Name: Sharon-Lise Teresa Normand

Office Address: Harvard Medical School
                     Department of Health Care Policy
                     180 Longwood Avenue, Suite 302
                     Boston, MA 02115-5899

Phone: 617-432-3260
E-Mail: sharon@hcp.med.harvard.edu
Fax: 617-432-0173

Education

1984	B.Sc.(Honours)	Statistics	University of Western Ontario
1985	M.Sc.	Statistics	University of Western Ontario
1990	Ph.D.	Biostatistics	University of Toronto

Postdoctoral Training

1990–1992   Department of Health Care Policy, Harvard Medical School

Academic Appointments

1992–1998   Assistant Professor of Biostatistics, Department of Health Care Policy, Harvard Medical School
1995–1998   Assistant Professor, Department of Biostatistics, Harvard School of Public Health
1998–2003   Associate Professor of Biostatistics, Department of Health Care Policy, Harvard Medical School
1998–2003   Associate Professor, Department of Biostatistics, Harvard School of Public Health
2003–2018   Professor of Health Care Policy (Biostatistics), Harvard Medical School
2003–   Professor, Department of Biostatistics, Harvard School of Public Health
2003–   Affiliate, Center for Basic Research in the Social Sciences, Faculty of Arts and Sciences, Harvard University
2011   Visiting Scientist, Division of Epidemiology, Office of Surveillance and Biometrics, Center for Devices and Radiological Health, US FDA
2018–   S. James Adelstein Professor of Health Care Policy, Harvard Medical School

Major Harvard Committee Assignments

<u>Harvard University</u>
1997–   Evaluation & Statistics Committee, Ph.D. in Health Policy Program, Member
1999–2001   Admissions Committee, Member, Health Policy Ph.D. Program
2000–   Standing Committee on the Degree of Doctor of Philosophy in Health Policy, Member
2005   Ad Hoc Tenure Committee, Faculty of Arts and Science, Member
2017-   Harvard Data Science Initiative Planning Committee, Member
2021   Harvard Data Science Institute Post-Doctoral Committee, Co-Chair

<u>Harvard Medical School & Harvard School of Dental Medicine</u>
2004–2005   Faculty Diversity Committee, Member
2004–2010   Standing Committee on Human Studies in the Faculty of Medicine, Member
2006–2008   Faculty Council, Senior Faculty Representative of the Department of Health Care Policy
2007   Screening Committee, Member
2008–   Harvard Catalyst Pilot Grants, Reviewer
2009-2012   Promotions, Reappointments, and Appointments Committee, Member

2012-	Financial Interest Review Committee, Member
2015-	Social Science Advisory Group
2018-	Therapeutics Foundry Planning Committee, Member
2019-	Research Computing Faculty Advisory Committee, Member
2019-	Center for Computational Biomedicine Faculty Advisory Committee, Member
2021-2022	Research Scientist Promotion and Appointment Committee, Member
2022-	Social Science Council, Committee Member

Department of Biostatistics, Harvard School of Public Health

1995–1998	Curriculum Committee
1996–1997	Computing Committee
1997–1999	Seminar Committee
1999–2000	Practical Training Committee
2000–2001	Postdoctoral Committee
2001–2002	Student Interview Committee
2002–2003	Chair, Seminar Committee
2003–2004	Degree Program Committee
2004–2005	Chair, Seminar Committee
2006–2007	Admissions and Recruiting Committee
2007–2010	Junior Faculty Development Committee
2010-2011	Harvard Tenure Review Committee
2011-2012	Zelen Award Committee
2012-2015	Industry Partnership Committee
2016-2017	Short Courses Committee
2018-2019	Junior Faculty Search Committee
2019-2020	Harvard Tenure Review Committee
2019-2021	Biostatistics SM Executive Committee

Department of Health Care Policy, Harvard Medical School

1995,1998	Statistics Postdoctoral Search Committee
1996–1997	MD Faculty Search Committee
1996–2001	Statistics Faculty Search Committee
2021-2020	Health Economics Faculty Search Committee

Major Regional and National Committee Assignments

Regional

1995–1996	Board of Directors, New England Quality Council, Inc.
2000–2007	Massachusetts Cardiac Care Quality Advisory Commission, Massachusetts Department of Public Health
2002–2012	Director, Massachusetts Data Analysis Center, Commonwealth of Massachusetts
2007–2008	Member, Expert Panel on Prevention and Control of Healthcare Associated Infections in Massachusetts, Massachusetts Department of Public Health and the Betsy Lehman Center for Public Safety and Medical Error Reduction
2008–2009	Member, Technical Advisory Group, Healthcare Associated Infections, Massachusetts Department of Public Health and the Betsy Lehman Center for Public Safety and Medical Error Reduction
2019	Member, Ad-Hoc Search Committee for the Director of Biostatistics Center, Massachusetts General Hospital

National

1992	Reviewer, Statistics and Probability Section, National Science Foundation Program

1994–1996	Review Member, Behavioral Science Track Award for Rapid Transition Program, National Institute of Mental Health
1996	Small Project Grant Program Review Member, Agency for Health Care Policy and Research
1997–2000	Reserve Review Member, Health Services Research Initial Review Group Committee, Agency for Health Care Policy and Research
1998–1999	Cardiovascular Outcomes Research Conference – Working Group Member, American Heart Association
1998–2000	Regional Advisory Board Member, ENAR
1998–2001	Patient Care and Outcomes Review Group Committee Member, American Heart Association
1999–2001	Review Member, Health Care Technology & Decision Sciences Review Committee, Agency for Healthcare Policy and Research
2000	Scientific Program Committee Member, ENAR
2000–2001	Quality of Care and Outcomes Research Expert Panel Member, American Heart Association
2000–2001	Health Policy Statistics Section, Program Chair (2001); Program Chair-Elect (2000), American Statistical Association
2000–2005	Joint Task Force on Performance Measures Member, American College of Cardiology & the American Heart Association
2000–2005	Heart Failure Performance Measures Writing Group Member, American College of Cardiology & the American Heart Association
2000–2005	3rd, 4th, 5th, 6th Scientific Forums on Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke Program Committee Member, American Heart Association
2001–2002	Heart Failure GAP Project Advisory Panel Member, American College of Cardiology & American Heart Association
2002	Technical Expert Panel Member, Centers for Medicaid and Medicare Services Doctor's Office Quality Project
2002	Special Emphasis Panel (Statistics) Chairperson, Review Panel, National Institute for Mental Health
2002	Temporary Review Member, Small Business Innovation Research, National Institute for Mental Health
2002–2005	Member, Subcommittee on Standards for NCDR Scientific and Clinical Support, American College of Cardiology
2003	Review Member, National Institute for Mental Health, Interventions
2003–2005	Secretary, Eastern North American Region (ENAR) of the International Biometrics Society
2003–2007	Member, Circulatory Systems Devices Advisory Panel, Food and Drug Administration, US Department of Health and Human Services
2004	Member, Institute of Medicine of the National Academies, Subcommittee on Performance Measures for Redesigning Health Insurance Benefits, Payment and Performance Improvement Programs
2004	Member, ENAR Distinguished Student Paper Awards Committee
2005–2007	Statistical Society of Canada Representative to the Florence Nightingale David Award Committee, Committee of Presidents of Statistical Societies
2006–2007	Member, Institute of Medicine Committee to Review NASA's Space Flight Health Standards
2006-2007	Member, IOM Committee to Review NASA's Space Flight Health Standards
2006–2008	Member, Measures Implementation and Evaluation Advisory Committee, American Medical Association
2003–2004	Health Policy Statistics Section Chair (2004) and Chair Elect (2003), American Statistical Association
2004–2006	Member, Quality Strategic Directions Committee, Appropriateness Criteria Working Groups, American College of Cardiology

2006–2009	Member, AcademyHealth Methods Council
2006–2007	Member, Agency for Healthcare Research and Quality (AHRQ) Quality Indicators Workgroup on Risk Adjustment Approaches to Administrative Data
2006-2007	Member, IOM Committee to Review NASA's Space Flight Health Standards
2006-2012	Member, IOM Committee to Aerospace Medicine and the Medicine of Extreme Environments
2006–2012	Member, Institute of Medicine of the National Academies, Committee of Aerospace Medicine and the Medicine of Extreme Environments
2007	Review Member, Special Emphasis Panel ITMA, National Institute of Mental Health
2007–2008	Statistical Leader, FDA-DCRI Cardiac Safety Critical Path Initiative: Drug Eluting Stent Thrombosis and Dual Anti-Platelet Therapy Group.
2007–2008	Member, AHA Evaluation of Novel Markers of Cardiovascular Risk and Subclinical Atherosclerosis Writing Group
2007–2009	Steering Committee Member, Registry of Angioplasty Registries (ROAR), National Heart, Lung, and Blood Institute
2007–2009	Consultant, Circulatory Systems Devices Advisory Panel, Food and Drug Administration, US Department of Health and Human Services
2007–2010	Member, Board of Advisors for the NCHS/AcademyHealth Policy Fellowship
2008	Review Member, Special Emphasis Panel ITMA, National Institute of Mental Health
2008	Member, ACC/AHA Quality in Technology Working Group
2008	Member, ACC/AHA Performance Measurement Methodology Update Committee
2008	Member, ACC/AHA Guidelines Methodology Review Workgroup
2009	Review Member, Special Emphasis Panel, ZMH1 ERB-N, National Institute of Mental Health
2009–	Advisory Committee Member, Dual Antiplatelet Therapy (DAPT) Study
2009–	Executive Operations Committee Member, Dual Antiplatelet Therapy (DAPT) Study
2009–2010	Member, IOM Committee on Future Directions for the National Healthcare Quality and Disparities Reports
2010–2011	Member, IOM Committee on a National Surveillance System for Cardiovascular and Select Chronic Diseases
2010–2012	Member, Medicare Evidence Development and Coverage Advisory Committee
2011–2012	Vice Chair, Methodology Committee, Patient-Centered Outcomes Research Institute
2012–2015	Board Member, Frontier Science and Technology Research Foundation, Inc.
2012–2015	Scientific Advisory Board Member, Institute of Clinical Evaluative Sciences, Toronto, Canada
2012–2016	Member, Committee on Applied and Theoretical Statistics, National Academy of Sciences
2016-2017	Co-Chair, Panel on the Review of the Compliance, Safety, Accountability Program of the Federal Motor Carrier Safety Administration, Committee on National Statistics
2016–	Member, National Academies of Sciences, Engineering, and Medicine, The Intelligence Science and Technology Experts Group (ISTEG)
2017–2020	Member, Fisher Lecture Selection Committee, Committee of Presidents of Statistical Societies (COPSS)
2018-2019	Chair, Fisher Award Committee, Committee of Presidents of Statistical Societies
2018–	Co-Chair, Standing Committee on the Federal Motor Carrier Safety Administration's Correlation Study, Committee on National Statistics, National Academies
2018–2020	Chair, Methods Subcommittee, National Evaluation System for health Technology Coordinating Center (NESTcc)

International

2013-2016	Member, Executive Board, International Biometrics Society
2019-2020	Member, Steering Committee, LIGHT trial and LIGHT-ACD trial, Yale-CORE China Project

Professional Societies

1987–	Statistical Society of Canada
1987–	Royal Statistical Society
1990	International Biometric Society
1990–	Institute of Mathematical Statistics
1990–	American Statistical Association
1992–	Association for Health Services Research (Now AcademyHealth)
1997–	International Society for Clinical Biostatistics
1999–	Society for Clinical Trials
2000–	American Public Health Association
2002–	American College of Cardiology
2007–	Society of Thoracic Surgeons
2007–	American Heart Association
2011–	International Society for Pharmacoeconomics and Outcomes Research
2021–	Society for Causal Inference

Community Service Related to Professional Work

1985–1990	Junior Statistical Consultant, Clinical Research Support Unit, Department of Preventive Medicine & Biostatistics, University of Toronto
1993–2001	JSM Session Organizer, American Statistical Association (IRT Modeling: Applications to Health Policy (2001); Statistical Methods for Profiling Medical Providers (1999); Modern Methods for Incorporating Uncertainty in Health Policy Analyses (1997); Statistical Methods in Mental Health Services Research (1995); Bayesian Methods in Health Services Research (1993)
1995–2003	Scientific Program Committee Member, International Conference on Health Policy Research (Bi-annual Meeting), Health Policy Statistics Section, American Statistical Association
1996, 2000	ENAR Session Organizer (Design & Analysis of Medical Device Trials: Regulatory, Industry, Statistical, and Clinical Perspectives (2000); Statistical Methods for Measuring, Assessing, and Modeling Compliance (1996)
2001	External Examiner, University of Toronto, School of Graduate Studies, Multiple Imputation of Missing Data in Clinical Trials (Biostatistics).

Editorial Boards

Board Member

1998–2005	Editorial Board Member	Health Services and Outcomes Research Methodology
2000	Guest Editor	Special Issue of Health Services and Outcomes Research Methodology
2002–2004	Member	Medical Decision Making
2006–2009	Associate Editor	Health Services and Outcomes Research Methodology
2006–2008	Associate Editor	Biometrics
2007–2008	Methods Editor	Psychiatric Services
2007–2009	Associate Editor	Statistics in Medicine
2008–2016	Associate Editor	Circulation: Cardiovascular Quality and Outcomes
2015-	Statistical Editor	New England Journal of Medicine
2021-	Statistical Editor	NEJM Evidence

Ad-Hoc Reviewer

American Journal of Public Health	Canadian Medical Association Journal
Annals of Internal Medicine	Cardiac Failure
Archives of General Psychiatry	Circulation
Bayesian Statistics 4 & 5	Communication in Statistics: Theory & Methods
Biometrics	Health Risk Analysis

Health Services Research
International Journal for Quality in Health Care
Joint Commission Journal of Quality Improvement
Journal of Clinical Outcomes Management
Journal d'Economie Medicale (France)
Journal of Health Economics
Journal of Multivariate Analysis
Journal of the American Academy of Child & Adolescent Psychiatry
Journal of the American Medical Association

Journal of the American Statistical Association
Journal of the Royal Statistical Society
Life Time Data Analysis
Medical Care
Milbank Quarterly
New England Journal of Medicine
Science
Sociological Methods and Research
Statistical Science
Statistics in Medicine
Annals of Applied Statistics

Awards and Honors

1984	University Gold Medal in Mathematical Statistics, University of Western Ontario, London, Ontario CANADA
1984	Entrance Scholarship, Faculty of Graduate Studies, University of Western Ontario, London, Ontario CANADA
1985	Special University Scholarship, Faculty of Graduate Studies, University of Western Ontario, London, Ontario CANADA
1985–1989	Ontario Graduate Scholarship, University of Toronto, CANADA
1988	Life Sciences Committee Scholarship in Cancer Research, University of Toronto, Toronto, Ontario CANADA
1989	Life Sciences Graduate Degree Completion Scholarship, University of Toronto, Toronto, Ontario CANADA
1991	National Science Foundation: Young Researcher Award, Support for the 4th Valencia International Meeting on Bayesian Statistics USA
2002	Elected Fellow, American College of Cardiology
2002	Elected Fellow, American Statistical Association for "influential application of Bayesian methodology to health policy problems, for leadership in the new area of health policy statistics, and for promoting and communicating statistical methods and assessments of the quality of cardiovascular disease and mental illness."
2005	Excellence in Mental Health Policy and Economics Research Award, Best Paper, Journal of Mental Health Policy and Economics
2005	Canadian Institute of Health Research Institute of Aging Age Plus Award, Excellence in Research on Aging for British Medical Journal article "Atypical antipsychotic drugs and risk of ischemic stroke: population based retrospective cohort study", BMJ 2005, 330(7489):445-450.
2007	Finalist, 2007 NIH Director's Pioneer Award "Rethinking evidence for medical therapies."
2007	Elected Associate, Society of Thoracic Surgeons
2009	Elected Fellow, American Heart Association
2009	Outstanding Publication Award, American Association of Cardiovascular and Pulmonary Rehabilitation. Suaya JA, Stason WB, Ades PA, Normand S-LT, Shepard DS. "Cardiac rehabilitation and survival in older coronary patients". Journal of the American College of Cardiology, 2009;54:25-33.
2010	IBM Faculty Award, nominated by IBM Healthcare Transformation Group
2011	Long Term Excellence Award, American Statistical Association, Health Policy Statistics Section
2012	Distinguished Scientist Award, American Heart Association
2012	Distinguished Service Award, International Society for Pharmacoeconomics and Outcomes Research
2013	Elected, Society for Research Synthesis Methodology
2015	L. Adrienne Cupples Award for Excellence in Teaching, Research, and Service in

Biostatistics, Boston University
2017   Outstanding Lifetime Achievement Award, Council on Quality of Care and
                Outcomes Research, American Heart Association
2018   Mosteller Statistician of the Year, American Statistical Association, Boston Chapter
2019   Elected Fellow, American Association for the Advancement of Science
2020   Article selected for Editor's Choice collection. Mulcahy AW, Normand S-L T,
                Newcomer J, Colaiaco B, Donohue JM, Lave JR, Keeler E, Sorbero M, Horvitz-
                Lennon M. "Simulated Effects of Policies to Reduce Diabetes Risk among Adults
                with Schizophrenia Receiving Antipsychotics". Psychiatric Services. 2017 Dec
                1;68(12):1280-1287.

RESEARCH, TEACHING, AND CLINICAL CONTRIBUTIONS

Report of Past Funding Information

1990–1994   AHCPR (PI: McNeil), Co-Investigator/Statistician. The consequences of variation in
               treatment for acute MI.
1992–1993   AHCPR (PI: McNeil), Co-Investigator/Statistician. The consequences of variation in
               treatment for acute MI.
1992–1994   AHCPR (PI: Epstein), Co-Investigator/Senior Statistician. Do re-admissions matter?
1992–1995   VHA – Institutional Participation Agreement (PI: McNeil), Co-Investigator/Senior
               Statistician. The consequences of variation in treatment after AMI in VHA.
1992–1995   AHCPR (PI: Morris), Co-Investigator. Hierarchical statistical modeling in health policy
               research.
1993–1994   HCFA (PI: McNeil): subcontract to Duke Medical School, Co-Investigator/Senior
               Statistician. Analysis of the pilot Cooperative Cardiovascular Project data.
1993–1997   NCI (PI: Normand), Principal Investigator. Hierarchical modeling for assessing breast
               cancer care.
1994–1999   AHCPR (PI: McNeil), Co-Investigator/Senior Statistician. Validating guidelines for the
               care of AMI patients.
1995–1997   VHA – Institutional Participation Agreement (PI: McNeil), Co-Investigator/Senior
               Statistician. Social factors & cardiac outcomes: A prospective study.
1995–1997   VHA – Institutional Participation Agreement (PI: McNeil), Co-Investigator/Senior
               Statistician. Appropriateness and necessity of cardiac procedure use after AMI in VHA.
1995–1998   NIMH (PI: Dickey), Co-Investigator/Senior Statistician. Regional variation in mental
               health treatment and cost.
1996–1999   AHCPR (PI: Guadagnoli): subcontract to Boston University, Co-Investigator/Senior
               Statistician. Adjuvant tamoxifen in old age.
1996–2001   SAMHSA (PI: Frank): subcontract to Brandeis University, Co-Investigator/Senior Statistician.
               State substance abuse treatment managed care evaluation program.
1996–2001   U18 HS09487 (PI: McNeil) AHCPR, Co-Investigator/Senior Statistician. Quality of care
               measures for cardiovascular patients.
1997–1999   USQA (PI: McNeil), Co-Investigator/Senior Statistician. Use of cholesterol lowering
               agents as secondary prevention after acute myocardial infarction.
1997–1999   MacArthur Foundation (PI: Frank), Co-Investigator/Senior Statistician. Determining the
               value of mental health.
1997–2002   R01 MH54076 (PI: Dickey) NIMH, Co-Investigator/Senior Statistician. Outcomes of
               Medicaid managed care.
1998–2001   NIMH (PI: Normand), NIMH, subcontract to University of Massachusetts Medical Center:
               Principal Investigator. Managed care effects on arrest and forensic commitment.
1998–2001   AHCPR (PI: McNeil), Co-Investigator/Senior Statistician. Financial incentives and care of
               chronic cardiac patients.
1998–2001   AAHP (PI: McNeil), Co-Investigator/Senior Statistician. Financial incentives and care of
               chronic cardiac patients.

1998	MERCK (PI: McNeil), Co-Investigator/Senior Statistician. Understanding the use of cholesterol lowering agents after myocardial infarction.
1998–2000	NCI (PI: Guadagnoli), Co-Investigator/Senior Statistician. Data sources and patterns of care for breast cancer.
1998–2002	R01 MH58288 (PI: Normand) NIMH: subcontract to McLean Hospital, Belmont, MA, Research: Principal Investigator. Mental illness, co-morbidity, and mortality.
1999–2003	R01 MH58240 (PI: Normand) NIMH, subcontract to McLean Hospital, Principal Investigator. BASIS 32: A Consumer Mental Health Outcome Measure.
2000–2003	HHS 100-00-0025 (PI: Frank) DHHS, Co-Investigator/Senior Statistician. Evaluation of Parity in the Federal Employees Health Benefits (FEHB) Program.
2000–2003	R01 MH620282 (PI: Frank) NIMH, Co-Investigator/Senior Statistician. Price Indexes of Mental Health Treatment.
2000–2005	P01 HS10803 (PI: Newhouse) AHRQ, Co-Investigator/Senior Statistician. Structuring Markets and Competition in Health Care.
2001–2004	R01 MH61434 (PI: Normand) NIMH, Principal Investigator. Modeling Treatment Use & Effectiveness in Mental Illness.
2001–2004	R01 HS11651 (PI: Landon) AHRQ, Co-Investigator/Senior Statistician. MD Group Characteristics and Quality of Care for CHD.
2002–2003	(PI: McNeil) MERCK, Co-Principal Investigator. Sample Sizes in Performance Measurement.
2002–2005	NO1 AA21011 (PI: Colditz) NIAA, Co-Investigator. Estimating Alcohol Attributable Fractions of US Morbidity and Mortality Based on Meta-Analyses of Epidemiological Studies.
2002–2017	620022A4PRE (PI: Normand) Commonwealth of Massachusetts, Department of Public Health, Principal Investigator. Cardiac Surgery Study.
2003–2006	R01 HS13335-01A1 (PI: Epstein) AHRQ, Co-Investigator. The Patterns and Impact of Value-Based Purchasing.
2003–2008	P20 MD000537 (PI: McGuire) NCMHD, Co-Investigator. Exploratory EXPORT Center: Bridging Communities.
2004–2007	R01 MH54693 (PI: Laird) NIMH, Co-Investigator. Analysis of Multiple Informant Data in Psychiatry.
2004–2007	R01 MH06972-01 (Frank RG: PI) NIMH, Co-Investigator/Statistician. Economic Impacts of New Drugs.
2004–2009	P50 DA10233-06A2 (PI: Frank) NIDA, Co-Investigator. The Brandeis/Harvard Center Study of Managed Care and Drug Abuse Treatment.
2005	(PI: McNeil), Harvard University, Co-Investigator. Programs for Health Systems Improvement.
2005–2007	R01 HS014774 (PI: Landon) AHRQ, Co-Investigator. Incentive Formularies and the Costs and Quality of Care.
2005–2008	2-R01 MH061434 (PI: Normand) NIMH. Modeling Treatment Use & Effectiveness in Mental Illness
2005–2010	P50 MH073469 (PI: McGuire), NIMH/CHA, Co-Investigator, Advanced Center for Latino and MH Systems Research.
2006–2010	R01-LM008142 (PI: Resnic), NLM/BWH, Co-Investigator, A System to Monitor Medical Device Safety in Interventional Cardiology.
2006–2010	(PI: Normand/Mauri), Harvard Clinical Research Institute, Principal Investigator. The Mass COMM Trial.
2006–2010	R01-LM008142 (PI: Resnic), NLM/BWH, Co-Investigator, A System to Monitor Medical Device Safety in Interventional Cardiology.
2008–2012	2-R01-MH54693 (PI: Normand), NIMH. Analysis of Multiple Informant Data in Psychiatry.
2008–2011	R01-MH081819 (PI: Frank), NIMH, Co-Investigator, Mental Health Spending and Quality of Care.
2008–2012	R01-MH080797 (PI: Huskamp), NIMH, Co-Investigator, Effects of Mental Health Parity

	on High-Cost and Severely Ill Individuals.
2009–2010	(PI: Normand), Division of Health Care Finance and Policy, Massachusetts Department of Public Health, Hospital-Wide Mortality Measurement Evaluation.
2009–2010	IPA (PI: Normand), Center for Devices and Radiographic Devices, Food and Drug Administration, Development of Statistical Surveillance Techniques for Hip Arthroplasty.
2009–2013	R01-HL101996 (PI: Reede, Joan), NHLBI, Co-Investigator, Factors that Promote and Support Careers of Women of Color in Academic Medicine.
2009–2012	5R01-NR010727 (PI:Termkin-Greener), NNR, Co-Investigator, End-of-Life Quality of Care in Nursing Homes.
2010-2012	1074629 (PI: Normand), DHHS/FDA, Innovative Methods for Evidence Synthesis for Medical Devices.
2010-2013	R01-MH087488 (PI: Horvitz-Lennon/Normand), NIMH, An In-Depth Investigation of Racial & Ethnic Disparities in Schizophrenia Care.
2010-2013	1RC4 MH092717-01 (PI: O'Malley), NIMH, Accounting for Confounding Bias and Heterogeneity in Comparative Effectiveness.
2011-2014	HHSF223201110172C (PI: Normand), Chickasaw Nation Industries (CNI)/Food & Drug Administration, The Medical Device Epidemiology Network (MDEpiNET) Methodology Center.
2011-2016	R01MH094290 (PI: McGuire), NIMH, Mental Health Coverage in Health Care Reform.
2012-2016	R01MH093359 (PI: Huskamp/Donohue), NIMH, Influences on Psychiatric Prescribing of Antipsychotics.
2012-2018	U01FD004493 (PI: Normand), FDA, The MDEPINET Medical Counter Measure Study.
2013-2015	Harvard Medical School/Portugal (PI: Normand), Comparative analysis and diagnostic treatment procedures provided to coronary artery disease patients: a critical evaluation study between the US and Portuguese health care systems.
2013-2015	R21HD076442 (PI: Chien/Newhouse), NICHD, Improving Pediatric Risk Adjustment Algorithms.
2013-2018	R01HL118314 (PI: Charytan/Normand), B&W/NIDDK, Optimizing Revascularization of Coronary Artery Disease in Chronic Kidney Disease.
2014-2018	R01CA181360 (PI: Haneuse), NIH/NCI, Clustered semi-competing risks analysis in quality of end-of-life care studies.
2013-2019	U01MH103018 (PI: Normand/Huskamp). Technology Diffusion Pathways
2015-2019	R01GM111339 (PI: Normand). Bayesian Methods for Comparative Effectiveness Research Using Observational Data.
2015-2019	U01FD005478 (PI: Normand/Sedrakyan). Creating National Surveillance Infrastructure for Priority Medical Devices.
2015-2020	P30DA035772 (PI: Horgan/Busch). Center to Improve System Performance of Drug Abuse Treatment.
2016-2021	R01MH106682 (PI: Normand/Horvitz-Lennon). Improving Value of Publicly Funded Mental Health Care.
2018-2020	The Society of Thoracic Surgeons (PI: Normand). STS Congenital Heart Surgery Database.
2017-2021	1R01MD012428-01 (PI: Normand/Horvitz-Lennon). Improving Minority Health by Monitoring Medicaid Quality, Disparities and Value.
2020-2021	1R01 MD012428 (PI: Normand/Horvitz-Lennon) Improving Minority Health by Monitoring Medicaid Quality, Disparities and Value- Admin Supplement.
2020-2022	ME-2019C1-16172 (PI: Zubizarreta). Towards a New Generation of Matching Methods for Comparative Effectiveness Research.
2021-2022	Quantum Black (McKinsey) (PI: Normand). Causal Inference for Multi-Valued Treatments.

