

**Margaret L. Brandeau**

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Research Interests

Health Policy Analysis  
Cost-Effectiveness Analysis  
Public Health Preparedness Planning  
Management Science Applications

Education

1985      Doctor of Philosophy, Engineering-Economic Systems, Stanford University  
1978      Master of Science, Operations Research, MIT  
1977      Bachelor of Science, Mathematics, MIT

Employment

2010      Coleman F. Fung Professor in the School of Engineering  
-present    Professor of Medicine (by Courtesy)  
              Faculty Fellow, Center for Primary Care and Outcomes Research  
              Stanford University

1997-2010    Professor of Management Science and Engineering  
              Professor of Medicine (by Courtesy)  
              Faculty Fellow, Center for Primary Care and Outcomes Research  
              Stanford University

1992-97      Associate Professor, Department of Industrial Engineering and Engineering Management,  
              Stanford University

1985-92      Assistant Professor, Department of Industrial Engineering and Engineering Management,  
              Stanford University

1981-85      Research Assistant, Stanford University Medical Center, Office of Analysis and Planning

1978-80      Research Associate, Public Systems Evaluation, Inc., Cambridge, MA

1977-78      Operations Research Consultant, Arthur D. Little, Inc., Cambridge, MA

Honors and Awards

William Pierskalla Best Paper Award, INFORMS Health Applications Society, 2017

Honorary Professor, Universidad Nacional de Ingeniería (National Engineering University), Peru (2016)

Omega Rho Distinguished Lecture on Operations Research and Management Science, 2015

Omega Rho Honor Society for Operations Research and Management Science, Inducted 2015

2015 Philip McCord Morse Lecturership Award, INFORMS (Institute for Operations Research and Management Science)

2015 Award for the Advancement of Women in Operations Research and the Management Sciences, INFORMS

Wasserstrom Family Distinguished Lecturer, Northwestern University, 2012

21<sup>st</sup> Annual E. Leonard Arnoff Memorial Lecture on the Practice of Management Science, University of Cincinnati, 2012

Fellow, INFORMS, Elected 2009

Graduate Teaching Award, Stanford Department of Management Science and Engineering, 2008-2009

President's Award (recognizing important contributions to the welfare of society), INFORMS, 2008

Award for Excellence in Application of Pharmacoeconomics and Health Outcomes Research, International Society for Pharmacoeconomics and Outcomes Research (ISPOR), 2008

William Pierskalla Best Paper Award, INFORMS Health Applications Section, 2001

Annual Outstanding Paper Award, Society for Computer Simulation, Conference on Simulation in the Medical Sciences, 1996

Presidential Young Investigator Award, National Science Foundation, 1988-1993

Faculty Service Award, Stanford Department of Industrial Engineering and Engineering Management, 1988-1989

Eugene L. Grant Faculty Teaching Award, Stanford School of Engineering, 1990-1991

#### Patent

“System and Method for Optimum Operation Assignments in Printed Circuit Board Manufacturing.” Co-Inventors: Corey A. Billington and Margaret L. Brandeau. Patent Number 5,258,915. Awarded 1993.

#### Funded Research Projects

“Cost-Effectiveness of Interventions to Reduce Morbidity from Opioid Dependency,” Department of Veterans Affairs, \$1,098,000, 2018-2021 (Co-Investigator).

“Developing Capacity to Assess Health Interventions and Poverty Reduction,” Stanford Institute for Innovation in Developing Economies, \$525,000, 2014-2019 (Investigator).

“Making Better Decisions: Policy Modeling for AIDS and Drug Abuse,” National Institute on Drug Abuse (NIDA), \$3,942,000, 2013-2019 (Co-Principal Investigator), Grant # R01-DA15612-11.

“Making Better Decisions: Policy Modeling for AIDS and Drug Abuse,” National Institute on Drug Abuse (NIDA), \$3,278,000, 2007-2013 (Co-Principal Investigator), Grant # R01-DA15612-06.

“Comparative Effectiveness of Antiretroviral Therapy for HIV in Patients with Co-Morbidities,” NIH Challenge Grant, National Institute of Allergy and Infectious Diseases (NIAID), \$994,608, 2009-2012 (Investigator), Grant # RC1-AI086927.

“Translating Research into the Jade Ribbon Campaign for Perinatal Hepatitis B Prevention,” Department of Health and Human Services, Centers for Disease Control and Prevention, \$1,342,352, 2007-2010 (Co-Principal Investigator), Grant # R18-PS000830.

“Making Better Decisions: Policy Modeling for AIDS and Drug Abuse,” National Institute on Drug Abuse (NIDA), \$2,913,000, 2002-2007 (Co-Principal Investigator), Grant # R01-DA15612.

“Drug Abuse and HIV Infection in Russia: Evaluation of Prevention Programs,” National Institute on Drug Abuse, \$120,945, 2004-2005 (Co-Principal Investigator), Administrative Supplement to Grant # R01-DA15612.

“Global HIV Prevention and Treatment: Planning for the Future,” Gates Foundation Policy Research Network, \$18,000 (Co-Principal Investigator), 2005.

“Blueprint for Evaluation of India AIDS Initiative,” Gates Foundation Policy Research Network, \$18,000 (Co-Principal Investigator), 2004.

“Public-Health Impact and Cost Effectiveness of HIV Interventions,” National Institute on Drug Abuse (NIDA), \$837,783, 1996-2002 (Principal Investigator), Grant # R01-DA09531.

“Quantitative Models for Optimal Provision of Goods and Services,” National Science Foundation (Presidential Young Investigator Award), \$196,000, 1988-1993 (Principal Investigator).

“Women, Adolescents and HIV: Cost-Benefit Analysis of Interventions,” State of California Universitywide Task Force on AIDS, \$43,750, 1993-1994 (Co-Principal Investigator).

