

References

- Abraham, G., Byrnes, G., Bain, C. 2007. *Short-Term Forecasting of Emergency Inpatient Flow*. IEEE Transactions on Information Technology in Biomedicine, IEEE TITB-00211-2007.R1, pp. 1–9
- Abu-Taieh, E., El Sheikh, A R., 2007. *Commercial Simulation Packages: A Comparative Study*. International Journal of Simulation, 8 (2), 66–76
- Armstrong, W., Taege, A., 2007. *HIV screening for All: the New Standard of Care*. Cleveland Clinic Journal of Medicine. 74 (4), pp. 297–301
- Ben-Arieh, D., Wu, Chih-Hang, 2011. *Reducing Patient Waiting Time at an Ambulatory Surgical Center*. Chapter 12. In: Kolker, A., & Story, P. (Eds). *Management Engineering for Effective Healthcare Delivery: Principles and Applications* (pp. 1–512). IGI-Global, doi:10.4018/978-1-60960-872-9
- Berwick, D., 2011. *Observations on Initiating Systems Change in Healthcare: Challenges to Overcome*. In: *Engineering a Learning Healthcare System: A Look at the Future*. Workshop Summary. Institute of Medicine (IOM), Washington, DC. The National Academies Press. p. 58 http://www.nap.edu/catalog.php?record_id=12213
- Blum, A., Shea, S., Czeisler, C., Landrigan, C., Leape, L., 2011. *Implementing the 2009 IOM Recommendations on Resident Physician Work Hours, Supervision and Safety*. White Paper. Dovepress. *Nature and Science of Sleep*, (3): 47–85. <http://dx.doi.org/10.2147/NSS.S19649>
- Bozzette, S., 2005. *Routine Screening for HIV infection-timely and cost effective*. New England Journal of Medicine, 352, pp. 620–621
- Butler, T., 1995. *Management Science/ Operations Research Projects in Health Care: The Administrator's Perspective*. *Health Care Management Review*, 20 (1):19–25
- Buttall Crane, A., 2007. *Management Engineers*. *Hospitals & Health Networks (H&HN)*, Management/Governance, April, 50. http://www.hhnmag.com/hhnmag_app/jsp/articledisplay.jsp?dcrpath=HHNMAG/Article/data/04APR2007/0704HHN_FEA_Management&domain=HHNMAG
- Carter, M., 2002. *Health Care Management. Diagnosis: Mismanagement of Resources*. *Operation Research/Management Science (OR/MS) Today*. April, 29: 2, pp. 26–32
- Cayirli, T., Veral, E., Rosen, H., 2006. *Designing Appointment Scheduling Systems for Ambulatory Care Services*. *Health Care Management Science*, 9; 47–58
- CDC report, 2008. *HIV Prevalence Estimates-USA, 2006*. *MMWR weekly*, 57(39), pp. 1073–1076
- Compton, W. Dale, Reid, P., 2008 (Spring). *Engineering and Health Care Delivery System (Editorial)*. *The Bridge*, 38 (1), 3–5 (National Academy of Engineering). <http://www.nae.edu/File.aspx?id=7417>
- Costa, A., Ridley, S., Shahani, A., Harper, P, De Senna, V.,Nielsen, M., 2003. *Mathematical Modeling and Simulation for Planning Critical Care Capacity*. *Anesthesia*, 58, pp. 320–327

- D'Alesandro, J., (2008). *Queuing Theory Misplaced in Hospitals*. Management News from the Front, Process Improvement. PHLO. Posted Feb 19, 2008 at <http://phlo.typepad.com>
- De Bruin A., van Rossum, A., Visser, M., Koole, G., 2007. *Modeling the Emergency cardiac in-patient flow: an application of queuing theory*. Health Care Management Science, 10, pp. 125–137
- Fabri, P., 2008. *Can Health Care Engineering Fix Health Care?* American Medical Association Journal of Ethics, Virtual Mentor, 10(5), pp. 317–319
- Fowler, J., Benneyan, J., Carayon, P., Denton, B., Keskinocak, P., & Runger, G., 2011. *An Introduction to a New Journal for Healthcare Systems Engineering*. IIE Transactions on Healthcare Systems Engineering, 1, pp. 1–5
- Fuhs, P., Martin, J., Hancock, W., 1979. *The Use of Length of Stay Distributions to predict Hospital Discharges*. Medical Care, XV11, 4, p. 355–368
- Gallivan, S., Utley, M., Treasure, T., Valencia, O., 2002. *Booked inpatient admissions and hospital capacity: mathematical modeling study*. British Medical Journal, 324, 280–282
- Glantz, S., Slinker, B., 2001. *Applied Regression & Analysis of Variance*. 2-nd Ed., McGraw-Hill, Inc
- Goldratt, E., Cox, J., 2004. *The Goal*. 3-rd Ed., North River Press, Great Barrington, MA, p. 384
- Gonzalez, P., Herrero, C., 2004. *Optimal Sharing of Surgical Costs in the Presence of Queues*. Mathematical Methods of Operations Research. 59: 435–446
- Green, L. 2006. *Queuing Analysis in Healthcare*. In Hall, R. (Ed.). *Patient Flow: Reducing Delay in Healthcare Delivery* (pp. 281–307). Springer, NY
- Green, L., 2004. *Capacity Planning and Management in Hospitals*. In M. Brandeau, F. Sainfort, W. Pierskala, (Eds.), *Operations Research and Health Care. A Handbook of Methods and Applications*, (pp. 15–41). Boston: Kluwer Academic Publisher
- Hall, R. 1990. *Queuing methods for Service and Manufacturing*. Upper Saddle River, NJ: Prentice Hall.
