

**Harvard Medical School  
CURRICULUM VITAE**

**Date Prepared:** February 5, 2020

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**Work Address:** Beth Israel Deaconess Medical Center  
Division of General Medicine  
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**Education:**

2000	BA, Psychology, Mathematics (Minor) Middlebury College
2004	MD, New York Medical College
2010	MPH, Clinical Effectiveness, Harvard School of Public Health

**Postdoctoral Training:**

2004-2005	Intern, Internal Medicine, Beth Israel Deaconess Medical Center
2005-2007	Resident, Internal Medicine, Beth Israel Deaconess Medical Center
2007-2008 & 2009-2010	Research Fellow (Mentor: Edward R. Marcantonio, MD, SM), General Medicine and Primary Care, Harvard Medical School/Beth Israel Deaconess Medical Center
2008-2009	Chief Medical Resident, Beth Israel Deaconess Medical Center

**Faculty Academic Appointments:**

2008-2009; 2010-2014	Instructor in Medicine, Harvard Medical School
2014-2019	Assistant Professor of Medicine, Harvard Medical School
2019-	Associate Professor of Medicine, Harvard Medical School

**Appointments at Hospitals/Affiliated Institutions:**

Past:

2007-2008; 2009-2010	Associate Staff, Medicine/General Medicine, Beth Israel Deaconess Medical Center
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Current:

2008-2009; 2010-	Active Staff, Medicine/General Medicine, Beth Israel Deaconess Medical Center
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**Major Administrative Leadership Positions:****Local:**

2006-2013	Coordinator, East Campus House Doctor Program, Beth Israel Deaconess Medical Center
2008-2009	Chief Medical Resident, Beth Israel Deaconess Medical Center
2013-2015	Course Director, Medical Resident Course in Comparative Physiology, Mount Desert Island Biological Laboratory/Beth Israel Deaconess Medical Center
2013-2018	Coordinator, Center for Healthcare Delivery Science, Work-In-Progress Session, Beth Israel Deaconess Medical Center
2013-	Core Faculty, Center for Healthcare Delivery Science, Beth Israel Deaconess Medical Center
2016-	Director of Hospital Medicine Research, Division of General Medicine, Beth Israel Deaconess Medical Center
2018-	Robinson Firm Chief, Internal Medicine Residency Program, Beth Israel Deaconess Medical Center
2018-	Co-Director, A Quantitative Approach to Quality, Masters in Healthcare Quality and Patient Safety, Harvard Medical School

**Regional:**

2015-	Course Director, Physiology on the Fly: A Faculty Development Program for Medical Educators Teaching on the General Medical Wards, Mount Desert Island Biological Laboratory, Maine
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**Committee Service:****Local:**

2007-	Intern Selection Committee, Department of Medicine, Beth Israel Deaconess Medical Center
2008-2009	Core Clinical Services Committee, Department of Medicine Beth Israel Deaconess Medical Center
2008-2009	Medical Patient Care Committee, Department of Medicine Beth Israel Deaconess Medical Center
2008-2009	Medical Patient Review Committee, Department of Medicine Beth Israel Deaconess Medical Center
2015-	General Medicine Grand Rounds Planning Committee, Division of General Medicine, Beth Israel Deaconess Medical Center
2017-	Opioid Care Committee, Beth Israel Deaconess Medical Center

**Professional Societies:**

2000-	Psi Chi (international honor society in psychology)
2003-	Alpha Omega Alpha
<u>2007-</u>	<u>Society of General Internal Medicine</u>
2009	Clinical Medicine Workshop Selection Subcommittee, 33 <sup>rd</sup> Annual National Meeting

2010	Clinical Vignette Selection Subcommittee, 33 <sup>rd</sup> Annual National Meeting
2012	Research Abstract Selection Subcommittee: Chronic Disease Management and Organization of Care, 35 <sup>th</sup> Annual National Meeting
2015	Research Abstract Selection Subcommittee: Hospital Medicine 38 <sup>th</sup> Annual National Meeting
2008-	<u>Society of Hospital Medicine</u>
2018	Research, Innovations, Vignettes judge, Annual National Meeting
2008-	Alliance for Academic Internal Medicine
2011-	American Geriatrics Society
2014-	American College of Physicians

**Editorial Activities:**

**Ad hoc Reviewer:**

New England Journal of Medicine  
 Journal of the American Medical Association  
 Annals of Internal Medicine  
 Archives of Internal Medicine  
 Journal of Hospital Medicine  
 British Medical Journal  
 Pharmacoepidemiology and Drug Safety  
 Clinical Microbiology and Infection  
 Clinical Epidemiology  
 Journal of Critical Care  
 Clinical Infectious Disease  
 Journal of the American Geriatrics Society  
 Pharmacy and Therapeutics  
 Internal and Emergency Medicine

**Other Editorial Roles:**

2007	Associate Editor, Last Minute: Internal Medicine [textbook] Edition I, Miksad RA, DelaMore PA, Meyer GK, authors. New York: McGraw Hill, ISBN-13: 978-0071445894
<u>2012-</u>	<u>Journal of Hospital Medicine</u>
2012-2015	Associate Editor
2015-	Senior Deputy Editor

