

# Bibliography

- [1] Adan, I.J.B.F., Vissers, J.M.H.: Patient mix optimisation in hospital admission planning: a case study. *International Journal of Operations and Production Management* **22**(4), 445–461 (2002)
- [2] Akkerman, R., Knip, M.: Reallocation of beds to reduce waiting time for cardiac surgery. *Health Care Management Science* **7**(2), 119–126 (2004)
- [3] Allen, A.O.: *Probability, Statistics and Queueing Theory*. Academic Press, London (1990)
- [4] Altinel, I.K., Ulas, E.: Simulation modeling for emergency bed requirement planning. *Annals of Operations Research* **67**(1), 183–210 (1996)
- [5] Anthony, R.N.: *Planning and control systems: a framework for analysis*. Harvard Business School Division of Research, Boston (1965)
- [6] Ashton, R., Hague, L., Brandreth, M., Worthington, D.J., Cropper, S.: A simulation-based study of a NHS walk-in centre. *Journal of the Operational Research Society* **56**(2), 153–161 (2005)
- [7] Ata, B., van Mieghem, J.A.: The value of partial resource pooling: Should a service network be integrated or product-focused? *Management Science* **55**(1), 115–131 (2009)
- [8] Bagust, A., Place, M., Posnett, J.W.: Dynamics of bed use in accommodating emergency admissions: stochastic simulation model. *British Medical Journal* **319**(7203), 155–158 (1999)
- [9] Bailey, N.T.J.: A study of queues and appointment systems in hospital outpatient departments, with special reference to waiting times. *Journal of the Royal Statistical Society* **14**(2), 185–99 (1952)

- 
- [10] Balasubramanian, H., Banerjee, R., Denton, B., Naessens, J., Stahl, J.: Improving clinical access and continuity through physician panel redesign. *Journal of General Internal Medicine* **25**(10), 1109–1115 (2010)
- [11] Balasubramanian, H., Denton, B., Lin, M.: *Handbook of Healthcare Delivery Systems*, chap. Managing physician panels in primary care, pp. 1–23. Taylor and Francis, New York (2010)
- [12] Baskett, F., Chandy, K.M., Muntz, R.R., Palacios, F.G.: Open, closed, and mixed networks of queues with different classes of customers. *Journal of the Association for Computing Machinery* **22**(2), 248–260 (1975)
- [13] Beland, F., Bergman, H., Lebel, P., Clarfield, A.M., Tousignant, P., Contandriopoulos, A.P., Dallaire, L.: A system of integrated care for older persons with disabilities in Canada: Results from a randomized controlled trial. *Journals of Gerontology Series A: Biological and Medical Sciences* **61**(4), 367–373 (2006)
- [14] Beliën, J., Demeulemeester, E.: Building cyclic master surgery schedules with leveled resulting bed occupancy. *European Journal of Operational Research* **176**(2), 1185–1204 (2007)
- [15] Beliën, J., Demeulemeester, E., Cardoen, B.: Visualizing the demand for various resources as a function of the master surgery schedule: A case study. *Journal of Medical Systems* **30**(5), 343–350 (2006)
- [16] Beliën, J., Demeulemeester, E., Cardoen, B.: A decision support system for cyclic master surgery scheduling with multiple objectives. *Journal of Scheduling* **12**(2), 147–161 (2009)
- [17] Bitran, G.R., Morabito, R.: Open queueing networks: Optimization and performance evaluation models for discrete manufacturing systems. *Production and Operations Management* **5**(2), 163–193 (1996)
- [18] Black, D., Pearson, M.: Average length of stay, delayed discharge, and hospital congestion: A combination of medical and managerial skills is needed to solve the problem. *British Medical Journal* **325**(7365), 610–611 (2002)
- [19] Blake, J.T.: Shooting arrows in the dark: the policies and practices of waitlist management in Canada. *Clinical and investigative medicine* **28**(6), 308–311 (2005)
- [20] Blake, J.T., Carter, M.W.: Surgical process scheduling: a structured review. *Journal of the Society for Health Systems* **5**(3), 17–30 (1997)

- 
- [21] Blake, J.T., Carter, M.W., Richardson, S.: An analysis of emergency room wait time issues via computer simulation. *INFOR* **34**(4), 263–273 (1996)
- [22] Blake, J.T., Donald, J.: Mount Sinai Hospital uses integer programming to allocate operating room time. *Interfaces* **32**(2), 63–73 (2002)
- [23] Blasak, R.E., Armel, W.S., Starks, D.W., Hayduk, M.C.: The use of simulation to evaluate hospital operations between the emergency department and a medical telemetry unit. In: *Proceedings of the 2003 Winter Simulation Conference*, vol. 2, pp. 1887 – 1893 (2003)
- [24] Blatchford, O., Capewell, S.: Emergency medical admissions: taking stock and planning for winter. *British Medical Journal* **315**(7119), 1322–1323 (1997)
- [25] Boat, T.F., Chao, S.M., O’Neill, P.H.: From waste to value in health care. *The Journal of the American Medical Association* **299**(5), 568–571 (2008)
- [26] Bonvissuto, C.A.: Avoiding unnecessary critical care costs. *Healthcare Financial Management* **48**(11), 47–52 (1994)
- [27] Boucherie, R.J., Taylor, P.: Transient product from distributions in queueing networks. *Discrete Event Dynamic Systems* **3**(4), 375–396 (1993)
- [28] Bowers, J., Mould, G.: Concentration and the variability of orthopaedic demand. *Journal of the Operational Research Society* **53**(2), 203–210 (2002)
- [29] Bowers, J., Mould, G.: Ambulatory care and orthopaedic capacity planning. *Health Care Management Science* **8**(1), 41–47 (2005)
- [30] Brailsford, S.C., Lattimer, V.A., Tarnaras, P., Turnbull, J.C.: Emergency and on-demand health care: modelling a large complex system. *Journal of the Operational Research Society* **55**(1), 34–42 (2004)
- [31] Brasted, C.: Ultrasound waiting lists: rational queue or extended capacity? *Health Care Management Science* **11**(2), 196–207 (2008)
- [32] Calichman, M.V.: Creating an optimal operating room schedule. *Association of peri Operative Registered Nurses (AORN) Journal* **81**(3), 580–588 (2005)