Report of Current Research Activities

2019-2023   <u>1R01MH122199</u> (PI: Cook) *Medicaid Value Based Payment Models and Healthcare Equity for Adults with Serious Mental Illnesses*. This project will assess the impact of value-based payment models on the equity of care for racial/ethnic minority Medicaid beneficiaries with severe mental illness in Oregon and in New York state. Access (via new outpatient visit rates and time to second visit), quality (via the Medicaid Adult Core Set), effectiveness (via medication discontinuation rates, readmission rates, and mortality rates), and costs of health care will be examined to identify racial/ethnic differences.

2019-2023   <u>5R01AG062282</u> (PI: Hsu) *Alzheimer's Disease and Related Dementia (ADRD) Care within the Medicare Program*. The current project will use a novel dataset that contains individual-level linkages between three data sources: 1) Medicare claims from Parts A, B, and D; 2) EHR data from a large health system; and 3) a dementia research registry. The project also will use national traditional fee-for-service Medicare (TM) data and a P01-developed instrument on MedicareAdvantage (MA) benchmarks to assess spillover effects within TM. We will: 1) validate algorithms using claims data for identifying beneficiaries with ADRD of varying stages or levels of severity, combined with a gold-standard definition based on EHR chart reviews; 2) assess the impact of MA penetration (using an instrumental variable based on changes in MA benchmarks) on guideline concordant or discordant testing; and 3) assess the impact of MA penetration on guideline concordant or discordant treatments.

2019-2024   <u>5R01DA048533</u> (PI: Huskamp/Mehrotra) *Telemedicine for Treatment of Opioid Use Disorder.* This project is a comprehensive evaluation of telemedicine for opioid use disorder using Medicaid, Medicare, and commercial insurance data as well as a series of qualitative interviews.

2021-2025   <u>P50MH126283</u> (Cook): *ALACRITY for Early Screening and Treatment of High Risk Youth (E-SToRY)*. This proposal establishes an Early Screening and Treatment of at-Risk Youth to identify interventions that close the wide mental health care access and quality gaps among youth of color, leveraging a unique research/services partnership to: a) reach individuals in their diverse communities through a strong web of community-based connections, b) collect real-time psychopathology risk information via system-wide adaptive symptom monitoring (CAT-MH), electronic health records (her), insurance claims, and social determinants of health (SDOH) data; and c) command and control the rollout and testing of measurement-based care designed to reduce access and quality disparities across a network of hospital- and school-based clinics. An administrative core collaborating across research and clinical departments will oversee pilot studies, training, and promotes meaningful community participation; A methods core will leverage adaptive psychopathology and SDOH screeners to implement rigorous randomized controlled trials (RCTs), and big data analytics to reduce disparities; and Three research projects will focus on the identification, early treatment, and disparities reduction among racially, ethnically, and linguistically diverse youth at high risk for mental illness and suicide.

2021-2026   <u>1U01AG076478</u> (PI: Hsu): *Impact of the COVID-19 Pandemic on Patients with and Without Alzheimer's Disease Related Dementias.* To assess and refine study variable definitions given data collected during the pandemic; to examine the impact of changes in outpatient care on clinical event rates, e.g.,emergency department and hospitalization rates; and to examine the impact of changes in inpatient care on mortality.

2022-2026   <u>2R01MH112829</u> (PI: Mehrotra/Huskamp) *Use of Telemedicine in the Treatment of Mental Illness.* In this renewal, we will study the period after the public health emergency ends to assess how different state laws and regulations influence the use of telemental health, whether increased use of telemental health has increased access for disadvantaged minorities and rural patients, how telemental health is being used in care, and whether its use is associated with improved quality of care. Telemedicine for the treatment of mental illness (or "telemental health") is one way to improve access to mental health care for those who need it. Use of telemental health dramatically increased during the COVID-19 pandemic.

2022-2026   <u>1R01HL155120</u> (PI: Normand/Pasquali) *Modern Analytics to Improve Quality & Outcome Assessments Following Congenital Heart Surgery*. Annually more than 40,000 children undergo surgery for congenital heart defects (CHD) in the US and while patient outcomes have improved over the past 30 years, morbidity and mortality remain high for some children, and significant variation exists across the more than 100 US congenital heart centers. Using a registry containing detailed clinical data from virtually all U.S. congenital heart centers, we will develop

machine learning and causal inference approaches to best utilize the diversity of the data to improve CHD surgical quality assessments. We expect the proposed research will transform our capabilities for assessing CHD surgical quality and drive national improvements in outcomes for children and families impacted by CHD.

2022-2027   R01 MH130213-01A1 (PI: Normand/Horvitz-Lennon) *Robust Learning Approaches for Assessing Effects and Effect Heterogeneity of Real World Antipsychotic Treatment Regimes in Elderly Persons with Schizophrenia.* We will develop statistical approaches to extract scientifically robust and valid causal evidence of the effectiveness and adverse outcomes of antipsychotic drugs used by elderly adults with schizophrenia using large, observational, longitudinal databases. Our proposal has high public health relevance because (1) we focus on adults with illnesses associated with a heavy disease burden for whom drug treatments are a critical and often lifetime treatment component; (2) we assess the extent to which patient race/ethnicity and social contextual factors known to influence health behaviors may moderate outcomes; (3) we expand causal inference methodology to characterize the outcome effects of drug exposure and drug regimens, thus providing valuable information to optimize outcomes of long and complex exposures typical of usual care settings; and (4) we develop generalizable approaches to target parameters of general scientific interest.

2022-2027   2P30DA035772-06 (PI: Reif/Huskamp) *Center to Improve System Performance of Drug Abuse Treatment*. This Center renewal will conduct and extend research on SUD service delivery and payment methods to synergistically expand the research base, serving as a national resource to inform policy and practice decisions that will profoundly affect the cost, quality, and availability of SUD treatment services.

Report of Teaching

Local Contributions

1995	Statistical Issues in Assessing Diagnostic Accuracy with Applications in Psychiatric Epidemiology (BIO300), Department of Biostatistics, HSPH, Course Developer and Instructor, 1 Student, Prep Time=1 hr/wk, Contact Time=2 hrs/wk.
1995	Sources of Biases in Estimating Diagnostic Accuracy (BIO300), Department of Biostatistics, HSPH, Course Developer and Instructor, 1 Student, Preparation Time=1 hr/wk, Contact Time=2 hrs/wk.
1995–1998	Bayesian Methodology Working Group, Department of Biostatistics, HSPH, Seminar Coordinator, 10 Students, Preparation Time=0.5 hrs/wk, Contact Time=1 hr/wk.
1996	Statistical Methods for Health Care Utilization Data (BIO300), Department of Biostatistics, HSPH, Course Developer and Instructor, 1 Student, Preparation Time=0.1 hr/wk, Contact Time=2 hr/wk.
1997	Psychiatric Epidemiology, Department of Epidemiology and Department of Biostatistics, HSPH, Participant in Training Program, 3-8 Students, Preparation Time=0.5 hrs/wk, Contact Time=0.5 hrs/wk.
1997–1998	Statistical Methods for Psychiatry (BIO269), Department of Biostatistics, Harvard School of Public Health, Course Developer and Instructor, 7 Students, Preparation Time=0.5 hrs/wk, Contact Time=4 hrs/wk.
1997–2002	Core Seminar in Health Policy (HCP597), Harvard University (Harvard Medical School, Kennedy School of Government, Harvard School of Public Health), Guest Lecturer, 20 Students.
1998–1999	Statistical Outreach (BIO270), Course Developer and Instructor (with LJ Wei and M Zelen), 6 Students, Preparation Time=5 hrs/wk, Contact Time=2 hrs/wk.
1998–2001	Multiple Regression Analysis for Health Policy and Management (BIO225c), Department of Biostatistics, HSPH, Course Developer and Instructor, 25 Students, Preparation Time=1 hr/wk, Contact Time=4 hrs/ wk.

2000–2006	Fundamental Methods of Clinical Trials, Scholars in Clinical Science Program, HMS, Guest Lecturer, 10 Students.
2001–2003	Bayesian Methodology in Biostatistics (BIO249ab), Course Developer & Instructor, 15 Students, Preparation Time = 3 hr/wk, Contact Time = 5 hrs/wk.
2004, 2008-2019	Epidemiology 219: Guest lecturer on "Item Response Theory Models", 20 Students, Preparation Time = 4 hrs, Contact Time = 2.0 hrs.
2008, 2009	Health Care Policy 750: Course Discussion Leader on "Drug/Device Policy Regulation,"12 Students, Preparation Time = 2 hours, Contact Time = 1 hour.
2010	Review of Statistical Approaches to the Analysis of Composite Endpoints (BIO300), Preparation Time = 5 hours, Contact Time = 1 hr/wk.
2013, 2012	Introduction to Clinical Investigation: Database Research, Harvard Catalyst, Course Developer and Instructor, 100 Students, Preparation Time = 1 hour, Contact Time = 1.5 hours. May and October.
2014	Topics in Medical Device Comparative Effectiveness Research, Epidemiology (EPI521), Guest Lecturer, 15 Students, Prep Time=3.0 hours, Contact Time=2.0 hours
2014–2015	Panel Discussion on FDA Advisory Committees, Biostatistics, Guest Panelist (BIO523), 10 Students, Prep Time=1.0 hours, Contact Time=2.0 hours
2016	Biostatistics 228: Guest lecturer on "Assessing Quality and Equity in Health Care", 10 Students, Prep Time=1.0 hours, Contact Time=2.0 hours
2017	Harvard Catalyst Biostatistics Symposium: p-values, hypothesis testing and reproducibility, "Generating Evidence for Comparative Effectiveness Research", Prep Time=2.0 hours, Contact Time=1.0 hours
2017	Biostatistics-Biomedical Informatics Big Data Seminar (B3D), "Data, Statistics, and Inference", Prep Time=2.0 hours, Contact Time=1.0 hours
2017	Biostatistics 228: Guest lecturer on "Bayesian Approaches to Assessing Hospital Quality of Care", 10 Students, Prep Time=1.0 hours, Contact Time=2.0 hours
2018	Harvard Data Science Initiative, 45/45 Seminar: Guest lecturer on "Approaches to Measuring the Value of Publicly-Funded Mental Healthcare", 20 Students, Prep Time=1.0 hours, Contact Time=1.5 hours
2019	Harvard Data Science Initiative, Guest Panelist: "Representation in Academia", Prep Time: 1.0 hour, Contact Time=2.0 hours
2020	Harvard Data Science Initiative, Corporate Members Summit: Guest speaker on "Data Science in Health Care Policy and Public Health", 25 participants, Prep Time=1.0 hours, Contact Time=1 hour
2021	Biostatistics 228: Guest lecturer on "Bayesian approaches in healthcare research", 10 Students, Prep Time=1.0 hours, Contact Time=2.0 hours

Graduate and Postdoctoral Students; K-Award Mentees

Mark Glickman	Postdoctoral Fellow in Statistics, July 1993 – Jan 1995. Currently Senior Lecturer on Statistics, Harvard University, and Senior Statistician, Center for Healthcare Organization and Implementation Research, Boston, MA.
Chuanhai Liu	Postdoctoral Fellow in Statistics, Jan 1995 – May 1995. Currently Professor, Department of Statistics, Purdue University, West Lafayette, IN.
MaryBeth Landrum	Postdoctoral Fellow in Biostatistics, Sep 1995 – June 1998. Currently Professor, Department of Health Care Policy, Harvard Medical School, Boston, MA.

Kelly H. Zou	Postdoctoral Fellow in Statistics, Dec 1997 – June 1999. Currently Senior Director, Real World Data & Analytics (RWDnA), Global Health and Value, Pfizer, New York, NY.
Nandini Dendukuri	Postdoctoral Fellow in Biostatistics, Jan 1999 – May 2000. Currently Biostatistician, St. Mary's Hospital, and Adjunct Assistant Professor, Department of Epidemiology and Biostatistics, and Director, Technology Assessment Unit of the McGill University Health Centre, McGill University, Montreal, Quebec, CANADA.
Jeffrey Jonkman	Postdoctoral Fellow in Statistics, Aug 1998 – July 2000. Currently Associate Professor of Mathematics and Statistics, Grinnell College, Grinnel, IA.
James O'Malley	Postdoctoral Fellow in Statistics, Sept 1999 – Aug 2001. Currently Professor, Department of Biomedical Data Science, Geisel School of Medicine, Dartmouth College, Lebanon, NH.
Edmond Shenassa	Graduate Student, 1996 – 2000. Thesis Committee Member, Epidemiology ScD, Harvard School of Public Health. Currently Associate Professor, Maternal and Child Health Program, and Department of Epidemiology and Biostatistics, School of Public Health, University of Maryland, College Park, MD.
Susan Bronskill	Graduate Student, 1997 – 2001. Thesis Co-Principal Advisor, Statistics & Evaluation Track, Health Policy PhD, Harvard University. Currently, Senior Core Scientist Program Lead, Institute for Clinical Evaluative Sciences, Sunnybrook Hospital, and Assistant Professor, Department of Health Policy, Management, and Evaluation, University of Toronto, Toronto, Ontario, Canada.
Karen Clements	Graduate Student, 1997-2003. Thesis Committee Member, Epidemiology ScD, Harvard School of Public Health. Currently Assistant Professor, Biostatistics and Health Services Research, University of Massachusetts Medical School, Worcester, MA.
Josh Breslau	Graduate Student, 2001 – 2005. Thesis Committee Member, Epidemiology ScD, Harvard School of Public Health. Currently, Senior Researcher, RAND Corporation, Pittsburgh, PA.
Douglas Levy	Graduate Student, 2001 – 2004. Thesis Committee Member, Statistics & Evaluation Track, Health Policy PhD, Harvard University. Assistant Professor of Medicine, Harvard Medical School. Currently Instructor, Institute for Health Policy, Massachusetts General Hospital, Boston, MA.
Rusty Tchernis	Postdoctoral Fellow in Economics, June 2002 – May 2004. Currently Associate Professor, Department of Economics, Andrew Young School of Policy Studies, Georgia State University, Atlanta, GA.
Justin Timbie	Graduate Student, 2003 – 2007. Advisor, Evaluation and Statistics Track, Health Policy PhD, Harvard University. Currently, Health Policy Researcher, RAND Corporation, Arlington, VA.
Heather Litman	Graduate Student, 2004 – May 2005. Orals Committee Member & Thesis Committee Member, Biostatistics PhD, Harvard School of Public Health. Currently Senior Biostatistician, Corrona, LLC, Southborough, MA.
Alexandros Gryparis	Graduate Student, 2004 – 2005. Thesis Committee Member, Biostatistics PhD, Harvard School of Public Health. Currently, Department of Applied Mathematics, University of Crete, Greece.
Armando Teixeira-Pinto	Graduate Student, 2004 – 2007. Thesis Principal Advisor, Biostatistics PhD, Harvard School of Public Health. Currently Level D (Associate Professor), Sydney Medical, University of Sydney, Australia.

Niteesh Choudhry | Graduate Student, 2004 – May 2005. Thesis Committee Member, Evaluative Sciences and Statistics Track, Health Policy PhD, Harvard University. Currently, Professor of Medicine, Harvard Medical School & Associate Physician, Division of Pharmacoepidemiology and Pharmacoeconomics and the Hospitalist Program, Brigham and Women's Hospital, Boston, MA.

Magdalena Cerda | Graduate Student, 2004 – August 2006. Thesis Committee Member, Department of Society, Human Development, and Health, Harvard School of Public Health. Currently, Associate Professor, Department of Emergency Medicine, University of California, Davis, Sacramento, CA.

Tom Concannon | Graduate Student, 2004 – 2006. Thesis Committee Member, Evaluative Sciences and Statistics Track, Health Policy PhD, Harvard University. Currently Assistant Professor, Institute for Clinical Research and Health Policy Studies, Tufts-New England Medical Center and Tufts University School of Medicine, and Senior Policy Researcher, RAND Corporation, Boston, MA.

Jose Suaya | Graduate Student, 2004 – 2005. Thesis Committee Member, Heller School for Social Policy and Management, Brandeis University, Waltham, MA. Currently Pneumococcal Vaccines, WW Medical Development & Scientific Affairs, Pfizer, New York, NY.

Karine Lamiraud | Fullbright Visiting Scholar, July 2005 – September 2005. Sponsor. Graduate of University of Lausanne, Switzerland (Institute of Health Economics and Management). Currently Associate Professor, Department of Economics, Titulaire Chair of Therapeutic Innovation, ESSEC Business School, Cergy, France.

Alisa Busch | K-Award Mentee (K01MH071714-01A2), December 1, 2005 – 2011. Currently Assistant Professor of Psychiatry, Department of Psychiatry, Harvard Medical School, Boston, MA.

Margie Skeer | Graduate Student, 2007 – May, 2009. Thesis Committee Member, Department of Society, Human Development, and Health, Harvard School of Public Health. Currently Assistant Professor of Public Health and Community at the Tufts University School of Medicine, Boston, MA.

Brian Neelon | Postdoctoral Fellow in Biostatistics, July 2007 – June 2009. Currently Associate Professor, Public Health Sciences, Medical University of South Carolina, Charleston, SC.

Frank Yoon | Postdoctoral Fellow in Statistics, September 2009 – August 2011. Currently Director, Statistical Informatics, Truven Health Analytics, New York, NY.

Manuel Gomes | Postdoctoral Fellow, Lecturer in Health Economics, London School of Hygiene & Tropical Medicine, 2014. Currently Assistant Professor of Health Economics and MRC Early Career Fellow in Economics of Health, London School of Hygiene & Tropical Medicine, London, UK.

Lauren Kunz | PhD graduate student, 2011-2014. Primary advisory, Department of Biostatistics, Harvard School of Public Health. Currently Statistician, Office of Biostatistics Research, National Heart, Lung, and Blood Institute, NIH, Washington, DC.

Mariana Lobo | PhD graduate student, 2013-2018. Co-primary advisory, Department of Health Information and Decision Sciences, Faculty of Medicine, University of Porto, Porto, Portugal. Currently Postdoctoral Research Fellow, Faculty of Medicine, University of Porto.

Cai Gillis | PhD graduate student, 2015-2018, Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, MA. Currently Contractor (Epidemiology), Biogen, Cambridge, MA; and Senior Data Curator, AlzRisk, Boston, MA.

Simon Hollands	PhD graduate student, 2015 – 2019. Dissertation Committee member, Pardee RAND Graduate School, Santa Monica, CA. Currently Engineering Data Scientist at Snap Inc., Santa Monica, California.
Robbert Zusterzeel	Graduate student, 2016-2018. MPH-EPI Practicum Committee member, Harvard T.H. Chan School of Public Health, Boston, MA. Currently Director (Data Network), National Evaluation System for health Technology Coordinating Center (NESTcc), Arlington, VA.
Chenyang Gu	Postdoctoral Research Fellow in Biostatistics, 2016-2018. Co-advisory, Department of Health Care Policy, Harvard Medical School, Boston, MA. Currently Associate, Analysis Group, Los Angeles, CA.
Samrachana Adhikari	Postdoctoral Research Fellow in Statistics, 2016-2018. Primary advisory, Department of Health Care Policy, Harvard Medical School, Boston, MA. Currently Assistant Professor of Biostatistics, Department of Population Health, New York University School of Medicine, New York, NY.
Glen McGee	PhD graduate student, 2016 – 2019. Co-primary advisory, Department of Biostatistics, Harvard T.H. Chan School of Public Health, Boston, MA. Currently, Postdoctoral Fellow, Department of Biostatistics, Harvard School of Public Health.
Bianca Orlandi	PhD graduate student, 2020-2021. Co-advisory, Department of Health Care Policy, Harvard Medical School, Boston, MA. Currently Student, Postgraduate Program in Thoracic and Cardiovascular Surgery of the Heart Institute of Hospital das Clinicas of the University of São Paulo, Brazil.
Rohan Khera	K-Award Mentee (PENDING AWARD). Currently Assistant Professor in the Section of Cardiovascular Medicine at Yale School of Medicine, general cardiologist at the Yale New Haven Hospital, and an investigator at Yale's Center for Outcomes Research and Evaluation.
Jason Poulos	Postdoctoral Fellow in Data Science, 2021 - current. Primary advisory, Department of Health Care Policy, Harvard Medical School, Boston, MA.
Larry Han	Postdoctoral Research Fellow in Statistics, 2023 – current. Primary advisory, Department of Health Care Policy, Harvard Medical School, Boston, MA.

Undergraduate and High School Mentoring

Anjali Chelliah	Undergraduate Student, Department of Economics, Harvard University.
Christina Awosan	High School Student, Summer 1999, Project Success.
Treacy Silverstein	Undergraduate Student, Mathematical Sciences, Carnegie Mellon University, Summer 2003.

Selected Regional, National, or International Contributions: Invited Presentations (since 2000)

Regional
1. Comparing Systems of Health Care: Does the Veterans Health Administration Measure Up? Health Care Policy Advisory Council, Harvard Medical School, Boston, MA. (2000)
2. Analyzing Observational Data Using Propensity Scores: Applications in Health Services Research. Biostatistics Colloquium, Department of Biostatistics, Harvard School of Public Health, Boston, MA. (2000)
3. Analyzing Observational Data Using Propensity Scores: Applications in Health Services Research. Statistics Colloquium, Department of Mathematics and Statistics, Boston University, MA. (2000)
4. Statistical Approaches to Profiling Providers. Yale Medical School, New Haven, CT. (2002)
5. Statistical Models for Health Care Quality Surveillance and Public Reporting. Center for Basic Research in the Social Sciences, Harvard University, Cambridge, MA. (2004).

6. Applied Statistical Methods for Health Policy Data. Department of Mathematics, Smith College, October 2004.
7. Statistical Methods for Profiling Hospitals: Methods and Implications. UVM Statistics Colloquium, University of Vermont, Burlington, VT. April 2005.
8. Statistical Issues in Medical Device Trials. Institute for Technology Assessment, Massachusetts General Hospital. October 2006.
9. Multivariate Analyses of Mixed Outcomes. Key Statistical Methods for Device Clinical Trials sponsored by the Harvard Clinical Research Institute and Harvard Medical School, Boston, MA. February 2007.
10. Using Statistical Models for Assessing Quality of Care: Issues and Applications. Center for Outcomes and Policy Research, Dana-Farber Cancer Institute, Boston, MA. October 2007.
11. Statisticians and FDA Advisory Committees. Boston Chapter of the American Statistical Association, Boston, MA. November 2007.
12. Statistical Issues in Assessing Hospital Quality of Care. MGH Biostatistics Center, Massachusetts General Hospital, Boston, MA. February 2008.
13. Public reporting of cardiac outcomes: a view of Massachusetts' experience. Centers for Medicare & Medicaid Services Measures Forum Presentation, Teleconference. October 2008.
14. Statistical issues in assessing hospital quality of cardiac care. Tufts Medical Center, Cardiology Grand Rounds, Boston, MA. February 2009.
15. Assessing safety of medical technologies in the real world. Harvard Medical School 2009 Commencement and Alumni Week, Boston, MA. June 2009.
16. Research synthesis for the real world: assessing safety after market release. Yale School of Public Health, New Haven, CT. October 2009.
17. Designing safety studies: interventional versus observational. Post-Approval Summit, Boston, MA. May 2010.
18. Statistical considerations when combining data for comparative effectiveness research. HSPH-Merck Workshop, Harvard School of Public Health, Boston, MA. June 2012
19. Statistical considerations in assessing the comparative effectiveness and safety of medical devices. Department of Epidemiology, Harvard School of Public Health, Boston, MA. November 2012.
20. Methodological perspectives on comparative effectiveness research. Harvard School of Public Health Catalyst Symposium, Boston, MA. November 2012.
21. Approaches to comparative effectiveness estimation in prospective observational data. Adrienne L. Cupples Seminar, Boston University, Boston, MA. April 2015.
22. Some Inferential Tools for Health Policy & Outcomes Research. Odoroff Lecture, Department of Biostatistics and Computational Biology, University of Rochester, Rochester, NY. May 2019.
23. Approaches for Causal Inference of Multi-valued Treatments: Cardiometabolic Risks and Antipsychotic Use Among Adults with Schizophrenia. Causal Inference Seminar Series, Boston University School of Public Health, Boston, MA. February 2020.

National

1. Statistical Methods for Adjusting Differences Due to Self-selection into Health Plans. American Public Health Association 128th Annual Meeting, Boston, MA. (2000)
2. On the Use of Propensity Scores in Health Services Outcomes Research. Techniques for Handling Bias in Health Services Outcomes Research, National Conference, Houston, TX. (2000)
3. On the Use of Prior Information in Medical Device Trials: Methods & Applications. Food and Drug Administration, Rockville, MD. (2000)
4. Risk Adjustment: Advanced Concepts. 2nd Scientific Forum on Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke, American Heart Association & the American College of Cardiology, Washington, DC. (2000)
5. Risk Adjustment for Procedures: The Basics. 2nd Scientific Forum on Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke, American Heart Association & the American College of Cardiology, Washington, DC. (2000)
6. Maryland Health Choice. Academy for Health Services Research and Health Policy Meetings, Atlanta, GA. (2001)
7. Models for Profiling Medical Care Providers. Academy for Health Services Research and Health Policy Meetings, Atlanta, GA. (2001)

8. On The Design and Analysis of Health Care Quality Studies: Assessing Chronic Cardiovascular Care in the US. American Statistical Association Annual Meetings, Atlanta, GA. (2001)
9. Unruly Control Groups: Determining the Appropriateness of Quasi-Experimental Estimators. National Institute of Mental Health Evidence in Mental Health Services Research: What Types, How Much, and Then What? Washington, DC. (2002)
10. On the Use of Propensity Scores in Medical Decision and Policy Making. Society for Medical Decision Making 24th Annual Meeting, Keynote Dinner Speaker, Baltimore, MD. (2002)
11. Use and Abuse of Observational Data for QI. 4th Annual ACC Quality Conference and NCDR User Meeting, Chicago, IL. (2003)
12. Measuring Quality. American College of Radiology Forum: The Future Quality of Medical Imaging, Reston, VA. (2003)
13. Statistical Models for Monitoring/Surveillance and Public Reporting. Joint Statistical Meetings, San Francisco, CA. (2003)
14. Hierarchical Models and Latent Variable Models: Methods for Assessing Multiple Measures of Quality and Outcomes of Care. International Conference on Health Policy Research, Chicago, IL. (2003)
15. Optimal Delineation of Health Status in Trial Endpoints. Health Failure Society of America/FDA Workshop. Rockville, MD. (2003).
16. Statistical Models for Health Care Quality Surveillance and Public Reporting. Department of Epidemiology and Biostatistics, Casewestern Reserve University, Cleveland, OH. (2003).
17. Limitations of Outcomes Analysis in CQI. 5th Annual ACC Quality Conference and NCDR User Meeting. New Orleans, LA. (2004).
18. Physician Clinical Performance Assessment. Institute of Medicine, National Academies, September 2004.
19. Limitations of Analyses in CQI: Accuracy. American College of Cardiology Scientific Meetings, Orlando, FL, March 2005.
20. Quasi-Experimental Designs. Alternative Study Designs for Evidence-Based Practice. AHRQ. Washington, DC. October 2005.
21. National Voluntary Consensus Standards for Ambulatory Care: Statistical Challenges in Small Group Settings. National Quality Forum, Washington, DC. December 2005.
22. Latent Variable Models for Mixed Outcomes: Methods and Applications. Schering-Plough Research Institute, Kenilworth, NJ. March 2006.
23. Assessing Evidence for New Technologies in the Absence of Randomization: A Review of Concepts and Analytic Approaches. Schering-Plough Research Institute, Kenilworth, NJ. March 2006.
24. Statistical Methods for Assessing Mental Health Treatment Effectiveness: Issues & Applications. 8th Annual Columbia, Penn, Yale Statistics in Psychiatry Symposium, New York, NY. May 2006.
25. Profiling Practices: How Much Do We Know? AcademyHealth Annual Meeting. Orlando, FL. June 2006.
26. Statistical Considerations in Assessing Quality of Cardiac Care. Mid America Heart Institute of Saint Luke's Hospital Cardiovascular Grand Rounds, Kansas City, MO. April 2007.
27. (Talk 1) Pre-Market Safety Approaches to Rare Safety Events; (Talk 2) Historical Controls and OPC; (Talk 3) The Mass-DAC Effort. FDA Drug Eluting Stent Thrombosis ThinkTank Meeting, Washington, DC. May 2007.
28. Statistical Models for Profiling Quality of Health Care. Columbia Developing Center on Implementation of Evidence-based Practices for Children in a State System Research Seminar, Columbia University, New York, NY. June 2007.
29. Some Thoughts on Propensity Scores. AcademyHealth Annual Meeting. Orlando, Fl. June 2007.
30. Methodological Issues in Assessing Quality of Care: Process and Outcomes Measures. AcademyHealth Annual Meeting. Orlando, FL. June 2007.
31. Statistical Strategies for Post-Approval Studies. Surveillance and Biometrics Grand Rounds, Division of Postmarket Surveillance, Center for Devices and Radiological Health, FDA. Washington, DC. September 2007.
32. The Statistics Behind the Numbers. 11th Annual Scientific Meeting of the Heart Failure of Society of America. Washington, DC. September 2007.
33. Hybrid Designs for Rehabilitation Research. State of Science Conference on Clinical Trials in Rehabilitation Research. Washington, DC. October, 2007.