**Honors and Prizes:**

2000	Varsity Softball Academic All-Conference (New England Small College Athletic Conference)
2003	American Society of Clinical Pathology Award for Academic Excellence, New York Medical College
2004	The Department of Medicine Academic Award, New York Medical College

2004	The Maurice M. Black, MD, Memorial Award, New York Medical College, given to a member of the graduating class for exceptional achievements in the study of Pathology and Pathophysiology
2004	The Eileen H. Pike, PhD, Memorial Award in Microbiology, New York Medical College
2004	Cor et Manus, Award of Distinction, New York Medical College, in recognition of outstanding service rendered to the medical college in the furtherance of its community program, as well as loyalty and devotion to the aims and objectives of the college
2004	American Medical Women's Association, Glasgow-Rubin Achievement Citation, New York Medical College
2005	The James Tullis Award, Beth Israel Deaconess Medical Center, in recognition of intellectual growth and enthusiasm for learning
2006	Teaching Award, Harvard Medical School, excellence in teaching Harvard medical students on the general medical wards
2007	Best Poster, Clinical Scholarship, Resident Research Day, Beth Israel Deaconess Medical Center
2007	The Lowell McGee Award, Medical Housestaff Teaching, Beth Israel Deaconess Medical Center, awarded to one senior resident each year in recognition of the fundamental importance of teaching and to the spirit and substance of being a physician
2009	Geriatric Abstract Stipend Award, Society of General Internal Medicine, 32 <sup>nd</sup> annual national meeting
2009	Mack Lipkin, Sr. Associate Member Award, Society of General Internal Medicine, presented to the three scientific presentations considered most outstanding by students, residents, and fellows, 32 <sup>nd</sup> annual national meeting
2010	Best Oral Presentation by a Fellow, New England Regional Meeting, Society of General Internal Medicine
2011	HOSPYP Award, Hospitalist Teacher of the Year, Hospital Medicine Program, Beth Israel Deaconess Medical Center
2013	Nominee, Charles McCabe Faculty Prize for Excellence in Teaching (Years III & IV), Harvard Medical School
2013	Certificate of Excellence in Tutoring, Harvard Medical School, awarded to faculty tutors for new Pathways courses in Years I & II who receive a score of 1.25 or higher
2014	Outstanding Reviewer, Annals of Internal Medicine
2015	Best Delirium Paper Award, Center of Excellence for Delirium in Aging: Research, Training, and Educational Enhancement
2016	Top Hospitalist, American College of Physicians
2018	Faculty Mentoring Leadership Program, Harvard Medical School
2019	Nominee, Charles McCabe Faculty Prize for Excellence in Teaching (Clinical), Harvard Medical School
2020	Excellence in Research Award, Society of Hospital Medicine

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## REPORT OF FUNDED AND UNFUNDED PROJECTS

### Funding Information

#### Past Funding:

2010-2011                    *Advancement of Geriatric Education at Harvard Medical School*  
Donald W. Reynolds Foundation  
Scholar

Attended a monthly seminar on hospital care of the geriatric patient, designed to enhance knowledge and understanding of unique issues related to the elderly during hospitalization.

2011-2013                    *Assessing and Improving the Quality of Care Transitions in HoMeRuN Hospitals*

Hospital Medicine Reengineering Network (HoMeRuN)/  
Association of American Medical Colleges/Beth Israel  
Deaconess Medical Center

Site Principal Investigator (\$25,000)

Multi-site cohort study of predictors of readmissions at U.S. academic medical centers, in an effort to identify high risk subgroups and targeted interventions.

#### Current Funding:

2010-                            *Reducing Medication Use Fragmentation Across Transitions of Care*

Center for Integration of Medicine and Innovative Technology (CIMIT), Young Clinician Research Award

Principal Investigator (\$43,478)

Developing a clinical decision support information technology intervention to reduce medication use fragmentation across transitions of care.

2013-2018                    *Improving Use of Sedating Medications in Hospitalized Older Adults*  
NCE 2018-2020              National Institute on Aging (NIA)/K23 AG042459

Principal Investigator (\$725,710)

The objectives of this project are to define current usage patterns and risks of sedating medications in hospitalized patients, and use this knowledge to develop an intervention to promote safer prescribing. Two large existing hospital data repositories will be used in a parallel and complementary fashion to investigate current specific hypothesized risks - hospital-acquired pneumonia and in-hospital falls - in two large cohorts of hospitalized patients. The information gained from these analyses will be used to develop and conduct a pilot study of a computerized decision support (CDS) tool that bundles prescribing suggestions with specific preventive interventions for those at highest risk.

2018-2023      *Characterizing Opioid-Related Adverse Events in Older Adults After Hospital Discharge*  
 Agency for Healthcare Research and Quality (AHRQ)/R01 HS026215  
 Principal Investigator (\$1,314,346)  
 The main goals of this study are to define the incidence, predictors, preventability, severity, and functional consequences of opioid-related adverse events among older adults within 30 days of hospital discharge, and to identify systems improvements that could have prevented the events.