- Hand, D., Mannila, H., Smyth, P., 2001. *Principles of Data Mining*. MIT Press, pp. 546.
- Haraden, C., Nolan, T., Litvak, E., 2003. *Optimizing Patient Flow: Moving Patients Smoothly Through Acute Care Setting*. Institute for Healthcare Improvement Innovation Series 2003. White papers 2, Cambridge, MA
- Harrison, G., Shafer, A., Mackay, M., 2005. *Modeling Variability in Hospital Bed Occupancy*. Health Care Management Science, 8, 325–334
- Hlupic, V., 2000. *Simulation Software: A Survey of Academic and Industrial Users*. *International Journal of Simulation*, 1(1), 1–11
- Ingolfsson, A., & Gallop, F., 2003. *Queuing ToolPak 4.0*. Retrieved from <http://apps.business.ualberta.ca/aingolfsson/qtp/>
- IHI, 2011. Institute for Healthcare Improvement (IHI). <http://www.ihl.org/knowledge/Pages/Tools/AppointmentSequenceSimulation.aspx>
- IOM (Institute of Medicine), 2011. *Engineering a Learning Healthcare System: A Look at the Future*. Workshop Summary. Washington, DC. The National Academics Press. http://www.nap.edu/catalog.php?record_id=12213
- Jobson, J.D., 1992. *Applied Multivariate Data Analysis*. V. 2. Categorical and Multivariate Methods. Springer-Verlag New-York, LLC
- Joustra, P., van der Sluis, E., van Dijk, N., 2010. *To pool or not to pool in hospitals: a theoretical and practical comparison for a radiotherapy outpatient department*. Annals of Operations Research, 178: pp. 77–89
- Joustra, P., de Witt, J., Van Dijk, N., Bakker, P., 2011. *How to juggle priorities? An interactive tool to provide quantitative support for strategic patient-mix decisions: an ophthalmology case*. Health Care Management Science, doi 10.1007/s10729-011-9168-5
- Kall, P., Mayer, J. 2005. *Stochastic Linear Programming. Models, Theory and Computation*. Springer Science & Business Media, New York, NY, pp. 397
- Klassen, K. J., Rohleder, T. R. 1996. *Scheduling Outpatient Appointment in a Dynamic Environment*. Journal of Operations Management, 14, pp. 83–101
- Kolker, A., 2008. *Process Modeling of Emergency Department Patient Flow: Effect of Patient Length of Stay on ED Diversion*. Journal of Medical Systems, 32(5), pp. 389 – 401. <http://dx.doi.org/10.1007/s10916-008-9144-x>

- Kolker, A., 2009. *Process Modeling of ICU Patient Flow: Effect of Daily Load Leveling of Elective Surgeries on ICU Diversion*. *Journal of Medical Systems*, 33(1), pp. 27–40 <http://dx.doi.org/10.1007/s10916-008-9161-9>
- Kolker, A., 2010. *Queuing Theory and Discrete Events Simulation for Health Care*. In: *Health Information Systems: Concepts, Methodologies, Tools, and Applications*. vol. 4, Chapter 7.12. Joel Rodrigues (Ed.). IGI-press Global, 2010. pp. 1874–1915. <http://www.irma-international.org/chapter/queuing-theory-discrete-events-simulation/49971/>
- Kolker, A., 2011. *Efficient Managerial Decision-Making in Healthcare Settings: Examples and Fundamental Principles. Chapter 1*. In: *Management Engineering for Effective Healthcare Delivery: Principles and Applications*. A. Kolker, P. Story (Eds). IGI-press Global, pp. 1–45.