34. Latent Variable Models for Assessing Quality of Health Care: Issues and Applications. Fall Health Economics Seminar, University of Chicago, Chicago IL. November 2007.
35. Large Data Streams and the Power of Large Numbers. IOM Workshop on Redesigning the Clinical Effectiveness Research Paradigm: Innovation and Practice-Based Approaches, Washington, DC. December 2007.
36. Assessing Quality of Care Delivered in the US: A Bayesian Approach. Bayesian Biostatistics Conference. Houston, TX. January, 2008.
37. Assessing Evidence on Safety and Efficacy: the Role of Meta-Analysis. 4th Annual Scientific Meeting of the International Society of Clinical Trials Management, Washington, DC. February, 2008.
38. Statistical strategies for analyzing observational data. Bipolar Statistical Summit, New York, NY. October 2008.
39. Statistical strategies for post-market surveillance of medical devices. FDA/ADVAMED Statistical Issues for Medical Devices and Diagnostics Workshop, Gaithersburg, MD. April 2009.
40. Statistical surveillance techniques for hip arthroplasty. AHRQ Clinical & Comparative Research Methods II, Rockville, MD. June 2009.
41. Bayesian inference for health policy decision making. Medicare Evidence Development and Coverage Advisory Committee, Washington DC. June 2009.
42. Use of multiple informant data. 49th Annual New Research Approaches for Mental Health Interventions Meeting, Hollywood, FL. July 2009.
43. Research synthesis for the real world. FDA Post-Approval Studies of Medical Devices Workshop, Silver Spring, MD. September 2009.
44. Discussion of Economic outcomes of BARI 2D, American Heart Association Annual Scientific Sessions, Orlando, FL. November 2009.
45. Methodology for calculating 30-day mortality rates, American College of Cardiology Annual Scientific Meetings, Atlanta, GA. March 2010.
46. Comparative effectiveness of total hip replacement systems. Eastern North American Region of the International Biometrics Society, New Orleans, LA. March 2010.
47. Statistical methods for combining information from multiple sources. Association of Clinical Research Professionals, Tampa, FL. April 2010.
48. Novel methodologies for generating evidence. Medical Device Epidemiology Network, Center for Devices and Radiological Health, FDA. April 2010.
49. Statistical issues in comparative effectiveness research. IBM Watson Research Lab, Hawthorne, NY. May 2010.
50. Combining multiple data sources for comparative effectiveness. Rutgers University Workshop on Statistical Issues on Combining Information, New Brunswick, NJ. May 2010.
51. Hospital quality following percutaneous intervention in Massachusetts: 2003 – 2008. Quality of Care and Outcomes Research in Cardiovascular Disease and Stroke Conference, Washington, DC. May 2010.
52. Using registry data to infer comparative effectiveness: comparing bivalirudin to heparin + glycoprotein IIb/IIIa receptor antagonist prior to primary PCI. Premier Annual National Breakthroughs Conference, Washington, DC. June 2010.
53. Statistical considerations for computing composite measures: application to assessing quality of care. AcademyHealth Annual Meeting, Boston, MA. June 2010.
54. Appropriate role of observational data analysis in comparative effectiveness research. AcademyHealth Annual Meeting, Boston, MA. June 2010.
55. How to minimize confounding in large data sets analyses? American Heart Association Annual Scientific Sessions, Chicago, IL. November 2010
56. Minimizing confounding in CER: using propensity score methods. American Heart Association Annual Scientific Sessions, Chicago, IL. November 2010.
57. Signal refinement in the context of large sample sizes. Expert Workshop on Statistical and Epidemiological Issues in Active Medical Product Surveillance. Engelberg Center for Health Care Reform at Brookings, Washington, DC. February 2011
58. Innovative methodological approaches to evidence accumulation and synthesis to advance the regulatory science of medical devices, AHRQ Centers for Education and Research on Therapeutics Steering Committee Meeting, Rockville, MD. March 2011

59. Modern statistical methods for post-approval surveillance: applications to medical device studies. 4rth Annual Medical Device and IVD Statistical Issues Workshop, Washington, DC. April 2011

60. Novel approaches to evidence synthesis for medical devices: a case of total hip arthroplasty. FDA 2nd Annual Public Workshop of the Medical Device Epidemiology Network, Silver Spring, MD. April 2011

61. The role of shrinkage estimation in comparative effectiveness research. AHRQ 3rd Symposium on Comparative Effectiveness Research, Rockville, MD. June 2011

62. Statistics and evidence synthesis. FDA Public Meeting on 522 Postmarket Surveillance Studies. Silver Spring, MD. March, 2012.

63. Statistical considerations in assessing the comparative effectiveness and safety of medical devices. Starr Lectureship, Center for Statistical Sciences, Brown University, Providence, RI. April 2012Tutorial: Comparative effectiveness research. Eastern National Region of the International Biometrics Society, Washington, DC. March 2012

64. Progress from the Patient-Centered Outcomes Research Institute. Engelberg Center for Health Care Reform, Brookings Institution, Washington, DC (webinar: joint with Anne Beal). July 2012

65. Innovative methodologies, data sources, and leveraging existing infrastructure. FDA Public Meeting on Post-Approval Studies. Silver Spring, MD. August 2012.

66. Methodological gaps and solutions in evidence synthesis using registries. FDA Public Meeting on Leveraging Registries with Medical Device Data for Postmarket Surveillance and Evidence Appraisal Throughout the Total Product Life Cycle, Greenbelt, MD. September 2012.

67. The MDEpiNet Methodology Center, FDA Public Meeting on Partnership for Building Global Medical Device Epidemiology and Surveillance Capabilities, Greenbelt, MD. September 2012.

68. Methodological perspectives on comparative effectiveness research. American Heart Association Annual Meetings, Los Angeles, CA. November 2012.

69. Statistical considerations in assessing the comparative effectiveness and safety of medical devices. Keynote Speaker, Kansas-Western Missouri Chapter of American Statistical Association Annual Meeting, Kansas City, MO. April 2013.

70. Learning what works: uncertainty and selective inference. International Conference on Health Policy Statistics, American Statistical Association. Chicago, IL. October 2013.

71. Statistics in Health Policy (2013): advances and retreats. Plenary Talk. International Conference on Health Policy Statistics, American Statistical Association. Chicago, IL. October 2013.

72. Comparative effectiveness Research: statistical methods and challenges (workshop). International Conference on Health Policy Statistics, American Statistical Association. Chicago, IL. October 2013.

73. Assessing quality and equity of care: statistical considerations and applications. Leonard Davis Institute of Health Economics, University of Pennsylvania. March 2014.

74. An introduction to comparative effectiveness research. Eastern North American Region of the International Biometrics Society Meeting, Baltimore, MD. March 2014.

75. Analytical approaches for characterizing the diffusion of new medical technologies. Johns Hopkins University, Baltimore, MD. October 2014.

76. CV safety assessments: signal detection with heterogeneous data sources. Cardiac Safety Research Consortium Mini Think Tank, Silver Spring, MD. February 2015.

77. Missing data approaches in trials. American College of Cardiology Scientific Sessions, San Diego, CA. March 2015.

78. On the use of registries for post-market medical device assessments. 8th FDA/MTLI Workshop, Crystal City, VA. April 2015.

79. Analytical approaches for characterizing the diffusion of new medical technologies. New Jersey ASA 36th Annual Spring Symposium, Rutgers RWJ School of Medicine, Piscataway, NJ. May 2015.

80. Statistical considerations in assessing hospital performance. Joint Statistical Meetings, Seattle, WA. August 2015.

81. Technology Diffusion Pathways. Health Economics Common Fund Diffusion of Medical Technology Workshop, Rockville, MD. May 2016.

82. On the role of causal inference in the analysis of electronic medical databases (EMD), Panelist. Atlantic Causal Inference Conference, New York, NY. May 2016.

83. Panel on the Review of the Compliance, Safety, and Accountability Program of the Federal Motor Carrier Safety Administration, First Meeting. The National Academies, Washington, DC. June 2016.

84. Capitalizing on the National/International Infrastructure to Develop Methods for 21 Century Active Surveillance, Program Leader and Moderator. Active Surveillance MDEpinet Think Tank, Silver Spring, MD. June 2016.
85. Panel on the Review of the Compliance, Safety, and Accountability Program of the Federal Motor Carrier Safety Administration, Second Meeting. The National Academies, Washington, DC. August 2016.
86. Methodological Considerations. MDEpiNet Registry Assessment of Peripheral Interventional Devices (RAPID) Think Tank, Silver Spring, MD. September 2016.
87. Cardiac Safety Research Consortium (CSRC) Think Tank: Real World Data to Assess Cardiovascular Safety. Silver Spring, MD. October 2016.
88. Statistical Issues in Comparative Effectiveness Research. Eastern North American Region (ENAR) Annual Spring Meeting, Washington, DC. March 2017.
89. Mitigating Confounding Violations Using High-Dimensional Electronic Data. Eastern North American Region (ENAR) Annual Spring Meeting, Washington, DC. March 2017.
90. Department of Biostatistics and Epidemiology (DBE) and Center for Clinical Epidemiology and Biostatistics (CCEB) Brian Strom Lecture Series Visiting Scholar and Keynote Speaker. University of Pennsylvania, Philadelphia, PA. April 2017.
91. Data, Statistics, and Inference. NYU School of Medicine, NYU Langone Medical Center. New York, NY. June 2017.
92. Data, Statistics, and Inference. Academy Health Annual Research Meeting 2017. New Orleans, LA. June 2017.
93. Improving Motor Carrier Safety Measurement. Summer Program on Transportation Statistics. Statistical and Applied Mathematical Sciences Institute, Duke University. Durham, North Carolina. August 2017.
94. Introduction to Statistical Approaches to Comparative Effectiveness Research. ASA Biopharmaceutical Section Webinar Series, American Statistical Association. September 2017.
95. Data, Statistics, and Inference. Biostatistics Seminars, University of Michigan. Ann Arbor, MI. September 2017.
96. What Affects the Diffusion of New Technology? Health Economics Common Fund Program, Health Economics Research Symposium, National Institutes of Health. Bethesda, MD. September 2017.
97. Data, Statistics, and Inference. Health Services Research seminar series, Department of Biostatistics, Vanderbilt University. Nashville, TN. October 2017.
98. Statistical Advances in Health Policy Research. Eastern North American Region (ENAR) Annual Spring Meeting, Atlanta, GA. March 2018.
99. Causal and observational study designs/methods in Medical Decision Making. Health Effects Institute Annual Conference, Chicago, IL. April 2018.
100. Bayesian approaches in quality of care. Applied Biostatistical Sciences (ABS) Network lectures series, Michigan Institute for Clinical & Health Research (MICHR), University of Michigan, Ann Arbor, MI. March 2019.
101. Bayesian Hierarchical Multivariate Poisson Regression for Characterizing the Diffusion of New Antipsychotic Drugs. Quantitative Methods Workshop, Committee on Quantitative Methods in Social, Behavioral, and Health Sciences, University of Chicago, Chicago, IL. April 2019.
102. Machine Learning for Regulatory Science: Assessing the Quality of Hospital Care. National Academy of Sciences Social Science Modeling for Big Data in the World of Machine Learning Workshop. Washington, DC. October 25, 2019.
103. Methodological Framework for Medical Device Studies Based on Real World Evidence. Real World Evidence Conference, DIA, Cambridge, MA. November 2019.
104. Statistical and Methodological Issues in Measuring Clinician and Hospital Performance. American Heart Association Annual Scientific Sessions, Philadelphia, MA. November 2019.
105. Presidential Invited Address: "Medical Product, Healthcare Delivery, And Road Safety Policies: Seemingly Unrelated Regulatory Questions," ENAR 2020 virtual conference. March 2020.
106. Presenter: COPSS Distinguished Achievement Award, JSM 2020 virtual conference. August 2020.
107. Panel on PCOR Methods. "Building Data Capacity for Patient-Centered Outcomes Research: Data Standards, Methods, and Policy," National Academy of Science, Engineering, and Medicine, virtual conference. May 2021.

International

1. Sample Size Determination in Hierarchical Models: An Application to Quality Assessment Studies. Conference on Statistics and Health, Department of Mathematical Sciences, University of Alberta, Edmonton, Alberta, Canada. (2000)
2. Propensity Scores: Economic, Epidemiological, and Statistical Perspectives, Panel Moderator. 6th Annual International Meeting of the International Society for Pharmacoeconomics and Outcomes Research(ISPOR), Arlington, VA. (2001)
3. Validating Recommendations for Coronary Angiography Following Acute Myocardial Infarction in the Elderly: A Matched Analysis Using Propensity Scores. Institute for Clinical Evaluative Sciences, Sunnybrook Hospital, Toronto, Canada. (2001)
4. Statistical Considerations for Profiling Providers of Medical Care. Keynote Speaker, Department of Health Administration, University of Toronto, Toronto, Canada. (2001)
5. Statistical Approaches to Profiling Providers of Medical Care. International Health Economics Conference, Hong Kong University of Science and Technology. (2002)
6. Analytic Methods for Meta-Analysis. INSERM (French Institute of Health and Medical Research), La Roche-Posay, France. (2002)
7. Sample Size Considerations in Observational Health Care Quality Studies. CREDES (Research and Information Center for Health Economics), Paris, France. (2002)
8. Some Statistical Issues in Profiling Providers: Cross-Sectional Univariate and Multivariate Outcome Measures. Department of Economics, University of Bristol, UK. (2002)
9. Likelihood-based Methods for Treatment Non-Compliance and Non-Response in Randomized Trials. Second International Workshop in Applied Probability, University of Piraeus, Greece. (2004).
10. Statistical Challenges in Medical Device Clinical Trials. Eastern Mediterranean Region of the International Biometrics Society Meeting, Corfu, Greece. May 2005.
11. Causal Estimation Using Quasi-Experimental Designs. International Conference on Health Policy Research (Methods), Boston, MA. October 2005.
12. Latent Variable Models for Assessing Quality of Health Care: Issues & Applications. Perugia, Italy. September, 2006.
13. Statistical Models for Profiling Quality of Hospital Care. 4th Conference of the Eastern Mediterranean Region of the International Biometrics Society. Eilat, Israel. January 2007.
14. Using Latent Variables for Assessing Quality of Health Care: Issues and Applications. International Conference on Health Policy Statistics, Philadelphia, PA. January 2008.
15. Statistical Strategies for Post-Approval Studies. Department of Biostatistics and Medical Informatics, University of Porto, Portugal. April 2008.
16. Estimating Quality and Effectiveness of Medical Care, Annual Meeting of Finnish Statisticians, Joint Meeting with the Finnish Statistical Society, Finnish Society of Biostatistics and Society of Social Medicine, Helsinki, Finland. May 2008.
17. Modeling Diffusion and Effects of New Drugs: Methods and Applications. International Biometrics Conference, Dublin, Ireland. July 2008.
18. Sensitivity analyses for observational studies: assessing safety after market release. 5th Conference of the Eastern Mediterranean Region of the International Biometrics Society, Istanbul, Turkey. May 2009.
19. Statistical strategies for combining information: assessing comparative safety. Symposium honoring Steve Lagakos, Athens, Greece. October 2010.
20. Rethinking analytical strategies for surveillance of medical devices and drugs: hip arthroplasty as an example. Health Services Research Methods Rounds, Women's College Research Institute, Toronto, Canada. November 2010.
21. Modern statistical methods for assessing comparative safety and effectiveness: artificial hips. University of Toronto Biostatistics Day, Toronto, Canada, April 2011
22. Hospital surveillance for safety and quality. International Summit on Outcomes Research in Healthcare. Beijing, China. April 2012.
23. Workshop: Comparative effectiveness research. International Chinese Association 21st Applied Statistics Symposium, Boston, MA. June 2012

24. Statistical considerations in studies of medical devices. Eastern Mediterranean Region of the International Biometrics Society Meeting, Tel Aviv, Israel. April 2013.
25. Combining information for assessing safety, effectiveness, and quality: technology diffusion and health policy. International Chinese Statistical Association and Korean International Statistical Society Meeting, Portland, OR. June 2014.
26. Statistical issues in comparative effectiveness research. Webinar, Eastern North American Region of the International Biometrics Society. February 2015.
27. Analytical approaches for characterizing the diffusion of new medical technologies. Nordic Baltic Region of the International Biometrics Society, Reykjavik, Iceland. June 2015.
28. Common pitfalls in publishing medical papers: a statistical editor's perspective. China Heart Congress, Beijing, China. August 2015.
29. Contemporary statistical approaches for determining the effectiveness and quality of cardiovascular interventions. China Heart Congress, Beijing, China. August 2015.
30. Considerations in Assessing Sex/Gender with Observational Data. Women's Xchange Workshop: Integrating Sex & Gender in Health Research. Women's College Hospital in Toronto, Ontario, Canada. March 2017.
31. Data, Statistics, and Inference. Eastern Mediterranean Region of the International Biometrics Society Meeting. Thessaloniki, Greece. May 2017.
32. Approaches for Quantifying Quality and Disparities in Mental Health Care. Symposium honoring Professor Marvin Zelen. Thessaloniki, Greece. May 2017.
33. Statistical Considerations with Big Data: An Introduction. Big Data in Health Services, University of Turku. Turku, Finland. September 2017.
34. Bayesian Application in Small-Sized Clinical Trials: Approaches to Medical Device Evaluation Using RWE. DIA 2018 Global Annual Meeting. Boston, MA. June 2018.
35. (Session 1) Outcomes Research and Health Policy Making: A Statistician's View; (Session 2) New England Journal of Medicine Statistical Reviewer Perspective; (Session 3) Medical Device Evaluation. China Heart Congress (CHC) 2018. Beijing, China. August 2018.
36. Statistical Approaches to Health Care Quality Assessments. Universitat Politècnica de Catalunya-BarcelonaTECH, Barcelona, Spain. January 2019.
37. Keynote: Promoting national and international excellence in biostatistics research. Biostatistics and Data Science: challenges and opportunities. 4th General Meeting of BIOSTATNET, Santiago de Compostela, Spain. January 2019.
38. Hierarchical multivariate Poisson regression for characterizing the diffusion of new drugs. Innovations in Data and Statistical Sciences (INDSTATS) IISA 2019 Conference, Mumbai, India. December 2019.

Professional Leadership Roles Related to Teaching

June 1993   Workshop Instructor, Association for Health Services Research and Foundation for Health Services Research Methods Workshop on Hierarchical Statistical Methods for Health Policy, Washington, DC. Provided an overview on applying complex statistical models to the analysis of health services data to help inform policy makers.

Dec 1997   Workshop Instructor, Multilevel Hierarchical Regression Models. 1997 International Conference on Health Policy Research, Washington, DC. Provided an overview on applying complex statistical models to the analysis of health services data to help inform policy makers.

March 1998   Advisory Council Meeting on Methodological Issues in Diagnostic Clinical Trials: Health Services and Outcomes Research in Radiology. Sponsored by the US Public Health Service's Office on Women's Health and the National Cancer Institute, Washington, DC. Provided advice regarding the difficulties in assessing the appropriateness of diagnostic tests.

June 2001   Keynote Instructor, International Conference on Information Technology Interfaces ITI 2001, Croatia School of Biometrics. Provide an overview of methods for making inferences with

observational data including regression-adjustment and propensity score adjustment with applications in health services research.

June 2002   Workshop Instructor, Academy for Health Services Research and Health Policy, Washington, DC. Introduction to Hierarchical Models for Health Services Research. Provided an introduction to hierarchical models with applications to services research.

Oct 2002   Workshop Instructor, 4th Scientific Forum on Quality and Outcomes Research in Cardiovascular Disease and Stroke, American Heart Association and the American College of Cardiology, Washington, DC. Introduction to Hierarchical Modeling for Cardiovascular Services Research.

Nov 2002   Cyber-Workshop Instructor, Academy for Health Services Research and Health Policy, Washington, DC. Introduction to Hierarchical Models for Health Services Research. Provided an introduction to hierarchical models with applications to services research.

June 2003   Workshop Instructor, Academy for Health Services Research and Health Policy, Nashville, TN. Introduction to Statistical Methods for Profiling. Provided a review of methods of comparing providers and described regression-based methods using hierarchical models.

Aug 2003   Workshop Instructor, Measurement, Design and Analysis Methods for Health Outcomes Research, Harvard School of Public Health, Boston, MA. Using Hierarchical Models.

Oct 2003   Workshop Instructor, Lister Hill Center for Health Policy, University of Alabama at Birmingham, AL. Introduction to Statistical Methods for Profiling. Provided an introduction to regression-based methods for comparing providers on the basis of observational data.

Oct 2003   Workshop Instructor, International Conference on Health Policy Research, Chicago, IL. Introduction to Statistical Methods for Profiling. Provided an introduction to regression-based methods for comparing providers on the basis of observational data.

April 2004   Workshop Instructor, Center for Devices and Radiological Health, US Food and Drug Administration, Rockville, MD. Assessing Evidence About Treatments in the Absence of Randomization: A Review of Concepts and Analytic Approaches.

June 2004   Workshop Organizer and Co-Instructor, AcademyHealth Annual Meetings, San Diego, CA. Statistical Approaches to Observational Data.

Aug 2004   Workshop Instructor, Measurement, Design, and Analysis Methods for Health Outcomes Research, Harvard School of Public Health, Boston, MA. Using Hierarchical Models.

Dec 2004   Workshop Instructor, University of Puerto Rico-Cambridge Health Alliance Training Institute, San Juan, PR. Causal Inference: A Review of Concepts and Analytic Approaches.

Mar 2005   Faculty Mentor Participant, Duke University, Advanced Research Institute in Geriatric Mental Health Institute.

June 2005   Workshop Organizer and Instructor, Academy for Health Services Research and Health Policy, Boston, MA. Introduction to Hierarchical Models for Health Services Research. Provided an introduction to hierarchical models with applications to services research.

Sept 2005   Workshop Organizer and Instructor, Heller School, Brandeis University, Waltham, MA. Introduction to Hierarchical Models for Health Services Research. Provided an introduction to hierarchical models with applications to services research.

June 2006   Workshop Organizer and Instructor, Academy for Health Services Research and Health Policy, Seattle, WA. Introduction to Hierarchical Models for Health Services Research. Provided an introduction to hierarchical models with applications to services research.

June 2007   Workshop Organizer and Instructor, Academy for Health Services Research and Health Policy, Orlando, FL. Introduction to Hierarchical Models for Health Services Research. Provided an introduction to hierarchical models with applications to services research.

June 2008   Workshop Organizer and Instructor, Academy for Health Services Research and Health Policy, Washington, DC. Introduction to Hierarchical Models for Health Services Research. Provided an introduction to hierarchical models with applications to services research.

Jan 2009   Scientific Committee Organizer, 2009 Bayesian Biostatistics Conference, The University of Texas M.D. Anderson Cancer Center, Houston, Texas.

June 2009   Methods Workshop Organizer, Academy for Health Services Research and Health Policy, Chicago, IL. Multiple imputation for multivariate incomplete data: A practical guide.

Jan 2010   Scientific Committee Organizer, 2010 Bayesian Biostatistics Conference, The University of Texas M.D. Anderson Cancer Center, Houston, Texas.

June 2010   Methods Workshop Organizer, Academy for Health Services Research and Health Policy, Boston, MA. Multiple imputation for multivariate incomplete data: A practical guide.

June 2012   Workshop Organizer and Instructor, International Chinese Statistical Association 2012 Applied Statistics Symposium, Boston, MA. Provided an introduction to comparative effectiveness research.

April 2017   Visiting Scholar and Keynote Speaker, Brian Strom Lecture Series, Department of Biostatistics and Epidemiology (DBE) and Center for Clinical Epidemiology and Biostatistics (CCEB), University of Pennsylvania, Philadelphia, PA.

Sept 2017   Workshop Instructor. Statistical Considerations with Big Data: An Introduction. Big Data in Health Services, University of Turku. Turku, Finland.

Oct 2019   Workshop Co-Organizer and Co-Instructor, Harvard Data Science Institute Annual Conference, Cambridge, MA. Provided an intermediate introduction to causal inference.

PART III: BIBLIOGRAPHY

Standard Journal Articles

1. Egan TM, Herman SJ, Doucette EJ, **Normand SL**, McLeod RS. A randomized, controlled trial to determine effectiveness of fascial infiltration of bupivacaine in preventing respiratory complications after elective abdominal surgery. Surgery 1988; 104(4):734-740.

2. Brasher P, Hogg-Johnson S, **Normand SL**. Analysis of the Lake Couchiching data. Canadian Journal of Statistics 1990; 18(4)377-382.

3. Morris CN, **Normand SL**. Hierarchical models for combining information and for meta-analysis with discussion. In: Bernardo JM, Berger JO, Dawid AP, Smith AFM, editors. Bayesian Statistics 4. Oxford: Clarendon Press 1992:321-44.

4. **Normand SL**, Tritchler D. Parameter updating in a Bayes network. Journal of the American Statistical Association 1992; 87(420):1109-1115.

5. Gatsonis C, **Normand SL**, Liu CH, Morris C. Geographic variation of procedure utilization – A Hierarchical Model Approach. Medical Care 1993; 31(5):YS54-YS59.