#### **Current Unfunded Projects:**

2016-2020      *Stratified Regression Models for Case-Only Studies*  
 Patient-Centered Outcomes Research Institute (PCORI)/L ME-1507-31028  
 Key Personnel (PI: Murray Mittleman, MD, DrPH)  
 The main goals of this study are to develop analytic techniques using case-only study designs to estimate measures of absolute effect of transient exposures, evaluate heterogeneity of treatment effects, and address time-varying covariates.

### **REPORT OF LOCAL TEACHING AND TRAINING**

#### **Teaching of Students in Courses:**

2007-2008	Renal Pathophysiology (Tutorial Leader) 2 <sup>nd</sup> year medical students Harvard Medical School 1.5 hour sessions, 3 days per week, for 4 weeks
2007, 2009	Patient Doctor II (Preceptor) 2 <sup>nd</sup> year medical students Harvard Medical School Weekly 2 hour sessions for 12 weeks
2010-2011	Patient Doctor II (Evaluator) 2 <sup>nd</sup> year medical student Harvard Medical School Observed history and physical examination and provided feedback during two 3 hour sessions
2011	Integration Exercises (CPC Discussant) 2 <sup>nd</sup> year medical students Harvard Medical School Modeled clinical problem solving during a 2.5 hour session
2018-	A Quantitative Approach to Quality (Faculty lecturer)

Students completing a Master's Degree in Healthcare Quality and Patient Safety  
Harvard Medical School  
I deliver 8 hours of lectures annually on various topics related to measuring the impact of quality improvement interventions

**Formal Teaching of Residents, Clinical Fellows and Research Fellows:**

2007	Hospitalist as Teacher: The Changing Face of Inpatient Medicine Medical housestaff Beth Israel Deaconess Medical Center One hour lecture
2008	“I’m too Busy to Teach!”: Microskills for Easier Clinical Teaching Resident Report (Faculty) Medical housestaff Beth Israel Deaconess Medical Center One hour lecture
2008-2009	Resident Report Medical housestaff Beth Israel Deaconess Medical Center Chief Resident year, twice per week
2008-2009	M&M Conference Medical housestaff Beth Israel Deaconess Medical Center Chief Resident year, once per month
2009	Acid-Suppressive Medication and Risk for Hospital-Acquired Pneumonia Resident Journal Club (Faculty Discussant) Medical housestaff Beth Israel Deaconess Medical Center One hour didactic discussion
2010	Effective Feedback Medical housestaff Beth Israel Deaconess Medical Center One hour didactic discussion
2010	Article: Clopidogrel With or Without Omeprazole in Coronary Artery Disease Resident Journal Club (Faculty Discussant) Medical housestaff Beth Israel Deaconess Medical Center One hour didactic discussion
2010	Critically Appraising the Literature

	Resident Report Medical housestaff Beth Israel Deaconess Medical Center One hour lecture
2011	One-Minute Clinical Preceptor Medical housestaff Beth Israel Deaconess Medical Center One hour didactic discussion
2011, 2013	Critically Appraising the Literature Thorndike's Lecture Series All medical housestaff Beth Israel Deaconess Medical Center One hour lecture
2012	Article: The Influence of Context on Antimicrobial Prescribing for Febrile Respiratory Illness Resident Journal Club (Faculty Discussant) Medical housestaff Beth Israel Deaconess Medical Center One hour didactic discussion
2012	Article: Inappropriate Prescribing of Proton Pump Inhibitors in Hospitalized Patients Resident Journal Club (Faculty Discussant) Medical housestaff Beth Israel Deaconess Medical Center One hour didactic discussion
2014	Article: Proton Pump Inhibitors are Associated with Hypersensitivity Reactions to Drugs in Hospitalized Patients: A Nested Case-Control in a Retrospective Cohort Study Resident Journal Club (Faculty Discussant) Medical housestaff Beth Israel Deaconess Medical Center One hour didactic discussion
2016	Update in Hospital Medicine 2015 Resident Ambulatory Care Conference Medical housestaff Department of Medicine, Beth Israel Deaconess Medical Center One hour lecture

**Clinical Supervisory and Training Responsibilities:**

2007-2010	Preceptor, Healthcare Associates, ambulatory internal medicine clinic, Beth Israel Deaconess Medical Center One to two half sessions per month
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2007- Hospitalist Teaching Attending, inpatient general medicine wards  
Beth Israel Deaconess Medical Center, 8-12 weeks per academic  
year

**Laboratory and Other Research Supervisory and Training Responsibilities:**

2007-2016 Supervised residents in the water homeostasis module, part of a  
course on comparative physiology at Mount Desert Island  
Biological Laboratory in Salisbury Cove, ME  
One week in September (30 hours), each year

**Formally Mentored Harvard Medical, Dental and Graduate Students:**

2019- Bhushan Deshpande, Harvard Medical School Class of 2020  
Research mentor for his scholarly project, entitled “Prescription of  
Long-Acting Opioids following Hospital Discharge among Opioid-  
Naïve Patients.”