- Kopach-Konrad, R., Lawley, M., Criswell, M., Hasan, I., Chakraborty, S., Pekny, J., Doebbeling, B., 2007. Applying Systems Engineering Principles in Improving Health Care Delivery. *Journal of General Internal Medicine*, 22 (3), 431–437
- Langabeer, J R., 2007. *Health Care Operations Management*. Jones and Bartlett Publishers, Sudbury, MA, pp. 438
- Lawrence, D., 2010. *Healthcare: How Did We Get Here and Where Are We Going?* In: *Handbook of Healthcare Delivery Systems*. Chapter 1. Yih Yuehwern (Ed.), Boca Raton, FL, CRC Press, pp. 1.1–1.15
- Lawrence, J., Pasternak, B., 2002. *Applied Management Science: Modeling, Spreadsheet Analysis, and Communication for Decision Making*. 2-nd Ed., Hoboken, NJ: John Wiley & Sons.
- Leapfrog Survey Group, 2011. Proposed Changes to the 2011 Leapfrog Hospital Survey. <http://www.leapfroggroup.org/media/file/SmPtSkedQuestions.pdf>
- Littig, S., Isken, M., (2007). *Short Term Hospital Occupancy Prediction*. *Health Care Management Science*, 10, p. 47–66
- Litvak, E., 2007. A new Rx for crowded hospitals: Math. Operation management expert brings queuing theory to health care. *American College of Physicians-Internal Medicine-Doctors for Adults*, December 2007, ACP Hospitalist.
- Litvak, E., Long, M., 2000. *Cost and Quality Under Managed Care: Irreconcilable Difference ?* *The American Journal of Managed Care*, 6(3), pp. 305–312
- Mayhew, L., Smith, D. 2008. *Using queuing theory to analyze the Government's 4-h completion time target in Accident and Emergency departments*. *Health Care Management Science*, 11, 11–21
- Mayo Clinic, 2011. *Mayo Clinic Launches New Center to Focus on How Healthcare is Delivered*. Mayo Clinic News, January, 25. www.mayoclinic.org/news2011-rst/6151.html
- Marshall, A., Vasilakis, C., El-Darzi, E., 2005. *Length of stay-based Patient Flow Models: Recent Developments and Future Directions*. *Health Care Management Science*, 8, p. 213–220
- McLaughlin, D., Hays, J., 2008. *Healthcare Operations Management*. Health Administration Press, Chicago, AUPHA Press, Washington, DC, pp. 466
- McManus, M., Long, M., Cooper, A., Litvak, E., 2004. *Queuing theory accurately models the need for critical care resources*. *Anesthesiology*. 100(5), pp. 1271–1276
- McManus, M., Long, M., Cooper, A., Mandell, J., Berwick, D., Pagano, M., Litvak, E., 2003. *Variability in surgical caseload and access to intensive care services*. *Anesthesiology*. 98(6), pp. 1491–1496
- Moeller, D., Evans, J., 2010. *Episode-of-care payment creates clinical advantages*. *Managed Care*, 19 (1): 42–5
- Motwani, J., Klein, D., Harowitz, R., 1996. *The Theory of Constraints in Services: part 2-examples from health care*. *Managing Service Quality*, 6(2), pp. 30–34
- Nikoukaran J., (1999). Software selection for simulation in manufacturing: A review. *Simulation Practice and Theory*, 7(1), 1–14
- Ozcan, Y., 2009. *Quantitative Methods in Health Care Management*. Second Edition. Jossey-Bass. A Wiley Imprint, San Francisco, CA, pp. 438
- Peek, N., 2010. *Data Mining*. Chapter 24. In: Yih, Yuehwern (Editor). *Handbook of Healthcare Delivery Systems*. CRC Press, Boca Raton, FL
- PHLO, 2008. Creating and Running Proactive Hospital Operations website, <http://phlo.typepad.com/phlo/2008/01/the-worst-thing.html>

- Prekopa, A., 1995. *Stochastic Programming*. Kluwer Academic Publisher. The Netherlands.