- [33] Capewell, S.: The continuing rise in emergency admissions. *British Medical Journal* **312**(7037), 991–992 (1996)
- [34] Cardoen, B., Demeulemeester, E., Beliën, J.: Operating room planning and scheduling: List of references (2008). Retrieved October 10, 2008, from <http://www.econ.kuleuven.be/public/ndbaa92/bibliography.pdf>
- [35] Cardoen, B., Demeulemeester, E., Beliën, J.: Operating room planning and scheduling: A literature review. *European Journal of Operational Research* **201**(3), 921 – 932 (2010)
- [36] Carter, M.W.: Diagnosis: Mismanagement of resources. *OR/MS Today* **29**(2), 26–32 (2002)
- [37] Carter, M.W., Blake, J.T.: Using simulation in an acute-care hospital: easier said than done. In: *Operations Research and Health Care: A Handbook of Methods and Applications*. Kluwer Academic Publishers, New York (2004)
- [38] Cattani, K., Schmidt, G.M.: The pooling principle. *INFORMS Transactions on Education* **5**(2), 47–52 (2005)
- [39] Cayirli, T., Veral, E.: Outpatient scheduling in health care: A review of literature. *Production and Operations Management* **12**(4), 519–549 (2003)
- [40] Cayirli, T., Veral, E., Rosen, H.: Designing appointment scheduling systems for ambulatory care services. *Health Care Management Science* **9**(1), 47–58 (2006)
- [41] Ceglowski, R., Churilov, L., Wasserthiel, J.: Combining data mining and discrete event simulation for a value-added view of a hospital emergency department. *The Journal of the Operational Research Society* **58**(2), 246–254 (2007)
- [42] Centeno, M.A., Albacete, C., Terzano, D.O., Carrillo, M., Ogazon, T.: A simulation study of the radiology department at JMH. In: *Proceedings of the 2000 Winter Simulation Conference*, pp. 1978–1984 (2000)
- [43] Center for Healthcare Operations Improvement and Research (CHOIR): *ORchestra Bibliography* (2011). Retrieved January 15, 2011 from <http://www.choir.utwente.nl/en/orchestra>
- [44] Cochran, J.K., Bharti, A.: A multi-stage stochastic methodology for whole hospital bed planning under peak loading. *International Journal of Industrial and Systems Engineering* **1**(1), 8–36 (2006)

- [45] Cochran, J.K., Bharti, A.: Stochastic bed balancing of an obstetrics hospital. *Health Care Management Science* **9**(1), 31–45 (2006)
- [46] Cohen, J.W.: The single server queue, *North-Holland Series in Applied Mathematics and Mechanics*, vol. 8, second edn. North-Holland Publishing Co., Amsterdam (1982)
- [47] Conforti, D., Guerriero, F., Guido, R.: Optimization models for radiotherapy patient scheduling. *4OR: A Quarterly Journal of Operations Research* **6**(3), 263–278 (2007)
- [48] Costa, A.X., Ridley, S.A., Shahani, A.K., Harper, P.R., De Senna, V., Nielsen, M.S.: Mathematical modelling and simulation for planning critical care capacity. *Anaesthesia* **58**(4), 320 (2003)
- [49] Criswell, M., Hasan, I., Kopach, R., Lambert, S., Lawley M. and McWilliams, D., Trupiano, G., Varadarajan, N.: Emergency department divert avoidance using petri nets. *Proceedings of the IEEE International Conference on System of Systems Engineering* (2007). 1–6
- [50] Currie, C.T., Hoy, D., Tierney, A.J., Bryan-Jones, J., Lapsley, I.: Hip-Mod: Development of a multi-agent audit-based computer simulation of hip fracture care. *Health Informatics Journal* **9**(3), 183 (2003)
- [51] Cutler, D.M.: Empirical evidence on hospital delivery under prospective payment (1990). MIT
- [52] Dafny, L.S.: How do hospitals respond to price changes? *The American Economic Review* **95**(5), 1525–1547 (2005)
- [53] Dansky, K.H., Miles, J.: Patient satisfaction with ambulatory health-care services: waiting times and filling time. *Hospital and health services administration* **77**, 42–165 (1997)
- [54] De Bruin, A.M., Koole, G.M., Visser, M.C.: Bottleneck analysis of emergency cardiac in-patient flow in a university setting: an application of queueing theory. *Clinical & Investigative Medicine* **28**(6), 316–7 (2005)
- [55] Dean, B., van Ackere, A., Gallivan, S., Barber, N.: When should pharmacists visit their wards? An application of simulation to planning hospital pharmacy services. *Health Care Management Science* **2**(1), 35–42 (1999)