**Other Mentored Trainees and Faculty:**

2010-2014 Jed D. Gonzalo, MD, MSc, Associate Professor of Medicine and  
Public Health Sciences/Assistant Dean for Health Systems  
Education, Penn State College of Medicine, Hershey, PA  
*Career stage:* chief resident/junior faculty  
*Mentoring role:* trainee/faculty research mentor  
*Accomplishments:* published four manuscripts (citations #5, #9,  
#12, #13)

2012-2017 Joshua W. Allen-Dicker, MD, MPH, Assistant Professor of  
Medicine, Harvard Medical School/Hospitalist, Division of General  
Medicine, Beth Israel Deaconess Medical Center, Boston, MA  
*Career stage:* resident/junior faculty  
*Mentoring role:* trainee/faculty research mentor  
*Accomplishments:* published four manuscripts (citations #11, #16,  
#18, #28)

2012-2014 Anthony C. Breu, MD, Assistant Professor of Medicine, Harvard  
Medical School/Director, Resident Education, VA Boston  
Healthcare System, Boston, MA  
*Career stage:* junior faculty  
*Mentoring role:* faculty research mentor  
*Accomplishments:* published two manuscripts (citation #11, #39)

2015-2017 Elliot Naidus, MD, Clinical Fellow in Medicine, UCSF School of  
Medicine/Pulmonary-Critical Care Fellow, University of California  
San Francisco, San Francisco, CA  
*Career stage:* trainee  
*Mentoring role:* trainee research mentor  
*Accomplishments:* published two manuscripts (citations #29, #30)

- 2016-2018      Kelly L. Graham, MD, MPH, Assistant Professor of Medicine  
Harvard Medical School/Primary Care Physician, Beth Israel  
Deaconess Medical Center, Boston, MA  
*Career stage:* junior faculty  
*Mentoring role:* faculty research mentor  
*Accomplishments:* published one manuscript (citation #32)
- 2017-2019      Matthew D. Basciotta, MD, Hospitalist, North Shore Medical  
Center, Lynn/Salem, MA  
*Career stage:* trainee  
*Mentoring role:* trainee research mentor  
*Accomplishments:* published one manuscript (citation #37)
- 2017-            Amber Moore, MD, MPH, Instructor in Medicine, Harvard Medical  
School, Department of Medicine, Beth Israel Deaconess Medical  
Center, Boston, MA  
*Career stage:* junior faculty  
*Mentoring role:* research mentor  
*Accomplishments:* published one manuscript (citation #35), with  
another project in progress. Investigating the impact of medical  
ward redesign on length of hospitalization and care coordination
- 2019-            Timothy S. Anderson, MD, Instructor in Medicine, Harvard  
Medical School, Department of Medicine, Beth Israel Deaconess  
Medical Center, Boston, MA  
*Career stage:* junior faculty  
*Mentoring role:* research/career mentor  
*Accomplishments:* several projects in progress studying the impact  
of hospitalization on chronic medications and associated outcomes  
in older adults

**Local Invited Presentations:**

*Those presentations below sponsored by outside entities are so noted and the sponsors are identified*

- 2007            An Analysis of Compliance with Venous Thromboembolism  
Prophylaxis Guidelines at a Major Academic Medical Center:  
Prophylaxis for All?  
Grand Rounds  
Department of Medicine, Beth Israel Deaconess Medical Center
- 2008            “I’m too Busy to Teach!”: Microskills for Easier Clinical Teaching  
General Medicine Professional Development Series  
Lecture  
Division of General Medicine and Primary Care  
Beth Israel Deaconess Medical Center
- 2008            Acid-Suppressive Medication and Risk for Hospital-  
Acquired Pneumonia  
General Medicine Professional Development Series

- Lecture  
Division of General Medicine and Primary Care  
Beth Israel Deaconess Medical Center
- 2011 PPIs: Clinical Uses, and Abuses  
Grand Rounds  
Division of General Medicine and Primary Care  
Beth Israel Deaconess Medical Center
- 2011 Master Clinician  
Clinicopathologic Conference  
Department of Medicine  
Beth Israel Deaconess Medical Center
- 2013 Sedatives and Code Blue Events  
Work-In-Progress Meeting  
Lecture  
Department of Emergency Medicine, Beth Israel Deaconess  
Medical Center
- 2013 Using the Clinical Data Repository for Pharmacoepidemiologic  
Investigations  
Seminar Series  
Lecture  
Division of Clinical Informatics, Beth Israel Deaconess  
Medical Center
- 2013 Update in Hospital Medicine 2012  
Grand Rounds  
Division of General Medicine and Primary Care  
Beth Israel Deaconess Medical Center
- 2014 Update in Hospital Medicine 2013  
Grand Rounds  
Division of General Medicine and Primary Care  
Beth Israel Deaconess Medical Center
- 2015 Update in Hospital Medicine 2014  
Grand Rounds  
Division of General Medicine and Primary Care  
Beth Israel Deaconess Medical Center
- 2015 Update in Hospital Medicine 2014  
Grand Rounds  
Department of Medicine  
VA Boston Healthcare System, West Roxbury, MA
- 2015 Master Clinician  
Clinicopathologic Conference  
Department of Medicine