“Policy Analysis of HIV Screening and Intervention,” State of California Universitywide Task Force on AIDS, \$194,203, 1990-1992 (Principal Investigator).

“Decision Making on Mass Screening for AIDS,” State of California Universitywide Task Force on AIDS, \$156,250, 1988-1990 (Co-Principal Investigator).

“Analysis of Heuristics in Manufacturing,” Stanford Institute for Manufacturing and Automation, \$25,876, 1985-1986 (Principal Investigator).

### Selected Professional Activities

#### Policy Committees:

Ad Hoc Member, Office of AIDS Research Advisory Council, National Institutes of Health, 2018-present

Member, Board of Scientific Counselors, a Federal Advisory Committee to the Office of Public Health Preparedness and Response of the Centers for Disease Control and Prevention, 2012-present

Member, Institute of Medicine Standing Committee for the Centers for Disease Control and Prevention Division of the Strategic National Stockpile, 2015-2017

Member, Board of Scientific Counselors/National Biodefense Science Board Working Group for the Strategic National Stockpile (SNS) Review 20/20, 2012-2013

Member, Institute of Medicine Committee on Prepositioned Medical Countermeasures, 2011

Member, Institute of Medicine Committee on the Prevention and Control of Viral Hepatitis Infections in the United States, 2008-2009

Member, Ad Hoc Peer Review Workgroup, Centers for Disease Control and Prevention, Coordinating Office for Terrorism Preparedness and Emergency Response (COTPER), Division of the Strategic National Stockpile, 2009

Journal Editorships:

Editorial Board Member, *Health Care Management Science*, 1997-present

Area Editor, *Operations Research (OR Practice)*, 1993-99

Associate Editor, *IIE Transactions Focused Issue on Scheduling and Logistics (Multi-Disciplinary and Cross-Functional Studies)*, 1993-97

Editor, *Interfaces*, Special Issue on AIDS, 1998

Co-Editor, *Transportation Science*, Focused Issue on the Transportation/Manufacturing Interface, 1996

Associate Editor, *Management Science (Public Programs and Processes)*, 1991-94

Associate Editor, *Operations Research (OR Practice; Distribution, Transportation, and Logistics)*, 1991-94

Courses Taught (Stanford University)

E 63 – Engineering Applications in Medicine (Sophomore Seminar)

EES 105 – Mathematical Methods of Systems Analysis

IE 180 – Industrial Engineering Senior Project

IE 260 – Analysis of Production and Operating Systems

IE 263 – Service Operations Management

IE 360 – Doctoral Research Seminar in Production

IE 363 – Advanced Models for Service Systems

IE 363 – Advanced Models for Logistics Planning

IE 366 – Optimization Models in Manufacturing Systems

MS&E 108 – Senior Project

MS&E 169/269 – Quality Assurance and Control

MS&E 190 – Introduction to Methods and Models in Strategy and Policy Analysis

MS&E 263 – Healthcare Operations Management

MS&E 292 – Health Policy Modeling

MS&E 390 – Doctoral Seminar in Health Systems Modeling

MS&E 490 – Health Operations and Policy: Thought Leaders Seminar

OSPCPTWN 56 – HIV Policy Issues and Models

Doctoral Dissertations Supervised

Jann C. Cook. A Dynamic Bin Replacement/Packing Problem. Operations Research Department, Stanford University, 1989.

Michael G. Genetti. An End Item Inventory System with Joint Failures. Department of Industrial Engineering and Engineering Management, Stanford University, 1991.

Tsung-Chyan Lai. Worst Case Analysis of Heuristics. Department of Industrial Engineering and Engineering Management, Stanford University, 1991.

M. Eric Johnson. Analytic Models for Design and Analysis of Automated Guided Vehicle Systems. Department of Industrial Engineering and Engineering Management, Stanford University, 1991.

Thomas A. Grossman. Optimal Resource Allocation in a User-Optimizing Environment. Department of Industrial Engineering and Engineering Management, Stanford University, 1993.

Mark S. Hillier. Models for Manufacturing System Design: Optimal Operation Assignment and Product Grouping. Department of Industrial Engineering and Engineering Management, Stanford University, 1993.

Ulrich W. Thonemann. Stochastic Models for Design and Control of Automated Material Handling Systems. Department of Industrial Engineering and Engineering Management, Stanford University, 1994.

Erik Toomre. Scheduling, Pricing and Due Dates in a Dynamic Job Shop. Department of Industrial Engineering and Engineering Management, Stanford University, 1994.

Anke Richter. Optimal Resource Allocation for Epidemic Control in Multiple Independent Populations. Operations Research Department, Stanford University, 1996.

Christina M. Friedrich. Optimal Investment in HIV Prevention Programs. Department of Engineering-Economic Systems and Operations Research, Stanford University, 1999.

Gregory S. Zaric. Resource Allocation for Epidemic Control Over Short Time Horizons. Department of Industrial Engineering and Engineering Management, Stanford University, 2000.

Sitki Timucin. Optimal Commonality and Postponement Strategies for Effective Supply Chain Management. Department of Industrial Engineering and Engineering Management, Stanford University, 2000.

Ram S. Duriseti. Making High Quality Clinical Decisions: Influence Diagrams in Cost-Effectiveness Analysis. Department of Management Science and Engineering, Stanford University, 2007.

Elisa F. Long. Economic Analysis of Preventive and Therapeutic HIV Interventions. Department of Management Science and Engineering, Stanford University, 2008.

Benjamin Armbruster. Contact Tracing to Control Endemic Infectious Disease: Models and Insights. Department of Management Science and Engineering, Stanford University, 2008.

David W. Hutton. Global Hepatitis B Prevention and Treatment: Models and Insights. Department of Management Science and Engineering, Stanford University, 2010.