- [56] Dean, B.S., Allan, E.L., Barber, N.D., Barker, K.N.: Comparison of medication errors in an American and a British hospital. *American Journal of Health-System Pharmacy* **52**(22), 2543–2549 (1995)
- [57] Derlet, R.W., Richards, J.R.: Overcrowding in the nation's emergency departments: Complex causes and disturbing effects. *Annals of emergency medicine* **35**(1), 63–68 (2000)
- [58] Dexter, F.: Bibliography of operating room management articles. Retrieved October 10, 2008 from <http://www.franklindexter.net> (2009)
- [59] Dexter, F., Blake, J.T., Penning, D.H., Sloan, B., Chung, P., Lubarsky, D.: Use of linear programming to estimate impact of changes in a hospital's operating room time allocation on perioperative variable costs. *Anesthesiology* **96**(3), 718–724 (2002)
- [60] Dexter, F., Lubarsky, D.A.: Using length of stay data from a hospital to evaluate whether limiting elective surgery at the hospital is an inappropriate decision. *Journal of Clinical Anesthesia* **16**(6), 421–425 (2004)
- [61] Dexter, F., Macario, A., Traub, R.D.: Enterprise-wide patient scheduling information systems to coordinate surgical clinic and operating room scheduling can impair operating room efficiency. *Anesthesia & Analgesia* **91**(3), 617–626 (2000)
- [62] van Dijk, N.M.: On hybrid combination of queueing and simulation. In: *Proceedings of the 2000 Winter simulation Conference*, pp. 147–150 (2000)
- [63] van Dijk, N.M., van der Sluis, E.: To pool or not to pool in call centers. *Production and Operations Management* **17**(3), 296–305 (2004)
- [64] van Dijk, N.M., van der Sluis, E.: Practical optimization by OR and simulation. *Simulation Modelling Practice and Theory* **16**(8), 1113 – 1122 (2008)
- [65] van Dijk, N.M., van der Sluis, E.: Pooling is not the answer. *European Journal of Operational Research* **197**(1), 415–421 (2009)
- [66] Dimakou, S., Parkin, D., Devlin, N., Appleby, J.: Identifying the impact of government targets on waiting times in the NHS. *Health Care Management Science* **12**(1), 1–10 (2009)

- [67] Drummond, A.J.: No room at the inn: overcrowding in Ontario's emergency departments. *Canadian Journal of Emergency Medicine* **4**(2), 91–7 (2002)
- [68] Dudgeo, N.: Canada - Netherlands seminar on health care. Tech. rep., Canadian College of Health Service Executives (2007)
- [69] Epstein, R.H., Dexter, F.: Economic analysis of linking operating room scheduling and hospital material management information systems for just-in-time inventory control. *Anesthesia & Analgesia* **91**(2), 337–343 (2000)
- [70] Erlenkotter, D.: Sequencing expansion projects. *Operations Research* **21**(2), 542–553 (1973)
- [71] Everett, J.E.: A decision support simulation model for the management of an elective surgery waiting system. *Health Care Management Science* **5**(2), 89–95 (2002)
- [72] Fackrell, M.: Modelling healthcare systems with phase-type distributions. *Health Care Management Science* **12**(1), 11–26 (2009)
- [73] Federgruen, A., Groenevelt, H.: M/G/c queueing systems with multiple customer classes: characterization and control of achievable performance under nonpreemptive priority rules. *Management Science* **34**(9), 1121–1138 (1988)
- [74] Fletcher, A., Worthington, D.J.: What is a 'generic' hospital model? (2007). EPrint: Retrieved October 13, 2008, from <http://eprints.lancs.ac.uk/7051/1/004583.pdf>
- [75] Fletcher, A., Worthington, D.J.: What is a generic hospital model? A comparison of generic and specific hospital models of emergency patient flows. *Health Care Management Science* **12**(4), 374–391 (2009)
- [76] Folmer, K., Mot, E.: Diagnosis and treatment combinations in Dutch hospitals. Tech. rep., CPB Netherlands Bureau for Economic Policy Analysis (2003)
- [77] Freidenfelds, J.: Capacity expansion-analysis of simple models with applications. North Holland (1981)
- [78] Gallivan, S., Utley, M., Treasure, T., Valencia, O.: Booked inpatient admissions and hospital capacity: mathematical modelling study. *BMJ* **324**(7332), 280–282 (2002). DOI 10.1136/bmj.324.7332.280

