

# ELISA F. LONG

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## Academic Positions

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### UCLA Anderson School of Management

Associate Professor (with tenure) of Decisions, Operations and Technology Management, 2018-present  
Assistant Professor of Decisions, Operations and Technology Management, 2013-2018

### Yale University

Assistant Professor of Operations Management, 2008-2013  
Assistant Professor of Health Policy and Administration (by courtesy), 2012-2013

## Education

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### Stanford University

Ph.D. Management Science and Engineering, 2008  
Dissertation: "Economic Analysis of Preventive and Therapeutic HIV Interventions"

### Stanford University

M.S. Management Science and Engineering, 2005

### Cornell University

B.S. Operations Research and Industrial Engineering, *Magna Cum Laude*, 2003

## Research Interests

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Healthcare operations, decision analysis, epidemic modeling, queueing applications in healthcare, cost-effectiveness analysis, Markov models, simulation.

## Honors & Awards

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UCLA Anderson MBA Teaching Award, 2021  
UCLA Anderson Eric and E Juline Faculty Excellence in Research Award, 2018  
UCLA Anderson MBA Teaching Award, 2018  
UCLA Faculty Community Engagement Award, 2018  
Poets & Quants Favorite Professor, 2018  
Poets & Quants Best 40 Under 40 Professors, 2017  
UCLA Anderson George W. Robbins Assistant Professor Teaching Award, 2016  
Diana Gordon Jonsson Award, UCLA Jonsson Comprehensive Cancer Center, 2016  
UCLA Faculty Career Development Award, 2015  
Seth Bonder Research Fellowship Award, 2015  
Stanford University Distinguished Alumni Scholar Award, 2010  
Seth Bonder Award for Applied Operations Research in Health Services, INFORMS, 2005  
Lee B. Lusted Award for Best Student Oral Presentation, Society for Medical Decision Making, 2005  
Cortland and Jean Van Rensselear Graduate Fellowship, Stanford University, 2003  
Merrill Presidential Scholar (top 1% of graduating class), Cornell University, 2003  
Ormond Scholar (Highest Honors), University of Melbourne, Australia, 2002  
Lockheed Martin Engineering Scholar Award, Cornell University, 2001