- Beth Israel Deaconess Medical Center
- 2016 Update in Hospital Medicine 2015  
Grand Rounds  
Division of General Medicine and Primary Care  
Beth Israel Deaconess Medical Center
- 2016 Update in Hospital Medicine 2015  
Resident Noon Conference  
Department of Medicine  
VA Boston Healthcare System, West Roxbury, MA
- 2016 Safe Opioid Use in Hospitalized Patients  
Grand Rounds  
Department of Medicine  
Beth Israel Deaconess-Needham, Needham, MA
- 2017 Update in Hospital Medicine 2016  
Grand Rounds  
Division of General Medicine and Primary Care  
Beth Israel Deaconess Medical Center
- 2018 Update in Hospital Medicine 2017  
Grand Rounds  
Division of General Medicine  
Beth Israel Deaconess Medical Center
- 2018 Update in Hospital Medicine 2017  
Grand Rounds  
Department of Medicine  
Beth Israel Deaconess Medical Center – Milton, Milton, MA
- 2018 Curbing the Opioid Epidemic: How Hospital-Based Clinicians Can Be Part of the Solution  
Grand Rounds  
Department of Medicine  
VA Boston Healthcare System, West Roxbury, MA
- 2019 Curbing the Opioid Epidemic: How Hospital-Based Clinicians Can Be Part of the Solution  
Quality Rounds  
Department of Medicine  
Brigham and Women’s Hospital, Boston, MA
- 2019 Curbing the Opioid Epidemic: How Hospital-Based Clinicians Can Be Part of the Solution  
Grand Rounds  
Department of Medicine  
Brigham and Women’s Faulkner Hospital, Boston, MA

2019 Safe Opioid Prescribing in the Hospital Setting  
Longwood Grand Rounds  
Department of Neurology  
Beth Israel Deaconess Medical Center, Boston, MA

**REPORT OF REGIONAL, NATIONAL AND INTERNATIONAL INVITED TEACHING AND PRESENTATIONS**

*Those presentations below sponsored by outside entities are so noted and the sponsors are identified*

**Regional:**

2008 Effective Teaching and Feedback in the Age of Duty Hour Reform Workshop  
Society of General Internal Medicine, New England Regional Meeting, Boston, MA

2009 Acid-Suppressive Medication and Risk for Hospital-Acquired Pneumonia  
Oral abstract presentation  
Society of General Internal Medicine, New England Regional Meeting, Boston, MA

2010 Acid-Suppressive Medication and the Risk for Gastrointestinal Bleed in Non-Critically Ill Hospitalized Patients  
Oral abstract presentation  
Society of General Internal Medicine, New England Regional Meeting, Providence, RI

2011 Medication Decisions and Adverse Outcomes  
Invited Lecture  
Baystate Medical Center, Springfield, MA

2012 Top 6 Papers in Hospital Medicine from 2011  
Invited Lecture  
Boston Association of Academic Hospitalists in Medicine  
Boston, MA

2013 The ACP Choosing Wisely Campaign, Initiative #2 for Hospital Medicine: Do Not Prescribe Medications for Stress Ulcer Prophylaxis to Medical Inpatients Unless at High Risk for GI Complications  
Invited Lecture  
Society of Hospital Medicine, Boston Chapter, Boston, MA

2014 Research Careers in General Medicine: How to Get Started and Be Successful  
Mentoring Panel

- Society of General Internal Medicine, New England Regional Meeting, Boston, MA
- 2014 Update in Hospital Medicine, 2013  
Invited Lecture  
Society of Hospital Medicine, Boston Chapter, Boston, MA
- 2014 Sedating Medication Use in Hospitalized Patients: Patterns, Predictors, Problems  
Invited Lecture  
Center for Quality of Care Research  
Baystate Medical Center, Springfield, MA
- 2016 Too Much of a Good Thing: The Perils of Purple Pills, Pharmaceutical Profiteering, and Prescribing Inertia  
Grand Rounds  
Department of Medicine  
Baystate Medical Center, Springfield, MA
- 2016 Sedating Medications and Nosocomial Complications  
Invited Lecture  
Center for Quality of Care Research  
Baystate Medical Center, Springfield, MA
- 2018 Update in Hospital Medicine  
Invited Lecture  
Hospital Medicine 2017, Stowe, VT
- 2019 Update in Hospital Medicine  
Invited Lecture  
Hospital Medicine 2018, Stowe, VT
- 2019 Fostering Graduated Autonomy in Medical Residents  
Invited Lecture  
Department of Medicine  
Saint Vincent Hospital, Worcester, MA
- National:**
- 2009 Acid-Suppressive Medication and Risk for Hospital-Acquired Pneumonia  
Oral abstract presentation  
Society of General Internal Medicine Annual Meeting, Miami, FL
- 2010 Acid-Suppressive Medication Use and the Risk for Hospital-Acquired Gastrointestinal Bleed  
Oral abstract presentation  
Society of General Internal Medicine Annual Meeting, Minneapolis, MN