Eva A. Enns. Network Models and Infectious Disease Control: Analysis and Insights. Electrical Engineering Department, Stanford University, 2012.

Jessica H. McCoy. Overcoming the Last Mile of Health and Humanitarian Supply Chains: Models and Insights. Department of Management Science and Engineering, Stanford University, 2012.

Jessie L. Juusola. Economic Analysis of HIV Prevention and Treatment Portfolios. Department of Management Science and Engineering, Stanford University, 2012.

Sabina S. Alistar. Resource Allocation for Infectious Disease Control. Department of Management Science and Engineering, Stanford University, 2012.

Yihan Guan. Data-Driven Methods in Modeling Healthcare Risks: Insights and Applications in Drug Surveillance and Breast Cancer Incidence Prediction. Department of Management Science and Engineering, Stanford University, 2012 (Co-advisor).

Lauren E. Cipriano. Optimal Information Collection for Dynamic Health Care Policy. Department of Management Science and Engineering, Stanford University, 2013 (Co-advisor).

Shan Liu. Optimizing Patient Treatment Decisions in an Era of Rapid Technological Advances: Models and Insights. Department of Management Science and Engineering, Stanford University, 2013 (Co-advisor).

Diana M. Negoescu. Managing Uncertainty in Sequential Medical Decision Making. Department of Management Science and Engineering, Stanford University, 2014.

Sze-chuan Suen. Control of Drug-Sensitive and Drug-Resistant Tuberculosis in Resource-Constrained Settings. Department of Management Science and Engineering, Stanford University, 2016 (Co-advisor).

Sung Eun Choi. Data-Driven Methods in Modeling Healthcare Decisions: Insights and Applications in Cardiovascular Disease Prevention and Control. Department of Management Science and Engineering, Stanford University. 2018.

Cora L. Bernard. From Compartments to Networks: Model Complexity and Infectious Disease Policy. Department of Management Science and Engineering, Stanford University. Expected completion 2018.

Allison L. Pitt. Modeling Differential Effects of Health Interventions Across a Heterogeneous Population. Department of Management Science and Engineering, Stanford University. Expected completion 2018.

Rui Fu. Modeling the Spread of Infectious Diseases Using Network Models. Department of Management Science and Engineering, Stanford University. Expected completion 2018.

#### Engineer's Theses Supervised

Carol H. Sox. Decision Making on Mass Screening for HIV: A Policy Analysis. Department of Industrial Engineering and Engineering Management, Stanford University, 1990.

PublicationsBooks

1. Kaplan EH and ML Brandeau, Eds. *Modeling the AIDS Epidemic: Planning, Policy and Prediction*. Raven Press, New York, NY, 1994.
2. Brandeau ML, Sainfort F, and WP Pierskalla, Eds. *Operations Research and Health Care: A Handbook of Methods and Applications*. Kluwer Academic Publishers, Norwell, MA, 2004.

Reports

1. Colton KW, Brandeau ML, and JM Tien. *A National Assessment of Police Command, Control, and Communications Systems*. National Institute of Justice, Washington, DC, 1983.
2. Bravata DM, McDonald K, Owens DK, Wilhelm E, Brandeau ML, Zaric GS, Holty JEC, Liu H, and V Sundaram. *Regionalization of Bioterrorism Preparedness and Response (Evidence Report/Technology Assessment)*. Agency for Healthcare Research and Quality, Rockville, MD, 2003.
3. Institute of Medicine Committee on the Prevention and Control of Viral Hepatitis Infections. *Hepatitis and Liver Cancer: A National Strategy for Prevention and Control of Hepatitis B and C*. National Academies Press, Washington, DC, 2010.
4. Institute of Medicine Committee on Prepositioned Medical Countermeasures. *Prepositioning Antibiotics for Anthrax*. National Academies Press, Washington, DC, 2011.
5. Bayoumi AM, Strike C, Jairam J, et al. *Report of the Toronto and Ottawa Supervised Consumption Assessment Study, 2012*. University of Toronto, Toronto, Canada, 2012.
6. National Biodefense Science Board/Board of Scientific Counselors Strategic National Stockpile 2020 Joint Working Group. *Anticipated Responsibilities of the Strategic National Stockpile (SNS) in the Year 2020 – An Examination with Recommendations*. Washington, DC, 2013.

Refereed Research Articles

1. Brandeau ML and DSP Hopkins. A patient mix model for hospital financial planning. *Inquiry*, 1984, 21(1), 32-44.
2. Brandeau ML, Chiu SS, and R Batta. Locating the two-median of a tree network with continuous link demands. *Annals of Operations Research*, 1986, 6(7), 223-253.
3. Brandeau ML and RC Larson. Extending and applying the Hypercube Queueing Model to deploy ambulances in Boston. In *Management Science and the Delivery of Urban Service*, Ignall E and AJ Swersey (Eds.), TIMS Studies in the Management Sciences Series, Vol. 22, 121-154, North-Holland/Elsevier, 1986.
4. Brandeau ML and DM Eddy. The workup of the asymptomatic patient with a positive fecal occult blood test. *Medical Decision Making*, 1987, 7(1), 32-46.
5. Brandeau ML, Hopkins DSP, and KW Melmon. An integrated budget model for medical school financial planning. *Operations Research*, 1987, 35(5), 684-703.
6. Brandeau ML and SS Chiu. Parametric facility location on a tree network with an Lp norm cost function. *Transportation Science*, 1988, 22(1), 59-69.
7. Brandeau ML and SS Chiu. Establishing continuity of certain optimal parametric facility location trajectories. *Transportation Science*, 1988, 22(3), 224-225.