## Refereed Publications

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1. Berger N, Schulze-Schwering S, **Long EF**, Spinler S. "Risk Management of Supply Chain Disruptions: An Epidemic Modeling Approach", *European Journal of Operational Research*, 2022.
2. Chen MK, Chevalier JA, **Long EF**. "Nursing Home Staff Networks and COVID-19", *Proceedings of the National Academy of Sciences*, 2021, 118(1):e2015455118.
3. Bravo F, Corcoran T, **Long EF**. "Flexible Drug Approval Policies", *Manufacturing & Service Operations Management*, 2021, 24(1):542-560.
  - Best Paper (finalist) *POMS College of Healthcare Operations Management*, 2019
  - Best Paper (first place), *INFORMS Public Sector OR Section*, 2018
  - Pierskalla Best Paper (finalist), *INFORMS Health Applications Society*, 2018
  - Best Student Paper (finalist), *INFORMS Manufacturing & Service Operations Management Society*, 2018
4. Brauer ER, **Long EF**, Petersen J, Ganz PA. "Current Practice Patterns and Gaps in Guideline-Concordant Breast Cancer Survivorship Care", *Journal of Cancer Survivorship*, 2021.
5. **Long EF**, Chen MK, Rohla R. "Political Storms: Emergent Partisan Skepticism of Hurricane Risks", *Science Advances*, 2020, 6(37):eabb7906.
6. Zhang B, **Long EF**. "Cost-effectiveness Analysis of Palbociclib or Ribociclib in the Treatment of Advanced Hormone Receptor-Positive, HER2-Negative Breast Cancer", *Breast Cancer Research and Treatment*, 2019, 175(3):775-779.
7. Brauer ER, **Long EF**, Melnikow J, Ravdin PM, Ganz PA. "Communicating Risks of Adjuvant Chemotherapy for Breast Cancer: Getting Beyond the Laundry List", *Journal of Oncology Practice*, 2019, 15(2): e98-e109.
8. **Long EF**, Nohdurft E, Spinler S. "Spatial Resource Allocation for Emerging Epidemics: A Comparison of Greedy, Myopic and Dynamic Policies", *Manufacturing & Service Operations Management*, 2018, 20(2):181-198.
  - Best Paper (second place), *INFORMS Public Sector OR Section*, 2015
9. **Long EF**, Mathews KS. "The Boarding Patient: Effects of ICU and Hospital Occupancy Surges on Patient Flow", *Production and Operations Management*, 2018, 27(12):2122-2143.
  - Most Influential Service Operations Paper Award (finalist), *POMS College of Service Operations*, 2019
10. Nohdurft E, **Long EF**, Spinler S. "Was Angelina Jolie Right? Optimizing Cancer Prevention Strategies among BRCA Mutation Carriers", *Decision Analysis*, 2017 Sep, 14(3):139-169.
  - Special Recognition Award (annual award for paper most worthy of recognition), *Decision Analysis*, 2017
11. Zelenev A, **Long EF**, Bazazi AR, Kamarulzaman A, Altice FL. "The Complex Interplay of Social Networks, Geography and HIV Risk among Malaysian Drug Injectors: Results from Respondent-Driven Sampling", *International Journal of Drug Policy*, 2016, 37:98-106.
12. **Long EF**, Ganz PA. "Cost-effectiveness of Universal BRCA1/2 Screening", *JAMA Oncology*, 2015, Sep:1-2.
13. Mathews KS, **Long EF**. "A Conceptual Framework for Improving Critical Care Patient Flow and Bed Use", *Annals of the American Thoracic Society*, 2015, 12(6):886-894.
14. Gilbert JA, **Long EF**, Brooks RP, Friedland GH, Moll AP, Townsend JP, Galvani AP, Sheno SV. "Integrating Community-Based Interventions to Reverse the Convergent TB/HIV Epidemics in Rural South Africa", *PLoS ONE*, 2015, 10(5):e0126267.
15. VanDeusen A, Paintsil E, Agyarko-Poku T, **Long EF**. "Cost Effectiveness of Option B Plus for Prevention of Mother-to-Child Transmission of HIV in Resource-Limited Countries: Evidence from Kumasi, Ghana", *BMC Infectious Diseases*, 2015, 15(130):1-10.
16. Song D, Altice FL, Copenhaver MM, **Long EF**. "Cost-effectiveness Analysis of Brief and Expanded Evidence-Based Risk Reduction Interventions for HIV-Infected People Who Inject Drugs in the United States", *PLoS ONE*, 2015, 10(2):e0116694.

17. Alistar SS, **Long EF**, Brandeau ML, Beck EJ. "HIV Epidemic Control—A Model for Optimal Allocation of Prevention and Treatment Resources", *Health Care Management Science*, 2014, 17(2):162-181.
18. **Long EF**, Mandalia R, Mandalia S, Alistar SS, Beck EJ, Brandeau ML. "Expanded HIV Testing in Low-Prevalence, High-Income Countries: A Cost-Effectiveness Analysis for the United Kingdom", *PLoS ONE*, 2014, 9(4):e95735.
19. **Long EF**, Swain GW, Mangi AA. "Comparative Survival and Cost-Effectiveness of Advanced Therapies for End-Stage Heart Failure", *Circulation: Heart Failure*, 2014, 7(3):470-8.
20. **Long EF**, Stavert RR. "Portfolios of Biomedical HIV Interventions in South Africa: A Cost-Effectiveness Analysis", *Journal of General Internal Medicine*, 2013, 28(10):1294-301.
21. Eaton JW, Johnson LF, Salomon JA, Bärnighausen T, Bendavid E, Bershteyn A, Bloom DE, Cambiano V, Fraser C, Hontelez JAC, Humair S, Klein DJ, **Long EF**, Phillips AN, Pretorius C, Stover J, Wenger EA, Williams BG, Hallett TB. "HIV Treatment as Prevention: Systematic Comparison of Mathematical Models of the Potential Impact of Antiretroviral Therapy on HIV Incidence in South Africa", *PLoS Medicine*, 2012, 9(7):e1001245.
22. HIV Modeling Consortium Treatment as Prevention Editorial Writing Group. "HIV Treatment as Prevention: Models, Data, and Questions—Towards Evidence-Based Decision-Making", *PLoS Medicine*, 2012, 9(7):e1001259.
23. **Long EF**, Owens DK. "The Cost-Effectiveness of a Modestly Effective HIV Vaccine in the United States", *Vaccine*, 2011, 29(36):6113-24.
24. **Long EF**. "HIV Screening via Fourth-Generation Immunoassay or Nucleic Acid Amplification Test in the United States: A Cost-Effectiveness Analysis", *PLoS ONE*, 2011, 6(11):1-10.
25. Juusola JL, Brandeau ML, **Long EF**, Owens DK, Bendavid E. "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):1779-87.
26. Kaimal AJ, Little SE, Odibo AO, Stamilio DM, Grobman WA, **Long EF**, Owens DK, Caughey AB. "Cost-Effectiveness of Elective Induction of Labor at 41 Weeks in Nulliparous Women", *American Journal of Obstetrics and Gynecology*, 2011, 204(2):137.e1-e9.
27. **Long EF**, Brandeau ML, Owens DK. "The Cost-Effectiveness and Population Outcomes of Expanded HIV Screening and Antiretroviral Treatment in the United States", *Annals of Internal Medicine*, 2010, 153(12):778-89.
28. **Long EF**, Brandeau ML, Owens DK. "Potential Population Health Outcomes and Expenditures of HIV Vaccination Strategies in the United States", *Vaccine*, 2009, 27(39):5402-10.
29. Patil CG, **Long EF**, Lansberg MG. "Cost-Effectiveness Analysis of Mechanical Thrombectomy in Acute Ischemic Stroke", *Journal of Neurosurgery*, 2009, 110(3):508-13.
30. **Long EF**, Vaidya NK, Brandeau ML. "Controlling Co-epidemics: Analysis of HIV and Tuberculosis Infection Dynamics", *Operations Research*, 2008, 56(6):1366-81.
31. **Long EF**, Brandeau ML, Galvin CM, Vinichenko T, Tole SP, Schwartz A, Sanders GD, Owens DK. "Effectiveness and Cost-Effectiveness of Strategies to Expand Antiretroviral Therapy in St. Petersburg, Russia", *AIDS*, 2006, 20:2207-15.