- 2011 Using Electronic Resources to Answer Clinical Questions  
Workshop  
Society of Hospital Medicine, National Meeting, Dallas, TX
- 2013 Opioid Utilization in Non-Surgical Patients in U.S. Hospitals  
Oral abstract presentation  
Society of Hospital Medicine Annual Meeting, National Harbor,  
MD
- 2014 Antipsychotic Medication and Risk of Nosocomial Pneumonia  
Oral abstract presentation  
Society of General Internal Medicine Annual Meeting, San Diego,  
CA
- 2014 Sedating Medication Use in Hospitalized Patients: Patterns,  
Predictors, Problems  
Invited Lecture  
University of Michigan Health System, Ann Arbor, MI
- 2014 PPIs: Clinical Uses and Abuses  
Invited Lecture  
University of Michigan Health System, Ann Arbor, MI
- 2017 Sedating Medications and Nosocomial Complications  
Invited Lecture  
University of Pennsylvania, Philadelphia, PA
- 2017 The Hospitalist's Role in the Opioid Epidemic  
Invited Lecture  
Society of Hospital Medicine Annual Meeting, Las Vegas, NV
- 2017 Safe Opioid Use in Hospitalized Patients  
Invited Plenary Speaker  
Midwest Hospital Medicine Conference  
Northwestern Memorial Hospital, Chicago, IL
- 2017 Medical Complications that Result from Inaccurate Medication  
Reconciliation During Transitions of Care and Current Methods  
Used to Reduce Errors, Unmet Needs  
Invited Lecture  
IEEE-NIH Special Topics Conference on Healthcare Innovations  
and Point of Care Technologies: Technology in Translation,  
Bethesda, MD
- 2018 Opioids: What Now?  
Invited Lecture  
Society of Hospital Medicine Annual Meeting, Orlando, FL
- 2019 Curbing the Opioid Epidemic: How Hospital-Based Clinicians Can  
Be Part of the Solution

- Grand Rounds  
Department of Medicine  
Northwestern Memorial Hospital, Chicago, IL
- 2019 Curbing the Opioid Epidemic: How Hospitalists Can Be Part of the Solution  
Invited Lecture  
Society of Hospital Medicine, New York City/Westchester Chapter Meeting, New York City, NY
- 2019 Pain Management in the Hospital: Time for a Culture Change  
Grand Rounds  
Department of Medicine  
Rush Medical Center, Chicago, IL
- 2019 Culture of Pain Management in the United States  
Keynote Address  
Mayo Clinic Hospital Medicine Conference: Managing Complex Patients, Marana, AZ
- 2019 Pearls for Safe Opioid Prescribing  
Invited Lecture  
Mayo Clinic Hospital Medicine Conference: Managing Complex Patients, Marana, AZ

**International:**

- 2010 PPIs and Chemoprevention: How Should Issues Regarding Long-term Use of PPIs Be Considered?  
Invited Plenary Speaker  
OESO 10<sup>th</sup> World Congress, Boston, MA, United States

**REPORT OF CLINICAL ACTIVITIES AND INNOVATIONS**

**Current Licensure and Board Certification:**

- 2006- Medical License, Commonwealth of Massachusetts  
2007- Diplomate, American Board of Internal Medicine (2017 recertified)  
2019- Waiver to prescribe or dispense buprenorphine under the Drug Addiction Treatment Act of 2000 (DATA 2000)

**Practice Activities:**

- 2007- Hospitalist, Hospital Medicine Program, Beth Israel Deaconess Medical Center, 12 weeks per year



**Clinical Innovations:**

- 2011                    Computerized Clinical Decision Support (CDS) Tool to Improve Appropriateness of Acid-Suppressive Medication Prescribing in Hospitalized Patients at Beth Israel Deaconess Medical Center (BIDMC)  
Based on the information gained from my analyses of acid-suppressive medication use, I assembled and led a team of pharmacists, information systems specialists, and other hospitalists at BIDMC to design a CDS tool to improve the appropriateness of acid-suppressive medication prescribing in the hospital setting. We found that our CDS tool significantly reduced inappropriate prescribing of acid-suppressive medication in a sustained fashion. The development and impact of the CDS tool has been published in the Journal of Hospital Medicine (citation #15 below).
- 2017                    Electronic Opioid Prescribing Dashboard at Beth Israel Deaconess Medical Center (BIDMC)  
I led an initiative to develop an opioid-prescribing dashboard at BIDMC, to provide quality improvement leaders and individual physicians with near real-time feedback on their performance on several metrics for safe opioid prescribing. These metrics were derived from the Consensus Statement on improving the safety of opioid use for acute non-cancer pain in hospitalized adults that I developed for the Society of Hospital Medicine. I plan to study the impact of this quality improvement initiative in the near future.
- 2018                    Safe Opioid Prescribing in the Hospital Setting: Internal Guidelines and National Consensus Statement  
I led the development of both internal BIDMC guidelines, as well as a consensus statement from the Society of Hospital Medicine on safe use of opioids for acute non-cancer pain in hospitalized patients. The consensus statement was published in the Journal of Hospital Medicine (see citation #42).