8. Brandeau ML and SS Chiu. An overview of representative problems in location research. *Management Science*, 1989, 35(6), 645-674.
9. Brandeau ML and SS Chiu. Trajectory analysis of the stochastic queue median in a plane with rectilinear distances. *Transportation Science*, 1990, 24(3), 230-243.
10. Brandeau ML and SS Chiu. A unified family of single-server queuing location models. *Operations Research*, 1990, 38(6), 1034-1044.
11. Brandeau ML, Lee HL, Owens DK, Sox CH, and RM Wachter. Policy analysis of human immunodeficiency virus screening and intervention: An overview of modeling approaches. *AIDS and Public Policy Journal*, 1990, 5(3), 119-131.
12. Brandeau ML, Lee HL, Owens DK, Sox CH, and RM Wachter. A policy model of human immunodeficiency virus screening and intervention. *Interfaces*, 1991, 21(3), 5-25.
13. Brandeau ML and SS Chiu. Parametric analysis of optimal facility locations. *Networks*, 1991, 21(2), 223-243.
14. Brandeau ML and CA Billington. Design of manufacturing cells: Operation assignment in printed circuit board manufacturing. *Journal of Intelligent Manufacturing*, 1991, 2(2), 95-106.
15. Brandeau ML, Owens DK, Sox CH, and RM Wachter. Screening women of childbearing age for human immunodeficiency virus: A cost-benefit analysis. *Archives of Internal Medicine*, 1992, 152(11), 2229-2237.
16. Brandeau ML and SS Chiu. A center location problem with congestion. *Annals of Operations Research*, 1992, 40(1), 17-32.
17. Brandeau ML. Characterization of the stochastic queue median trajectory in a plane with generalized distances. *Operations Research*, 1992, 40(2), 331-341.
18. Johnson ME and ML Brandeau. Integrated design and control of automated guided vehicle systems. *Planning and Control of Material Handling Systems*, Palekar US and R Pandit (Eds.), American Society of Manufacturing Engineers, 1992, 17-32.
19. Johnson ME and ML Brandeau. Application of analytic models for material handling system design: Analysis of stochastic effects. In *Progress in Material Handling Research*, Braun-Brumfield, Inc., Ann Arbor, MI, 1993, 97-120.
20. Brandeau ML, Owens DK, Sox CH, and RM Wachter. Screening women of childbearing age for human immunodeficiency virus: A model-based policy analysis. *Management Science*, 1993, 39(1), 72-92.
21. Johnson ME and ML Brandeau. An analytic model for design of a multivehicle automated guided vehicle system. *Management Science*, 1993, 39(12), 1477-1489.
22. Brandeau ML and SS Chiu. Sequential location and allocation: Worst case performance and statistical estimation. *Location Science*, 1993, 1(4), 289-298.
23. Brandeau ML and SS Chiu. Location of competing facilities in a user-optimizing environment with market externalities. *Transportation Science*, 1994, 28(2), 125-140.
24. Kaplan EH and ML Brandeau. AIDS policy modeling by example. *AIDS*, 1994, 8(Suppl 1), S333-S340.
25. Brandeau ML and DK Owens. When women return to risk: Costs and benefits of HIV screening in the presence of relapse. In *Modeling the AIDS Epidemic: Planning, Policy and Prediction*, Kaplan EH and ML Brandeau (Eds.), Ch.8, 121-136, Raven Press, New York, NY, 1994.



26. Johnson ME and ML Brandeau. An analytic model for design and analysis of single-vehicle asynchronous material handling systems. *Transportation Science*, 1994, 28(4), 337-353.
27. Lai TC, Brandeau ML, and SS Chiu. An approach for worst case analysis of heuristics: Analysis of a flexible 0-1 knapsack problem. *Journal of the Operations Research Society of Japan*, 1994, 37(3), 197-210.
28. Brandeau ML and SS Chiu. Facility location in a user-optimizing environment with market externalities: Analysis of customer equilibria and optimal public facility locations. *Location Science*, 1994, 2(3), 129-147.
29. Johnson ME and ML Brandeau. Designing multiple-load automated guided vehicle systems for delivering material from a central depot. *Transactions of the ASME: Journal of Engineering for Industry*, 1995, 117(1), 33-41.
30. Brandeau ML, Chiu SS, Kumar S, and TA Grossman. Location with market externalities. In *Facility Location: A Survey of Applications and Methods*, Drezner Z (Ed.), Springer-Verlag, New York, NY, 1995, Ch. 7, 121-150.
31. Johnson ME and ML Brandeau. Stochastic modeling for automated material handling system design and control. *Transportation Science*, 1996, 30(4), 330-350.
32. Thonemann UW and ML Brandeau. Designing a single-vehicle automated guided vehicle system with multiple load capacity. *Transportation Science*, 1996, 30(4), 351-363.
33. Thonemann UW and ML Brandeau. Designing a zoned automated guided vehicle system with multiple vehicles and multiple load capacity. *Operations Research*, 1997, 45(6), 857-873.
34. Thonemann UW and ML Brandeau. Note: Optimal storage assignment policies for automated storage and retrieval systems with stochastic demands. *Management Science*, 1998, 44(1), 142-148.
35. Brandeau ML. AIDS policy modeling: A social role for operations research. *Ricerca Operativa*, 1998, 27(81-82), 5-33.
36. Kahn JG, Brandeau ML, and J Dunn-Mortimer. OR modeling and AIDS policy: From theory to practice. *Interfaces*, 1998, 28(3), 3-22.
37. Owens DK, Brandeau ML, and CH Sox. Effects of relapse to high-risk behavior on the costs and benefits of a voluntary program to screen women for HIV. *Interfaces*, 1998, 28(3), 52-74.
38. Hillier MS and ML Brandeau. Optimal component assignment and board grouping in printed circuit board manufacturing. *Operations Research*, 1998, 46(5), 675-689.
39. Zaric GS, Brandeau ML, Bayoumi AM, and DK Owens. The effects of protease inhibitors on the spread of HIV and the development of drug-resistant HIV strains: A simulation study. *Simulation*, 1998, 71(4), 262-275.
40. Johnson ME and ML Brandeau. Design of an automated shop floor material handling system with inventory considerations. *Operations Research*, 1999, 47(1), 65-80.
41. Richter A, Brandeau ML, and DK Owens. An analysis of optimal resource allocation for prevention of infection with human immunodeficiency virus (HIV) in injection drug users and non-users. *Medical Decision Making*, 1999, 19(2), 167-179.
42. Thonemann UW and ML Brandeau. Optimal commonality in component design. *Operations Research*, 2000, 48(1), 1-19.
43. Zaric GS, Barnett PG, and ML Brandeau. HIV transmission and the cost-effectiveness of methadone maintenance. *American Journal of Public Health*, 2000, 90(7), 1100-1111.