6.   Pashos CL, **Normand SLT**, Garfinkle JB, Newhouse JP, Epstein AM, McNeil BJ. Trends in the use of drug therapies in patients with acute myocardial infarction – 1988 to 1992. Journal of the American College of Cardiology 1994; 23(5):1023-1030.

7.   Doksum KA, **Normand SL**. Gaussian models for degradation processes. Part I: Methods for the analysis of biomarker data. Lifetime Data Analysis 1995; 1:131-144.

8.   Dickey B, Norton EC, **Normand SL**, Azeni H, Fisher W, Altaffer F. Massachusetts Medicaid managed health care reform: treatment for the psychiatrically disabled. Advances in Health Economics and Health Services 1995; 15:99-116.

9.   Gatsonis CA, Epstein AM, Newhouse JP, **Normand SL**, McNeil BJ. Variations in the utilization of coronary angiography for elderly patients with an acute myocardial infarction – An analysis using hierarchical logistic regression. Medical Care 1995; 33(6):625-642.

10.   Lamas GA, Pashos CL, **Normand SLT**, McNeil BJ. Permanent pacemaker selection and subsequent survival in elderly Medicare pacemaker recipients. Circulation 1995; 91(4):1063-1069.

11.   Lenz FA, **Normand SL**, Kwan HC, Andrews D, Rowland LH, Jones MW, Seike M, Lin YC, Tasker RR, Dostrovsky JO, Lenz YE. Statistical prediction of the optional site for thalamotomy in Parkinsonian tremor. Movement Disorders 1995; 10(3):318-328.

12.   **Normand SLT**, Morris CN, Fung KS, McNeil BJ, Epstein AM. Development and validation of a claims-based index for adjusting for risk of mortality – The case of acute myocardial infarction. Journal of Clinical Epidemiology 1995; 48(2):229-243.

13.   Dickey B, **Normand SLT**, Norton E, Azeni H, Fisher W, Altaffer F. Managing the care of schizophrenia: Lessons from a 4-year Massachusetts Medicaid Study. Archives of General Psychiatry 1996; 53(10):945-952.

14.   Doksum K, **Normand SL**. Models for degradation processes and event times based on gaussian processes. In: Jewell NP, et al, editors. Proceedings of the 1994 Conference on Lifetime Data Models in Reliability and Survival Analysis. Kluwer Academic Publishers 1996; 85-91.

15.   **Normand SLT**, Glickman ME, Sharma R, McNeil BJ. Using admission characteristics to predict short-term mortality from myocardial infarction in the elderly – Results from the Cooperative Cardiovascular Project. Journal of the American Medical Association 1996; 275(17):1322-1328.

16.   **Normand SLT**, Glickman ME, Gatsonis CA. Statistical methods for profiling providers of medical care: Issues and applications. Journal of the American Statistical Association 1997; 92(439):803-814.

17.   **Normand SL**, Glickman ME, Ryan T. Modeling mortality rates for elderly heart attack patients: Profiling hospitals in the Cooperative Cardiovascular Project. In: Gatsonis C, Hodges J, Kass R, Singpurwalla N, editors. Case Studies in Bayesian Statistics. Springer-Verlag, 1997:155-236.

18.   Tu JV, Pashos CL, Naylor CD, Chen EL, **Normand SL**, Newhouse JP, McNeil BJ. Use of cardiac procedures and outcomes in elderly patients with myocardial infarction in the United States and Canada. New England Journal of Medicine 1997; 336(21):1500-1505.

19.   Ayanian JZ, Landrum MB, **Normand SLT**, Guadagnoli E, McNeil BJ. Rating the appropriateness of coronary angiography – Do practicing physicians agree with an expert panel and with each other? New England Journal of Medicine 1998; 338(26):1896-1904.

20.   Dickey B, **Normand SLT**, Norton EC, Azeni H, Fisher W. Treatment of long-term psychiatric disorders in the managed care environment – An observational longitudinal study. Clinical Drug Investigation 1998; 15(4):303-308.

21.   Dickey B, Norton E, **Normand SL**, Azeni H, Fisher W. Managed Mental Health Experience in Massachusetts. In: Mechanic E editor. Managed Behavioral Health Care: Current Realities and Future Potential. Josey-Bass, 1998:115-22.

22.   **Normand SLT**, McNeil BJ, Peterson LE, Palmer RH. Methodology matters – VIII – Eliciting expert opinion using the Delphi technique: Identifying performance measures for cardiovascular disease. International Journal for Quality in Health Care 1998; 10(3):247-260.

23.   Frank RG, McGuire TG, **Normand SLT**, Goldman HH. The value of mental health care at the system level: The case of treating depression. Health Affairs 1999; 18(5):71-88.

24.   Landrum MB, McNeil BJ, Silva L, **Normand SLT**. Understanding variability in physician ratings of the appropriateness of coronary angiography after acute myocardial infarction. Journal of Clinical Epidemiology 1999(4); 52:309-319.

25.   Landrum MB, **Normand SLT**. Applying Bayesian ideas to the development of medical guidelines. Statistics in Medicine 1999; 18(2):117-137.

26.   **Normand SLT**. Meta-analysis: Formulating, evaluating, combining, and reporting. Statistics in Medicine 1999; 18(3):321-359.

27.   Petersen LA, Wright S, **Normand SLT**, Daley J. Positive predictive value of the diagnosis of acute myocardial infarction in an administrative database. Journal of General Internal Medicine 1999; 14(9):555-558. PMC1496736

28.   Glickman ME, **Normand SLT**. The derivation of a latent threshold instrumental variables model. Statistica Sinica 2000; 10(2):517-544.

29.   Landrum MB, Bronskill SE, **Normand SL**. Analytic methods for constructing cross-sectional profiles of health care providers. Health Services & Outcomes Research Methodology 2000; 1:23-48.

30.   Chertow GM, **Normand SLT**, Silva LR, McNeil BJ. Survival after acute myocardial infarction in patients with end-stage renal disease: Results from the Cooperative Cardiovascular Project. American Journal of Kidney Diseases 2000; 35(6):1044-1051.

31.   Landrum MB, **Normand SL**. Developing & applying medical practice guidelines following acute myocardial infarction: A case study using Bayesian probit & logit models. In: Dey D, Ghosh S, Mallick B, editors. Generalized Linear Models: A Bayesian Perspective. Marcel Dekker Inc. 2000:195-213.

32.   DuMouchel W, **Normand SL**. Computer modeling and graphical strategies for meta-analysis. In: Berry D, Stangl D, editors. Meta-Analysis in Medicine and Health Policy. Marcel Dekker Inc. 2000:127-178.

33.   **Normand, SL**, Doksum K. Empirical Bayes procedures for a change point problem with application to HIV/AIDs data. In: Ahmed SE, Reid N, editors. Empirical Bayes and Likelihood Inference. Springer Verlag Inc. 2000:67-79.

34.   Petersen LA, **Normand ST**, Daley J, McNeil BJ. Outcome of myocardial infarction in Veterans Health Administration patients as compared with Medicare patients. New England Journal of Medicine 2000; 343(26):1934-1941.

35.   **Normand SLT**, Landrum MB, Guadagnoli E, Ayanian JZ, Ryan TJ, Cleary PD, McNeil BJ. Validating recommendations for coronary angiography following acute myocardial infarction in the elderly: A matched analysis using propensity scores. Journal of Clinical Epidemiology 2001; 54(4):387-398.

36.   Dickey B, **Normand SL**, Norton EC, Rupp A, Azeni H. Managed care and children's behavioral health services in Massachusetts. Psychiatric Services 2001; 52(2):183-188.

37.   Horvitz-Lennon M, **Normand SLT**, Gaccione P, Frank RG. Partial versus full hospitalization for adults in psychiatric distress: A systematic review of the published literature (1957-1997). American Journal of Psychiatry 2001; 158(5):676-685.

38.   Guadagnoli E, Landrum MB, **Normand SLT**, Ayanian JZ, Garg P, Hauptman PJ, Ryan TJ, McNeil BJ. Impact of underuse, overuse, and discretionary use on geographic variation in the use of coronary angiography following acute myocardial infarction. Medical Care 2001; 39(5):446-458.

39.   Zou KH, **Normand SLT**. On determination of sample size in hierarchical binomial models. Statistics in Medicine 2001; 20(14):2163-2182.

40.   Jonkman JN, **Normand S-LT**, Wolf R, Borbas C, Guadagnoli E. Identifying a cohort of patients with early-stage breast cancer - A comparison of hospital discharge and primary data. Medical Care 2001; 39(10):1105-1117.

41.   DiSalvo TG, **Normand S-LT**, Hauptman PJ, Guadagnoli E, Palmer RH, McNeil BJ. Pitfalls in assessing quality of ambulatory care for chronic cardiovascular disease. American Journal of Medicine 2001; 111(4):297-303.

42.   Shahian DM, **Normand S-LT**, Torchiana DF, Lewis SM, Pastore JO, Kuntz RE, Dreyer PI. Cardiac surgery report cards: Comprehensive review and statistical critique. Annals of Thoracic Surgery 2001; 72(6):2155-2168.

43.   Petersen LA, **Normand S-LT**, Leape LL, McNeil BJ. Comparison of use of medications after acute myocardial infarction in the Veterans Health Administration and Medicare. Circulation 2001; 104(24):2898-2904.

44.   **Normand SL**, Zou KH. Sample size considerations in observational health care quality studies. Statistics in Medicine 2002; 21:331-345.

45.   Bronskill SE, **Normand S-LT**, Landrum MB, Rosenheck RA. Longitudinal profiles of health care providers. Statistics in Medicine 2002; 21:1067-1088.

46.   Bronskill SE, **Normand S-LT**, McNeil BJ. Post-acute service use following acute myocardial infarction in elderly Medicare patients. Health Care Financing Review 2002; 24(2):77-93.

47.   **Normand S-LT**, Frank RG, McGuire TG. Using elicitation techniques to estimate the value of ambulatory treatments for major depression. Medical Decision Making 2002; 22:245-261.

48.   Norton EC, Harold CA, Lindrooth RC, **Normand S-LT**, Dickey B. Does prospective payment reduce inpatient length of stay? Health Economics 2002; 11:377-387.

49.   Fisher WH, Dickey B, **Normand S-LT**, Packer IK, Grudzinksas AJ, Azeni H. Managed mental health care and use of a state's inpatient forensic system. Psychiatric Services 2002; 53(4):447-451.

50.   Dickey B, **Normand S-LT**, Weiss RD, Drake R, Azeni H. Medical morbidity, mental illness, and substance use disorders. Psychiatric Services 2002; 53:861-867.

51.   Berndt ER, Bir A, Busch SH, Frank RG, **Normand S-LT**. The medical treatment of depression, 1991-1996: Productive inefficiency, expected outcome, and price indexes. Journal of Health Economics 2002; 21(3):373-396.

52.   Garg PP, Landrum MB, **Normand S-LT**, Ayanian JZ, Hauptman TJ, McNeil BJ, Guadagnoli E. Understanding individual and small area variation in the underuse of coronary angiography following acute myocardial infarction. Medical Care 2002; 40(7):614-626.

53.   Kessler RC, Andrews G, Colpe LJ, Hiripi E, Mroczek DK, **Normand S-LT**, Walter EE, Zaslavsky A. Short screening scales to monitor population prevalences and trends in nonspecific psychological distress. Psychological Medicine 2002; 32(6):959-976.

54.   O'Malley AJ, **Normand S-LT**, Kuntz RE. Sample size calculation for a historically-controlled clinical trial with adjustment with covariates. Journal of Biopharmaceutical Statistics 2002; 12(2):227-247.

55.   O'Malley AJ, **Normand S-LT**, Kuntz RE. Application of models for multivariate mixed outcomes to medical device trials: Coronary artery stenting. Statistics in Medicine 2003; 22(2):313-336.

56.   O'Malley AJ, **Normand S-LT**. Statistics: Keeping pace with the medical technology revolution. Chance 2003; 16(4):41-44.

57.   **Normand S-LT**, Belanger AJ, Frank RF. Evaluating selection out of health plans for Medicaid beneficiaries with substance abuse. The Journal of Behavioral Health Services & Research 2003; 30(1):78-92.

58.   Kessler RC, Barker PR, Colpe LJ, Epstein JF, Gfroerer JC, Hiripi E, Howes MJ, **Normand S-LT**, Manderscheid RW, Walters EE, Zaslavsky AM. Screening for Serious Mental Illness in the General Population. Archives of General Psychiatry 2003; 60(2):184-189.

59.   Petersen LA, **Normand S-LT**, Druss BG, Rosenheck RA. Process of care and outcomes after acute myocardial infarction for patients with mental illness in an integrated healthcare system. Health Services Research 2003; 38(1):41-63. PMC1360873

60.   Dendukuri N, **Normand S-LT**, McNeil BJ. Impact of cardiac service availability on case-selection for angiography and survival following acute myocardial infarction. Health Services Research 2003; 38(1):21-40. PMC1360872

61.   Shahian DM, **Normand S-LT**. The volume-outcome relationship: From Luft to Leapfrog. Annals of Thoracic Surgery 2003; 75:1048-1058.

62.   Landrum MB, **Normand S-LT**, Rosenheck RA. Selection of related multivariate means: Monitoring psychiatric care in the Department of Veterans Affairs. Journal of the American Statistical Association 2003; 98(461):7-16.

63.   Horvitz-Lennon M, **Normand S-LT**, Frank RG, Goldman HH. Usual care for major depression in the 1990's: Characteristics and expert-estimated outcomes. American Journal of Psychiatry 2003; 160:720-726.

64.   Dickey BD, **Normand S-LT**, Hermann R, Eisen SV, Cortes D, Cleary P, Ware N. Guideline recommendations for treatment of schizophrenia: The impact of managed care. Archives of General Psychiatry 2003; 60(4):340-348.

65.   Petersen LA, **Normand S-LT**, Leape LL, McNeil BJ. Regionalization and the underuse of angiography in the Veterans Affairs Health Care System as compared with a fee-for-service system. New England Journal of Medicine 2003; 348:2209-17.

66.   Landon BE, **Normand S-LT**, Daley J, Blumenthal D. Physician clinical performance assessment: Prospects and barriers. The Journal of the American Medical Association 2003; 290:1183-1189.

67.   Dickey B, **Normand S-LT**, Drake R, Weiss RD, Azeni H, Hanson A. Limiting inpatient substance use treatment: What are the consequences. Medical Care Research and Review 2003; 60(3):332-346.

68.   Dickey B, Dembling B, Azeni H, **Normand S-LT.** Externally caused deaths for adults with substance use and mental disorders, The Journal of Behavioral Health Services & Research 2004; January/March:31(1):75-84.

69.   Fisher WH, **Normand S-LT**, Dickey B, Packer IK, Grudzinskas AJ, Azeni H. Managed mental health care's effects on arrest and forensic commitment, International Journal of Law and Psychiatry 2004; 27:65-77.

70.   Eisen SV, **Normand S-LT**, Belanger AJ, Gevorkian S, Irvin EA. BASIS-32 and the Revised Behavior and Symptom Identification Scale (BASIS-R). In: The Use of Psychological Testing for Treatment Planning and Outcome Assessment, 3rd Edition, Volume 3, M. Maruish ed., Lawrence Erlbaum Associates, Inc., pp. 79-113, 2004.

71.   Dickey B, **Normand S-LT**. Toward a model for testing the relationship between quality and costs, The Journal of Mental Health Policy and Economics 2004; 7(1):15-21.

72.   Levy DE, O'Malley AJ, **Normand S-LT**. Covariate adjustment in clinical trials with non-ignorable missing data and non-compliance. Statistics in Medicine 2004; 23, 2319-2339.

73.   Wang JC**, Normand S-LT**, Mauri L, Kuntz RE. Coronary artery spatial distribution of acute myocardial infarction occlusions. Circulation 2004; 110(3):278-284.

74.   **Normand S-LT**. Meta-analysis: Formulating, evaluating, combining, and reporting. In: Tutorials in Biostatistics, Vol. 2 - Statistical Modeling of Complex Medical Data, RB D'Agostino (ed), Wiley, Chichester, 2004, 249-288.

75. Chertow GM, **Normand S-LT**, McNeil BJ. Renalism: inappropriately low rates of coronary angiography in elderly persons with renal insufficiency. Journal of the American Society of Nephrology 2004; 15:2462-2468.

76. Guadagnoli E, **Normand S-LT**, DiSalvo TG, Palmer RH, McNeil BJ. Effects of treatment recommendations and specialist intervention on care provided by primary care physicians to patients with myocardial infarction or heart failure. The American Journal of Medicine 2004; 117:371-379.

77. Eisen SV, **Normand S-LT**, Belanger AJ, Spiro A, Esch D. The revised behavior and symptom identification scale (BASIS-24): reliability and validity. Medical Care 2004; 42(12):1230-1241.

78. Jonkman JN, McCarty D, Harwood HJ, **Normand S-LT**, Caspi Y. Practice variation and length of stay in alcohol and drug detoxification centers. Journal of Substance Abuse Treatment 2005; 28:11-18.

79. O'Malley AJ, **Normand S-LT**. Likelihood methods for treatment-noncompliance and subsequent nonresponse in randomized trials. Biometrics 2005; 61(June):325-334.

80. Tchernis R, Horvitz-Lennon M, **Normand S-LT**. On the use of discrete choice models for causal inference. Statistics in Medicine 2005; 24:2197-2212.

81. Landon BE, **Normand S-LT**, Frank RG, McNeil BJ. Characteristics of medical practices in three developed managed care markets. Health Services Research 2005; 40(3):675-695. PMC1361163

82. Shahian DM, Torchiana DF, **Normand S-LT**. Implementation of a cardiac surgery report card. Annals of Thoracic Surgery 2005; 80:1146-1180.

83. Gill SS, Rochon PA, Hermann N, Lee PE, Sykora K, Gunraj N, **Normand S-LT**, Gurwitz J, Marras C, Wodchis W, Mamdani M. Atypical antipsychotic drugs and risk of ischemic stroke: Population based retrospective cohort study. British Medical Journal 2005; 330(7489):445-450. PMC549652

84. Spertus JA, Eagle KA, Krumholz HM, Mitchell KR, **Normand S-LT.** American College of Cardiology and American Heart Association Methodology for the Selection and Creation of Performance Measures for Quantifying the Quality of Cardiovascular Care. Journal of American College of Cardiology and Circulation 2005; 45:1147-56 and Circulation 2005; 111:1703-1712.

85. Horvitz-Lennon M, O'Malley AJ, Frank RG, **Normand S-LT**. Improving traditional intention-to-treat analyses: A new approach. Psychological Medicine 2005; 35:961-970.

86. Rochon PA, Gurwitz JH, Sykora K, Mamdani M, Streiner DL, Garfinkel S, **Normand S-LT**, Anderson GM. Reader's guide to critical appraisal of cohort studies: 1. Role and design. British Medical Journal 2005; 330(16):895-897. PMC556167

87. Mamdani M, Sykora K, Li P, **Normand S-LT**, Streiner DL, Austin PG, Rochon PA, Anderson GM. Reader's guide to critical appraisal of cohort studies: 2. Assessing potential for confounding. British Medical Journal 2005; 330:960-962. PMC556348

88. **Normand S-LT**, Sykora K, Li P, Rochon PA, Anderson GM. Reader's guide to critical appraisal of observational cohort studies: 3. Analytical strategies to reduce confounding. British Medical Journal 2005; 330:1021-1023. PMC557157.

89. Lee PE, Sykora K, Mamdani M, Marras C, Stukel T, Anderson G, Gill SS, Shulman K, **Normand S-L**, Rochon PA. Antipsychotic medications and drug induced movement disorders other than parkinsonism: A population based cohort study. Journal of the American Geriatrics Society 2005; 53(8):1374-1379.

90. **Normand S-L**, Rector TS, Neaton JD, Pina IL, Lazar RM, Proestel SE, Fleischer DJ, Cohn JN, Spertus JN. Clinical and analytical considerations in the study of health status in device trials for heart failure. Journal of Cardiac Failure 2005; 11(5):396-403.

91. Shahian DM, Torchiana DF, Shemin RJ, Rawn JD, **Normand S-LT**. The Massachusetts cardiac surgery report card: implications of statistical methodology. Annals of Thoracic Surgery 2005; 80:2106-13.

92. Rochon PA, Stukel T, Sykora K, Gill S, Garfinkel S, Anderson GM, **Normand S-LT**, Gurwitz JH, Mamdani M. Atypical antipsychotics and parkinsonism. Archives of Internal Medicine, 2005; 165:1882-1888. Cited as PRACTICE POINT, Nature Clinical Practice Neurology 2006; 2(3):132-133.

93. Bonow RO, Bennett S, Casey DE, Ganiats TG, Hlatky MA, Konstam MA, Lambrew CT, **Normand S-LT**, Pina IL, Radford M, Smith AL, Warner-Stevens L. ACC/AHA Heart Failure Clinical Performance Measures for Adults with Chronic Heart Failure. Journal of the American College of Cardiology 2005; 46(6):1144-1178.

94. Ryan JW, Peterson ED, Chen AY, Roe MT, Ohman EM, Cannon CP, Berger PB, Saucdeo JF, DeLong ER**, Normand S-L**, Pollack CV, Cohen DJ (for CRUSADE Investigators). Early versus delayed intervention in non-ST- segment elevation acute coronary syndromes: Analysis using instrumental variables. Circulation 2005; 112:3049-3057.

95. Clements KM, Murphy JM, Eisen SV, **Normand S-LT.** Comparison of self-report and clinician-rated measures of psychiatric symptoms and functioning in predicting 1-year hospital readmission. Administration and Policy in Mental Health and Mental Health Services Research 2006; 33:568-577.

96. Berndt ER, Busch A, Frank RG, **Normand S-L.** Real output in mental health care during the 1990s. Forum for Health Economics & Policy 2006; 9(1):Article 5.

97. Daniels MJ, **Normand S-LT**. Longitudinal profiling of health care units based on continuous and discrete patient outcomes. Biostatistics 2006; 7(1):1-15. PMC2791405

98. Timbie J, Frank RG, Horvitz-Lennon MV, **Normand S-LT**. A meta-analysis of the effect of interventions for depression labor supply. Psychiatric Services 2006; 57:212-218.

99. Choudhry NK, Anderson GM, Laupacis A, Ross-Degnan D, **Normand S-L**, Soumerai SB. The impact of adverse events of warfarin prescribing in atrial fibrillation: A matched pair analysis. British Medical Journal 2006; 332(Jan):141-145. PMC1336760

100. Choudhry NK, Soumerai SB, **Normand S-L**, Ross-Degnan D, Laupacis A, Anderson GM. Warfarin prescribing in atrial fibrillation: the impact of physician, patient, and hospital characteristics. American Journal of Medicine 2006; 119:607-615.

101. Dickey B**, Normand S-L,** Eisen SV, Hermann RC, Cleary PD, Cortes D, Ware N. Associations between adherence to guidelines for antipsychotic dose and health status, side-effects, and patient care experiences. Medical Care 2006; 44(9):827-834.

102. Krumholz HM, Brindis RG, Brush JE, Cohen DJ, Epstein AJ, Furie K, Howard G, Peterson ED, Rathore SS, Smith SC, Spertus JA, Wang Y, **Normand S-L**. Standards for statistical models for public reporting of health outcomes. Circulation 2006; 113:456-462.

103. Busch AB, Huskamp HA, **Normand S-LT**, Young AS, Goldman H, Frank RG. The impact of parity on major depression treatment quality in the federal employees' health benefits program after parity implementation. Medical Care 2006; 44:506-512.

104. Goldman HH, Frank RG, Burnam MA, Huskamp HA, Ridgely MS, **Normand S-L**, Young AS, Barry C, Azzone V, Azrin ST, Moran G, Lichtenstein C, Blasinksy M. Behavioral health insurance parity for federal employees. New England Journal of Medicine 2006; 354:1378-86.

105. Tchernis R, **Normand S-LT**, Pakes J, Gaccione P, Newhouse JP. Selection and plan switching behavior. Inquiry 2006; 43:10-22.

106. Krumholz HM, Wang Y, Mattera JA, Wang Y, Han LF, Ingber MJ, Roman S, **Normand S-L**. An administrative claims model suitable for profiling hospital performance based upon 30-day mortality rates among patients with an acute myocardial infarction. Circulation 2006; 113:1683-1692.

107. **Normand S-LT,** Belanger AJ, Eisen SV. Graded response model-based item selection for behavior and symptom identification. Health Services and Outcomes Research Methodology 2006; 6:1-19.

108. Bradley EH, Herrin J, Elbel B, McNamara RL, Magid DJ, Nallamothu BK, Wang Y, **Normand S-LT**, Spertus JA, Krumholz HM. Hospital quality for acute myocardial infarction: correlation among process measures and relationship with short-term mortality. Journal of the American Medical Association 2006; 296:72-78.

109. Kosiborod M, Lichtman JH, Heidenreich PA, **Normand S-LT**, Wang Y, Brass LM. Krumholz HM. National trends in outcomes among elderly patients with heart failure. American Journal of Medicine 2006; 119:616.e1-616.e7.

110. Rosenthal MB, Landon BE, **Normand S-LT**, Frank RG, Epstein AM. Pay for performance in commercial HMOs. New England Journal of Medicine 2006; 355:1895-902.

111. Landon BE, **Normand S-LT**, Lessler A, O'Malley AJ, Schmaltz S, Loeb JM, McNeil BJ. Quality of care for the treatment of acute medical conditions in United States hospitals. Archives of Internal Medicine 2006; 166:2511-2517.

112. Ross JS, Chas SS, Epstein AJ, Wang Y, Bradley EH, Herrin J, Lichtman JH, **Normand S-LT**, Masoudi FA, Krumholz HM. Quality of care for acute myocardial infarction at urban safety net hospitals. Health Affairs 2007; 26(1):238-248.

113. Bernheim SM, Spertus JA, Reid KJ, Bradley Eh, Desai RA, Peterson ED, Rathore SS, **Normand S-LT**, Jones PG, Rahimi A, Krumholz HM. Socioeconomic disparities in outcomes following acute myocardial infarction. American Heart Journal 2007; 153:313-9.

114. Krumholz HM, **Normand S-LT**, Spertus JA, Shahian DM, Bradley, EH. Measuring performance for treating heart attacks and heart failure: the case for outcomes measurement. Health Affairs 2007; 26(1):75-85.

115. **Normand S-L**, Wolf RE, Ayanian AZ, McNeil BJ. Assessing the accuracy of hospital clinical performance measures. Medical Decision Making 2007; 27:9-20.

116. Austin PC, Grootendorst P, **Normand S-LT,** Anderson G. Conditioning on the propensity score can result in biased estimation of common measures of treatment effect. Statistics in Medicine 2007; 26:754-768.

117. Azrin ST, Huskamp HA, Azzone V, Goldman HH, Frank RG, Burnam MA, **Normand S-LT**, Ridgely MS, Young AS, Barry CL, Busch AB, Moran G. Impact of full mental health and substance abuse parity for children in the federal employees health benefits program. Pediatrics 2007; 119:452-459. PMC1995034

118. **Normand S-LT**, Wang Y, Krumholz HM. Assessing surrogacy of data sources for institutional comparisons. Health Services and Outcomes Research Methodology 2007; 7:79-96.

119. Shahian DM, Silverstein T, Lovett A, Wolf RE, **Normand S-LT**. A comparison of clinical and administrative data sources for hospital CABG reports. Circulation 2007; 115(12):1518-27.

120. Neaton JD, **Normand SL**, Gelijns A, Starling RC, Mann DL, Konstam MA. Designs for mechanical circulatory support device studies. Journal of Cardiac Failure 2007; 1391):63-74.