## Working Papers

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1. Bravo F, Hu J, **Long EF**. "Closer to Home: Partnering to Distribute Vaccinations under Spatially Heterogeneous Demand", 2023.
2. **Long EF**. "Opioid and Benzodiazepine Prescriptions within Pharmacy Deserts in California, 2016-2019", 2022.

3. **Long EF**, Ganz PA. "A Personalized Decision-Support Tool for Risk-Reducing Surgery in BRCA1/2 Mutation Carriers", 2021.
4. Chen MK, Zhuo Y, De La Fuente M, **Long EF**. "Partisan Responses to COVID-19 Government Restrictions: Evidence from Individual Smartphone Mobility Data", 2021.

## Popular Press Articles

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1. "How Statistics Guided Me Through Life, Death, and 'The Price is Right' ", *Washington Post*, August 7, 2015. <http://wapo.st/1KVF46X>

## Other Publications

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1. **Long EF**, Brandeau ML. "OR's Next Top Model: Decision Models for Infectious Disease Control" In *Tutorials in Operations Research*, Gray P (Ed.), Institute for Operations Research and Management Sciences (INFORMS), 2009.
2. Caughey AB, Sundaram V, Kaimal AJ, Cheng YW, Gienger A, Little SE, Lee JF, Wong L, Shaffer BL, Tran SH, Padula A, McDonald KM, **Long EF**, Owens DK, Bravata DM. "Maternal and Neonatal Outcomes of Elective Induction of Labor", Evidence Report/Technology Assessment No. 176. (Prepared by the Stanford University-UCSF Evidenced-based Practice Center). *Agency for Healthcare Research and Quality (AHRQ) Publication No. 09-E005*, 2009.
3. Brandeau ML, **Long EF**, Hutton DW, Owens DK. "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 Lee EK (Eds.), Taylor and Francis Publishers, 2008.