44. Zaric GS, Brandeau ML, and PG Barnett. Methadone maintenance and HIV prevention: A cost-effectiveness analysis. *Management Science*, 2000, 46(8), 1013-1031.
45. Zaric GS, Bayoumi AM, Brandeau ML, and DK Owens. The cost effectiveness of voluntary prenatal and routine newborn HIV screening in the United States. *Journal of AIDS and Human Retrovirology*, 2000, 25(5), 403-416.
46. Zaric GS and ML Brandeau. Resource allocation for epidemic control over short time horizons. *Mathematical Biosciences*, 2001, 171(1), 33-58.
47. Hillier MS and ML Brandeau. Cost minimization and workload balancing in printed circuit board assembly. *IIE Transactions*, 2001, 33(7), 547-557.
48. Rauner MS and ML Brandeau. AIDS policy modeling for the 21<sup>st</sup> century: An overview of key issues. *Health Care Management Science*, 2001, 4(3), 165-180.
49. Barnett PG, Zaric GS, and ML Brandeau. The cost-effectiveness of buprenorphine maintenance therapy for opiate addiction in the United States. *Addiction*, 2001, 96(9), 1267-1278.
50. Zaric GS and ML Brandeau. Optimal investment in a portfolio of HIV prevention programs. *Medical Decision Making*, 2001, 21(5), 391-408.
51. Brandeau ML. Difficult choices, urgent needs: Optimal investment in HIV prevention programs. In *Quantitative Evaluation of HIV Prevention Programs*, Kaplan EH and R Brookmeyer (Eds.), Yale University Press, New Haven, 2001, 128-153.
52. Grossman TA and ML Brandeau. Optimal pricing for service facilities with self-optimizing customers. *European Journal of Operational Research*, 2002, 141(1), 39-57.
53. Zaric GS and ML Brandeau. Dynamic resource allocation for epidemic control in multiple populations. *IMA Journal of Mathematics Applied to Medicine and Biology*, 2002, 19(4), 235-255.
54. Brandeau ML, Zaric GS, and A Richter. Resource allocation for control of infectious diseases in multiple independent populations: Beyond cost-effectiveness analysis. *Journal of Health Economics*, 2003, 22(4), 575-598.
55. Brandeau ML, Sainfort F, and WP Pierskalla. Health care delivery: Current problems and future challenges. In *Operations Research and Health Care: A Handbook of Methods and Applications*, Brandeau ML, Sainfort F, and WP Pierskalla (Eds.), Kluwer Academic Publishers, 2004, Ch. 1, 1-14.
56. Brandeau ML. Allocating resources to control infectious diseases. In *Operations Research and Health Care: A Handbook of Methods and Applications*, Brandeau ML, Sainfort F, and WP Pierskalla (Eds.), Kluwer Academic Publishers, 2004, Ch. 17, 443-464.
57. Brandeau ML, Zaric GS, and V de Angelis. Improved allocation of HIV prevention resources: Using information about prevention program production functions. *Health Care Management Science*, 2005, 8(1), 19-28.
58. Brandeau ML. Modeling complex medical decision problems with the Archimedes model [Editorial]. *Annals of Internal Medicine*, 2005, 143(4), 303-304.
59. Duriseti RS, Shachter RD, and ML Brandeau. Value of quantitative D-dimer assays in identifying pulmonary embolism: Implications from a sequential decision model. *Academic Emergency Medicine*, 2006, 13(7), 755-766.
60. Bravata DM, Zaric GS, Holty JEC, Brandeau ML, Wilhelm ER, McDonald KM, and DK Owens. Reducing mortality from anthrax bioterrorism: Strategies for stockpiling and dispensing