121. Shahian DM, Edwards FH, Ferraris VA, Haan CK, Rich JB, **Normand S-LT**, DeLong ER, O'Brien S, Shewan CM, Dokholyan RS, Peterson ED. The measurement of adult cardiac surgery quality; Part I: conceptual framework and measurement selection. Annals of Thoracic Surgery 2007; 83:S3-12.

122. O'Brien S, Shahian DM, DeLong ER, **Normand S-LT**, Edwards FH, Ferraris VA, Haan CK, Rich JB, Shewan CM, Dokholyan RS, Anderson RP, Peterson ED. The measurement of adult cardiac surgery quality; Part 2: statistical considerations in composite measure scoring and provider rating. Annals of Thoracic Surgery 2007; 83:S13-26.

123.   Gill SS, Bronskill SE, **Normand SLT**, Anderson GM, Kykora K, Lam K, Bell CM, Lee PE, Fischer HD, Hermann N, Gurwitz JH, Rochon PA. Antipsychotic drug use and mortality among older adults with dementia. Annals of Internal Medicine 2007; 146:775-786.

124.   Landon BE, Rosenthal MB, **Normand SLT**, Spettell C, Lessler A, Underwood HR, Newhouse JP. Incentive formularies and changes in prescription drug spending. American Journal of Managed Care 2007; 13(part 2):360-369.

125.   **Normand S-LT**, Shahian DM. Statistical and clinical aspects of institutional profiling. Statistical Science 2007; 22(2):206-226.

126.   Wang OJ, Want Y, Lichtman JH, Bradley EH, **Normand S-LT**, Krumholz HM. "America's Best Hospitals" in the treatment of acute myocardial infarction. Archives of Internal Medicine 2007; 167(13):1345-1351.

127.   Suaya JA, Shepard DS, **Normand S-LT**, Ades P, Prottas J, Stason WB. Use of cardiac rehabilitation by Medicare beneficiaries after myocardial infarction or coronary bypass surgery. Circulation 2007; 116:1653-1662.

128.   Rosenthal MB, Landon BE, **Normand S-LT**, Frank RG, Ahmad TS, Epstein AM. Employers' use of value-based purchasing strategies. Journal of the American Medical Association 2007; 298(19):2281-2288.

129.   Nallamothu BK, Wang Y, Cram P, Birkmeyer JD, Ross JS, **Normand S-LT**, Krumholz HM. Acute myocardial infarction and congestive heart failure outcomes at specialty cardiac hospitals. Circulation 2007; 116:2280-2287.

130.   Landon BE, Schneider EC, **Normand S-LT**, Hudson Scholle S, Pawlson LG, Epstein AM. Quality of care in Medicaid managed care and commercial health plans. Journal of the American Medical Association 2007; 298(14):674-1681.

131.   Concannon TW, Kent DM, **Normand S-L**, Newhouse JP, Ruthazer R, Griffith JL, Beshansky JR, Wong JB, Aversano T, Selker HP. A geospatial analysis of emergency transport and inter-hospital transfer in ST-segment elevation myocardial infarction. American Journal of Cardiology 2008; 101:69-74.

132.   Alegria M, Polo A, Gao S, Santana L, Rothstein D, Jimenez A, Hunter ML, Mendieta F, Oddo V**, Normand S-LT**. Evaluation of a patient activation and empowerment intervention in mental health care. Medical Care 2008; 46:247-256.

133.   Landon BE, **Normand S-LT**. Performance measurement in small practice settings: challenges and potential solutions. Annals of Internal Medicine 2008; 148:353-357.

134.   Canino G, Vila D, **Normand S-L**, Perez EA, Ramirez R, Garcia P, Rand C. Reducing asthma health disparities in poor Puerto Rican children: the effectiveness of a culturally tailored family intervention. Journal of Allergy & Clinical Immunology 2008; 121:665-670.

135.   Landon BE, **Normand S-LT**, Meara E, Zhou Q, Simon SR, Frank RG, McNeil BJ. The relationship between medical practice characteristics and quality of care for cardiovascular disease. Medical Care Research and Review 2008; 65(2):167-186.

136.   Teixeira-Pinto A, **Normand S-L T**. Statistical methodology for classifying units on the basis of multiple related measures. Statistics in Medicine 2008; 27:1329-1350. PMC2278020

137.   Timbie JW, **Normand S-LT.** A comparison of methods for combining quality and efficiency performance measures: profiling the value of hospital care following acute myocardial infarction. Statistics in Medicine 2008; 27:1351-1370.

138.   Shahian DM, **Normand S-LT**. The comparison of "risk-adjusted" hospital outcomes. Circulation 2008; 117:1955-1963.

139.   Breslau J, Javaras KN, Blacker JM, **Normand S-LT**. Differential item functioning between ethnic groups in the epidemiological assessment of depression. Journal of Nervous and Mental Disease 2008; 196(4):297-306. PMC2748987

140.   **Normand S-LT,** Wolf RE, McNeil BJ. Discriminating quality of hospital care in the US. Medical Decision Making 2008; 28(3):308-322.

141.   Timbie JW, Newhouse JP, Rosenthal MB, **Normand S-LT**. A cost-effectiveness framework for profiling the value of hospital care. Medical Decision Making 2008; 28(3):419-434.

142.   Rochon PA, **Normand S-LT**, Gomes T, Gill SS, Anderson GM, Melo M, Sykora K, Lipscombe L, Bell CM, Gurwitz JH. Antipsychotic therapy and short-term serious events in older adults with dementia. Archives of Internal Medicine 2008; 168(10):1090-1096.

143.   Glazer J, McGuire T, **Normand S-LT**. Mitigating the problem of unmeasured outcomes in quality reports. The B.E. Journal of Economic Analysis & Policy 2008; 8(2):7. PMC2872781

144.   **Normand S-LT**. Some old and some new statistical tools for outcomes research. Circulation 2008; 118:872-884. PMC2535854

145.   Landon BE, Rosenthal MB, **Normand S-LT**, Frank RG, Epstein AM. Quality monitoring and management in commercial health plans. American Journal of Managed Care 2008; 14(6):377-386.

146.   Keenan PS, **Normand S-LT**, Lin Z, Drye EE, Bhat KR, Ross JS, Schuur JD, Stauffer BD, Bernheim SM, Epstein AJ, Wang YF, Herrin J, Chen J, Federer JJ, Mattera JA, Wang Y, Krumholz HM. An administrative claims model suitable for profiling hospital performance based on 30-day all-cause readmission rates among patients with heart failure. Cardiovascular Quality and Outcomes 2008; 1:29-37.

147.   Krumholz HM, Keenan PS, Brush JE, Bufalino VJ, Chernew ME, Epstein AJ, Heidenreich PA, Ho V, Masoudi FA, Matchar DB, **Normand S-LT**, Rumsfeld JS, Schuur JD, Smith SC, Spertus JA, Walsh MN. Standards for measures used for public reporting of efficiency in healthcare. Circulation 2008; 118(18):1885-93. Epub 2008 Oct 6. J of Am Coll of Cardiol, 2008; 52(18):1518-26.

148.   Mauri L, Silbaugh TS, Garg P, Wolf RE, Zelevinsky K, Lovett A, Varma MR, Zhou Z, **Normand S-LT**. Drug-eluting or bare-metal stents for acute myocardial infarction. New England Journal of Medicine 2008; 359:1330-42.

149.   Alegria M, Nakash O, Oddo V, Gao S, Lin J, **Normand S-LT.** How missing information in diagnosis can lead to disparities in the clinical encounter. Journal of Public Health Management and Practice 2008; November(Supple),S26-S35. PMC2677445

150.   Ross JS, **Normand S-LT**, Wang Y, Nallamothu BK, Lichtman JH, Krumholz HM. Hospital remoteness and thirty-day mortality from three serious conditions. Health Affairs 2008; 27(6):1707-1717.

151.   Johnson MA, **Normand S-LT**, Krumholz HM. How are our hospitals measuring up? "Hospital Compare": a resource for hospital quality of care. Circulation 2008; 118(13): e498-500.

152.   Krumholz HM, **Normand S-LT**. Public reporting of 30-day mortality for patients hospitalized with acute myocardial infarction and heart failure. Circulation 2008; 118(13): 1394-7.

153.   Mauri L, Silbaugh TS, Wolf RE, Zelevinsky K, Lovett A, Zhou Z, Resnic FS, **Normand S-LT**. Long-term clinical outcomes following drug-eluting and bare metal stenting in Massachusetts. Circulation 2008; 118:1817-1827. PMC2821087

154.   Garg P, **Normand S-LT**, Silbaugh TS, Wolf RE, Zelevinsky K, Lovett A, Varma MR, Zhou Z, Mauri L. Drug-eluting or bare metal stenting in patients with diabetes mellitus: Results from the Mass-DAC registry. Circulation 2008; 118:2277-85.

155.   Ten Have TR, **Normand S-LT,** Marcus SM, Brown CH, Lavori P, Duan N. Intent-to-treat vs non-intent-to-treat analyses under treatment non adherence in mental health randomized trials. Psychiatric Annals 2008; 38(12): 772-83. PMC2921714

156. Bhaumik DK, Roy A, Aryal S, Hur K, Duan N, **Normand S-LT**, Brown CH, Gibbons RD. Sample size determination for studies with repeated continuous outcomes. Psychiatric Annals 2008; 38(12): 765-71. PMC2743342

157. Marcus SM, Siddique J, Ten Have TR, Gibbons RD, Stuart E, **Normand S-LT**. Balancing treatment comparisons in longitudinal studies. Psychiatric Annals 2008; 38(12): 805-11. PMC2722117

158. Belin TR, **Normand S-LT**. The role of ANCOVA in analyzing experimental data. Psychiatric Annals 2009; 39(7):753-759.

159. Concannon TW, Griffith JL, Kent DM, **Normand S-L**, Newhouse JP, Atkins J, Beshansky JR, Selker HP. Elapsed time in emergency medical services in patients with cardiac complaints: are some patients at greater risk for delay? Circulation: Cardiovascular Quality and Outcomes 2009; 2:9-15.

160. Rosenthal MB, Landon BE, **Normand S-LT**, Ahman TS, Epstein AM. Engagement of health plans and employers in addressing racial and ethnic disparities in health care. Medical Care Research and Review 2009 66(2):219-231.

161. Busch AB, Frank RG, Sachs G, Normand S-LT. Bipolar-I patient characteristics associated with differences in antimanic medication prescribing. Psychopharmacology Bulletin 2009; 4291:35-49. PMC2648065

162. Sherrill J, Sommers DI, Nierenberg, AA, Leon AC, Amdt S, Bandeen-Roche K, Greenhouse J, Guthrie D, **Normand S-LT**, Phillips KA, Shear MK, Woolson R. Integrating statistical and clinical research elements in intervention-related grant applications: summary from an NIMH workshop. Academic Psychiatry 2009; 33:221-228. PMC2838497

163. Gill SS, Anderson GM, Fischer HD, Bell CM, Li P, **Normand S-LT**, Rochon PA. Syncope and its consequences in patients with dementia receiving cholinesterase inhibitors: A population-based cohort study. Archives of Internal Medicine 2009; 169(9): 867-73.

164. Suaya JA, Stason WB, Ades PA, **Normand S-LT**, Shepard DS. Cardiac rehabilitation and survival in older coronary patients. Journal of the American College of Cardiology 2009; 54:25-33.

165. Timbie JW, Shahian DM, Newhouse JP, Rosenthal MB, **Normand S-LT.** Composite measures for hospital quality using quality-adjusted life years. Statistics in Medicine, 2009; 28:1239-1254.

166. Horvitz-Lennon M, Donohue J, Domino M, **Normand S-L**. Improving quality and diffusing best practices: the case of schizophrenia. Health Affairs 2009; 28(3):701-712. PMC2832306

167. Huskamp H, Busch A, Domino M, **Normand S-L**. Antidepressant reformulations: Who uses them and what are the benefits? Health Affairs 2009; 28(3):734-745. PMC2752284

168. Teixeira-Pinto A, **Normand S-LT**. Correlated bivariate continuous and binary outcomes: Issues and applications. Stat in Medicine 2009; 28:1753-1773. PMC2818753.

169. Hlatky MA, Greenland P, Arnett DK, Ballantyne CM, Criqui MH, Elkind M, Go AS, Harrell FE, Howard BV, Howard VJ, Hsue PY, Kramer CM, McConnell JP, **Normand S-LT**, O'Donnell CJ, Smith SC, Wilson P, American Heart Association Expert Panel on Subclinical Atherosclerotic Diseases and Emerging Risk Factors and the Stroke Council. Criteria for evaluation of novel markers of cardiovascular risk. A scientific statement from the American Heart Association. Circulation 2009; 119(17): 2408–2416. PMC2956982

170. Shahian DM, O'Brien SM, Filardo G, Ferraris VA, Haan CK, Rich JB, **Normand S-LT**, DeLong ER, Shewan CM, Dokholyan RS, Peterson ED, Edwards FH, Anderson RP. The Society of Thoracic Surgeons 2008 cardiac surgery risk models: Part 1 – coronary artery bypass grafting surgery. Annals of Thoracic Surgery 2009; 88:S2-22.

171. O'Brien SM, Shahian DM, Filardo G, Ferraris VA, Haan CK, Rich JB, **Normand S-LT**, DeLong ER, Shewan CM, Dokholyan RS, Peterson ED, Edwards FH, Anderson RP. The Society of Thoracic Surgeons 2008 cardiac surgery risk models: Part 2 – isolated valve surgery. Annals of Thoracic Surgery 2009; 88:S23-42.

172.   Shahian DM, O'Brien SM, Filardo G, Ferraris VA, Haan CK, Rich JB, **Normand S-LT**, DeLong ER, Shewan CM, Dokholyan RS, Peterson ED, Edwards FH, Anderson RP. The Society of Thoracic Surgeons 2008 cardiac surgery risk models: Part 3 – valve plus coronary artery bypass grafting surgery. Annals of Thoracic Surgery 2009; 88:S43-62.

173.   Teixeira-Pinto A, Siddique J, Gibbons R, **Normand S-L**. Statistical approaches to modeling multiple outcomes in psychiatric studies. Psychiatric Annals 2009; 39(7):729-735. PMC2798811

174.   Stuart EA, Marcus SM, Horvitz-Lennon MV, Gibbons RD, **Normand S-LT,** Brown H. Using non-experimental data to estimate treatment effects. Psychiatric Annals, 2009; 39(7):719-728. PMC2886294.

175.   Mulvey GK, Wang Y, Lin Z, Wang OJ, Chen J, Keenan PS, Drye EE, Rathore SS, **Normand S-LT**, Krumholz HM. Mortality and readmission for patients with heart failure among *U.S. News & Report's* top heart hospitals. Circulation: Cardiovascular Quality and Outcomes, 2009; 2:558-565.

176.   Krumholz HM, Merrill AR, Schone RM, Schreiner GC, Chen J, Bradley EH, Wan Y, Wang YF, Lin Z, Straube BM, Rapp MT, **Normand S-LT**, Drye EE. Patterns of hospital performance in acute myocardial infarction and heart failure 30-day mortality and readmission. Circulation: Cardiovascular Quality and Outcomes, 2009; 2(5):407-413.

177.   Krumholz HM, Wang Y, Chen J, Drye EE, Radford MJ, Havranek DP, Masoudi FA, Nallamothu BK, Spertus JA, Ross JS, Lichtman JH, Curtis JP, Han LF, Rapp MT, Straube BM, **Normand S-LT**. Reduction in acute myocardial infarction mortality in the United States: Risk-Standardized mortality rates from 1995-2006. Journal of the American Medical Association, 2009; 302(7):767-773.

178.   Horvitz-Lennon MV, Frank RG, Thompson W, Baik SH, Alegria M, Rosenheck RA, **Normand S-LT**. An investigation of racial and ethnic disparities in service utilization among homeless adults with severe mental illness. Psychiatric Services, 2009; 60:1032-1038. PMC2898183

179.   Busch AB, Huskamp HA, Neelon B, Manning T, **Normand S-LT**, McGuire TG. Longitudinal racial/ethnic disparities in antimanic medication use in bipolar-I disorder. Medical Care, 2009; 47(12):1217-1228. PMC2787883

180.   Castellanos LR, **Normand S-L T**, Ayanian JZ. Racial and Ethnic Disparities in Access to Higher and Lower Quality Cardiac Surgeons For Coronary Artery Bypass Grafting. American Journal of Cardiology, 2009:103:1682-1686.

181.   Skeer MR, McCormick MC, **Normand S-LT**, Mimiaga MJ, Buka SL, Gilman SE. A prospective study of familial conflict, psychological stress, and the development of substance use disorders in adolescence. Drug and Alcohol Dependence, 2009; 104(1-2):65-72. PMC2728005

182.   Ross JS, Chen J, Qiu Lin Z, Bueno H, Curtis JP, Keenan PS, **Normand S-LT,** Schreiner G, Spertus J, Vidan MT, Wang YF, Wang Y, Krumholz HM. Recent national trends in readmission rates after heart failure hospitalization. Circulation: Heart Failure, 2010; 3:97-1.03. PMC2830811

183.   Shahian DM, O'Brien SM, **Normand S-LT**, Peterson ED, Edwards FH. Association of hospital coronary artery bypass volume with processes of care, mortality, morbidity, and the Society of Thoracic Surgeons composite quality score. Journal of Thoracic and Cardiovascular Surgery, 2010; 139: 273-282.

184.   Chen J, Krumholz HM, Wang Y, Curtis JP, Rathore SS, Ross JS, **Normand S-LT**, Schreiner G, Mulvey G, Nallamothu BK. Differences in patient survival after acute myocardial infarction by hospital capability of performing percutaneous coronary intervention: implications for regionalization. Archives of Internal Medicine, 2010; 170(5):433-439.

185.   Ross JS, **Normand S-LT**, Wang Y, Ko DT, Chen J, Drye EE, Keenan PS, Lichtman JH, Bueno H, Schreiner GC, Krumholz, HM. Hospital volume and 30-day mortality for three common medical admissions. New England Journal of Medicine, 2010; 362: 1110-1118. PMC2880468

186. Chen J, **Normand S-LT**, Wang Y, Drye EE, Schreiner GC, Krumholz HM. Recent declines in hospitalizations for acute myocardial infarction for fee-for-service beneficiaries: progress and continuing challenges. Circulation, 2010; 121:1322-1328.

187. Hummel SL, Pauli NP, Krumholz HM, Wang Y, Chen J, **Normand S-LT**, Nallamothu BK. Thirty-day outcomes in Medicare patients with heart failure at heart transplant centers. Circulation Heart Failure, 2010; 3:244-252.

188. Nasir K, Lin Z, Bueno H**, Normand S-LT**, Drye EE, Keenan PS, Krumholz HM. Is same-hospital readmission rate a good surrogate for all-hospital readmission rate? Medical Care, 2010; 48(5):477-481.

189. Sedrakyan A, Marinac-Dabic D, **Normand S-LT**, Mushlin A, Gross T. A framework for evidence evaluation and methodological issues in implantable device studies. Medical Care, 2010; 48:S121-S128.

190. **Normand S-LT**, Marinac-Dabic D, Sedrakyan A, Kaczmarek R. Rethinking analytical strategies for surveillance of medical devices: the case of hip arthroplasty. Medical Care; 2010; 48:S58-S67.

191. Bueno H, Ross JS, Wang Y, Chen J, Vidan W, **Normand S-LT**, Curtis JP, Drye EE, Lichtman J, Keenan PS, Kosiborod M, Krumholtz HM. Trends in length of stay and short-term outcomes among Medicare patients hospitalized for heart failure, 1993-2006. Journal of the American Hospital Association 2010; 303(21):2141-2147. PMC3020983.

192. Ross JS, Maynard C, Krumholz HM, Sun H, Rumsfeld JS, **Normand S-LT**, Wang Y, Fihn SD. Use of administrative claims models to assess 30-day mortality among veterans' health administration hospitals. Medical Care 2010; 48:652-658. PMC3020977.

193. Bernheim SM, Grady JN, Lin A, Wang Y, Wang Y, Savage SV, Bhat KR, Ross JS, Desai MM, Merrill AR, Han LF, Rapp MT, Drye EE, **Normand S-LT**, Krumholz HM. National patterns of risk-standardized mortality and readmission for acute myocardial infarction and heart failure: Update on publicly reported outcomes measures based on the 2010 release. Circulation Cardiovascular Quality and Outcomes 2010; 3:459-467. PMC3027304.

194. Concannon TW, Kent DM, **Normand S-LT**, Newhouse JP, Griffith JL, Cohen J, Beshansky JR, Wong JB, Aversano T, Selker HP. Comparative effectiveness of ST-segment-elevation myocardial infarction regionalization strategies. Circulation: Cardiovascular Quality and Outcomes 2010; 3(5):506-513. PMC2967250.

195. Meyer RE, Salzman C, Youngstrom EA, Clayton PJ, Mann JJ, Goodwin FK, Alphs LD Broich K, Goodman WK, Greden JF, Meltzer HY, **Normand S-LT** Posner K, Shaffer D, Trivedi M, Turecki G, Beasley Jr. CM, Beautrais AL, Bridge JA, Brown GK, Oquendo MA, Revicki D, Ryan N, Sheehan DV, Stanley B. Suicidality and risk of suicide: Definition, drug safety concerns and a necessary target for drug development: a consensus statement. Journal of Clinical Psychiatry 2010; 71(8):1040-1046.

196. Lidenauer PK, Bernheim SM, Grady JN, Lin Z, Wang Y, Wang Y, Merrill AR, Han LF, Rapp MR, Drye EE, **Normand S-LT**, Krumholz HM. The performance of US hospitals as reflected in risk-standardized 30-day mortality and readmission rates for Medicare beneficiaries with pneumonia. Journal of Hospital Medicine 2010; 5(6):E12-E18.

197. Bradley EH, Herrin J, Curry L, Cherlin EJ, Wang Y, Webster TR, Drye EE, **Normand S-LT**, Krumholz HM. Variation in hospital mortality rates for patients with acute myocardial infarction. Journal of the American College of Cardiology 2010; 106:1108-1112.

198. Neelon B, O'Malley AJ, **Normand S-LT.** A Bayesian model for repeated measures zero-inflated count data with application to outpatient psychiatric service use. Statistical Modeling 2010; 10:421-439. PMC3039917.

199. Resnic FS, Gross TP, Marinac-Dabic D, Loyo-Berrios N, Donnelly S, **Normand S-LT**, Matheny ME. Automated surveillance to detect postprocedure safety signals of approved cardiovascular devices. Journal of the American Medical Association 2010; 304(18):2019-2027.

200. Mauri L, Kereiakes DJ, **Normand S-LT**, Wiviott SD, Cohen DJ, Holmes DR, Bangalore S, Cutlip DE, Pencina M, Massaro JM. Rationale and design of the dual antiplatelet therapy study, a prospective, multicenter, randomized, double-blind trial to assess the effectiveness and safety of 12 versus 30 months of dual antiplatelet therapy in subjects undergoing percutaneous coronary intervention with either drug-eluting stent or bare metal stent placement for the treatment of coronary artery lesions. American Heart Journal 2010; 160:1035-1041.

201. Shahian DM, Wolf RE, Iezzoni LI, Kirle L, **Normand S-LT**. Variability in the measurement of hospital-wide mortality rates. New England Journal of Medicine 2010; 363:2530-9.

202. Holmboe ES, Weng W, Arnold G, Kaplan SH, **Normand S-LT**, Greenfield S, Hood S, Lipner R. The comprehensive care project: measuring physician performance in ambulatory practice. Health Services Research 2010; 45(6):1912-1933.

203. He Y, Wolf RE, **Normand S-LT**. Assessing geographical variations in hospital processes of care using multilevel item response theory models. Health Services and Outcomes Research Methodology 2010; 10:111-133.

204. Spertus JA, Bonow RO, Chan P, Diamond GA, Drozda JP, Kaul S, Krumholz HM, Masoudi FA, **Normand S-LT**, Peterson ED, Radford MJ, Rumsfeld JS, Writing Committee Members. "ACCF/AHA New Insights Into the Methodology of Performance Measurement: A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Performance Measures." Circulation 2010; 122(20): 2091-2106.

205. Barringhaus KG, Zelevinsky K, Lovett A, **Normand S-LT**, Ho KK. Impact of independent data adjudication on hospital-specific estimates of risk-adjusted mortality following percutaneous coronary interventions in Massachusetts. Circulation Cardiovascular Quality and Outcomes 2011; 4:92-98.

206. Azzone V, Frank RG, **Normand S-LT**, Burman AM. Effect of insurance parity on substance abuse treatment. Psychiatric Services 2011; 62(2):129-134. PMC3250065.

207. Charytan DM, Varma MR, Silbaugh TS, Lovett AF, **Normand S-L**, Mauri L. Long-term clinical outcomes following drug-eluting or bare-metal stent placement in patients with severely reduced GFR: Results of the Massachusetts Data Analysis Center (Mass-DAC) State Registry. Am J Kidney Dis. 2011; 57(2):202-11.

208. Resnic FS, **Normand S-LT**, Piemonte TC, Shubrooks SJ, Zelevinsky K, Lovett A, Ho KKL. Improvement in mortality risk prediction following percutaneous coronary intervention through addition of a "compassionate use" variable to the National Cardiovascular Data Registry CathPCI Dataset: A study from the Massachusetts angioplasty registry. Journal of the American College of Cardiology 2011; 57:904-911. PMC3061352

209. Neelon B, O'Malley AJ, **Normand S-LT**. A Bayesian two-part latent class model for longitudinal medical expenditure data: Assessing the impact of mental health and substance abuse parity. Biometrics 2011; 67:280-289. NIHMS ID: 197107

210. Krumholz HM, Lin Z,. Drye EE, MD; Desai MM, Han HF; Rapp MT,Mattera JA, **Normand S-LT**. An administrative claims measure suitable for profiling hospital performance based on 30-day all-cause readmission rates among patients with acute myocardial infarction. Circulation Cardiovascular Quality and Outcomes 2011; 4: 243-252. PMC3350811

211. Baudendistel TE, Lindenauer PK, Normand SL, Drye EE, Lin Z, Goodrich K, Desai MM, Bratzler DW, O'Donnell WJ, Metersky ML, Krumholz HM. Continuing medical education program in the journal of hospital medicine. J Hosp Med. 2011; 6(3):141.

212. Teixeira-Pinto A, **Normand, S-L**. Missing data in regression models for non-commensurate multiple outcomes. RevStat – Statistical Journal 2011; 9(1): 37–55. PMC3595565

213. Bratzler DW, **Normand S-LT**, Wang Y, O'Donnell WJ, Metersky M, et al. An administrative claims model for profiling hospital 30-Day mortality rates for pneumonia patients. PLoS ONE 2011; 6(4): e17401. PMC3075250

214. Tyler KM, **Normand S-LT**, Horton NJ. The use and abuse of multiple outcomes in randomized controlled depression trials. Contemporary Clinical Trials 2011; 32:299-304. PMC3071542.

215. O'Malley AJ, Frank RG, **Normand S-LT**. Estimating cost-offsets of new medications: use of new antipsychotics and mental health costs for schizophrenia. Statistics in Medicine 2011; 30(16):1971-1988. PMC2150217.

216. Lindenauer PK, **Normand S-LT**, Drye EE, Lin Z, Goodrich K, Desai MM, Bratzler DW, O'Donnell WJ, Metersky ML, Krumholz HM. Development, validation, and results of a measure of 30-day readmission following hospitalization for pneumonia. J Hosp Med 2011; 6:142-150.