- 
- [79] Gorunescu, F., McClean, S.I., Millard, P.H.: A queueing model for bed-occupancy management and planning of hospitals. *Journal of the Operational Research Society* **53**, 19–24 (2002)
- [80] Green, L.V., Savin, S.: Reducing delays for medical appointments: A queueing approach. *Operations Research* **56**(6), 1526–1538 (2008)
- [81] Green, L.V., Savin, S., Murray, M.: Providing timely access to care: What is the right patient panel size? *Joint Commission Journal on Quality and Patient Safety* **33**(4), 211–218 (April 2007)
- [82] Griffiths, J.D., Price-Lloyd, N., Smithies, M., Williams, J.E.: Modelling the requirement for supplementary nurses in an intensive care unit. *Journal of the Operational Research Society* **56**(2), 126–133 (2005)
- [83] Gross, D.: *Fundamentals of queueing theory*. Wiley-India (2008)
- [84] Gross, M.: Wait times: the appropriateness of the methodology and how they affect patients. *Canadian Journal of Surgery* **47**(3), 167–169 (2004)
- [85] Guinet, A., Chaabane, S.: Operating theatre planning. *International Journal of Production Economics* **85**(1), 69–81 (2003)
- [86] Hall, R.W.: *Patient Flow: Reducing Delay in Healthcare Delivery*, first edn. Springer, New York (2006)
- [87] Hanratty, B., Robinson, M.: Coping with winter bed crises. New surveillance systems might help. *British Medical Journal* **319**(7224), 1511–1512 (1999)
- [88] Hans, E.W., van Houdenhoven, M., Hulshof, P.J.H.: A framework for health care planning and control (2011). EPrint: Retrieved April 27, 2011, from <http://eprints.eemcs.utwente.nl/19571/>
- [89] Harper, P.R.: A framework for operational modelling of hospital resources. *Health Care Management Science* **5**(3), 165–173 (2002)
- [90] Harper, P.R., Shahani, A.K.: Modelling for the planning and management of bed capacities in hospitals. *Journal of the Operational Research Society* **53**(1), 11–18 (2002)
- [91] Harper, P.R., Shahani, A.K., Gallagher, J.E., Bowie, C.: Planning health services with explicit geographical considerations: a stochastic location-allocation approach. *Omega* **33**(2), 141 – 152 (2005)



- [92] Harris, R.A.: Hospital bed requirements planning. *European Journal of Operational Research* **25**(1), 121–126 (1986)
- [93] Hermes Consulting Solutions: Panel sizer software (2011). Retrieved January 15, 2011 from <http://www.panelsizer.com>
- [94] Hochang, L.: Project selection problems for production-inventory-distribution scheduling in manufacturing plants. In: *Computer-Aided Design, Engineering, and Manufacturing*, pp. 1–27. CRC Press (2000)
- [95] Hopp, W.J., Spearman, M.L.: *Factory physics: foundations of manufacturing management*. McGraw-Hill, Boston (2001)
- [96] van Houdenhoven, M., Hans, E., Klein, J., Wullink, G., Kazemier, G.: A norm utilisation for scarce hospital resources: Evidence from operating rooms in a Dutch university hospital. *Journal of Medical Systems* **31**(4), 231–236 (2007)
- [97] van Houdenhoven, M., van Oostrum, J.M., Wullink, G., Hans, E., Hurink, J.L., Bakker, J., Kazemier, G.: Fewer intensive care unit refusals and a higher capacity utilization by using a cyclic surgical case schedule. *Journal of Critical Care* **23**(2), 222–226 (2008)
- [98] Hreinsson, E.B.: Hydroelectric project sequencing using heuristic techniques and dynamic programming. In: *Power Systems Computation Conference, Cascais, Portugal* (1987)
- [99] Huang, X.M.: Patient attitude towards waiting in an outpatient clinic and its applications. *Health Services Management Research* **7**(1), 2–8 (1994)
- [100] Huang, X.M.: A planning model for requirement of emergency beds. *Mathematical Medicine and Biology* **12**(3-4), 345–353 (1995). DOI 10.1093/imammb/12.3-4.345
- [101] Huckman, R.S., Zinner, D.E.: Does focus improve operational performance? Lessons from the management of clinical trials. *Strategic Management Journal* **29**(2), 173–193 (2008)
- [102] Hyer, N.L., Wemmerlöv, U., Morris, J.: Performance analysis of a focused hospital unit: The case of an integrated trauma center. *Journal of Operations Management* **27**(3), 203–219 (2009)
- [103] Institute for Healthcare Improvement (IHI): Optimizing patient flow: Moving patients smoothly through acute