- medical and pharmaceutical supplies. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science*, 2006, 4(3), 244-262.
61. Long EF, Brandeau ML, Galvin CM, Vinichenko T, Tole SP, Schwartz A, Sanders GD, and DK Owens. Effectiveness and cost-effectiveness of strategies to expand antiretroviral therapy in St. Petersburg, Russia. *AIDS*, 2006, 20(17), 2207-2215.
  62. Zaric GS and ML Brandeau. A little planning goes a long way: Multi-level allocation of HIV prevention resources. *Medical Decision Making*, 2007, 27(1), 71-81.
  63. Armbruster B and ML Brandeau. Optimal mix of screening and contact tracing for endemic diseases. *Mathematical Biosciences*, 2007, 209(2), 386-402.
  64. Hutton DW, Tan D, So SK, and ML Brandeau. Cost effectiveness of screening and vaccinating Asian and Pacific Islander adults for hepatitis B. *Annals of Internal Medicine*, 2007, 14(7), 460-469.
  65. Armbruster B and ML Brandeau. Contact tracing to control infectious disease: When enough is enough. *Health Care Management Science*, 2007, 10(4), 341-355.
  66. Brandeau ML, Hutton DW, Owens DK, and DM Bravata. Planning the bioterrorism response supply chain: Learn and live. *American Journal of Disaster Medicine*, 2007, 2(5), 231-247.
  67. Brandeau ML, Long EF, Hutton DW, and DK Owens. Optimal spending on HIV prevention and treatment: A framework for evaluating the cost-effectiveness of HIV prevention and treatment programs with example application to The India AIDS Initiative. In *Optimization in Medicine and Biology*, Lim GJ and EK Lee (Eds.), Taylor and Francis Publishers, Boca Raton, Florida, 2008, 147-175.
  68. Zaric GS, Bravata DM, Holty JEC, McDonald KM, Owens DK, and ML Brandeau. Modeling the logistics of response to anthrax bioterrorism. *Medical Decision Making*, 2008, 28(3), 332-350.
  69. Zaric GS, Bayoumi AM, Brandeau ML, and DK Owens. The cost effectiveness of counseling strategies to improve adherence to highly active antiretroviral therapy among men who have sex with men. *Medical Decision Making*, 2008, 28(3), 359-376.
  70. Brandeau ML, Zaric GS, Freiesleben J, Edwards FL, and DM Bravata. An ounce of prevention is worth a pound of cure: Improving communication to reduce mortality during bioterrorism responses. *American Journal of Disaster Medicine*, 2008, 3(2), 65-78.
  71. Long EF, Vaidya N, and ML Brandeau. Controlling co-epidemics: Analysis of HIV and tuberculosis infection dynamics. *Operations Research*, 2008, 56(6), 1366-1381.
  72. Brandeau ML and GS Zaric. Optimal investment in HIV prevention programs: More is not always better. *Health Care Management Science*, 2009, 12(1), 27-37.
  73. Tole SP, Sanders GD, Bayoumi AM, Galvin CM, Vinichenko TN, Brandeau ML, and DK Owens. Cost-effectiveness of voluntary HIV screening in Russia. *International Journal of STD and AIDS*, 2009, 20(1), 46-51.
  74. Brandeau ML, McCoy JH, Hupert NA, Holty JEC, and DM Bravata. Recommendations for modeling disaster responses in public health and medicine: A position paper of the Society for Medical Decision Making. *Medical Decision Making*, 2009, 29(4), 438-460.
  75. Long EF, Brandeau ML, and DK Owens. Potential population health outcomes and expenditures of HIV vaccination strategies in the United States. *Vaccine*, 2009, 27(39), 5402-5410.
  76. Armbruster B and ML Brandeau. Cost-effective control of chronic viral diseases: Finding the optimal level of screening and contact tracing. *Mathematical Biosciences*, 2010, 224(1), 35-42.

77. Hutton DW, So SK, and ML Brandeau. Cost effectiveness of nationwide hepatitis B catch-up vaccination among children and adolescents in China. *Hepatology*, 2010, 51(2), 405-414.
78. Bendavid E, Brandeau ML, Wood R, and DK Owens. Comparative effectiveness of HIV testing and treatment in highly endemic regions. *Archives of Internal Medicine*, 2010, 17(15), 1347-1354.
79. Duriseti RS and ML Brandeau. Cost-effectiveness of strategies for diagnosing pulmonary embolism among emergency department patients presenting with undifferentiated symptoms. *Annals of Emergency Medicine*, 2010, 56(4), 321-332.
80. Long EF, Brandeau ML, and DK Owens. The cost effectiveness and population outcomes of expanded HIV screening and antiretroviral treatment in the United States. *Annals of Internal Medicine*, 2010, 153(12), 778-789.
81. Alistar SS, Owens DK, and ML Brandeau. Effectiveness and cost effectiveness of expanding harm reduction and antiretroviral therapy in a mixed HIV epidemic: A modeling analysis for Ukraine. *PLoS Medicine*, 2011, 8(3), e1000423.
82. Enns EA and ML Brandeau. Inferring model parameters in network-based disease simulation. *Health Care Management Science*, 2011, 14(2), 174-188.
83. McCoy JH and ML Brandeau. Efficient stockpiling and shipping strategies for humanitarian relief: UNHCR's inventory challenge. *OR Spectrum*, 2011, 33(3), 673-698.
84. Hutton DW, Brandeau ML, and SK So. Doing good with good OR: Supporting cost-effective hepatitis B interventions. *Interfaces*, 2011, 41(3), 289-300.
85. Juusola JL, Brandeau ML, Long EF, Owens DK, and E. Bendavid. The cost-effectiveness of symptom-based testing and routine screening for acute HIV infection in men who have sex with men in the United States. *AIDS*, 2011, 25(14), 1779-1787.
86. Enns EA, Brandeau ML, Igeme TK, and E Bendavid. Assessing effectiveness and cost-effectiveness of concurrency reduction for HIV prevention. *International Journal of STD and AIDS*, 2011, 22(10), 558-67.
87. Alistar SS and ML Brandeau. Decision making for HIV prevention and treatment scale up: Bridging the gap between theory and practice. *Medical Decision Making*, 2012, 32(1), 105-117.
88. Enns EA, Mounzer JJ, and ML Brandeau. Optimal link removal for epidemic mitigation: A two-way partitioning approach. *Mathematical Biosciences*, 2012, 235(2), 138-147.
89. Juusola JL, Brandeau ML, Owens DK, and E Bendavid. The cost-effectiveness of preexposure prophylaxis for HIV prevention in men who have sex with men in the United States. *Annals of Internal Medicine*, 2012, 156(8), 541-550.
90. Smith-Spangler C, Brandeau ML, Hunter GE, Bavinger JC, Pearson M, Eschbach PJ, Sundaram V, Liu H, Schirmer P, Stave C, Olkin I, and DM Bravata. Are organic foods safer or healthier than conventional alternatives? A systematic review. *Annals of Internal Medicine*, 2012, 157(5), 348-366.
91. Negoescu DM, Owens DK, Brandeau ML, and E Bendavid. Balancing immunological benefits and cardiovascular risks of antiretroviral therapy: When is immediate treatment optimal? *Clinical Infectious Diseases*, 2012, 55(10), 1392-1399.
92. Cipriano LE, Zaric GS, Holodniy M, Bendavid E, Owens DK, and ML Brandeau. Cost effectiveness of screening strategies for early identification of HIV and HCV infection in injection drug users. *PLoS ONE*, 2012, 7(9), e45176.

