



CALL FOR PAPERS

Special Issue on
“Modeling for Better Healthcare”
Decision Support Systems

Guest Editors:

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Special Issue Scope: Healthcare is a perfect example of an extremely complex industry that is marred by poor efficiencies, rising costs, and high regulation. The *complexity* in healthcare often arises due to the involvement of multidisciplinary teams having interactions among several actors and stakeholders such as patients, hospitals, doctors, insurance companies, etc. Such complex interactions require us to develop decision models that can suggest improvements in information, work, material, and patient flow. Several factors contribute towards poor *efficiencies* within the healthcare system. Uncertain payback from the investment in healthcare technology potentially contributes towards low productivity outputs. Another factor is the presence of usually large supporting staff. There is a need for decision models that could suggest better utilization of hospital resources and a reduction in the overall patient service time per visit. A contributing factor is the high regulation in the healthcare industry. Several government bodies and agencies such as CMS, FDA, Joint Commission, NCQA, etc. exercise tremendous control over various processes down to the very atomic level. Though such regulations generally tend to improve the quality and effectiveness of the entire healthcare system, it does potentially reduce the efficiency of healthcare systems. This special issue invites original manuscripts of high quality research that utilize various modeling and analytical approaches and make significant contribution towards a) improving the management or performance of any aspect of healthcare network or any of its constituents, b) using innovative approaches towards resolving problems of significant interest in the healthcare domain, c) proposing and testing decision models that suggest improvement in state-of-art healthcare practice or delivery.

Suggested Topics include, but not limited to, using various modeling approaches that improve our decision making abilities in following areas (not an exhaustive list):

Decision models of healthcare reforms and policy analysis

Models of healthcare regulatory processes and delivery mechanisms

Models that suggest improvement in patient care quality and hospital performance

Improving decision making at various healthcare stakeholders and actors level

Social networking in healthcare

Business process and workflow management approaches as applied in healthcare delivery

Models suggesting improvement in Information, patient and material flow within and across healthcare networks

Decision models suggesting effective and efficient utilization of healthcare resources

Model based solutions to the problems in specific healthcare units such as oncology, cardiology

Decision models that help understand and control disease spread and progression, epidemic outbreak

Models of drug development and other aspects of pharmaceutical industry

Decision models related to the use (implementation, etc.) of technology in healthcare such as electronic medical records, telemedicine, RFID applications, etc.

Decision models related to the next generation healthcare cyber infrastructure

Modeling security and privacy related aspects of healthcare records

Case studies utilizing modeling and simulation approaches

Submission Instructions: Inquiries should be directed to both the editors at gupta@mnstate.edu and ramesh.sharda@okstate.edu. All papers must be submitted electronically to DSSspecialissue@gmail.com. Please submit two copies in PDF: one with author information and affiliation and the other for double blind review process without any author information. The submission must not exceed 34 pages, including abstract, keywords, tables, figures, all references and appendices, should be typed double-spaced throughout with one-inch margins and using 11 point font. Please read the author guidelines at: http://www.elsevier.com/wps/find/journaldescription.cws_home/505540/authorinstructions

Important Dates: Paper Submission: Sept 15, 2010, **Final Authors Notification:** May 15, 2011, **Projected Publication:** 2011

Workshops: Papers are also invited for submission to the **Healthcare Service Management and Modeling Workshop at MWAIS 2010 conference**, Minnesota State University Moorhead, May 21-22, 2010. Please visit URL for details: <http://www.mnstate.edu/schoolofbusiness/mwais2010/workshop.htm> .

Selected papers from the first round of revision may be invited to another follow-up workshop organized by the guest editors to provide additional feedback. Please note that acceptance or invitation to either workshop, though increases acceptance likelihood, does not guarantee acceptance into the special issue.