## Invited Talks

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Georgia Tech, School of Industrial and Systems Engineering, September 2021  
Centers for Disease Control and Prevention, March 2021  
Stanford University, Management Science & Engineering, December 2020  
London Business School, December 2020  
Yale School of Management, October 2020  
UCLA, Computational Medicine, January 2020  
University of Illinois, Gies College of Business, December 2019  
Southern Methodist University, Cox School of Business, August 2018  
USC, Schaeffer Center for Health Policy and Economics, June 2016  
Scripps Translational Science Institute, March 2016  
UCLA, Jonsson Comprehensive Cancer Center, February 2016  
Centers for Disease Control and Prevention, May 2014  
UCLA, Fielding School of Public Health, April 2014  
UC-Berkeley, School of Engineering, February 2013  
New York University, Department of Population Health, February 2013  
USC, School of Engineering, February 2013  
UCLA, Anderson School of Management, January 2013  
University of North Carolina, Kenan-Flagler Business School, December 2012  
Stanford University, School of Medicine, November 2012  
Utah Winter Operations Conference, February 2012  
Yale University, Section of Pulmonary and Critical Care Medicine, February 2012  
New York University, School of Medicine, December 2011  
MIT Sloan School of Management, November 2011  
Georgia Tech, School of Industrial and Systems Engineering, October 2011  
University of Chicago, Booth School of Business, May 2011  
Northeastern University, College of Engineering, April 2011

Joint United Nations Programme on HIV/AIDS (UNAIDS), Geneva, Switzerland, March 2011  
New York University, School of Medicine, December 2010  
Yale School of Public Health, November 2010  
London Business School (Innovation in Operations Conference), June 2010  
United States Coast Guard Academy, April 2009

## Conference Presentations

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“Nursing Home Staff Networks and COVID-19”

- INFORMS Healthcare Conference (virtual), July 2021
- INFORMS Annual Meeting, Anaheim, CA, October 2021

“Political Storms: Emergent Partisan Skepticism of Hurricane Risks”

- INFORMS Annual Meeting, Seattle, WA, October 2019

“Spatial Resource Allocation for Emerging Epidemics: A Comparison of Greedy, Myopic, and Dynamic Policies”

- Production and Operations Management (POMS) Annual Meeting, Houston, TX, May 2018
- 9th Annual Conference on Health and Humanitarian Logistics, Copenhagen, Denmark, June 2017

“Individual Decision-Making in Breast Cancer Treatment”

- Advances in Decision Analysis Conference, Austin, TX, June 2017
- Production and Operations Management (POMS) Annual Meeting, Seattle, WA, May 2017
- INFORMS Annual Meeting, Nashville, TN, November 2016
- INFORMS Health Care Conference, Nashville, TN, July 2015

“The Boarding Patient: Effects of ICU and Hospital Occupancy Surges on Patient Outcomes”

- INFORMS Annual Meeting, Nashville, TN, November 2016

“Patients without Patience: An Econometric Model of Waiting in the Intensive Care Unit”

- INFORMS Annual Meeting, Minneapolis, MN, October 2013
- INFORMS Health Care Conference, Chicago, IL, June 2013
- Production and Operations Management (POMS) Annual Meeting, Denver, CO, May 2013

“Optimizing the Flow of Short-Stay Patients in the Intensive Care Unit: A Simulation Model”

- INFORMS Annual Meeting, Phoenix, AZ, October 2012
- Society for Medical Decision Making Annual Meeting, Phoenix, AZ, October 2012

“Potential Impact of an RV144-like HIV Vaccine in Diverse Epidemic Settings”

- XIX International AIDS Conference, Washington, DC, July 2012

“A Portfolio Approach to HIV Control in South Africa”

- 7th International AIDS Economics Network Meeting, Washington, DC, July 2012
- INFORMS Health Care Conference, Montreal, Canada, June 2011
- Society for Medical Decision Making Annual Meeting, Chicago, IL, October 2011
- INFORMS Annual Meeting, Charlotte, NC, November 2011

“The Cost-Effectiveness of an HIV Vaccine with Exponentially Declining Efficacy”

- INFORMS Health Care Conference, Montreal, Canada, June 2011
- INFORMS Annual Meeting, Charlotte, NC, November 2011

“The Cost-Effectiveness of Acute HIV Screening in the United States”

- 17th Conference on Retroviruses and Opportunistic Infections, San Francisco, CA, February 2010
- INFORMS Annual Meeting, Austin, TX, November 2010

“A Tale of Two Models: Health Benefits and Costs of HIV Vaccination in the United States”

- Manufacturing and Service Operations Management Annual Conference, Haifa, Israel, June 2010
- AIDS Vaccine 2010 Conference, Atlanta, Georgia, September 2010
- INFORMS Annual Meeting, Austin, TX, November 2010

“How Effective is Comparative Effectiveness?”