**REPORT OF TEACHING AND EDUCATION INNOVATIONS**

- 2007-2016            Comparative Physiology Course for Residents, Mount Desert Island Biological Laboratory/Beth Israel Deaconess Medical Center  
Participated in creation of a novel course in comparative physiology for residents. The course involves hands on experiments using aquatic species, intended to highlight physiologic concepts relevant to the care of patients. I participated in all aspects of development and execution, including designing experiments and creating the course syllabus, and served as co-director of the course for 9 years. Participants were initially restricted to Beth Israel Deaconess Medical Center medicine residents, but due to course popularity and word of mouth, we began including surgical residents, as well as residents from across the country shortly after course creation. Our

team published a manuscript describing this innovation (citation #3).

- 2014- Physiology on the Fly Course, Mount Desert Island Biological Laboratory  
I led the creation of a novel national course in comparative physiology for faculty teaching on the general medicine wards, sponsored by the Mount Desert Island Biological Laboratory, with continuing medical education credits provided by the University of Vermont. This course built off the framework of our resident course above, with added emphasis on professional development, including development of teaching skills and scripts. I led all aspects of development and execution, including curriculum development, syllabus creation, and faculty invitations, and I have served as a course director since conception.
- 2018- A Quantitative Approach to Quality, Harvard Medical School  
I co-direct a course on measuring the impact of quality improvement initiatives for the Master's Degree in Healthcare Quality and Patient Safety at Harvard Medical School. Working with my co-director, Amy Cohen, we created the course from scratch, developing the course syllabus, session objectives, homework assignments, final projects, and most of the content for the 39 hours of curricular material (we issue invitations to external speakers in key areas as needed).

## REPORT OF EDUCATION OF PATIENTS AND SERVICE TO THE COMMUNITY

### Recognition

- 2009 Publicity on JAMA manuscript on acid-suppressive medication and hospital-acquired pneumonia (citation #1)  
Organizations conferring recognition: National Public Radio, New York Times, ABC News, CNN, WebMD
- 2011 Publicity on Archives of Internal Medicine manuscript on acid-suppressive medication and nosocomial gastrointestinal bleeding (citation #2)  
Organizations conferring recognition: Medscape, Drug Topics
- 2013 Publicity on Journal of General Internal Medicine manuscript on risk factors for nosocomial gastrointestinal bleeding (citation #6)  
Organizations conferring recognition: U.S. Pharmacist, Formulary
- 2013 Publicity on Journal of Hospital Medicine manuscript on inpatient use of opioids (citation #8)  
Organizations conferring recognition: National Pain Report, ACP Hospitalist, Boston Globe, Fox News, CBS News

2014	Publicity on Health Affairs manuscript on hospitalizations related to opioid abuse/dependence (citation #24) Organizations conferring recognition: Forbes
2016	Publicity on Journal of the American Geriatrics Society manuscript on antipsychotic use in hospitalized adults (citation #20) Organizations conferring recognition: SiriusXM
2017	Publicity on Journal of Hospital Medicine manuscript on the hospital care of Very Important Persons (citation #28) Organizations conferring recognition: WBUR
2018	Publicity on Journal of Hospital Medicine manuscripts on safe opioid prescribing (citation #41, #42) Organizations conferring recognition: Science Daily, the Hospitalist, Core IM podcast

## REPORT OF SCHOLARSHIP

### Peer-Reviewed Scholarship in Print or Other Media:

#### Research Investigations:

1. **Herzig SJ**, Howell MD, Ngo LH, Marcantonio ER. Acid-suppressive medication use and the risk for hospital-acquired pneumonia. *JAMA* 2009 May 27;301(20):2120-2128. doi: 10.1001/jama.2009.722. PMID: 19470989.
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Kamiya T, Pelosini I, Scarpignato C, Armstrong D, DeVault KR, Bechi P, Taddei A, Freschi G, Ringressi MN, Degli'Innocenti DR, Castiglione F, Masini E, Hunt RH. Barrett's esophagus: proton pump inhibitors and chemoprevention II. *Ann N Y Acad Sci* 2011 Sep;1232:114-39. doi: 10.1111/j.1749-6632.2011.06048.x. Erratum in: *Ann N Y Acad Sci* 2011 Dec;1239:162. Tenca, Andrea [added]. PubMed PMID: 21950810.

Reviews, Chapters, Monographs and Editorials:

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10. **Herzig SJ.** Opening the black box of inpatient opioid prescribing. *J Hosp Med* 2016 Aug;11(8):595-596. doi: 10.1002/jhm.2601. Epub 2016 May 9. PMID: 27157070; PMCID: PMC5242331.
11. Loh FE, **Herzig SJ.** Pain in the United States: Time for a Culture Shift in Expectations, Messaging, and Management. *J Hosp Med.* 2019 Jul 24;14:E1-E2. doi: 10.12788/jhm.3277. [Epub ahead of print] PMID: 31339835.

## Clinical Guidelines and Reports:

2018

### Consensus Statement

I led the development of a consensus statement on safe use of opioids for acute non-cancer pain in hospitalized patients for the Society of Hospital Medicine.