93. Brandeau ML. OR in public health: A little help can go a long way. In *Operations Research and Health Care Policy*, Zaric GS (Ed.), Springer Publishers, New York, 2013, Ch. 2, 17-38.
94. Alistar SS, Brandeau ML, and EJ Beck. REACH: A practical HIV resource allocation tool for decision makers. In *Operations Research and Health Care Policy*, Zaric GS (Ed.), Springer Publishers, New York, 2013, Ch. 10, 201-224.
95. Hutton DW and ML Brandeau. Too much of a good thing? When to stop catch-up vaccination. *Medical Decision Making*, 2013, 33(7), 920-936.
96. Alistar SS, Long EF, Brandeau ML, and EJ Beck. HIV epidemic control: A model for optimal allocation of prevention and treatment resources. *Health Care Management Science*, 2014, 17(2), 162-181.
97. Alistar SS, Owens DK, and ML Brandeau. Effectiveness and cost effectiveness of oral pre-exposure prophylaxis in a portfolio of prevention programs for injection drug users in mixed HIV epidemics. *PLoS One*, 2014, 9(1), e86584.
98. Long EF, Mandalia R, Mandalia S, Alistar SS, Beck EJ, and ML Brandeau. Expanded HIV testing in low-prevalence, high-income countries: A cost-effectiveness analysis for the United Kingdom. *PLoS One*, 2014, 9(4), e95735.
99. Goldhaber-Fiebert JD and ML Brandeau. Modeling and calibration for exposure to time-varying, modifiable risk factors: The example of smoking behavior in India. *Medical Decision Making*, 2015, 35(2), 196-210.
100. Enns EA and ML Brandeau. Link removal for the control of epidemics stochastically evolving over networks: A comparison of approaches. *Journal of Theoretical Biology*, 2015, 371, 154-165.
101. Goldhaber-Fiebert JD and ML Brandeau. Evaluating health outcomes of interventions that affect fertility and childbearing: How health effects are measured matters. *Medical Decision Making*, 2015, 35(7), 818-846.
102. Choi SE, Brandeau ML, and S Basu. Expansion of the National Salt Reduction Initiative: A mathematical model of benefits and risks of population-level sodium reduction. *Medical Decision Making*, 2016, 36(1), 72-85.
103. Juusola JL and ML Brandeau. HIV treatment and prevention: A simple model to determine optimal investment. *Medical Decision Making*, 2016, 36(3), 391-409.
104. Fu R, Gutfraind A, and ML Brandeau. Modeling a dynamic bi-layer contact network of injection drug users and the spread of blood-borne infections. *Mathematical Biosciences*, 2016, 273, 102-113.
105. Brandeau ML. Creating impact with operations research in health: Making room for practice in academia. *Health Care Management Science*, 2016, 19(4), 305-312.
106. Bernard CM, Brandeau ML, Owens DK, Humphreys K, Bendavid E, Weyant C, and JD Goldhaber-Fiebert. Cost-effectiveness of HIV preexposure prophylaxis for people who inject drugs in the United States. *Annals of Internal Medicine*, 2016, 165(1), 10-19.
107. Liu S, Brandeau ML, and JD Goldhaber-Fiebert. Optimizing patient treatment decisions in an era of rapid technological advances: The case of hepatitis C treatment. *Health Care Management Science*, 2017, 20(1), 16-32.
108. Bernard CM, Owens DK, Goldhaber-Fiebert JD, and ML Brandeau. Estimation of the cost-effectiveness of HIV prevention portfolios for people who inject drugs in the United States: A model-based analysis. *PLoS Medicine*, 2017, 14(5), e1002312.

109. Suen SC, Goldhaber-Fiebert JD, and ML Brandeau. Risk stratification in compartmental epidemic models: Where to draw the line? *Journal of Theoretical Biology*, 2017, 428, 1-17.
110. Choi SE, Brandeau ML, and E Bendavid. Cost-effectiveness of malaria preventive treatment for HIV-infected pregnant women in sub-Saharan Africa. *Malaria Journal*, 2017, 16(1), 403.
111. Bernard CL and ML Brandeau. Structural sensitivity in HIV modeling: A case study of vaccination. *Infectious Disease Modelling*, 2017, 2(4), 399-411.
112. Choi SE, Brandeau ML, and S Basu. Personalizing blood pressure therapy: Dynamic treatment selection and modification using a Markov Decision Process model. *BMJ Open*, 2017, 7(11), e018374.
113. Negoescu DM, Bimpikis K, Brandeau ML, and DA Iancu. Dynamic learning of patient response types: An application to treating chronic diseases. *Management Science*, 2017, Articles in Advance, 1-20.
114. Suen SC, Goldhaber-Fiebert JD, and ML Brandeau. Optimal timing of drug sensitivity testing for patients on first-line tuberculosis treatment. *Health Care Management Science*, 2017, Epub ahead of print.
115. Fu R, Owens DK, and ML Brandeau. Cost-effectiveness of alternative strategies for provision of HIV preexposure prophylaxis for people who inject drugs in the United States. *AIDS*, 2018, 32(5), 663-672.
116. Alistar SS and ML Brandeau. Saving lives with operations research: Models to improve HIV resource allocation. In *Decision Analytics and Optimization in Disease Prevention and Treatment*, Kong N and S Zhang (Eds.), Wiley Publishers, in press.
117. Weyant C, Bendavid E, Brandeau ML, Burke M, Lobell D, and S Basu. Anticipated burden and mitigation of carbon dioxide-induced nutritional deficiencies and related diseases: A simulation modeling study. *PLoS Medicine*, in press.