- care settings (2003). Retrieved June 23, 2008 from <http://www.ihl.org/IHI/Results/WhitePapers>
- [104] Irwin, R.S., Rippe, J.M.: Irwin and Rippe's intensive care medicine. Wolters Kluwer Health/Lippincott Williams & Wilkins (2008)
- [105] Janssen, A., van Leeuwen, J., Zwart, B.: Corrected asymptotics for a multi-server queue in the Halfin-Whitt regime. *Queueing Systems* **58**(4), 261–301 (2008)
- [106] Jebali, A., Hadj Alouane, A.B., Ladet, P.: Operating rooms scheduling. *International Journal of Production Economics* **99**(1-2), 52–62 (2006)
- [107] Jiang, L., Giachetti, R.: A queueing network model to analyze the impact of parallelization of care on patient cycle time. *Health Care Management Science* **11**(3), 248–261 (2008)
- [108] Johansson, L.: Decentralisation from acute to home care settings in Sweden. *Health policy* **41**(1), 131–143 (1997)
- [109] Joustra, P., van der Sluis, E., van Dijk, N.M.: To pool or not to pool in hospitals: a theoretical and practical comparison for a radiotherapy outpatient department. *Annals of Operations Research* **178**(1), 77–89 (2010)
- [110] Jun, J.B., Jacobson, S.H., Swisher, J.R.: Application of discrete-event simulation in health care clinics: A survey. *Journal of the Operational Research Society* **50**(2), 109–123 (1999)
- [111] van de Ketterij, J.L., Schaepkens, F.F.J.M., de Vries, P.G.: DBC 2003 what's in it for me. *Health information developments in the Netherlands* **1**(5) (2002)
- [112] Kim, S.C., Horowitz, I.: Scheduling hospital services: the efficacy of elective-surgery quotas. *Omega* **30**(5), 335–346 (2002)
- [113] Kim, S.C., Horowitz, I., Young, K.K., Buckley, T.A.: Analysis of capacity management of the intensive care unit in a hospital. *European Journal of Operational Research* **115**(1), 36–46 (1999)
- [114] Kim, S.C., Horowitz, I., Young, K.K., Buckley, T.A.: Flexible bed allocation and performance in the intensive care unit. *Journal of Operations Management* **18**(4), 427–43 (2000)
- [115] Koizumi, N., Kuno, E., Smith, T.E.: Modeling patient flows using a queueing network with blocking. *Health Care Management Science* **8**(1), 49–60 (2005)

- 
- [116] Kokangul, A.: A combination of deterministic and stochastic approaches to optimize bed capacity in a hospital unit. *Computer Methods and Programs in Biomedicine* **90**(1), 56–65 (2008)
- [117] Kolisch, R., Hartmann, S.: Experimental investigation of heuristics for resource-constrained project scheduling: An update. *European Journal of Operational Research* **174**(1), 23 – 37 (2006)
- [118] Kolker, A.: Process modeling of ICU patient flow: Effect of daily load leveling of elective surgeries on ICU diversion. *Journal of Medical Systems* **33**(1), 1–14 (2008)
- [119] Kommer, G.J.: A waiting list model for residential care for the mentally disabled in the Netherlands. *Health Care Management Science* **5**(4), 285–290 (2002)
- [120] Kotiadis, K.: Extracting a conceptual model for a complex integrated system in healthcare. In: J. Garnett, S. Brailsford, S. Robinson, S. Taylor (eds.) *Proceedings of the Third Operational Research Society Simulation Workshop*, pp. 235–245. The Operational Research Society (2006)
- [121] Kremitske, D.L., West, D.J.: Patient-focused primary care: a model. *Hospital Topics* **75**(4), 22 – 28 (1997)
- [122] Kwak, N.K., Kuzdrall, P.J., Schmitz, H.H.: The GPSS simulation of scheduling policies for surgical patients. *Management Science* **22**(9), 982–989 (1976)
- [123] Lane, D.C., Monefeldt, C., Rosenhead, J.V.: Looking in the wrong place for healthcare improvements: A system dynamics study of an accident and emergency department. *Journal of the Operational Research Society* **51**(5), 518–531 (2000)
- [124] Langabeer, J.R., Ozcan, Y.A.: The economics of cancer care: longitudinal changes in provider efficiency. *Health Care Management Science* **12**(2), 192–200 (2009)
- [125] Leonard, K.J., Rauner, M.S., Schaffhauser-Linzatti, M.M., Yap, R.: The effect of funding policy on day of week admissions and discharges in hospitals: the cases of Austria and Canada. *Health Policy* **63**(3), 239 – 257 (2003)
- [126] Leung, G.M.: Hospitals must become Focused Factories. *BMJ: British Medical Journal* **320**(7239), 942–943 (2000)

- 
- [127] Litvak, E., Long, M.C.: Cost and quality under managed care: Irreconcilable differences. *American Journal of Managed Care* **6**(3), 305–312 (2000)
- [128] Litvak, N., van Rijsbergen, M., Boucherie, R.J., van Houdenhoven, M.: Managing the overflow of intensive care patients. *European Journal of Operational Research* **185**(3), 998–1010 (2008)
- [129] Lovejoy, W.S., Li, Y.: Hospital operating room capacity expansion. *Management Science* **48**(11), 1369–1387 (2002)
- [130] Lowery, J.C., Martin, J.B.: Evaluation of an advance surgical scheduling system. *Journal of Medical Systems* **13**(1), 11–23 (1989)
- [131] Luss, H.: Operations research and capacity expansion problems: A survey. *Operations Research* **30**(5), 907–947 (1982)
- [132] Mahapatra, S., Koelling, C.P., Patvivatsiri, L., Fraticelli, B., Eitel, D., Grove, L.: Pairing emergency severity index 5-level triage data with computer aided system design to improve emergency department access and throughput. In: *Proceedings of the 2003 Winter Simulation Conference*, vol. 2, pp. 1917–1925 (2003)
- [133] Mandelbaum, A., Reiman, M.I.: On pooling in queueing networks. *Management Science* **44**(7), 971–981 (1998)
- [134] Martin, S., Smith, P.C.: Rationing by waiting lists: an empirical investigation. *Journal of Public Economics* **71**(1), 141–164 (1999)
- [135] Massey, W.A., Whitt, W.: Networks of infinite-server queues with non-stationary Poisson input. *Queueing Systems* **13**(1), 183–250 (1993)
- [136] Masursky, D., Dexter, F., O’Leary, C.E., Applegeet, C., Nussmeier, N.A.: Long-term forecasting of anesthesia workload in operating rooms from changes in a hospital’s local population can be inaccurate. *Anesthesia & Analgesia* **106**(4), 1223–1231 (2008)
- [137] Matta, M.E., Patterson, S.S.: Evaluating multiple performance measures across several dimensions at a multi-facility outpatient center. *Health Care Management Science* **10**(2), 173–194 (2007)
- [138] Mayhew, L.: On the effectiveness of care co-ordination services aimed at preventing hospital admissions and emergency attendances. *Health Care Management Science* **12**(3), 269–284 (2009)

