And Implementation For Health - Ovreteit, John 2014-08-01

This book examines different approaches to evaluating treatment, health service delivery, public health programmes and policy implementation.

Handbook of Research on Strategic Performance Management and Measurement Using Data Envelopment Analysis - Osman, Ibrahim H. 2013-08-31

Organizations can use the valuable tool of data envelopment analysis (DEA) to make informed decisions on developing successful strategies, setting specific goals, and identifying underperforming activities to improve the output or outcome of performance measurement. The Handbook of Research on Strategic Performance Management and Measurement Using Data Envelopment Analysis highlights the advantages of using DEA as a tool to improve business performance and identify sources of inefficiency in public and private organizations. These recently developed theories and applications of DEA will be useful for policymakers, managers, and practitioners in the areas of sustainable development of our society including environment, agriculture, finance,

and higher education sectors.

Handbook of Research on Healthcare Administration and Management - Wickramasinghe, Nilmini 2016-08-23

Effective healthcare delivery is a vital concern for citizens and communities across the globe. The numerous facets of this industry require constant re-evaluation and optimization of management techniques. The Handbook of Research on Healthcare Administration and Management is a pivotal reference source for the latest scholarly material on emerging strategies and methods for delivering optimal healthcare opportunities and solutions. Highlighting issues relating to decision making, process optimization, and technological applications, this book is ideally designed for policy makers, administrators, students, professionals, and researchers interested in achieving superior healthcare solutions.

Health Care Financial Management for Nurse Managers - Janne Dunham-Taylor 2005

Enhances the financial skills that nurse managers and administrators need to navigate the health care system and the varying reimbursement issues facing different health care settings.

Health Care Benchmarking and Performance Evaluation - Yasar A. Ozcan 2007-12-08

Hugely relevant in today's world of healthcare performance management, this comprehensive work applies the analytical framework of Data Envelopment Analysis methodology to provide health care administrators with specific tools for performance evaluation. Most important, the book provides health care practitioners and administrators with information of what is lacking in specific aspects of performance and then outlines the ways how these performance inadequacies can be improved.