217. Landon BE, Rosenthal MB, **Normand S-LT**, Spettell C, Lessler A, Underwood HR, Newhouse JP. Incentive formularies: spending and utilization for 3 common drug classes. American Journal of Pharmacy Benefits 2011; 3(3):152-164.

218. Horvitz-Lennon M, Zhou D, **Normand S-LT**, Alegria M, Thompson W. Racial and ethnic service use disparities among homeless adults with severe mental illnesses receiving ACT. Psychiatric Services 2011; 62(6):598-604.

219. Yoon FB, Fitzmaurice GM, Lipsitz SR, Horton NJ, Laird NM, **Normand S-LT**. Alternative methods for testing treatment effects on the basis of multiple outcomes: simulation and case study. Statistics in Medicine 2011; 30(16):1917-1932. PMC3116112.

220. Yoon FB, Huskamp HA, Busch AB, **Normand S-LT**. Using multiple control groups and matching to address unobserved biases in comparative effectiveness research: An observational study of the effectiveness of mental health parity. Statistics in Biosciences 2011; 3:63-78. PMC3182124.

221. Cook B, McGuire T, Alegria M, **Normand S-LT**. Crowd-out and exposure effects of physical comorbidities on mental health care use: Implications for racial-ethnic disparities in access. Health Services Research 2011; 46(4):1259-80. PMC3130831.

222. Skeer MR, McCormick MC, **Normand S-LT**, Mimiaga MJ, Buka SL, Gilman SE. Gender differences in the association between family conflict and adolescent substance use disorders. J Adolesc Health 2011; 49(2):187-92.

223. Shahian DM, Edwards FH, Jacobs JP, Prager RL, **Normand S-LT**, Shewan CM, O'Brien SM, Peterson ED, Grover FL. Public reporting of cardiac surgery performance: Part 1--history, rationale, consequences. Ann Thorac Surg. 2011; 92(3 Suppl):S2-11.

224. Shahian DM, Edwards FH, Jacobs JP, Prager RL, **Normand S-LT**, Shewan CM, O'Brien SM, Peterson ED, Grover FL. Public reporting of cardiac surgery performance: Part 2--implementation. Ann Thorac Surg. 2011; 92(3 Suppl):S12-23.

225. Nunez Smith M, Bradley EH, Herrin J, Santana C, Curry LA, **Normand S-LT**, Krumholz HM. Quality of Care in the US Territories. Archives of Internal Medicine 2011; 171:1528-1540. PMC3251926.

226. Yeh RW, **Normand S-LT**, Wolf RE, Jones PG, Ho KK, Cohen DJ, Cutlip DE, Mauri L, Kugelmass AD, Amin AP, Spertus JA. Predicting the restenosis benefit of drug-eluting versus bare metal stents in percutaneous coronary intervention. Circulation 2011; 124(14):1557-64.

227. Chen J, **Normand, S-LT,** Wang Y, Krumholz HM. National and Regional Trends in Heart Failure Hospitalization and Mortality Rates for Medicare Beneficiaries, 1998-2008. JAMA 2011; 306(15):1669-1678.

228. Matheny ME, **Normand S-LT**, Gross TP, Marinac-Dabic D, Loyo-Berrios N, Vidi V, Donnelly S, Resnic RS. Evaluation of an automated safety surveillance system using risk adjusted sequential probability ratio testing. BMC Medical Informatics and Decision Making 2011; 11:75. PMC3262755

229. Fullerton CA, Busch AB, **Normand S-LT**, McGuire TG, Epstein AM. Ten-year trends in quality of care and spending for depression: 1996 through 2005. Archives of General Psychiatry 2011; 68(12):1218-26.

230.   Mauri L, **Normand S-L**, Pencina M, Cutlip DE, Jeon C, Dreyer P, Kuntz RE, Baim DS, Jacobs AK. Rationale and design of the MASS COMM trial: A randomized trial to compare percutaneous coronary intervention between MASSachusetts hospitals with cardiac surgery on-site and COMMunity hospitals without cardiac surgery on-site. American Heart Journal 2011; 162(5):826-831.

231.   Sedrakyan A, **Normand S-LT**, Dabic S, Jacobs S, Graves S, Marinac-Dabic D. Comparative assessment of implantable hip devices with bearing surfaces: systematic appraisal of evidence. British Medical Journal 2011; 343:d7434. PMC3226583.

232.   Pinto DS, Ogbonnaya A, Sherman SA, Tung P, **Normand S-L**. Bivalirudin therapy is associated with improved clinical and economic outcomes in ST-elevation myocardial infarction patients undergoing percutaneous coronary intervention: results from an observational database. Circ Cardiovasc Qual Outcomes 2012; 5(1):52-61.

233.   Chen J, Ross JS, Carlson MD, Lin Z, **Normand S-L**, Bernheim SM, Drye EE, Ling SM, Han LF, Rapp MT, Krumholz HM. Skilled nursing facility referral and hospital readmission rates after heart failure or myocardial infarction. Am J Med. 2012; 125(1):100.e1-9.

234.   Shahian DM, Iezzoni LI, Meyer GS, Kirle L, **Normand S-LT**. Hospital-wide mortality as a quality metric: conceptual and methodological considerations. American Journal of Medical Quality 2012; 27(2):112-23.

235.   Drye E, **Normand S-LT,** Wang Y, Ross JS, Schreiner GC, Han L, Rapp M, Krumholz HM. Comparison of hospital-risk-standardized mortality rates using in-hospital and 30-day models: implications for hospital profiling. Annals of Internal Medicine 2012; 156:19-26.

236.   Fullerton CA, Epstein AM, Frank RG, **Normand S-L**, Fu CX, McGuire TG. Medication use and spending trends among children with ADHD in Florida's Medicaid program, 1996-2005. Psychiatric Services 2012; 63(2):115-21.

237.   Busch AB, Neelon B, Zelevinsky K, He Y, **Normand S-LT**. Accurately predicting bipolar mood outcomes – implications for the use of electronic databases. Medical Care 2012; 50(4):311-9.

238.   Goldman HH, Barry CL**, Normand S-LT**, Azzone V, Busch AB, Huskamp HA. Economic grand rounds: the price is right? Changes in the quantity of services used and prices paid in response to parity. Psychiatric Services 2012; 63(2):107-9.

239.   Yeh RW, **Normand S-LT**, Wang Y, Barr CD, Dominici F. Geographical disparities in the incidence and outcomes of hospitalized myocardial infarction: does a rising tide lift all boats? Circulation Cardiovascular Quality and Outcomes 2012; 5(2):197-204. PMC3310945.

240.   Hu S, Zheng Z, Yuan X, Wang Y, **Normand S-LT**, Ross JS, Krumholz HM. Coronary artery bypass graft surgery: Contemporary heart surgery center performance in China. Circulation Cardiovascular Quality and Outcomes Research 2012; 5(2):214-21. PMC3509783

241.   Shahian DM, Nordberg P, Meyer GS, Blanchfield BB, Mort DF, **Normand S-LT**. Contemporary performance of US teaching hospitals. Academic Medicine 2012; 87(6):701-8.

242.   Stamou SC. Robich M, Wolf RE, Lovett A, **Normand S-LT**, Selke FW. Effects of gender and ethnicity on outcomes after aortic valve replacement. Journal of Thoracic and Cardiovascular Surgery 2012,144(2):486-492.

243.   Bhaumik DK, Amatya A, **Normand S-LT**, Greenhouse J, Kaizar E, Neelon B, Gibbons RD. Meta-analysis of rare binary adverse event data. Journal of the American Statistical Association 2012; 107(498):555-567. PMC3665366

244.   Amin AP, Spertus JA, Cohen DJ, Chhatriwalla A, Kennedy KF, Vilain K, Salisbury AC, Venkitachalam L, Lai SM, Mauri L, **Normand SL**, Rumsfeld JS, Messenger JC, Yeh RW. Use of drug-eluting stents as a function of predicted benefit: clinical and economic implications of current practice. Arch Intern Med. 2012; 172(15):1145-52.

245. Kulkarni VT, Shah SJ, Bernheim SM, Wang Y, **Normand S-LT**, Han LF, Rapp MT, Krumholz HM. Regional associations between Medicare Advantage penetration and administrative claims-based measures of hospital outcomes. Medical Care 2012; 50(5):406-409.

246. Vidi VD, Matheny ME, Govindarajulu US, **Normand S-LT**, Robbins SL, Agarwal VV, Bangalore S, Resnic FS. Vascular closure device failure in contemporary practice. JACC Cardiovasc Interv. 2012; 5(8):837-44. PMC3427601.

247. Ross JS, Bernheim SM, Lin ZQ, Drye EE, Chen J, **Normand S-LT**, Krumholz HM. Based on key measures, care quality for Medicare enrollees at safety-net and non-safety-net hospitals was almost equal. Health Affairs 2012; 31(8):1739-1748. PMC3527010

248. Partovian C, Gleim S, Mody PS, Li SX, Wang H, Strait KM, Allen LA, Lagu TC, **Normand S-LT,** Krumholz HM. Hospital patterns of use of positive inotropic agents in patients with heart failure. Journal of the American College of Cardiology 2012; 60(15):1402-1409.

249. Venkatesan DV, Matheny ME, Govindarajulu US, **Normand S-LT**, Robbins SL, Agarwal VV, Bangalore S, Resnic FS. Vascular Closure Devices in Contemporary Practice. Journal of the American College of Cardiology: Cardiovascular Interventions 2012; 5(8):837-844.

250. Yeh RW, Rosenfield K, Zelevinsky K, Mauri L, Sakhuja R, Shivapour D, Lovett A, Weiner B, Jacobs AK, **Normand S-LT**. Sources of hospital variation in short term readmission rates after percutaneous coronary intervention. Circulation Interventions 2012; 5(2):227-236.

251. Normand SL. Registry studies for improving the quality of cardiovascular care: the role of variance components. Circ Cardiovasc Qual Outcomes. 2012; 5(5):e42-3.

252. Horvitz-Lennon M, Alegria M, **Normand S-LT**. The effect of race-ethnicity and geography on adoption of innovations in the treatment of schizophrenia. Psychiatric Services 2012; 63(12):1171-1177. PMC3666934

253. Marinac-Dabic D, **Normand S-LT**, Sedrakyan A, Gross T. Epidemiologic studies of medical devices: Methodologic considerations for implantable device. In: Pharmacoepidemiology. 5 ed. Strom BL, Kimmel SE, Hennessy S, editors. Hoboken, NJ: Wiley-Blackwell; 2012. Chapter 27, pp.469-486.

254. Horvitz-Lennon M, Donohue J, Lave JR, Alegria M, **Normand S-LT**. The effect of race-ethnicity on the comparative effectiveness of clozapine among Medicaid beneficiaries. Psychiatric Services 2013; 64(3):230-7. PMC3713199

255. Jacobs AK, Kushner FG, Ettinger SM, Guyton RA, Anderson JL, Ohman EM, Albert NM, Antman EM, Arnett DK, Bertolet M, Bhatt DL, Brindis RG, Creager MA, DeMets DL, Dickersin K, Fonarow GC, Gibbons RJ, Halperin JL, Hochman JS, Koster MA, **Normand S-LT**, Ortiz E, Peterson ED, Roach WH Jr, Sacco RL, Smith SC Jr, Stevenson WG, Tomaselli GF, Yancy CW, Zoghbi WA. ACCF/AHA clinical practice guideline methodology summit report: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013; 127(2):268-310.

256. Busch A, Yoon F, Barry C, Azzone V, **Normand S-L**, Goldman H, Huskamp H. The effects of mental health parity on spending and utilization for bipolar, major depression and adjustment disorders. The American Journal of Psychiatry 2013;170:180-187. PMC4169195

257. Krumholz HM, Lin Z, Keenan PS, Chen J, Ross JS, Drye EE, Bernheim SM, Wang Y, Bradley EH, Han LF, **Normand S-LT**. Relationship between hospital readmission and mortality rates for patients hospitalized with acute myocardial infarction, heart failure, or pneumonia. Journal of the American Medical Association 2013; 309(6):587-593. PMC3621028

258. Barry CL, Chien AT, **Normand S-LT**, Busch AB, Azzone V, Goldman HH, Huskamp HA. Parity and out-of-pocket spending for children with high mental health or substance abuse expenditures. Pediatrics 2013; 131(3):2012-1491. PMC3581843

259.   Bittl JA, He Y, Jacobs AK, Yancy CW, **Normand S-LT**. Bayesian methods affirm use of percutaneous coronary angiography intervention to improve survival in patients with unprotected left main coronary artery disease. Circulation 2013;127(22):2177-85.

260.   Kramer DB, Kennedy KF, Noseworthy PA, Buxton AE, Josephson ME, **Normand S-L,** Spertus JA, Zimetbaum PJ, Reynolds MR, Mitchell SL. Characteristics and outcomes of patients receiving new and replacement implantable cardioverter-defibrillators: results from the NCDR. Journal of the American College of Cardiology 2013; 6:488-497. PMC4001927

261.   Rochon PA, Gruneir A, Gill SS, Wu W, Fisher HD, Bronskill SE, **Normand S-LT**, Austin PC, Seitz DP, Bell CM, Fu L, Lipscombe L, Anderson GM, Gurwitz JH. Older men with dementia are at greater risk than women of serious events after initiating antipsychotic therapy. Journal of the American Geriatrics Society 2013; 61:55–61.

262.   Kulkarni VT, Ross JS, Wang Y, Nallamothu BK, Spertus JA, **Normand S-LT**, Masoudi FA, Krumholz HM. Regional density of cardiologists and rates of mortality for acute myocardial infarction and heart failure. Circulation: Cardiovascular Quality and Outcomes 2013; 6(3):352-9.

263.   Peterson PN, Varosy PD, Heidenreich PA, Wang Y, Dewland TA, Curtis JP, Go AS, Greenlee RT, Magid DJ, **Normand S-LT**, Massoudi FA. Association of single versus dual chamber ICDs with mortality, readmissions and complications among patients receiving an ICD for primary prevention. JAMA 2013; 309(19):2025. PMC3752924

264.   Wasfy JH, Rosenfeld K, Zelevinsky K, Sakhuja R, Lovett A, Spertus JA, Winner NJ, Mauri L, **Normand S-LT**, Yeh RW. A prediction model to identify patients at high risk for 30-day readmission after percutaneous coronary intervention. Circulation: Cardiovascular Quality and Outcomes 2013; 6(4):429-35.

265.   Jacobs AK, **Normand SL-T**, Massaro JM, Cutlip DE, Carozza JP, Marks AD, Murphy NM, Romm, IK, Biondolillo, Mauri L. Nonemergency PCI at hospitals with or without on-site cardiac surgery. New England Journal of Medicine 2013; 368(16):1498-508.

266.   **Normand S-LT**. Strengthening our capability to analyse big data streams in health systems: The challenges. In: OECD. ICTs and the Health Sector: Towards Smarter Health and Wellness Models, OECD Publishing, 2013:129-140.

267.   McGuire TG, Glazer J, Newhouse JP, **Normand S-L**, Shi J, Sinaiko AD, Zevekas S. Integrating risk adjustment and enrollee premiums in health plan payment. Journal of Health Economics 2013, 32(6): 1263-77. PMC3855655

268.   Alegría M, Roter DL, Valentine A, Chen CN, Li X, Lin J, Rosen D, Lapatin S, **Normand S-LT**, Larson S, Shrout PE. Patient-clinician ethnic concordance and communication in mental health intake visits. Patient Educ Couns. 2013; 93(2):188-96. PMC3800470.

269.   Jacobs AK, **Normand S-LT**, Mauri L. PCI at hospitals with or without on-site cardiac surgery. New England Journal of Medicine 2013; 25;369(4):392-3.

270.   He Y, Selck F, **Normand S-LT**. On the accuracy of classifying hospitals on their performance measures. Statistics in Medicine 2014; 333(7): 1081-1103.

271.   Wasfy JH, Strom JB, O'Brien C, Zai AH, Luttrell J, Kennedy KF, Spertus JA, Zelevinsky K, **Normand S-LT**, Mauri L, Yeh RW. Causes of short-term readmission after percutaneous coronary intervention. Circ Cardiovasc Interv. 2014; 7(1):97-103.

272.   Barreto-Filho JA, Wang Y, Rathore SS, Spatz ES, Ross JS, Curtis JP, Nallamothu BK, **Normand S-LT,** Krumholz HM. Transfer Rates from Nonprocedure Hospitals after Initial Admission and Outcomes among Elderly Patients with Acute Myocardial Infarction. JAMA Internal Medicine 2014; 174(2): 213-222.

273.   Kramer DB, Kennedy KF, Noseworthy PA, Buxton AE, Josephson ME, **Normand S-LT**, Spertus JA, Zimetbaum PJ, Mitchell SL, and Reynolds MR. Mortality Risk Following Replacement Implantable

Cardioverter-Defibrillator Implantation at End of Battery Life: Results from the NCDR®. Heart Rhythm 2014; 11(2):255-261.

274. Shahian DM, Xiu S, Meyer GS, **Normand S-LT**. Comparing teaching versus nonteaching hospitals: the association of patient characteristics with teaching intensity for three common medical conditions. Academic Medicine 2014; 89:94-106.

275. Shahian DM, Xiu S, Meyer GS, **Normand S-LT**. Hospital teaching intensity and mortality for acute myocardial infarction, heart failure, and pneumonia. Medical Care 2014; 52:38-46.

276. Betancourt T, Yang F, Bolton P, **Normand S-LT**. Developing an African youth psychosocial assessment: an application of item response theory. International Journal of Methods in Psychiatric Research 2014; 23(2):142-160. PMC4098666

277. Alameddine A, Visintainer P, **Normand S-LT**, Wolf RE, Alameddine Y. Cancer rates in adults after cardiac interventions: a preliminary observational report. American Journal of Clinical Oncology. Epub 2014 Sep 5.

278. Matteau A, Yeh RW, Kereiakes D, Orav EJ, Massaro J, Steg PG, **Normand S-LT**, Cutlip DE, Mauri L. Frequency of the use of low- versus high-dose aspirin in dual antiplatelet therapy after percutaneous coronary intervention (from the Dual Antiplatelet Therapy Study). American Journal of Cardiology 2014; 113(7):1146-1152.

279. Li J, Dharmarajan K, Li X, Lin Z, **Normand S-LT**, Krumholz HM, Jiang L (China PEACH Collaborative Group). Protocol for the China PEACH (Patient-centered evaluative assessment of cardiac events) retrospective study of coronary catheterization and percutaneous coronary intervention. British Medical Journal Open 2014; 4: e004595.

280. Horvitz-Lennon M, Volya R, Donohue J, Lave JR, Stein B, **Normand S-LT**. Disparities in quality of care among publicly insured adults with schizophrenia in four large US states: 2002–2008. Health Services Research 2014; 4 9(4):1121-1144. PMC4111783

281. McGuire TG, Newhouse JP, **Normand S-LT**, Shi J, Zuvekas S. Assessing incentives for service-level selection in private health insurance exchanges. Journal of Health Economics 2014; 35:47-63. PMC4040329.

282. Amatya A, Bhaumik D**, Normand S-LT**, Greenhouse J, Kaizar E, Neelon B, Gibbons RD. Likelihood-based random effect meta-analysis of binary events. Journal of Biopharmaceutical Statistics 2015; 25(5):984-1004.

283. Albert MA, Ayanian JZ, Silbaugh TS, Lovett A, Resnic F, Jacobs A, **Normand S-LT**. Early results of Massachusetts health care reform on racial, ethnic, and socioeconomic disparities in cardiovascular care. Circulation 2014;129:2528-2538.

284. Xu X, Li S-X, Lin H, **Normand S-LT**, Kim N, Ott LS, Lagu T, Duan M, Kroch EA, Krumholz HM. "Phenotyping" hospital value of care for patients with heart failure. Health Services Research 2014;49(6):2000-2016. PMC4254136

285. Yeh RW, Vasaiwala S, Forman DE, Silbaugh TS, Zelevinski K, Lovett A, **Normand S-LT**, Mauri L. Instrumental variable analysis to compare effectiveness of stents in the extremely elderly. Circulation Cardiovascular Quality Outcomes Research 2014; 7:1 18-124.

286. Krumholz HM, **Normand S-LT**, Wang Y. Trends in hospitalizations and outcomes for acute cardiovascular disease and stroke: 1999 – 2011. Circulation 2014; 130: 966-975. PMC4171056

287. Wasfy JH, Strom JB, Waldo SW, O'Brien C, Wimmer NJ, Zai AH, Luttrell J, Spertus JA, Kennedy KF, **Normand S-LT**, Mauri L, Yeh RW. Clinical preventability of 30-day readmission after percutaneous coronary intervention. Journal of the American Heart Association 2014, 3(5):e001290. PMC4323776

288. Mauri L, Kereiakes DJ, Yeh RW, Driscoll-Shempp P, Cutlip DE, Steg PG, **Normand S-LT**, Braunwald E, Wiviott SD, Cohen DJ, Holmes DR, Krucoff MW, Hermiller J, Dauerman HL, Simon DI, Kandzari DE, Garratt KN, Lee DP, Pow TK, Lee PV, Rinaldi MJ, Massaro JM, for the DAPT

Study Investigators. Twelve or 30 months of dual antiplatelelet therapy after drug-eluting stents. New England Journal of Medicine 2014; 371(23): 2155-2166.

289.   He Y, Bittle JA, Wouhib A, **Normand S-LT**. Case study in cardiovascular medicine. In: Network Meta-Analysis: Evidence Synthesis with Mixed Treatment Comparison. Biondi-Zoccai, editor. Hauppauge, NY: Nova Science Publishers, Inc.; 2014. Chapter 17.

290.   Yeh RW, Mauri L, Wolf RE, Romm IK, Lovett A, Shahian D, **Normand S-LT**. Population trends in rates and outcomes of coronary revascularization. JAMA Internal Medicine 2015: 175(3): 454-456.. PMC4385321

291.   Bangalore S, Silbaugh TS**, Normand S-LT**, Lovett AF, Welt FGP, Resnic FS. Drug eluting stents versus bare metal stents prior to noncardiac surgery. Catheterization and Cardiovascular Interventions 2015; 85:533-541.

292.   Kumar A, Matheny ME, Ho KK, Yeh RW, Piemonte TC, Waldman H, Shah PB, Cope R, **Normand SLT**, Donnelly S, Robbins S, Resnic FS. The data extraction and longitudinal trend analysis network study of distributed automated postmarket cardiovascular device safety surveillance. Circ Cardiovasc Qual Outcomes 2015 Jan;8(1):38-46.

293.   Yeh RW, Czarny MJ, **Normand S-LT**, Kereiakes DJ, Holmes DR, Brindis RG, Weaver WD, Rumsfeld JS, Rose MT, Kim S, Driscoll-Shempp P, Mauri L. Evaluating the generalizability of a large streamlined cardiovascular trial. Comparing hospitals and patients in the dual antiplatelet therapy study versus the national cardiovascular data registry. Circulation Cardiovascular Quality Outcomes Research 2015; 8: 96-102.

294.   Dharmarajan K, Hsieh AF, Kulkarni VT, Lin Z, Ross JS, Horwitz LI, Kim N, Suter LG, Lin H, **Normand S-LT**, Krumholz HM. Trajectories of risk after hospitalization for heart failure, acute myocardial infarction, or pneumonia: retrospective cohort study. BMJ 2015; 350: h411. PMC4353309

295.   Shahian DM, **Normand SL**. What is a performance outlier? BMJ Qual Saf. 2015; 24(2):95-9.

296.   Kunz L, Rose S, Spiegelman D, **Normand S-LT**. An overview of approaches to causal inference. In C. Gatsonis, S. Morton, eds. In: Methods in Comparative Effectiveness Research. Boca Raton: Chapman and Hall/CRC. 2015.

297.   Kunz L, **Normand S-LT**, Sedrakyan A. Meta-analysis of rate ratios with differential follow-up by treatment arm: Inferring comparative effectiveness of medical devices. Statistics in Medicine, 2015; DOI: 10.1002/sim.6530. PMC4523415

298.   Horvitz-Lennon M, Volya R, Garfield R, Donohue JM, Lave JR**, Normand S-LT**. Where you live matters: quality and racial/ethnic disparities in schizophrenia care in four state Medicaid programs. Health Services Research 2015; 50(5):1710-29. PMC4600368

299.   Rose S, Shi J, McGuire TG, **Normand S-LT**. Matching and imputation methods for risk adjustment in the health insurance marketplaces. Statistics in Biosciences (Special Issue on Big Data). 2017 Dec;9(2):525-542. doi: 10.1007/s12561-015-9135-7. PMC5824732

300.   Anderson TS, Huskamp H, Epstein AJ, Barry CL, Men A, Berndt EN, Horvitz-Lennon M, **Normand S-LT**, Donohue J. Antipsychotic Prescribing: Do conflict of interest policies make a difference? Medical Care 2015; 53(4):338-45. PMC4360919

301.   Nallamothu BK, **Normand S-LT**, Wang Y, Hofer TP, Brush JE, Messenger JC, Rumsfeld JS, Krumholz HM. Relation between door-to-balloon times and mortality after primary percutaneous coronary intervention over time: a retrospective study. The Lancet 2015; 385(9973):1114-22. PMC4409657

302.   Kramer DB, Mitchell SL, Monteiro J, Jones PW**, Normand S-LT**, Hayes DL, Reynolds MR. Patient Activity and Survival Following Implantable Cardioverter-Defibrillator Implantation: The ALTITUDE Activity Study. J Am Heart Assoc. 2015; 4(5). PMC4599410

303. Shahian DM, He X, Jacobs JP, Kurlansky PA, Badhwar V, Cleveland JC Jr, Fazzalari FL, Filardo G, **Normand SL-T**, Furnary AP, Magee MJ, Rankin JS, Welke KF, Han J, O'Brien SM. The Society of Thoracic Surgeons Composite Measure of Individual Surgeon Performance for Adult Cardiac Surgery: A Report of The Society of Thoracic Surgeons Quality Measurement Task Force. Ann Thorac Surg. 2015;100(4): 1315-24.

304. Krumholz HM, Nuti SV, Downing NS, **Normand S-LT**, Wang Y. Mortality, hospitalizations, and expenditures for the Medicare population age 65 and older, 1999-2013. JAMA 2015; 314(4):355-65.

305. Krucoff, MW, Sedrakyan, A, **Normand S-LT**. Bridging unmet medical device ecosystem needs with strategically coordinated registry networks. JAMA 2015; 314(16):1691-2.

306. Akar JG, Bao, H, Jones P, Wang Y, Varosy P,Masoudi FA, Stein K, Saxon LA, **Normand S-LT**, Curtis JP. Use of remote monitoring is associated with lower risk of adverse outcomes among patients with implanted cardiac defibrillators. Circulation: Arrhythmia and Electrophysiology 2015; 8(5):1173-80.

307. Busch AB, Epstein AM, McGuire TG, **Normand S-LT**, Frank RG. Thirty-day hospital readmission for Medicaid enrollees with schizophrenia: The role of local health care systems. J Ment Health Policy Econ. 2015; 18(3):115-24. PMC4764135

308. Bucholz EM, Ma S, **Normand S-LT**, Krumholz HM. Race, Socioeconomic status, and life expectancy after acute myocardial infarction. Circulation 2015;132(14):1338-46.