- [139] McDonald, J.H.: Handbook of Biological Statistics, 2nd ed. Sparky House Publishing, Baltimore, Maryland. (2009)
- [140] McGowan, J.E., Truwit, J.D., Cipriano, P., Howell, R.E., VanBree, M., Garson, A., Hanks, J.B.: Operating room efficiency and hospital capacity: Factors affecting operating room use during maximum hospital census. *Journal of the American College of Surgeons* **204**(5), 865–871 (2007)
- [141] McLaughlin, C.P., Yang, S., van Dierdonck, R.: Professional service organizations and focus. *Management Science* **41**(7), 1185–1193 (1995)
- [142] McManus, M.L., Long, M.C., Cooper, A., Mandell, J., Berwick, D.M., Pagano, M., Litvak, E.: Variability in surgical caseload and access to intensive care services. *Anesthesiology* **98**(6), 1491–1496 (2003)
- [143] van der Meer, R.B., Rymaszewski, L.A., Findlay, H., Curran, J.: Using OR to support the development of an integrated musculo-skeletal service. *Journal of the Operational Research Society* **56**(2), 162–172 (2005)
- [144] van Merode, G.G., Groothuis, S., Schoenmakers, M., Boersma, H.H.: Simulation studies and the alignment of interests. *Health Care Management Science* **5**(2), 97–102 (2002)
- [145] Ministerie van Infrastructuur en Milieu: Sneller-beter (2011). Retrieved April 15, 2011 from <http://www.snellerbeter.nl/> (see [68] for English Summary)
- [146] Morin, T.L.: Optimal sequencing of capacity expansion projects. *Journal of the Hydraulics Division* **99**(9), 1605–1622 (1973)
- [147] Morin, T.L.: Multidimensional sequencing rule. *Operations Research* **23**(3), 576–580 (1975)
- [148] Morin, T.L., Shin, Y.S.: Optimal expansion of flood control systems, vol. 1. Northwestern University (1977)
- [149] Murray, M., Berwick, D.M.: Advanced access: Reducing waiting and delays in primary care. *Journal of the American Medical Association* **289**(8), 1035–1040 (2003)
- [150] Murray, M., Davies, M., Boushon, B.: Panel size: How many patients can one doctor manage? *Family Practice Management* **14**(4), 44 (2007)

- [151] Neebe, A.W., Rao, M.R.: The discrete-time sequencing expansion problem. *Operations Research* **31**(3), 546–558 (1983)
- [152] Neebe, A.W., Rao, M.R.: Sequencing capacity expansion projects in continuous time. *Management Science* **32**(11), 1467–1479 (1986)
- [153] Newman, K.: Towards a new health care paradigm. Patient-focused care. The case of Kingston Hospital Trust. *Journal of Management in Medicine* **11**(6), 357–371 (1997)
- [154] Nguyen, J.M., Six, P., Antonioli, D., Glemain, P., Potel, G., Lombrail, P., Le Beux, P.: A simple method to optimize hospital beds capacity. *International Journal of Medical Informatics* **74**(1), 39–49 (2005)
- [155] Nguyen, J.M., Six, P., Parisot, R., Antonioli, D., Nicolas, F., Lombrail, P.: A universal method for determining intensive care unit bed requirements. *Intensive Care Medicine* **29**(5), 849–852 (2003)
- [156] O’Kane, P.C.: A simulation model of a diagnostic radiology department. *European Journal of Operational Research* **6**(1), 38–45 (1981)
- [157] van Oostrum, J.M., Bredenhoff, E., Hans, E.W.: Suitability and managerial implications of a master surgical scheduling approach. *Annals of Operations Research* **178**(1), 91–104 (2010)
- [158] van Oostrum, J.M., van Houdenhoven, M., Hurink, J.L., Hans, E.W., Wullink, G., Kazemier, G.: A master surgical scheduling approach for cyclic scheduling in operating room departments. *OR Spectrum* **30**(2), 355–374 (2008)
- [159] Oudhoff, J.P., Timmermans, D.R.M., Rietberg, M., Knol, D.L., Van der Wal, G.: The acceptability of waiting times for elective general surgery and the appropriateness of prioritising patients. *BMC Health Services Research* **7**(1), 32–44 (2007)
- [160] Pham, D.N., Klinkert, A.: Surgical case scheduling as a generalized job shop scheduling problem. *European Journal of Operational Research* **185**(3), 1011–1025 (2008)
- [161] Pitt, D.F., Noseworthy, T.W., Guilbert, J., Williams, J.R.: Waiting lists: management, legalities and ethics. *Canadian Journal of Surgery* **46**(3), 170–175 (2003)
- [162] Ramis, F.J., Palma, J.L., Baesler, F.F.: The use of simulation for process improvement at an ambulatory surgery center. In: *Proceedings of the 2001 Winter Simulation Conference*, pp. 1401–1404 (2001)

