

Curriculum Vitae

Name: Brian Thomas Bateman, M.D., M.Sc.

Education:

1997	B.A. <i>Magna cum laude, Phi Beta Kappa</i>	Religious Studies- Concentration in Philosophy	Yale College New Haven, CT
1998	Postbaccalaureate Premedical Program	Premedical	Goucher College, Towson, Maryland
2006	M.D. <i>Alpha Omega Alpha</i> , Janeway Prize for the highest achievement and abilities in the graduating class	Medicine	College of Physicians and Surgeons, Columbia University, New York, NY
2011	Program in Clinical Effectiveness		Harvard School of Public Health, Boston, MA
2013	Masters of Science	Epidemiology	Harvard School of Public Health, Boston, MA
2023 (expected)	Masters in Business Administration	Global MBA Program	Imperial College London, School of Business

Postdoctoral Training:

7/06-6/07	Intern	Medicine	Brigham and Women's Hospital, Boston, MA
7/07-6/10	Resident	Anesthesia	Massachusetts General Hospital, Boston, MA
1/10-1/11	Chief Resident	Anesthesia	Massachusetts General Hospital, Boston, MA

Faculty Academic Appointments:

1/11-11/15	Assistant Professor	Department of Anesthesia, Critical Care, and Pain Medicine (DACCPM)	Harvard Medical School, Boston, MA
11/15- 10/21	Associate Professor	Department of Anesthesia, Critical Care, and Pain Medicine; Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital	Harvard Medical School, Boston, MA
10/21-	Professor (tenured) and Chair	Department of Anesthesiology, Perioperative, and Pain Medicine	Stanford University School of Medicine

Appointments at Hospitals/Affiliated Institutions:

7/11- 3/17	Anesthesiologist	Department of Anesthesia, Critical Care, and Pain Medicine	Massachusetts General Hospital
2/12-10/21	Researcher	Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine	Brigham and Women's Hospital
3/17-10/21	Anesthesiologist	Department of Anesthesiology, Perioperative and Pain Medicine	Brigham and Women's Hospital
10/21-	Anesthesiologist	Department of Anesthesiology, Perioperative and Pain Medicine	Stanford Hospital

Other Professional Positions:

1998-1999	High School Biology and Earth Sciences Teacher	Parkwest High School, New York, NY
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1999-2001	Research Assistant in Ambrose Cheung's Laboratory	Dartmouth Medical School, Hanover, NH
2016	Consultant	Optum, Inc
2018-2020	Consultant	Action, Inc
2015-2021	Consultant	ALOSA Foundation

Major Administrative Leadership Positions:

Local

2012-2016	Fellowship Co-Director, Perioperative Health Services Research Fellowship	Department of Anesthesia, Critical Care, and Pain Medicine, Massachusetts General Hospital
2017-2021	Chief, Division of Obstetric Anesthesia	Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital
2017-2021	Co-Director, Harvard Program on Perinatal and Pediatric Pharmacoepidemiology (H4P)	Division of Pharmacoepidemiology and Pharmacoeconomics, Department of Medicine, Brigham and Women's Hospital
2019-2021	Vice Chair for Faculty Development; member of Department Executive Committee	Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital
10/21-	Chair	Department of Anesthesiology, Perioperative, and Pain Medicine, Stanford University School of Medicine

International

2016-2020	Member, Board of Directors	Society for Obstetric Anesthesia and Perinatology
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Committee Service:

Local

2010	Internal Review Committee	Geriatric Medicine Fellowship, Massachusetts General Hospital
2010- 2011	Resident Clinical Competency Committee	Department of Anesthesia, Critical Care, and Pain Medicine, Massachusetts General Hospital
2010- 2013	Residency Recruiting Committee	Department of Anesthesia, Critical Care, and Pain Medicine, Massachusetts General Hospital
2011-2012	Research Mentoring Committee	Department of Anesthesia, Critical Care, and Pain Medicine, Massachusetts General Hospital
2011-2016	Clinical Research Advisory Committee	Department of Anesthesia, Critical Care, and Pain Medicine, Massachusetts General Hospital
2013	Data Safety Monitor Board	Phase I clinical trial conducted at Children's Hospital, Boston
2013	Clinical Research Grants Study Section	Department of Anesthesia, Critical Care, and Pain Medicine, Massachusetts General Hospital
2013-2016	Chair, Clinical Research Advisory Committee	Department of Anesthesia, Critical Care, and Pain Medicine, Massachusetts General Hospital
2018-2021	Research Advisory Committee	Department of Anesthesiology, Perioperative, and Pain Medicine, Brigham and Women's Hospital

2020-2021	Faculty Develop and Junior Promotions Committee	Department of Anesthesiology, Perioperative, and Pain Medicine, Brigham and Women's Hospital
2020-2021	Neuroanesthesia Division Chief Search Committee	Department of Anesthesiology, Perioperative, and Pain Medicine, Brigham and Women's Hospital
2020-2021	Diversity, Equity, and Inclusion Committee	Department of Anesthesiology, Perioperative, and Pain Medicine, Brigham and Women's Hospital
Regional		
2012-2019	Massachusetts Maternal Mortality Review Committee	Department of Public Health, Commonwealth of Massachusetts
2015	Obstetrical Advisory Group focused on the measurement of obstetrical complications and trauma	Blue Cross Blue Shield of Massachusetts
National		
2014	Temporary voting member, Anesthetic and Analgesic Drug Products Advisory Committee	Food and Drug Administration
2015-2019	Standing member, Anesthetic and Analgesic Drug Products Advisory Committee	Food and Drug Administration
2015-2020	Data Use Committee	Anesthesia Quality Institute
2016	Technical Advisory Panel (TAP) for new pain management standards	The Joint Commission
2017-2018	Subcommittee on Opioid Misuse in Medicaid	Institute for Medicaid Innovation
2017	Panelist, Packaging, Storage, and Disposal Options to Enhance Opioid Safety: Exploring the Path Forward Workshop	Food and Drug Administration