- Yale University Healthcare Conference, New Haven, CT, April 2010

“Cost-Effectiveness of Alternative HIV Intervention Portfolios in South Africa”

- Society for Medical Decision Making Annual Meeting, Hollywood, CA, October 2009

“OR’s Next Top Model: Decision Models for Infectious Disease Control”

- INFORMS Annual Meeting, San Diego, CA, October 2009

“Economic Evaluation of HIV Interventions: Expanded Screening versus Treatment”

- INFORMS Annual Meeting, Washington, DC, October 2008
- Society for Medical Decision Making Annual Meeting, Philadelphia, PA, October 2008

“The Cost-Effectiveness of Alternative HIV Vaccination Strategies among U.S. Risk Groups”

- INFORMS Annual Meeting, Seattle, WA, November 2007
- Society for Medical Decision Making Annual Meeting, Pittsburgh, PA, October 2007

“Optimal Allocation of HIV Prevention and Treatment Resources”

- INFORMS Annual Meeting, Seattle, WA, November 2007
- Society for Medical Decision Making Annual Meeting, Pittsburgh, PA, October 2007

“The Cost-Effectiveness of Expanding Antiretroviral Therapy in Russia”

- Operating on Health Care: An Operations Research Symposium, Vancouver, Canada, August 2007
- Harvey Mudd Conference on Public Sector Operations Research, Los Angeles, CA, September 2007
- 16th International Conference on AIDS, Cancer & Public Health, St. Petersburg, Russia, May 2007

“Mathematical Modeling of Infectious Disease Co-epidemics: HIV and Tuberculosis in India”

- INFORMS Annual Meeting, Pittsburgh, PA, November 2006
- INFORMS Annual Meeting, San Francisco, CA, November 2005

“Treating Injection Drug Users with Antiretroviral Therapy: Effect on the HIV Epidemic in Russia”

- 14th International Conference on AIDS, Cancer & Public Health, St. Petersburg, Russia, May 2005
- Society for Medical Decision Making Annual Meeting, San Francisco, CA, October 2005

## Teaching Experience

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### **UCLA Anderson School of Management**

Data and Decisions (MBA core), 2013-present  
Data and Decisions (Executive MBA core), 2017, 2020  
Data and Decisions (Fully Employed MBA core), 2015  
Healthcare Analytics (MBA elective), 2020-2021  
Healthcare Analytics (MSBA elective), 2018-2019

### **Yale School of Management**

Introduction to Probability Modeling (MBA core), 2011-2013  
Healthcare Operations (MBA elective and Executive MBA core), 2008-2013  
Leadership Development Program (MBA core), 2010-2011  
Decision Analysis (MBA elective), 2008-2010

### **Stanford University**

TA for Analysis of Costs, Risks, and Benefits of Healthcare (MBA elective), 2005-2007  
TA for Principles of Decision Analysis (graduate course), 2004-2005

### **Cornell University**

TA for Engineering Stochastic Processes (undergraduate course), 2002-2003  
TA for Introduction to Operations Research (undergraduate course), 2002-2003

## Grants

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1. "Decision-Making among BRCA Mutation Carriers"  
Goldberg Charitable Trust and UCLA Jonsson Cancer Center Foundation  
Role: Primary Investigator (2017-2018)
2. "Making Better Decisions: Policy Modeling for AIDS and Drug Abuse" (R01-DA15612)  
National Institute on Drug Abuse  
Role: Consultant (2013-2018)
3. "Secondary HIV Prevention and Adherence among HIV-Infected Drug Users" (R01-DA032290)  
National Institute on Drug Abuse  
Role: Co-Investigator (2012-2013)

## Industry Experience

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**Strategic Decisions Group**, Palo Alto, CA  
Summer Consultant, June-August 2004

**University of Melbourne**, Melbourne, Australia  
Research Assistant, Strategic Planning in Naval Operations, February-July 2002

**Maxim Integrated Products**, Sunnyvale, CA  
Production Planning Co-op, August-December 2001

## Professional Activities

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**Associate Editor:** *Manufacturing & Service Operations Management, Decision Analysis*

**Editorial Board:** *Medical Decision Making*

**Member:** Institute for Operations Research and Management Sciences (INFORMS), Production and Operations Management Society (POMS), Society for Medical Decision Making (SMDM)

**Reviewer:** *Management Science, Operations Research, Manufacturing & Service Operations Management, Production & Operations Management, Health Care Management Science, Journal of Mathematical Biology, Lancet Infectious Diseases, Annals of Internal Medicine*

**Grant reviewer:** National Science Foundation