309. The Atlantic Divide In Coronary Heart Disease: Health Technologies Use In The Us And Portugal. Lobo MF, Azzone V, Melica B, Bacelar-Nicolau L, Nisa C, Freitas A, Azevedo LF, Rocha-Gonçalves FN, Resnic FS, Teixeira-Pinto A, Pereira-Miguel J, **Normand S-LT**, Costa-Pereira A. Value Health. 2015 Nov;18(7):A402. doi: 10.1016/j.jval.2015.09.930. Epub 2015 Oct 20.

310. Dehmer GJ, Jennings J, Madden RA, Malenka DJ, Masoudi FA, McKay CR, Ness DL, Rao SV, Resnic FS, Ring ME, Rumsfeld JS, Shelton ME, Simanowith MC, Slattery LE, Weintraub WS, Lovett A, **Normand S-LT**. The National Cardiovascular Data Registry voluntary public reporting program: An interim report from the NCDR Public Reporting Advisory Group. Journal of the American College of Cardiology 2016; 67(2):205-15.

311. Horvitz-Lennon M, Braun D, **Normand S-LT**. Challenges in the use of administrative data for heart failure services research. Journal of Cardiac Failure 2016; 22(1):61-3.

312. Nuti SV, Qin L, Rumsfeld JS, Ross JS, Masoudi FA, **Normand S-LT**, Murugiah K, Bernheim SM, Suter LG, Krumholz HM. Association of admission to Veterans Affairs hospitals vs non-Veterans Affairs hospitals with mortality and readmission rates among older men hospitalized with acute myocardial infarction, heart failure, or pneumonia. JAMA 2016; 315(6):582-92.

313. Yeh RW, Secemsky EA, Kereiakes DJ, **Normand S-LT**, Gershlick AH, Cohen DJ, Spertus JA, Steg PG, Cutlip DE, Rinaldi MJ, Camnzind E, Wijns W, Apruzzese PK, Song Y, Massaro JM, Mauri L, on behalf of the DAPT study investigators. Development and validation of a prediction rule for benefit and harm of dual antiplatelet therapy beyond one year after percutaneous coronary intervention. JAMA. 2016 Apr 26;315(16):1735-49. doi: 10.1001/jama.2016.3775.

314. Shahian DM, **Normand S-LT**, Friedberg MW, Hutter MM, Pronovost PJ. Rating the raters: The inconsistent quality of health care performance measurement. Annals of Surgery 2016;264(1):36-8.

315. Xu X, Li S-X, Lin H, **Normand S-LT,** Lagu T, Desai N, Duan M, Kroch EA, Krumholz HM. Hospital phenotypes in the management of patients admitted for acute myocardial infarction. Medical Care 2016;54(10):929-36.

316. **Normand S-LT**, Ash AS, Fienberg SE, Stukel TA, Utts J, Louis TA. League tables for hospital comparisons. Annual Review of Statistics and Its Applications 2016;3(1):21-50.

317. Krumholz H, Bucholz EM, Butala N, **Normand S-LT**, Yun. Association of guideline-based admission treatments and life expectancy after myocardial infarction in elderly Medicare beneficiaries. J Am Coll Cardiol. 2016; 67(20):2378-2391.

318.   Hill EV, Wake M, Carapinha R**, Normand S-LT**, Wolf RE, Norris K, Reede JY. Rationale and design of the Women and Inclusion in Academic Medicine Study. Ethn Dis. 2016; 26(2):245-54. PMC4836906

319.   Gomes M, Hatfield L, **Normand S-LT**. Handling incomplete correlated continuous and binary outcomes in meta-analysis of individual participant data. Stat Med. 2016 Apr 18; 35(21):3676-89. PMC4982066

320.   Donohue JM, **Normand S-LT**, Horvitz-Lennon M, Men A, Berndt ER, Huskamp HA. Regional variation in physician adoption of antipsychotics: Impact on US Medicare expenditures. J Ment Health Policy Econ 2016; 19:69-78.

321.   Kramer DB, Reynolds MR, **Normand S-LT**, Parzynski CS, Spertus JA, Mor V, Mitchell SL. Hospice use following implantable cardioverter-defibrillator implantation in older patients: Results from the National Cardiovascular Data Registry. Circulation 2016; 133(21):2030-7.

322.   Dharmarajan K, Qin L, Lin Z, Horwitz LI, Ross JS, Drye EE, Keshawarz A, **Normand S-LT**, Krumholz HM, Bernheim SM. Declining admission rates And thirty-day readmission rates positively associated even though patients grew sicker over time. Health Aff 2016; 35(7):1294-130.

323.   Wang Y , Eldridge N, Metersky ML, Sonnenfeld N, Fine JM, Pandolfi MM, Eckenrode S, Bakullari A, Galusha DH, Jaser L, Verzier NR, Nuti SV, Hunt D, **Normand S-LT**, Krumholz HM. Association between Hospital Performance on Patient Safety and 30-day Mortality and Unplanned Readmission for Medicare Fee-for-Service Patients with Acute Myocardial Infarction. J Am Heart Assoc. 2016 Jul 12;5(7).

324.   Xu X, Li SX, Lin H, **Normand S-LT**, Lagu T, Desai N, Duan M, Kroch EA, Krumholz HM. Hospital phenotypes in the management of patients admitted for acute myocardial infarction. Med Care. 2016 Oct;54(10):929-36.

325.   Bernheim SM, Parzynski CS, Horwitz L, Lin Z, Araas MJ, Ross JS, Drye EE, Suter LG, **Normand S-LT**, Krumholz HM. Accounting For Patients' Socioeconomic Status Does Not Change Hospital Readmission Rates. Health Aff 2016; 35(8):1461-70.

326.   Wimmer NJ, Robbins S, Ssemaganda H, Yang E, **Normand S-LT**, Matheny ME, Herz N, Rising JP, Resnic FS. Assessing the Cost Burden of United States FDA-mandated Post-Approval Studies for Medical Devices. J Health Care Finance. 2016 Summer;2016(Spec Features).

327.   Yeh RW, Secemsky EA, Kereiakes DJ, **Normand S-LT**, Gershlick AH, Cohen DJ, Spertus JA, Steg PG, Cutlip DE, Rinaldi MJ, Camenzind E, Wijns W, Apruzzese PK, Song Y, Massaro JM, Mauri L; DAPT Study Investigators. Development and Validation of a Prediction Rule for Benefit and Harm of Dual Antiplatelet Therapy Beyond 1 Year After Percutaneous Coronary Intervention. JAMA. 2016 Apr 26;315(16):1735-49.

328.   Hatfield LA, Kramer DB, Voyla R, Reynolds MR, **Normand S-LT**. Geographic and Temporal Variation in Cardiac Implanted Electric Devices to Treat Heart Failure. J Am Heart Assoc. 2016 Jul 28;5(8).

329.   Bucholz EM, Butala NM, Ma S, **Normand S-LT**, Krumholz HM. Life Expectancy after Myocardial Infarction, According to Hospital Performance. N Engl J Med. 2016 Oct 6; 375(14):1332-1342.

330.   Spertus JV, **Normand S-LT**, Wolf RE, Cioffi M, Lovett A, Rose S. Assessing Hospital Performance Following Percutaneous Coronary Intervention Using Big Data. Circ Cardiovasc Qual Outcomes. 2016 Nov 8 ; 9(6):659-669. PMC5341139

331.   Hatfield LA, Baugh CM, Azzone V, **Normand S-L T**. Regulator Loss Functions and Hierarchical Modeling for Safety Decision Making. Med Decis Making. 2017 Jul;37(5):512-522.

332.   Chughtai B, Barber MD, Mao J, Forde JC, **Normand S-L T**, Sedrakyan A. Association Between the Amount of Vaginal Mesh Used With Mesh Erosions and Repeated Surgery After Repairing Pelvic Organ Prolapse and Stress Urinary Incontinence. JAMA Surg. 2017 Mar 1;152(3):257-263.

333. Resnic FS, Majithia A, Marinac-Dabic D, Robbins S, Ssemaganda H, Hewitt K, Ponirakis A, Loyo-Berrios N, Moussa I, Drozda J, **Normand S-L T**, Matheny ME. Registry-Based Prospective, Active Surveillance of Medical-Device Safety. N Engl J Med. 2017 Feb 9;376(6):526-535. PMC6145132

334. Kunz LM, Rose S, Spiegelman D, **Normand S-L T**. Methods in Comparative Effectiveness Research. Gatsonis C, Morton SC, editors. Boca Raton, FL: Chapman & Hall/CRC Biostatistics Series; 2017. Chapter 1, pp.3-38.

335. Dharmarajan K, Lin Z, **Normand S-L T**. Hospitals' Role In Readmissions. Health Aff (Millwood). 2017 Feb 1;36(2):382.

336. Tang Y, Horvitz-Lennon M, Gellad WF, Lave JR, Chang CH, **Normand S-L T**, Donohue JM. Prescribing of Clozapine and Antipsychotic Polypharmacy for Schizophrenia in a Large Medicaid Program. Psychiatr Serv. 2017 Jun 1;68(6):579-586.

337. Kramer DB, Reynolds MR, **Normand S-L T**, Parzynski CS, Spertus JA, Mor V, Mitchell SL. Nursing Home Use After Implantable Cardioverter-Defibrillator Implantation in Older Adults: Results from the National Cardiovascular Data Registry. J Am Geriatr Soc. 2017 Feb;65(2):340-347. PMC5325141

338. Alameddine AK, Visintainer P, **Normand S-L T**, Wolf RE, Alameddine YA. Cancer Rates in Adults After Cardiac Interventions: A Preliminary Observational Report. Am J Clin Oncol. 2017 Apr;40(2):122-124.

339. Newhouse JP, **Normand S-L T**. Health Policy Trials. N Engl J Med. 2017 Jun 1;376(22):2160-2167. doi: 10.1056/NEJMra1602774.

340. Zheng Z, Zhang H, Yuan X, Rao C, Zhao Y, Wang Y, **Normand S-L T**, Krumholz HM, Hu S. Comparing Outcomes of Coronary Artery Bypass Grafting Among Large Teaching and Urban Hospitals in China and the United States. Circ Cardiovasc Qual Outcomes. 2017 Jun;10(6).

341. Mulcahy AW, **Normand S-L T**, Newcomer J, Colaiaco B, Donohue JM, Lave JR, Keeler E, Sorbero M, Horvitz-Lennon M. Simulated Effects of Policies to Reduce Diabetes Risk among Adults with Schizophrenia Receiving Antipsychotics. Psychiatr Serv. 2017 Dec 1;68(12):1280-1287. doi: 10.1176/appi.ps.201500485. Epub 2017 Sep 1.

342. Dharmarajan K, Wang Y, Lin Z, **Normand S-L T**, Ross JR, Horwitz LI, Desai NR, Suter LG, Drye EE, Bernheim SM, Krumholz HM. Association of changing hospital readmission rates with mortality rates after hospital discharge. JAMA. 2017;318(3):270-278.

343. Ross JS, Bates J, Parzynski CS, Akar J, Curtis JP, Desai NR, Freeman JV, Gamble GM, Kuntz R, Li SX, Marinac-Dabic D, Masoudi FA, **Normand S-L T**, Ranasinghe I, Shaw RE, Krumholz H. Can machine learning complement traditional medical device surveillance? A case-study of dual-chamber implantable cardioverter–defibrillators. Med Devices (Auckl). 2017 Aug 16;10:165-188. PubMed Central PMCID: PMC5566316.

344. Shahian DM, Liu X, Rossi LP, Mort EA, **Normand S-LT**. Safety culture and mortality after acute myocardial infarction: a study of Medicare beneficiaries at 171 hospitals. Health Serv Res. 2018 Apr;53(2):608-631. doi: 10.1111/1475-6773.12725. Epub 2017 Oct 9.

345. Chien A, Newhouse J; Iezzoni L, Petty C, **Normand S-L T**, Schuster M. Socioeconomic Background and Commercial Health Plan Spending. Pediatrics. 2017 Nov;140(5). pii: e20171640. doi: 10.1542/peds.2017-1640. Epub 2017 Oct 3.

346. Lobo MF, Azzone V, Azevedo LF, Melica B, Freitas A, Bacelar-Nicolau L, Rocha-Gonçalves FN, Nisa C, Teixeira-Pinto A, Pereira-Miguel J, Resnic FS, Costa-Pereira A, **Normand S-L T**. A comparison of in-hospital acute myocardial infarction management between Portugal and the United States: 2000–2010. Int J Qual Health Care. 2017 Oct 1;29(5):669-678. doi: 10.1093/intqhc/mzx092.

347. Lobo MF, Azzone V, Resnic FS, Melica B, Teixeira-Pinto A, Azevedo LF, Freitas A, Nisa C, Bacelar-Nicolau L, Rocha-Gonçalves FN, Pereira-Miguel J, Costa-Pereira A, **Normand S-L T**. The Atlantic divide in coronary heart disease: Epidemiology and patient care in the US and Portugal.

Rev Port Cardiol. 2017 Sep;36(9):583-593. doi: 10.1016/j.repc.2016.09.021. Epub 2017 Sep 6. English, Portuguese.

348. Bacelar-Nicolau L, Rodrigues T, Fernandes E, Lobo M, Fernandes Nisa C, Azzone V, Teixeira-Pinto A, Costa-Pereira A, **Normand S-LT**, Pereira-Miguel J. Picturing inequities for health impact assessment: linked electronic records, mortality and regional disparities in Portugal. Impact Assessment and Project Appraisal. 2018/01/02 2018;36(1):90-104.

349. Välimäki M, Yang M, **Normand S-LT**, Lorig KR, Anttila M, Lantta T, Pekurinen V, Adams CE. Study protocol for a cluster randomised controlled trial to assess the effectiveness of user-driven intervention to prevent aggressive events in psychiatric services. BMC Psychiatry. 2017 Apr 4;17(1):123.

350. Krumholz HM, Wang K, Lin Z, Dharmarajan K, Horwitz LI, Ross JS, Drye EE, Bernheim SM, **Normand S-LT**. Hospital-Readmission Risk - Isolating Hospital Effects from Patient Effects. N Engl J Med. 2017 Sep 14;377(11):1055-1064. doi: 10.1056/NEJMsa1702321.

351. Nuti, SV, Wang Y, Masoudi FA, Nunez-Smith, M, **Normand, S-LT**, Murugiah, K, Rodríguez-Vilá O, Ross JS, Krumholz HM. Quality of Care in the United States Territories, 1999–2012. Medical Care. 2017 Oct; 55(10):886-892. doi: 10.1097/MLR.0000000000000797

352. Peterson PN, Greenlee RT, Go AS, Magid DJ, Cassidy-Bushrow A, Garcia-Montilla R, Glenn KA, Gurwitz JH, Hammill SC, Hayes J, Kadish A, Reynolds K, Sharma P, Smith DH, Varosy PD, Vidaillet H, Zeng CX, **Normand S-LT**, Masoudi FA. Comparison of Inappropriate Shocks and Other Health Outcomes Between Single- and Dual-Chamber Implantable Cardioverter-Defibrillators for Primary Prevention of Sudden Cardiac Death: Results From the Cardiovascular Research Network Longitudinal Study of Implantable Cardioverter-Defibrillators. J Am Heart Assoc. 2017 Nov 9;6(11). PMC5721776.

353. Keating NL, Huskamp HA, Schrag D, McWilliams JM, McNeil BJ, Landon BE, Chernew ME, **Normand S-LT.** Diffusion of Bevacizumab Across Oncology Practices: An Observational Study. Med Care. 2018 Jan;56(1):69-77. doi: 10.1097/MLR.0000000000000840. PMCID: PMC5726588

354. Krumholz HM, **Normand S-LT**, Wang Y. Geographical Health Priority Areas For Older Americans. Health Aff (Millwood). 2018 Jan;37(1):104-110. doi: 10.1377/hlthaff.2017.0744.

355. Spertus JV, Horvitz-Lennon M, Abing H, **Normand S-L T.** Risk of weight gain for specific antipsychotic drugs: a meta-analysis. NPJ Schizophr. 2018 Jun 27;4(1):12. doi: 10.1038/s41537-018-0053-9. PMC6021430

356. Rochon PA, Gruneir AG, Gill SS, Wu W, Zhu L, Herrmann N, Bell CM, Austin PC, Stall NM, McCarthy L, Giannakeas V, Alberga A, Seitz DP, **Normand S-L T**, Gurwitz JH, Bronskill SE. Initial Cholinesterase Inhibitor Therapy Dose and Serious Events in Older Women and Men. J Am Geriatr Soc. 2018 Sep;66(9):1692-1699.

357. Spertus JV, **Normand S-L T**. Bayesian propensity scores for high-dimensional causal inference: A comparison of drug-eluting to bare-metal coronary stents. Biom J. 2018 Jul;60(4):721-733. PMC6397046

358. Krumholz HM, Dharmarajan K, **Normand S-LT**. Evaluating Readmission-Need for More Clarity on Methods. JAMA Cardiol. 2018 Mar 1;3(3):265. doi: 10.1001/jamacardio.2017.5321.

359. Wilcox MA, Savitz AJ, Addington AM, Gray GS, Guinan EC, Jackson JW, Lehner T, **Normand S-L T**, Ranu H, Senthil G, Spertus J, Valeri L, Ross JS. The Open Translational Science in Schizophrenia (OPTICS) project: an open-science project bringing together Janssen clinical trial and NIMH data. NPJ Schizophr. 2018 Jun 27;4(1):14. doi: 10.1038/s41537-018-0055-7. Review.

360. Rose S, **Normand S-L T**. Double Robust Estimation for Multiple Unordered Treatments and Clustered Observations: Evaluating Drug-Eluting Coronary Artery Stents. Biometrics. 2019 Mar;75(1):289-296. doi: 10.1111/biom.12927. Epub 2018 Jul 13. PMC6330249

361. Zhou X, Liao X, Kunz LM, **Normand S-LT**, Wang M, Spiegelman D. A maximum likelihood approach to power calculations for stepped wedge designs of binary outcomes. Biostatistics. 2020 Jan 1;21(1):102-121. doi: 10.1093/biostatistics/kxy031.

362. Downing NS, Wang C, Gupta A, Wang YF, Nuti SV, Ross JS, Bernheim SM, Lin ZQ, **Normand S-L T**, Krumholz HM. Association of Racial and Socioeconomic Disparities With Outcomes Among Patients Hospitalized With Acute Myocardial Infarction, Heart Failure, and Pneumonia An Analysis of Within- and Between-Hospital Variation. JAMA Network Open. 2018;1(5):e182044. doi:10.1001/jamanetworkopen.2018.2044

363. Wang Y, Li J, Zheng X, Jiang ZH, Hu S, Wadhera RK, Bai XK, Lu JP, Wang QY, Li YT, Wu CQ, Xing C, **Normand S-LT**, Krumholz HM, Jiang LX. Risk Factors Associated With Major Cardiovascular Events 1 Year After Acute Myocardial Infarction. JAMA Network Open. 2018;1(4):e181079. doi:10.1001/jamanetworkopen.2018.1079

364. Rochon PA, Gruneir A, Bell CM, Savage R, Gill SS, Wu W, Giannakeas V, Stall NM, Seitz DP, **Normand S-L T**, Zhu L, Herrmann N, McCarthy L, Faulkner C, Gurwitz JH, Austin PC, Bronskill SE. Comparison of prescribing practices for older adults treated by female versus male physicians: A retrospective cohort study. PLoS ONE. 2018;13(10): e0205524. https://doi.org/10.1371/journal.pone.0205524

365. Khera R, Dharmarajan K, Wang Y, Lin Z, Bernheim SM, Wang Y, **Normand S-L T**, Krumholz HM. Association of the Hospital Readmissions Reduction Program With Mortality During and After Hospitalization for Acute Myocardial Infarction, Heart Failure, and Pneumonia. JAMA Netw Open. 2018 Sep 7;1(5):e182777. doi: 10.1001/jamanetworkopen.2018.2777.

366. Haneuse S, Dominici F, **Normand S-L T**, Schrag D. Assessment of Between-Hospital Variation in Readmission and Mortality After Cancer Surgical Procedures. JAMA Netw Open. 2018 Oct 5;1(6):e183038. doi: 10.1001/jamanetworkopen.2018.3038.

367. Kramer DB, **Normand S-L T**, Volya R, Hatfield LA. Facility-Level Variation and Clinical Outcomes in Use of Cardiac Resynchronization Therapy With and Without an Implantable Cardioverter-Defibrillator. Circ Cardiovasc Qual Outcomes. 2018 Dec;11(12):e004763. doi: 10.1161/CIRCOUTCOMES.118.004763.

368. Anoke SC, **Normand S-L T**, Zigler CM. Approaches to treatment effect heterogeneity in the presence of confounding. Stat Med. 2019 Jul 10;38(15):2797-2815. doi: 10.1002/sim.8143. Epub 2019 Mar 31.

369. Majithia A, Matheny ME, Paulus JK, Marinac-Dabic D, Robbins S, Ssemaganda H, Hewitt K, Ponirakis A, Loyo-Berrios N, Moussa I, Drozda J, **Normand S-LT**, Resnic FS. Comparative Safety of Aspiration Thrombectomy Catheters Utilizing Prospective, Active Surveillance of the NCDR CathPCI Registry. Circ Cardiovasc Qual Outcomes. 2019 Feb;12(2):e004666.

370. Gillis JC, Chang SC, Wang W, Simon NM, **Normand S-L T**, Rosner BA, Blacker D, DeVivo I, Okereke OI.. The relation of telomere length at mid-life to subsequent 20-year depression trajectories among women. Depress Anxiety. 2019 Jun;36(6):565-575. doi: 10.1002/da.22892. Epub 2019 Apr 8.

371. Krumholz HM, **Normand S-L** T, Wang Y. Twenty-Year Trends in Outcomes for Older Adults With Acute Myocardial Infarction in the United States. JAMA Netw Open. 2019;2(3):e191938. doi:10.1001/jamanetworkopen.2019.1938

372. Shahian DM, Torchiana DF, Engelman DT, Sundt TM, D'Agostino RS, Lovett AF, Cioffi MJ, Rawn JD, Birjiniuk V, Habib RH, **Normand S-L T**. Mandatory public reporting of cardiac surgery outcomes: The 2003 to 2014 Massachusetts experience. J Thorac Cardiovasc Surg. 2019 Jul;158(1):110-124.e9. doi: 10.1016/j.jtcvs.2018.12.072. Epub 2018 Dec 31.

373. Shang P, Liu GG, Zheng X, Ho M, Hu S, Li J, Jiang ZH, Li X, Bai XK, Gao Y, Xing C, Wang Y, **Normand S-L T**, Krumholz HM. Association Between Medication Adherence and 1-year Major

Cardiovascular Adverse Events After Acute Myocardial Infarction in China. J Am Heart Assoc. 2019 May 7;8(9):e011793. doi: 10.1161/JAHA.118.011793.

374.   Spertus JV, Horvitz-Lennon M, **Normand S-L T**. Bayesian Meta-Analysis of Multiple Continuous Treatments with Individual Participant-Level Data: An Application to Antipsychotic Drugs. Med Decis Making. 2019 Jul;39(5):583-592. PMC6786940

375.   Välimäki M, Yang M, Vahlberg T, Lantta T, Pekurinen V, Anttila M, **Normand S-L T**. Trends in the use of coercive measures in Finnish psychiatric hospitals: a register analysis of the past two decades. BMC Psychiatry. 2019 Jul 26;19(1):230. doi: 10.1186/s12888-019-2200-x.

376.   Krumholz HM, Coppi AC, Warner F, Triche EW, Li SX, Mahajan S, Li YX, Bernheim SM, Grady J, Dorsey K, Lin ZQ, **Normand S-L T**. Comparative Effectiveness of New Approaches to Improve Mortality Risk Models From Medicare Claims Data. JAMA Network Open. 2019;2(7):e197314. doi:10.1001/jamanetworkopen.2019.7314.

377.   Krumholz HM, Warner F, Coppi A, Triche EW, Li SX, Mahajan S, Li Y, Bernheim SM, Grady J, Dorsey K, Desai NR, Lin Z, **Normand S-L T**. Development and Testing of Improved Models to Predict Payment Using Centers for Medicare & Medicaid Services Claims Data. JAMA Netw Open. 2019 Aug 2;2(8):e198406. doi: 10.1001/jamanetworkopen.2019.8406.

378.   Brennan M, Wruck L, Pencina MJ, Clare RM, Lopes RD, Alexander JH, O'Brien S, Krucoff M, Rao SV, Wang TY, Curtis LH, Newby LK, Granger CB, Patel M, Mahaffey K, Ross JS, **Normand S-L T**, Eloff BC, Caños DA, Lokhnygina YV, Roe MT, Califf RM, Marinac-Dabic D, Peterson ED. Claims-Based Cardiovascular Outcome Identification for Clinical Research: Results from Seven Large Randomized Cardiovascular Clinical Trials. Am Heart J. 2019 Dec;218:110-122. doi: 10.1016/j.ahj.2019.09.002. Epub 2019 Sep 12.

379.   Charytan DM, Zelevinksy K, Wolf R, **Normand S-L T**. Identification of ESRD in Cardiovascular Procedural Databases. Kidney Int Rep. 2019 Jul 3;4(10):1477-1482. doi: 10.1016/j.ekir.2019.06.014. eCollection 2019 Oct.

380.   Krumholz HM, Wang Y, Wang K, Lin Z, Bernheim SM, Xu X, Desai NR, **Normand S-L T**. Association of Hospital Payment Profiles With Variation in 30-Day Medicare Cost for Inpatients With Heart Failure or Pneumonia. JAMA Netw Open. 2019 Nov 1;2(11):e1915604. doi: 10.1001/jamanetworkopen.2019.15604.

381.   Li X, Krumholz HM, Yip W, Cheng KK, De Maeseneer J, Meng Q, Mossialos E, Li C, Lu J, Su M, Zhang Q, Xu DR, Li L, **Normand S-L T**, Peto R, Li J, Wang Z, Yan H, Gao R, Chunharas S, Gao X, Guerra R, Ji H, Ke Y, Pan Z, Wu X, Xiao S, Xie X, Zhang Y, Zhu J, Zhu S, Hu S. Quality of primary health care in China: challenges and recommendations. Lancet. 2020 Jun 6;395(10239):1802-1812. doi: 10.1016/S0140-6736(20)30122-7.

382.   Adhikari S, Rose S, **Normand S-L T**. Nonparametric Bayesian Instrumental Variable Analysis: Evaluating Heterogeneous Effects of Coronary Arterial Access Site Strategies. Journal of the American Statistical Association. 2019 Dec 13:1-4. doi: 10.1080/01621459.2019.1688663.

383.   Mori M, Shahian DM, Huang CX, Li SX, **Normand S-L T**, Geirsson A, Krumholz HM. Surgeons: Buyer Beware – Does "Universal" Risk Prediction Model Apply to Patients Universally? J Thorac Cardiovasc Surg. 2020 Jul;160(1):176-179.e2. doi: 10.1016/j.jtcvs.2019.11.144. Epub 2020 Feb 19.

384.   Dhruva SS, Parzynski CS, Gamble GM, Curtis JP, Desai NR, Yeh RW, Masoudi FA, Kuntz R, Shaw RE, Marinac-Dabic D, Sedrakyan A, **Normand S-L T**, Krumholz HM, Ross JS. Attribution of Adverse Events Following Coronary Stent Placement Identified Using Administrative Claims Data. J Am Heart Assoc. 2020 Feb 18;9(4):e013606. doi: 10.1161/JAHA.119.013606. Epub 2020 Feb 16.

385.   Gilstrap L, Huskamp H, **Normand S-LT**. Assessment of Second-Generation Antidiabetic Medication Use Among Medicare Enrollees from 2007-2015. JAMA Netw Open. 2020 May 1;3(5):e205411. doi: 10.1001/jamanetworkopen.2020.5411.