- Press, W., Flannery, B., Teukolsky, S., Vetterling, W., 1988. *Numerical Recipes in C. The Art of Scientific Computing*. Cambridge University Press. New York, NY, pp. 735
- Reid, P., Compton, W, Grossman, J., Fanjiang, G., Eds., 2005. *Building A Better Delivery System: A new Engineering / Healthcare Partnership*. National Academy of Engineering and Institute of Medicine. Washington, DC. The National Academy Press
- Reinhardt, G., Dada, M., 2005. *Allocating the Gains from Resource Pooling with the Shapley Value*. *Journal of the Operational Research Society*, 56, pp. 997–1000
- Ryckman, F., Yelton, P., Anneken, A., Kissling, P., Schoettker, P., Kotagal, U., 2009. *Redesigning Intensive Care Unit Flow Using Variability Management to Improve Access and Safety*. *The Joint Commission Journal on Quality and Patient Safety*, 35 (11), pp. 535–543
- Saraniti, B., 2006. *Optimal Pooled Testing*. *Health Care Management Science*, 9, pp. 143–149
- Savage, S., 2009. *The Flaw of Averages*. John Wiley & Sons, Inc, Hoboken, New Jersey, pp. 392
- Savin, S., 2006. *Managing Patient Appointments in Primary Care*. In: *Patient Flow: Reducing Delay in Healthcare Delivery*. Chapter 5. Hall, R.W. (Ed). Springer, New York, NY. pp. 123–150
- Schuster, HG. 1998. *Deterministic Chaos: Introduction*. Weinheim; Physik Verlag
- Seelen, L., Tijms, H., Van Hoorn, M., 1985. *Tables for multi-server queues* New-York, Elsevier, pp. 1–449.
- Sen, S., Higle, J., 1999. *An Introductory Tutorial on Stochastic Linear Programming Models*. *Interfaces*, 29, 2, pp. 33–61
- Story, P., 2009. *Are We Thinking Systems Yet ?* American Society for Quality (ASQ), January, 2009. <http://www.asq.org/pdf/healthcare/are-we-thinking-systems-yet.pdf>
- Swain, J., 2007. *Biennial Survey of discreet-event simulation software tools*. *OR/MS Today*, 34(5), October
- Teow, K L., 2009. *Practical Operations Research Applications for Healthcare Managers*. *Annals Academy of Medicine Singapore*, 38 (6), pp. 564–566
- Tibshirani, R., Walther, G., Hastie, T., 2001. *Estimating the Number of Clusters in a Dataset via the Gap Statistic*. *Journal of Royal Statistical Society, B*. 63: 411–423
- Tseng, C-L., Brimacombe, M., Xie, M., Rajan, M., Wang, H., Kolassa, J., Crystal, S., Chen, T., Pogach, L., Safford, M., 2005. *Seasonal Patterns in Monthly Hemoglobin A1C Values*. *American Journal of Epidemiology*, 161 (6): 565–574
- Ulmer, C., Wolman, D., Johns, M., Eds. 2009. *Resident Duty Hours: Enhancing Sleep, Supervision, and Safety*. Institute of Medicine. Washington, DC: National Academic Press. <http://www.iom.edu/Reports/2008/Resident-Duty-Hours-Enhancing-Sleep-Supervision-and-Safety.aspx>
- Valdez, R.S., Brennan, P.F. 2009. *Industrial and System Engineering and Health Care: Critical Areas of Research*. Background Report. University of Wisconsin-Madison, Madison, WI. Agency for Healthcare Research and Quality (AHRQ) publication, #09-0094-EF, Rockville, MD. [#10-0079-EF, May 2010](http://healthhit.ahrq.gov/engineeringhealthfinalreport)
- Vissers, J M.H. 1998. *Health Care Management Modeling: A Process Perspective*. *Health Care Management Science*, 1: 77–85
- Winston, W. 2004. *Microsoft Excel Data and Business Modeling*. Microsoft Learning, pp. 624
- Weber, D. O., 2006. Queue Fever: Part 1 and Part 2. May 10. *Hospitals & Health Networks, Health Forum*. http://www.hhnmag.com/hhnmag_app/jsp/articledisplay.jsp?dcrpath=HHNMAG/PubsNewsArticle/data/2006May/060509HHN_Online_Weber&domain=HHNMAG
- Wullink, G., Van Houdenhoven, M., Hans, E., van Oostrum, J., van der Lans, M., Kazemier, G., 2007. *Closing Emergency Operating Rooms Improves Efficiency*. *Journal of Medical Systems*, 31: 543–546
- Young, H.P. 1994. *Cost Allocations*. In: *Handbook of Game Theory with Economic Application*. V. 2, Aumann, R., Hart, S., (Ed), 1193–1230. Elsevier Science B.V.
- Yoo, I., Alafaireet, P., Marinov, M., Pena-Hernandez, K., Gopidi, R, Chang, J-F., Hua, L., 2011. *Data Mining in Healthcare and Biomedicine: A Survey of the Literature*. *J. Med. Systems*, Published Online, May 3, 2011. DOI 10.1007/s10916-011-9710-5