- [163] Rauner, M.S., Schaffhauser-Linzatti, M.M.: Impact of the new Austrian inpatient payment strategy on hospital behavior: a system-dynamics model. *Socio-Economic Planning Sciences* **36**(3), 161 – 182 (2002)
- [164] Renwick, M., Gillett, S., Liu, Z.: Long-stay older patients in acute hospitals: are they bed blockers? *Australian health review* **15**(3), 284–98 (1992)
- [165] Robbins, M.J., Jacobson, S.H.: Pediatric vaccine procurement policy: The monopolist’s problem. *Omega* (forthcoming) (2011)
- [166] Ross, S.M.: *Stochastic Processes*. Wiley (1995)
- [167] Rotondi, A.J., Brindis, C., Cantees, K.K., DeRiso, B.M., Ilkin, H., Palmer, J.S., Gunnerson, H.B., Watkins, W.D.: Benchmarking the perioperative process. I. Patient routing systems: a method for continual improvement of patient flow and resource utilization. *Journal of Clinical Anesthesia* **9**(2), 159–69 (1997)
- [168] Rubin, S.G., Davies, G.H.: Bed blocking by elderly patients in general-hospital wards. *Age and Ageing* **4**(3), 142–147 (1975)
- [169] Sakasegawa, H.: An approximation formula  $l_q \approx \alpha\rho^\beta/(1 - \rho)$ . *Annals of the Institute of Statistical Mathematics* **29**(1), 67–75 (1977)
- [170] Samaha, S., Armel, W.S., Starks, D.W.: The use of simulation to reduce the length of stay in an emergency department. In: *Proceedings of the 2003 Winter Simulation Conference*, vol. 2 (2003)
- [171] Santibáñez, P., Begen, M., Atkins, D.: Managing surgical waitlists for a British Columbia health authority (2005). Retrieved October 10, 2008, from <http://www.chcm.ubc.ca/docs/Managing-Surgical-Waitlists-British-Columbia-Health-Authority.pdf>
- [172] Santibáñez, P., Begen, M., Atkins, D.: Surgical block scheduling in a system of hospitals: an application to resource and wait list management in a British Columbia health authority. *Health Care Management Science* **10**(3), 269–282 (2007)
- [173] Schneider, J.E., Miller, T.R., Ohsfeldt, R.L., Morrissey, M.A., Zelner, B.A., Li, P.: The economics of specialty hospitals. *Medical Care Research and Review* **65**(5), 531 (2008)
- [174] Sier, D., Tobin, P., McGurk, C.: Scheduling surgical procedures. *Journal of the Operational Research Society* **48**(9), 884–891 (1997)

- 
- [175] Skinner, W.: *Manufacturing: The Formidable Competitive Weapon*. John Wiley & Sons Inc, New York (1985)
- [176] Sobolev, B., Harel, D., Vasilakis, C., Levy, A.: Using the statecharts paradigm for simulation of patient flow in surgical care. *Health Care Management Science* **11**(1), 79–86 (2008)
- [177] Sokal, S.M., Craft, D.L., Chang, Y., Sandberg, W.S., Berger, D.L.: Maximizing operating room and recovery room capacity in an era of constrained resources. *Archives of Surgery* **141**(4), 389 (2006)
- [178] Sutherland, J., Hamm, J., Hatcher, J.: Adjusting case mix payment amounts for inaccurately reported comorbidity data. *Health Care Management Science* **13**(1), 65–73 (2010)
- [179] Syam, S.S., Ct, M.J.: A location-allocation model for service providers with application to not-for-profit health care organizations. *Omega* **38**(3-4), 157 – 166 (2010)
- [180] Takakuwa, S., Shiozaki, H.: Functional analysis for operating emergency department of a general hospital. In: *Proceedings of the 2004 Winter simulation Conference*, pp. 2003–2011 (2004)
- [181] Taylor, K., Lane, D.: Simulation applied to health services: opportunities for applying the system dynamics approach. *Journal of Health Services Research & Policy* **3**(4), 226–32 (1998)
- [182] Taylor, R.G.: A general form for the capital projects sequencing problem. In: *Proceedings of the 21st international conference on computers and industrial engineering*, pp. 47–50. Elsevier Science Publishers Ltd., Essex, UK (1997)
- [183] Testi, A., Tanfani, E.: Tactical and operational decisions for operating room planning: Efficiency and welfare implications. *Health Care Management Science* **12**(4), 363–373 (2009)
- [184] Testi, A., Tanfani, E., Torre, G.: A three-phase approach for operating theatre schedules. *Health Care Management Science* **10**(2), 163–172 (2007)
- [185] Tijms, H.C.: *A First Course in Stochastic Models*. John Wiley and Sons, New York (2003)
- [186] Tiwari, V., Heese, H.S.: Specialization and competition in healthcare delivery networks. *Health Care Management Science* **12**(3), 306–324 (2009)