386.   Wang Y, Leifheit E, **Normand S-L T**, Krumholz HM. Association Between Subsequent Hospitalizations and Recurrent Acute Myocardial Infarction Within 1 Year After Acute Myocardial

Infarction. J Am Heart Assoc. 2020 Mar 17;9(6):e014907. doi: 10.1161/JAHA.119.014907. Epub 2020 Mar 14.

387. Wang Y, Eldridge N, Metersky ML, Sonnenfeld N, Rodrick D, Fine JM, Eckenrode S, Galusha DH, Tasimi A, Hunt DR, Bernheim SM, **Normand S-L T**, Krumholz HM. Association Between Medicare Expenditures and Adverse Events for Patients With Acute Myocardial Infarction, Heart Failure, or Pneumonia in the United States. JAMA Netw Open. 2020 Apr 1;3(4):e202142. doi: 10.1001/jamanetworkopen.2020.2142.

388. Pasquali SK, Banerjee M, Romano JC, **Normand S-L T**. Hospital Performance Assessment in Congenital Heart Surgery: Where Do We Go From Here? Ann Thorac Surg. 2020 Mar;109(3):621-626. doi: 10.1016/j.athoracsur.2020.01.002. Epub 2020 Jan 18.

389. Shahian DM, Liu X, Mort EA, **Normand S-L T**. The association of hospital teaching intensity with 30-day postdischarge heart failure readmission and mortality rates. Health Serv Res. 2020 Apr;55(2):259-272. doi: 10.1111/1475-6773.13248. Epub 2020 Jan 9.

390. Busch A, Huskamp H, Greenfield SF, Reif S, **Normand S-L T**. Outpatient Care for Opioid Use Disorder Among the Commercially Insured: Use of Medication and Psychosocial Treatment. J Subst Abuse Treat. 2020 Aug;115:108040. doi: 10.1016/j.jsat.2020.108040. Epub 2020 May 22.

391. Gu CY, Huskamp H, Donohue J, **Normand S-L T**. A Bayesian Hierarchical Model for Characterizing the Diffusion of New Antipsychotic Drugs. Biometrics. 2021 Jun;77(2):649-660. doi: 10.1111/biom.13324. Epub 2020 Jul 18. PMC8108482

392. Lobo MF, Azzone V, Lopes F, Freitas A, Costa-Pereira A, **Normand S-L T**, Teixeira-Pinto A. Understanding the large heterogeneity in hospital readmissions and mortality for acute myocardial infarction. Health Policy. 2020 Jul;124(7):684-694. doi: 10.1016/j.healthpol.2020.04.004. Epub 2020 May 19.

393. Lentz TA, Curtis LH, Rockhold FW, Martin D, Andersson TLG, Arias C, Berlin JA, Binns C, Cook A, Cziraky M, Dent R, Desai M, Emmett A, Esserman D, George J, Hantel S, Heagerty P, Hernandez AF, Hucko T, Khan N, Lee SF, LoCasale R, Mardekian J, McCall D, Monda K, **Normand S-L T**, Riesmeyer J, Roe M, Roessig L, Scott R, Siedentop H, Waldstreicher J, Wang L, Weerakkody G, Wolf M, Ellenberg SS. Designing, Conducting, Monitoring, and Analyzing Data from Pragmatic Randomized Clinical Trials: Proceedings from a Multi-stakeholder Think Tank Meeting. Ther Innov Regul Sci. 2020 Jun 8. doi: 10.1007/s43441-020-00175-7. Online ahead of print.

394. Huskamp HA, Reif S, Greenfield SF, **Normand S-L T**, Busch AB. Medication Utilization for Alcohol Use Disorder in a Commercially Insured Population. J Gen Intern Med. 2020 Nov;35(11):3262-3270. doi: 10.1007/s11606-020-06073-w. Epub 2020 Aug 4.

395. Majithia, A, Matheny, ME, Dani, SS, Paulus, JK, Marinac-Dabic, D, Robbins, S, Ssemaganda, H, Hewitt, K, Ponirakis, A, Loyo-Berrios, N, Moussa, I, Drozda, J, **Normand, S-L**, Resnic, FS. Impact of early surveillance on safety signal identification in the CathPCI DELTA study. BMJ Surg Interv Health Technologies 2020;2:e000047. doi: 10.1136/bmjsit-2020-000047

396. Charytan D, Zelevinsky K, Wolf R, **Normand S-L T**. All-Cause Mortality and Progress to End Stage Kidney Disease Following Percutaneous Revascularization or Surgical Coronary Revascularization in Patients with CKD. *Kidney Int Rep*. 2021 Mar 25;6(6):1580-1591. doi: 10.1016/j.ekir.2021.03.882. eCollection 2021 Jun. PMC8207311

397. Khera R, Haimovich J, Hurley NC, McNamara R, Spertus JA, Desai N, Rumsfeld JS, Masoudi FA, Huang CX, **Normand S-L T**, Mortazavi BJ, Krumholz HM. Use of Machine Learning Models to Predict Death After Acute Myocardial Infarction. *JAMA Cardiol*. 2021 Jun 1;6(6):633-641. doi: 10.1001/jamacardio.2021.0122.

398. Moura LMVR, Festa N, Price M, Volya R, Benson N, Zafar S, Weiss M, Blacker D, **Normand S-L T**, Newhouse J, Hsu J. Identifying Medicare Beneficiaries with Dementia. *J Am Geriatr Soc*. 2021 Aug;69(8):2240-2251. doi: 10.1111/jgs.17183. Epub 2021 Apr 26.

399.   Read SH, Giannakeas V, Pop P, Bronskill SE, Herrmann N, Chen S, Luke MJ, Wu W, McCarthy LM, Austin PC, **Normand S-L T**, Gurwitz JH, Stall NM, Savage RD, Rochon P. Evidence of a gabapentinoid and diuretic prescribing cascade among older adults with lower back pain. *J Am Geriatr Soc*. 2021 Oct;69(10):2842-2850. doi: 10.1111/jgs.17312. Epub 2021 Jun 12.

400.   Horvitz-Lennon M, Volya R, Hollands S, Zelevinsky K, Mulcahy A, Donohue JM, **Normand S-L T.** Factors Associated With Off-Label Utilization of Second-Generation Antipsychotics Among Publicly Insured Adults. *Psychiatr Serv.* 2021 Sep 1;72(9):1031-1039. doi: 10.1176/appi.ps.202000381. Epub 2021 Jun 2.

401.   Choi SE, Kalenderian E, **Normand S-L T**. Measuring the Quality of Dental Care among Privately Insured Children in the US. *Health Serv Res*. 2022 Feb;57(1):137-144. doi: 10.1111/1475-6773.13713. Epub 2021 Jul 29.

402.   Adhikari S, **Normand S-L T,** Bloom J, Shahian D, Rose S. Revisiting Performance Metrics for Prediction with Rare Outcomes. *Stat Methods Med Res.* 2021;30(10):2352-2366.

403.   Huang C, Li SX, Caraballo C, Masoudi FA, Rumsfeld JS, Spertus JA, **Normand S-L T**, Mortazavi BJ, Krumholz HM. Performance Metrics for the Comparative Analysis of Clinical Risk Prediction Models Employing Machine Learning. *Circ Cardiovasc Qual Outcomes*. 2021 Oct;14(10):e007526. doi: 10.1161/CIRCOUTCOMES.120.007526.

404.   Horvitz-Lennon M, Volya R, Zelevinsky K, Shen M, Donohue JM, Mulcahy A, **Normand S-L T**. Significance and Factors Associated with Antipsychotic Polypharmacy Utilization Among Publicly Insured US Adults. *Adm Policy Ment Health*. 2022 Jan;49(1):59-70. doi: 10.1007/s10488-021-01141-7. Epub 2021 May 19. PMC8893990

405.   Fung V, Tevis D, Weiss M, **Normand S-L T**, Bertko J, Newhouse J, Hsu J. Premium Tax Credits in the American Rescue Plan and Off-Marketplace Enrollees. *Am J Manag Care*. 2022 Aug;28(8):404-408. doi: 10.37765/ajmc.2022.89199.

406.   **Normand S-L T**, Zelevinsky K, Nathan M, Abing HK, Dearani JA, Galantowicz M, Gaynor JW, Habib RH, Hanley FL, Jacobs JP, Kumar SR, McDonald DE, Pasquali SK, Shahian DM, Tweddell JS, Vener DF, Mayer JE. Mortality Prediction Following Cardiac Surgery in Children – An STS Congenital Heart Surgery Database Analysis. *Ann Thorac Surg*. 2022 Feb 2;S0003-4975(22)00135-7. doi: 10.1016/j.athoracsur.2021.11.077. Online ahead of print.

407.   **Normand S-L T**, Zelevinsky K, Nathan M, Abing HK, Dearani JA, Galantowicz M, Gaynor JW, Habib RH, Hanley FL, Jacobs JP, Kumar SR, McDonald DE, Pasquali SK, Shahian DM, Tweddell JS, Vener DF, Mayer JE. Re-evaluating Congenital Heart Surgery Center Performance Using Operative Mortality. *Ann Thorac Surg*. 2022 Feb 1;S0003-4975(22)00131-X. doi: 10.1016/j.athoracsur.2021.11.076. Online ahead of print.

408.   Festa N, Price M, Moura LMVR, Blacker D, **Normand SL**, Newhouse JP, Hsu J. Evaluation of Claims-Based Ascertainment of Alzheimer Disease and Related Dementias Across Health Care Settings. *JAMA Health Forum*. 2022 Apr 22;3(4):e220653. doi: 10.1001/jamahealthforum.2022.0653. eCollection 2022 Apr.

409.   Wang Y, Eldridge N, Metersky ML, Rodrick D, Faniel C, Eckenrode S, Mathew J, Galusha DH, Tasimi A, Ho SY, Jaser L, Peterson A, Drye E, **Normand S-L T**, Krumholz HM. Analysis of Hospital-Level Readmission Rates and Variation in Adverse Events among Patients with Pneumonia in the United States. *JAMA Netw Open*. 2022 May 2;5(5):e2214586. doi: 10.1001/jamanetworkopen.2022.14586.

410.   **Normand S-L T,** Zelevinsky K, Abing HK, Horvitz-Lennon M. Statistical Approaches for Quantifying the Quality of Neurosurgical Care. *World Neurosurg*. 2022 May;161:331-342.e1. doi: 10.1016/j.wneu.2022.01.047. PMC9074098

411.   Välimäki M, Lantta T, Anttila M, Vahlberg T, **Normand S-L T**, Yang M. An evidence-based educational intervention for reducing coercive measures in psychiatric hospitals: A randomised clinical trial. *JAMA Netw Open.* 2022;5(8):e2229076. doi:10.1001/jamanetworkopen.2022.29076

412.   Haneuse S, Schrag D, Dominici F, **Normand S-L T**, Lee HK. Measuring Performance for End-Of-Life Care. *The Annals of Applied Statistics*, 16(3) 1586-1607 September 2022. https://doi.org/10.1214/21-AOAS1558.

413.   Festa N, Price M, Weiss M, Moura LMVR, Benson NM, Zafar S, Blacker D, **Normand S-L T**, Newhouse JP, Hsu J. Evaluating The Accuracy Of Medicare Risk Adjustment For Alzheimer's Disease And Related Dementias. *Health Affairs*. 2022 September, 41(9):1324-1332.

414.   Moura LMVR, Zafar S, Benson NM, Festa N, Price M, Donahue MA, **Normand S-LT**, Newhouse JP, Blacker D, Hsu J. Identifying Medicare Beneficiaries With Delirium. Med Care. 2022 Nov 1;60(11):852-859. doi: 10.1097/MLR.0000000000001767. Epub 2022 Aug 31.

415.   Orlandi BMM, Mejia OMV, Sorio JL, Silva PBE, Oliveira MAP, Nakazone MA, Tiveron MG, Campagnucci VP, Lisboa LAF, Zubelli J, **Normand S-LT**, Jatene FB. Performance of a novel risk model for deep sternal wound infection after coronary artery bypass grafting. Sci Rep. 2022 Sep 7;12(1):15177. doi: 10.1038/s41598-022-19473-1.

416.   Orlandi BMM, Mejia OAV, Sorio JL, de Barros E Silva P, Oliveira MAP, Nakazone MA, Tiveron MG, Campagnucci VP, Lisboa LAF, Zubelli J, **Normand S-L T**, Jatene FB. Author Correction: Performance of a novel risk model for deep sternal wound infection after coronary artery bypass grafting. *Sci Rep*. 2022 Nov 18;12(1):19850. doi: 10.1038/s41598-022-23963-7.

417.   Festa N, Katz-Christy N, Weiss M, Lisk R, **Normand S-L T**, Grabowski DC, Newhouse JP, Hsu J.. Nursing Home Infection Control Strategies During the COVID-19 Pandemic. *J Am Geriatr Soc.* 2023 May 22. doi: 10.1111/jgs.18402. Online ahead of print.

418.   Wang Y, Eldridge N, Metersky ML, Rodrick D, Eckenrode S, Mathew J, Galusha DH, Peterson AA, Hunt D, **Normand S-L T**, Krumholz HM. Relationship Between In-Hospital Adverse Events and Hospital Performance on 30-Day All-cause Mortality and Readmission for Patients With Heart Failure. *Circ Cardiovasc Qual Outcomes.* 2023 Jul;16(7):e009573. doi: 10.1161/CIRCOUTCOMES.122.009573. PMC10351904

419.   Choi SE, White J, Mertz E, **Normand S-L T**. Analysis of Race and Ethnicity, Socioeconomic Factors, and Tooth Decay Among US Children. *JAMA Netw Open.* 2023 Jun 1;6(6):e2318425. doi: 10.1001/jamanetworkopen.2023.18425. PMC10273024

420.   Horvitz-Lennon M, Leckman-Westin E, Finnerty M, Jeong J, Tsuei J, Zelevinsky K, Chen QX, **Normand S-L T**. Healthcare Access for a Diverse Population with Schizophrenia Following the Onset of the COVID-19 Pandemic. *Community Mental Health Journal*, 2023. https://doi.org/10.1007/s10597-023-01105-1

421.   McGee G, Schildcrout J, **Normand S-L T**, Haneuse S. Outcome-dependent sampling in cluster-correlated data settings with application to hospital profiling. J R Stat Soc Ser A Stat Soc. 2020 Jan; 183(1): 379–402. doi: 10.1111/rssa.12503. PMC9390011

422.   Benson NM, Yang Z, Fung V, **Normand S-L T**, Keshavan MS, Öngür D, Hsu J. Medical and Psychiatric Care Preceding the First Psychotic Disorder Diagnosis. Schizophr Bull. 2023 Aug 22:sbad125. doi: 10.1093/schbul/sbad125. Online ahead of print.

Reviews and Editorials [Peer-Reviewed]

1.   **Normand SL.** Discussion of "Linear dependencies represented by chain graphs" by D.R. Cox and R.G. Cowell and "Bayesian Analysis in Expert Systems" by D.J. Spiegelhalter, A.P. Dawid, S.L. Lauritzen, and R.G. Cowell. Statistical Science 1993,8(3):263-265.

2.   **Normand SL**. Meta-Analysis software: A comparative review. American Statistician 1995; 49(3):298-309.

3.   **Normand SL**. Discussion of "Computation on Bayesian Graphical Models". In: Bernardo JM, Berger JO, Dawid AP, Smith AFM, editors. Bayesian Statistics 5. Oxford: Clarendon Press, 1996:420-1.

4.   **Normand SL**. Discussion of "League tables and their limitations: Statistical issues in comparisons of institutional performance" by H. Goldstein and D.J. Spiegelhalter. Journal of the Royal Statistical Society 1996(Series A – Statistics in Society);159:385-444.

5.   **Normand SL**. Discussion of "Utilization of diagnostic tests: Assessing appropriateness" Academic Radiology 1999;6(suppl. 1):S47-S51.

6.   Krumholz HM, Brass LM, Every NR, Spertus JA, Bazzarre T, Cohen DJ, Hlatky MA, Petersen ED, Radford MJ, Weintraub WS, Cannon CP, Ellerbeck EF, McNeil BJ, Ryan TJ, Smith SC, Baker DW, Ashton CM, Dunbar SB, Friesinger GC, Harvranek EP, Komstam M, Ordin DL, Pina IL, Pitt B, DeLong ER, Eagle KA, **Normand SL**, Mark DB, McAllister BD, Thomas JW, Duncan PW, Goldstein LB, Gorlick PB, Hinchey JA, Matchar DB, Nilasena D, Wennberg D, Williams LS, Wolf PA. Measuring and Improving Quality of Care: A Report from the American Heart Association/American College of Cardiology First Scientific Forum on Assessment of Healthcare Quality in Cardiovascular Disease and Stroke. Circulation 2000;101(12):1483-1493 and Stroke 2000;31(4):1002-1012.

7.   **Normand S-LT**. Meta-analysis: Formulating, evaluating, combining, and reporting. In: Tutorials in Biostatistics, Vol 2 - Statistical Modeling of Complex Medical Data, RB D'Agostino (ed), Wiley, Chichester, 2004, 2004,249-288.

8.   **Normand S-LT**. Quality of Care. In: Encyclopedia of Biostatistics, Vol 6, P Armintage and T Colton (eds), 2nd Edition, John Wiley & Sons Ltd., Chichester, UK. 2005:4348-4352.

9.   Kuntz RE**, Normand S-LT**. Measuring percutaneous coronary intervention quality by simple case volume. Circulation, 2005;112:1088-1091.

10.   Krumholz HM, Anderson JL, Brooks NH, Fesmire FM, Lambrew CT, Landrum MB, Weaver WD, Whyte J, Bonow RO, Bennett SJ, Burke G, Eagle KA, Linderbaum J, Masoudi FA, **Normand S-LT**, Pina IL, Radford MJ, Rumsfeld JS, Ritchie JL, Spertus JA. ACC/AHA Clinical performance measures for adults with ST-elevation and non-ST-elevation myocardial infarction. Circulation, 2006;113:732-761.

11.   **Normand S-LT**. Evaluating the optimal timing of angiography: Landmark or off the mark? Circulation 2007;116:2656-2657.

12.   Mauri L**, Normand S-LT**. Studies of drug-eluting stents: to each his own. Circulation 2008:117:2047-2050.

13.   Shahian DM, **Normand S-LT**. Low volume coronary artery bypass surgery – measuring and optimizing performance. The Journal of Thoracic and Cardiovascular Surgery 2008;135:1202-1209.

14.   Chen J, **Normand S-LT**. Myocardial infarction and quality of care. Canadian Medical Association Journal 2008;179(9):875-876. PMC2565734

15.   Teixeira-Pinto A, **Normand S-LT**. Comments on "The BUGS project: Evolution, critique, and future directions." Statistics in Medicine 2009;28(25):3075-3078. **PMC in Process**

16.   **Normand S-LT**. Missing data and convenient assumptions. Circulation: Cardiovascular Quality and Outcomes 2010; 3:2-3.

17.   Wears RL**, Normand S-LT**. When less is more: using shrinkage to increase accuracy. Annals of Emergency Medicine 2010; 55:553-555.

18.   **Normand S-LT**, McNeil BJ. What is evidence? Statistics in Medicine 2010; 29:1985-1988. PMC2917254

19.   **Normand S-LT**. Large data streams and the power of numbers, in Redesigning the Clinical Effectiveness Paradigm: Innovation and Practice-based Approaches, eds LA Olsen and M McGinnis. The National Academies Press, Washington, DC. 2010; 269-275

20.   **Normand S-LT**. Multiple outcomes and multiple sources of evidence: best statistical practices. Circulation: Cardiovascular Quality and Outcomes 2011; 4(6):579-580.

21. Berger ML, Dreyer N, Anderson F, Towse A, Sedrakyan A, **Normand S-LT**. Prospective observational studies to assess comparative effectiveness: ISPOR Good Research Practices Task Force report. Value in Health 2012; 15:217-230.

22. Shahian DM and **Normand S-LT**. Autonomy, beneficence, justice, and the limits of provider profiling. Journal of the American College of Cardiology 2012; 59(12):2383-2386.

23. Resnic F, **Normand S-LT**. Postmarketing surveillance of Medical Devices – Filling in the Gaps. New England Journal of Medicine 2012; 366(10):875-877.

24. Gabriel SE, **Normand S-LT**. Getting the methods right – the foundation of patient-centered outcomes research. New England Journal of Medicine 2012,367(9):787-790.

25. Kunz L, Yeh R, **Normand S-LT**. Comparative effectiveness research: does one size fit all? Statistics in Medicine 2012; 31: 3062–3065.

26. **Normand SLT**, Hatfield L, Drozda J, Resnic FS. Postmarket surveillance for medical devices: America's new strategy. British Medical Journal 2012; 345:e6848.

27. Krumholz HM, Lin Z, **Normand S-LT**. Measuring hospital clinical outcomes: methods matter. British Medical Journal 2013; 346:f620.

28. Kramer DB, Hatfield LA, **Normand S-LT**. Comparative effectiveness of cardiac implantable electrical devices. Heart 2015; 101(22):1773-5.

29. Haneuse S, Zubizarreta J, **Normand S-L T**. Discussion on "Time-Dynamic Profiling with Application to Hospital Readmission among Patients on Dialysis," by Jason P. Estes, Danh V. Nguyen, Yanjun Chen, Lorien S. Dalrymple, Connie M. Rhee, Kamyar Kalantar-Zadeh, and Damla Senturk. Biometrics. 2018 Dec;74(4):1395-1397. doi: 10.1111/biom.12909. PMC6469391.

30. Harrington D, D'Agostino RB, Gatsonis C, Hogan JW, Hunter DJ, **Normand S-L T**, Drazen JM, Hamel MB. New Guidelines for Statistical Reporting in the Journal. N Engl J Med. 2019 Jul 18;381(3):285-286. doi: 10.1056/NEJMe1906559.

31. Pasquali SK, Banerjee M, Romano JC, **Normand S-L T**. Hospital Performance Assessment in Congenital Heart Surgery: Where Do We Go From Here? Ann Thorac Surg. 2020 Mar;109(3):621-626. doi: 10.1016/j.athoracsur.2020.01.002. Epub 2020 Jan 18.

32. **Normand S-LT**. The RECOVERY Platform. N Engl J Med 2021; 384:757-758. DOI: 10.1056/NEJMe2025674

33. Sacks CA, Hardin CC, **Normand S-L T**, Kadire S, Takvorian K, Galloway N, Linga R, Hannon P, Drazen J, Rubin E. NEJM Evidence - A New Journal in the NEJM Group Family. *N Engl J Med*. 2022 Jan 13;386(2):182-183. doi: 10.1056/NEJMe2118588. Epub 2022 Jan 10.

34. Lobo M, **Normand S-L T** (2022). Hierarchical Models in Health Services Research. In Wiley StatsRef: Statistics Reference Online (eds N. Balakrishnan, T. Colton, B. Everitt, W. Piegorsch, F. Ruggeri and J.L. Teugels). https://doi.org/10.1002/9781118445112.stat05328.pub2

35. Takvorian KS, Hardin CC, Muller D, Vining T, **Normand S-L**, Sacks Chana A. The Problem of Multiple Comparisons. NEJM Evidence. 2022;1:EVIDstat2200171. doi: 10.1056/EVIDstat2200171

36. **Normand S-L T.** Predicting Risk or Adjusting for Risk? Circ Cardiovasc Qual Outcomes. 2022 Aug;15(8):e009082. doi: 10.1161/CIRCOUTCOMES.122.009082. Epub 2022 Aug 12.

37. Hardin CC, **Normand S-L T**. Interface — A New Series from NEJM Evidence. NEJM Evidence. 2022;1(8):EVIDe2200173.

38. Takvorian Katherine S, Hardin Charles C, Muller D, Ling E, Vining T, **Normand S-L T**, et al. Of Climate Change and Competing Risks. NEJM Evidence. 2022;2(1):EVIDstat2200319.

Proceedings of Meetings & Briefs [Non-Peer Reviewed]

1. **Normand SL**, Tritchler D. Kalman filtering in a Bayesian network. In: Proceedings of the Statistical Computing Section. American Statistical Association, 1989:259-64.

2. **Normand SL**, Tritchler D. Computation in multi-process dynamic linear models: A network approach. In: Proceedings of the Statistical Computing Section. American Statistical Association, 1991:129-32.

3. **Normand SL**, Tritchler D. A network representation of the multiprocess dynamic linear model. In: Computing Science and Statistics, 23rd Symposium on the Interface. 1991:168-71.

4. O'Malley J, **Normand SL,** Kuntz RE. Power calculation for historically-controlled clinical trials. In: 2000 Proceedings of the Section on Bayesian Statistical Science, American Statistical Association, 2000:72-77.

5. **Normand, SL**. Methodological issues in health services and outcomes research: 2001 international conference on health policy research. AMSTAT News, 2001;290:18-21.

6. **Normand SL**. Propensity scores for causal inference. ISPOR News. 2001;7(4):1213.

7. O'Malley J, **Normand S-L T**. Likelihood methods for accounting for all-or-nothing treatment non-compliance and subsequent non-response in randomized clinical trials. In: 2003 Proceedings of the Biometrics Section, American Statistical Association, 3087-3106.

8. **Normand S-L T**, Berlin JA, Krucoff M, Laschinger J, Li H, Loyo-Berrios N, Monteiro J, Morel D, Shah N, Snyder S. National Evaluation System for health Technology Coordinating Center (NESTcc) Methods Framework. A Report of the Methods Subcommittee of the NEST Coordinating Center – An initiative of MDIC. February 2020. https://nestcc.org/data-quality-and-methods/

Dissertation

1. **Normand SL.** Some statistical applications of Bayesian networks [PhD Dissertation]. University of Toronto, Department of Preventive Medicine and Biostatistics, 1990.

Dr. Normand has provided a foundation for health data science in the measurement of quality and equity in health care and in the evaluation of the safety and effectiveness of medical devices. Her research has enabled statistically reliable assessment of health care providers (hospitals, health plans, etc.); of geographic and racial/ethnic health care disparities; and of the safety/effectiveness of medical devices. She pioneered Bayesian approaches for measuring hospital quality using tail-area probabilities and shrinkage estimators. This moved policy researchers away from testing for excess variation to actionable information informed by quality estimates. Dr. Normand established and directed the Massachusetts Data Analysis Center to measure and publicly report on hospital cardiac surgical care in Massachusetts for 15 years. This work was supported by the Massachusetts Department of Public Health. Her work in Bayesian modeling provided the groundwork for establishing objective performance criteria in the evaluation of medical devices, enabling expedited device approval and enhanced safety surveillance. Her approaches to causal inference for comparative effectiveness and safety research laid the foundation for the PCORI methodology standards. Dr. Normand's methodological innovations have been widely adopted by policymakers including the Centers for Medicare & Medicaid Services; FDA's Center for Devices & Radiological Health; the Massachusetts Department of Public Health; the American Heart Association; the Society of Thoracic Surgeons; and the Federal Motor Carrier Safety Administration.

An important aspect of Dr. Normand's academic contributions is in the area of training. Her teaching activities included the development and instruction of courses on: multiple regression for the School of Public Health's Health Policy and Management students; Bayesian Methods for Biostatistics to graduate students in the Department of Biostatistics; and Statistical Methods for Psychiatry for Biostatistics and Epidemiology in the School. She has also supervised statistics postdoctoral fellows, economics fellow, graduate students in the areas of biostatistics, health policy, and psychiatric epidemiology.