#### Refereed Conference Proceedings

1. Brandeau ML and ME Johnson. Analytical models for design of automated guided vehicle systems. *Proceedings of the 1992 NSF Design and Manufacturing Systems Conference*, Society of Manufacturing Engineers, Dearborn, MI, 1992, 537-540.
2. Johnson ME and ML Brandeau. Application of analytic models for material handling system design: Analysis of stochastic effects. *Proceedings of the 1992 International Material Handling Research Colloquium*, Material Handling Institute of America, 1992, 229-252.
3. Brandeau ML and M.S. Hillier. Strategic production planning: Operation assignment and product grouping. *Proceedings of the 1993 Design and Manufacturing Systems Conference*, Society of Manufacturing Engineers, 1993, 8-15.
4. Richter A, Brandeau ML, and DK Owens. Policy analysis of preventive HIV interventions targeted to adolescents. *Simulation in the Medical Sciences Conference: Proceedings of the 1996 Western Multiconference*, Society for Computer Simulation, San Diego, 1996, 55-63.
5. Friedrich CM and ML Brandeau. Using simulation to find optimal funding levels for HIV prevention programs with different costs and effectiveness. *Proceedings of the 1998 Medical Sciences Simulation Conference*, Society for Computer Simulation, San Diego, 1998, 58-64.
6. Zaric GS, Brandeau ML, Bayoumi AM, and DK Owens. Simulating the effects of protease inhibitors on the HIV epidemic: Treatment, compliance, and drug resistance. *Proceedings of the 1998 Medical Sciences Simulation Conference*, Society for Computer Simulation, San Diego, 1998, 65-72.

7. Armbruster B and ML Brandeau. Who do you know? A simulation study of infectious disease control through contact tracing. *Proceedings of the 2007 Western Multiconference on Computer Simulation*, Society for Modeling and Simulation International, San Diego, 2007, 79-85.
8. Brandeau ML. Infectious disease control policy: A role for simulation. *Proceedings of the 2008 Winter Simulation Conference*, INFORMS, Miami, 2008.
9. Brandeau ML and GJ Barrow. Improving the HIV care delivery process: Analysis of the CHARES Clinic in Kingston, Jamaica. *Proceedings of the 5<sup>th</sup> World Conference on Production and Operations Management*, Production and Operations Management Society (POMS), Havana, Cuba, 2016.
10. Scheinker D and ML Brandeau. Analytical approaches to operating room management: Projects at Lucile Packard Children's Hospital Stanford. *Health Care Systems Engineering, Springer Proceedings in Mathematics and Statistics 210*, P. Cappanera et al., Eds., 2017, 17-26.

#### Other Publications

1. Brandeau ML, Lee, HL, and CH Sox. A mathematical model of AIDS screening. *Stanford Engineering*, 1 (Autumn 1989), 8-15.
2. Brandeau ML and SS Chiu. An overview of representative problems in location research, [Extended abstract]. *OR/MS Today*, 16 (April 1989), 57-58.
3. Brandeau ML. Review of *Operations Management for Distributed Service Networks* by N Ahituv and O Berman. *Interfaces*, 19 (Spring 1989), 84-86.
4. Wachter RM, Cooke M, Brandeau ML, and DK Owens. HIV testing of pregnant women and newborns [Letter]. *Journal of the American Medical Association*, 265 (1991), 1525.
5. Kaplan EH and ML Brandeau. AIDS: Thoughts on managing a deadly epidemic. *OR/MS Today*. 19 (August 1992), 50-52.
6. Brandeau ML. PR for OR/MS: How can you get involved? *OR/MS Today*, 20 (April 1993), 68-69.
7. Brandeau ML. Review of *Network and Discrete Location – Models, Algorithms, and Applications* by M.S. Daskin. *Interfaces*, 1997, 27(1), 157-158.
8. Brandeau ML. Facility location with externalities. In *Encyclopedia of Optimization*, Floudas C and P Pardalos (Eds.), Kluwer Academic Publishers, Boston, 2001.
9. Brandeau ML. Resource allocation for epidemic control. In *Encyclopedia of Optimization*, Floudas C and P Pardalos (Eds.), Kluwer Academic Publishers, Boston, 2001.
10. Bravata DM, McDonald KM, Owens DK, Wilhelm E, Brandeau ML, Zaric GS, Holty JEC, Liu H, and V Sundaram. Regionalization of bioterrorism preparedness and response [Summary]. *Evidence Report/Technology Assessment*, 2004, No. 96, 1-7.
11. Brandeau ML, Chaudry JR, Long EF, and DK Owens. Evaluating the cost effectiveness of the India AIDS Initiative: A blueprint. White Paper, Gates Foundation Policy Research Network, 2005.
12. Brandeau ML, McDonald KM, and DK Owens. Global HIV prevention and treatment: Planning for the future. White Paper, Gates Foundation Policy Research Network, 2005.
13. Brandeau ML. From Venn diagrams to bioterrorism: An OR journey. *The Operations Research Center at MIT. INFORMS Topics in Operations Research Series*. 2007, 41-46.
14. Long EF and ML Brandeau. OR's next top model: Decision models for infectious disease control. In *TutORials in Operations Research*, Gray P (Ed.), Institute for Operations Research and the Management Sciences (INFORMS), 2009, 123-138.

15. Smith-Spangler C, Brandeau ML, Olkin I, and DM Bravata. Are organic foods safer or healthier? [Letter]. *Annals of Internal Medicine*. 2013, 158(4), 297-300.
16. Brandeau ML. Applying OR in health: A five-step path to sure-fire success. *OR/MS Tomorrow*, December 2013.