Other Peer-Reviewed citations #5 above (**Herzig SJ**, Mosher HJ, Calcaterra SL, Jena AB, Nuckols TK. Improving the safety of opioid use for acute non-cancer pain in hospitalized adults: a consensus statement from the Society of Hospital Medicine. *J Hosp Med* 2018 Apr;13(4):263-271. doi: 10.12788/jhm.2980. PMID: 29624189.

## NARRATIVE REPORT

I am an academic hospitalist in the Division of General Medicine at Beth Israel Deaconess Medical Center, and a leader in hospital-based outcomes research with a particular focus on older adults. I am passionate about improving the care of hospitalized adults, and spend the majority of my time engaged in federally funded research in the area of hospital-based pharmacoepidemiology. My work has pioneered an understanding of the utilization, risks, and benefits of commonly used medications in the hospital setting, and has shaped prescribing practice in this realm. My work as a Senior Deputy Editor at the *Journal of Hospital Medicine* allows me to further inform and guide the growth of the rapidly expanding field of hospital medicine. My significant supporting activities in the realms of clinical expertise and innovation, and teaching and educational leadership, allow me to have a direct impact on patients during acute illness, and trainees as they care for these patients during this vulnerable time in the care continuum.

My research focuses broadly on medication safety, and more specifically on patterns of medication utilization in the inpatient setting and associated outcomes, with the goal of informing physician decision-making in this realm. My work thus far has helped to elucidate the risk and benefits of commonly used medications in the inpatient setting, including acid-suppressive medications, antipsychotics, and opioids, and has served as the basis for national initiatives aimed at improving prescribing, including the American Board of Internal Medicine's Choosing Wisely Campaign, and a recently released consensus statement on safe opioid prescribing which I developed for the Society of Hospital Medicine. My work has resulted in several high impact publications in journals such as *JAMA*, *Annals of Internal Medicine*, *JAMA-IM*, and *BMJ*, and has garnered national attention in the lay press, including a television interview on Fox news, a radio interview on NPR, and newspaper articles in the *New York Times*, *Boston Globe*, and others. I am currently funded through R01HS026215 from the Agency for Healthcare Research and Quality to conduct a multicenter study to better understand risk factors for opioid-related adverse events in patients discharged from the hospital with an opioid prescription.

In addition to generating new information regarding the risks and benefits of commonly used medications in the hospital setting, I also spend a significant portion of my time developing innovative ways to translate this knowledge into practice change. I was recently awarded the distinction of "Top Hospitalist" from the American College of

Physicians for my work translating my research into meaningful quality improvement for hospitalized patients. I have led two large, multidisciplinary medication safety initiatives in the last several years. First, based on the information gained from my analyses of acid-suppressive medication use, I assembled a team of pharmacists, information systems specialists, and other hospitalists at BIDMC to design a computerized decision support (CDS) tool to improve the appropriateness of acid-suppressive medication prescribing in the hospital setting. We found that our CDS tool significantly reduced inappropriate prescribing of acid-suppressive medication at BIDMC in a sustained fashion. More recently I have spearheaded an initiative to develop an opioid-prescribing dashboard at BIDMC, to provide quality improvement leaders and individual physicians with near real-time feedback on their performance on several metrics for safe opioid prescribing. These metrics were derived from the national initiative that I led for the Society of Hospital Medicine to develop a Consensus Statement on improving the safety of opioid use for acute non-cancer pain in hospitalized adults. I plan to study the impact of this quality improvement initiative in the near future.

In recognition of my national reputation in research, I was asked to join the editorial staff of the Journal of Hospital Medicine, where I have served as an Associate Editor from 2012-2015, and as Senior Deputy Editor since 2015. I recently received the Excellence in Research Award from the Society of Hospital Medicine. I was also named the Director of Hospital Medicine Research in the Division of General Medicine at BIDMC, and Senior Faculty in the Center for Healthcare Delivery Science at BIDMC, through which I mentor trainees and junior faculty on their own research projects.

In addition to my research interests, I am also passionate about teaching. I served as a Chief Medical Resident at BIDMC for the 2008-2009 academic year, and have received several teaching awards both as a resident and as a hospitalist at BIDMC. I was recently honored to be named Robinson Firm Chief – a leadership role reserved for distinguished clinician educators at BIDMC. In this capacity, I play an important role in shaping the residency experience for one quarter of our house staff through regular teaching and advising sessions. Finally, I developed and co-direct a course on quantitative methods for measuring the impact of quality improvement interventions for the Harvard Medical School Master's Degree in Healthcare Quality and Patient Safety.

Clinical work will always lie at the heart of my career, serving as the foundation for my research and teaching endeavors. I spend about one third of my time working clinically as a hospitalist on our teaching services, supervising and teaching residents and medical students while managing medically complex patients during acute care episodes. My clinical work provides me with an important sense of purpose, different and complementary to my scholarly pursuits.

I greatly look forward to continuing my contributions to the quality of medical care through my research on medication safety, my involvement with the education of housestaff, and my direct care of patients as an academic hospitalist.