Management Engineering for Effective Healthcare Delivery: Principles and Applications

Alexander Kolker (Children's Hospital of Wisconsin, USA) and Pierce Story (GE Healthcare, USA)

Due to massive technological and medical advances in the life sciences (molecular genetics, biology, biochemistry, etc.), modern medicine is increasingly effective in treating individual patients, but little technological advancement has focused on advancing the healthcare infrastructure.

Management Engineering for Effective Healthcare Delivery: Principles and Applications illustrates the power of management engineering for quantitative managerial decision-making in healthcare settings. This understanding makes it possible, in turn, to predict performance and/or real resource requirements, allowing decision-makers to be truly proactive rather than reactive. The distinct feature of this book is that it provides international exposure to this challenging area.

Topics Covered:
• Dynamic Capacity Management in a Hospital Setting
• EHR and EMR
• Healthcare Management Engineering
• Intensive Care Unit Operational Modeling and Analysis
• Outlier Management
• Patient Flow
• Probabilistic Resource Optimization
• Radio Frequency Identification
• Simulation Modeling of Healthcare Delivery
• Stakeholder Dissonance in Healthcare Delivery


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Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal for classroom use.

Alexander Kolker is currently an Outcomes Operations Project Manager in Children's Hospital and Health System, Milwaukee, Wisconsin. He has extensive practical expertise in quantitative methods for healthcare management, such as hospital capacity expansion planning, system-wide patient flow optimization, staffing planning, forecasting trends, and market expansion analysis. He widely applies process simulation and other advanced analytical and computer methodologies to analyze different scenarios for allocation resources that result in the most efficient operational hospital management solutions. He actively publishes in peer-reviewed journals, edits books, and speaks at the national conferences in the area of management engineering and system and process improvement in healthcare settings. He serves on the review boards of Healthcare Management Science and Journal of Medical Systems. Previously he has worked for Froedtert Memorial Lutheran Hospital, and for General Electric Co, GE Healthcare, as a simulation specialist, and reliability engineer. He can be reached at.
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Kolker Alexander (Children's Hospital and Health System, Wisconsin, USA)

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Story Pierce (GE Healthcare, USA)

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