- [187] Utley, M., Gallivan, S., Davis, K., Daniel, P., Reeves, P., Worrall, J.: Estimating bed requirements for an intermediate care facility. *European Journal of Operational Research* **150**(1), 92–100 (2003)
- [188] Utley, M., Gallivan, S., Treasure, T., Valencia, O.: Analytical methods for calculating the capacity required to operate an effective booked admissions policy for elective inpatient services. *Health Care Management Science* **6**(2), 97–104 (2003)
- [189] Vanberkel, P.T., Blake, J.T.: A comprehensive simulation for wait time reduction and capacity planning applied in general surgery. *Health Care Management Science* **10**(4), 373–385 (2007)
- [190] Vanberkel, P.T., Boucherie, R.J., Hans, E.W., Hurink, J.L., Lent, W.A.M., Harten, W.H.: Accounting for inpatient wards when developing master surgical schedules. *Anesthesia & Analgesia* (forthcoming) (2011)
- [191] Vanberkel, P.T., Boucherie, R.J., Hans, E.W., Hurink, J.L., Lent, W.A.M., Harten, W.H.: An exact approach for relating recovering surgical patient workload to the master surgical schedule. *Journal of the Operational Research Society* (forthcoming) (2011)
- [192] Vanberkel, P.T., Boucherie, R.J., Hans, E.W., Hurink, J.L., Litvak, N.: Reallocating resources to focused factories: A case study in chemotherapy. In: J.T. Blake, M.W. Carter (eds.) *International Perspectives on Operations Research and Health Care: Proceedings of the 34th Meeting of the European Working Group on Operational Research Applied to Health Services*, pp. 152–164 (2010)
- [193] Vanberkel, P.T., Boucherie, R.J., Hans, E.W., Hurink, J.L., Litvak, N.: A survey of health care models that encompass multiple departments. *International Journal of Health Management and Information* **1**(1), 37–69 (2010)
- [194] Vasilakis, C., Marshall, A.H.: Modelling nationwide hospital length of stay: opening the black box. *Journal of the Operational Research Society* **56**(7), 862–869 (2005)
- [195] Vissers, J.M.H.: Patient flow-based allocation of inpatient resources: A case study. *European Journal of Operational Research* **105**(2), 356–370 (1998)
- [196] Vissers, J.M.H., Beech, R.: *Health Operations Management: Patient Flow Logistics in Health Care*. Routledge, Oxon (2005)

- [197] Wachtel, R.E., Dexter, F.: Tactical increases in operating room block time for capacity planning should not be based on utilization. *Anesthesia & Analgesia* **106**(1), 215–226 (2008)
- [198] Wartman, S.A., Morlock, L.L., Malitz, F.E., Palm, E.A.: Patient understanding and satisfaction as predictors of compliance. *Medical Care* **21**(9), 886–91 (1983)
- [199] Westert, G.P., Burgers, J.S., Verkleij, H.: The Netherlands: regulated competition behind the dykes? *BMJ* **339**(3397), 839–842 (2009)
- [200] Whitt, W.: Approximating a point process by a renewal process, I: Two basic methods. *Operations Research* **30**(1), 125–147 (1982)
- [201] Whitt, W.: The queueing network analyzer. *Bell System Technical Journal* **62**(9), 2779–2815 (1983)
- [202] Whitt, W.: Partitioning customers into service groups. *Management Science* **45**(11), 1579–1592 (1999)
- [203] Wickramasinghe, N., Bloemendal, J.W., De Bruin, A.K., Krabben-dam, J.J.: Enabling innovative healthcare delivery through the use of the focused factory model: the case of the spine clinic of the future. *International Journal of Innovation and Learning* **2**(1), 90–110 (2005)
- [204] Wiecek, M.M., Ehrgott, M., Fadel, G., Figueira, J.R.: Multiple criteria decision making for engineering. *Omega* **36**(3), 337 – 339 (2008). Special Issue on Multiple Criteria Decision Making for Engineering
- [205] Winston, W.L.: *Operations research: applications and algorithms*, third edn. International Thomson Publishing, Tampa (1994)
- [206] Wolstenholme, E.: A patient flow perspective of UK health services: exploring the case for new “intermediate care” initiatives. *System Dynamics Review* **15**(3), 253–271 (1999)
- [207] Wong, C., Geiger, G., Derman, Y.D., Busby, C.R., Carter, M.W.: Redesigning the medication ordering, dispensing, and administration process in an acute care academic health sciences centre. In: *Proceedings of the 2003 Winter Simulation Conference* (2003)
- [208] Worthington, D.J.: Hospital waiting list management models. *Journal of the Operational Research Society* **42**(10), 833–843 (1991)
- [209] Wright, M.B.: The application of a surgical bed simulation model. *European Journal of Operational Research* **32**(1), 26–32 (1987)

- 
- [210] Zijm, W.H.M.: Towards intelligent manufacturing planning and control systems. *OR Spectrum* **22**(3), 313–345 (2000)
- [211] Zonderland, M.E., Boer, F., Boucherie, R.J., de Roode, A., van Kleef, J.: Redesign of a university hospital preanesthesia evaluation clinic using a queuing theory approach. *Anesthesia & Analgesia* **109**(5), 1612–1621 (2009)