2018	Member, Opioid Prescribing Estimates Workgroup	National Center for Injury Prevention and Control, Centers for Disease Control and Prevention
2019-2020	Treatments for Acute Pain Technical Expert Panel	Agency for Healthcare Research and Quality Systematic Review
2020-	The Equitable Maternal Health Coalition Data Workgroup	Equitable Maternal Health Coalition (organized by the March of Dimes)
2021	Panelist, Exploring Options for Safe and Effective In-Home Opioid Disposal	Food and Drug Administration/Duke-Margolis
2021-2025	Chairperson, Anesthetic and Analgesic Drug Products Advisory Committee	Food and Drug Administration

International

2015	Expert panel; Invasive Placentation: Clinical Guideline Development	Women and Babies Program, Department of Evaluative Clinical Sciences, Sunnybrook Research Institute
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Professional Societies:

2011-present	Society for Obstetric Anesthesia and Perinatology	Member
	2011-present	Research Committee
	2016-2020	Board of Directors (Journal Liaison)
2011-present	American Society of Anesthesiology	Member
	2012-2014	Abstract Review Subcommittee on Obstetric Anesthesia and Perinatology
	2015	Consultant for the “Practice Guidelines for Obstetric Anesthesia”
2013-2016	Association of Women’s Health, Obstetric & Neonatal Nurses (AWHONN)	Expert Panel Member, Anesthesia representative, Obstetrical Hemorrhage Quality Improvement Project

		Data Panel Member, Obstetrical Hemorrhage Quality Improvement Project
2014	American Academy of Orthopaedic Surgeons/American Society of Anesthesiology	Panel Member, Consensus statement for the Clinical Practice Guideline on the Management of Hip Fractures in the Elderly
2014-2015	American Congress of Obstetrics and Gynecology/American Society of Anesthesiology	Maternal Quality Improvement Program (MQIP) Advisory Committee
2013-	International Society of Pharmacoepidemiology	Co-developed and taught Modern Pregnancy Pharmacoepidemiology Methods course given at the annual meeting

Grant Review Activities:

2011	Invited External Grant Reviewer	Australian Government National Health & Medical Research Council
2012	Invited External Grant Reviewer	The Netherlands Organization for Health Research & Development
2013	Temporary Member	NHLBI Clinical Trials Review Committee, March, 2013
2013	Temporary Member	NHLBI Clinical Trials Review Committee, October, 2013
2015	Grant Reviewer	Gertie Marx Grant, Society for Obstetric Anesthesia and Perinatology
2017	Merit Reviewer and substitute Section Chair	Patient Centered Outcomes Research Institute (PCORI) Study Section, March 2017

2017	Grant Reviewer	NIDA, Special Emphasis Panel/Scientific Review Group, July 2017
2017	Grant Reviewer	Harvard Catalyst Data Ideation Challenge October 2017
2017	Grant Reviewer	Write in reviewer, NICHD, November 2017
2018	Grant Reviewer	NIDA, Multisite reviewer, February 2018
2018	Grant Reviewer	Development of Medications to Prevent and Treat Opioid Use Disorders and Overdose—NIDA, Special Emphasis Panel. May 16, 2018
2018	Grant Reviewer	Israel Society of Anesthesia grant, October 29, 2018
2018	Grant Reviewer	Maternal, Newborn, Child, and Youth Strategic Clinical Network's (MNCY SCN), Calgary Alberta February 25, 2019
2018	Grant Reviewer/Meeting chair	NIDA, Special emphasis panel, March 7, 2019
2019	Grant Reviewer	NIDA, Special emphasis panel, May 22, 2019
2019	Grant Reviewer	Health Research Board, Ireland
2021	Grant Reviewer	National Medical Research Council, Singapore
2021	Grant Reviewer	NIH, Special Emphasis Panel, Population Sciences and Epidemiology. April 6, 2021

United States Food and Drug Administration Advisory Committee Meetings

Date	Committee	Role
June 11-12, 2014	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
November 24-25, 2014	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
September 10, 2015	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
September 11, 2015	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
May 3-4, 2016	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
May 5, 2016	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
June 7, 2016	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
August 5, 2016	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
September 15-16, 2016	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
October 5, 2016	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
March 13-14, 2017	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
April 5, 2017	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
September 14, 2017	Anesthetic and Analgesic Drug Products Advisory Committee	Acting Chairperson

February 14, 2018	Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
August 3, 2018	Joint meeting of the Drug Safety and Risk Management Advisory Committee and the Anesthetic and Analgesic Drug Products Advisory Committee	Acting Chairperson
November 14, 2018	Joint meeting of the Drug Safety and Risk Management Advisory Committee and the Anesthetic and Analgesic Drug Products Advisory Committee	Acting Chairperson
September 10/11, 2020	Joint meeting of the Drug Safety and Risk Management Advisory Committee and the Anesthetic and Analgesic Drug Products Advisory Committee	Voting member
November 2, 2020	Joint meeting of the Drug Safety and Risk Management Advisory Committee and the Anesthetic and Analgesic Drug Products Advisory Committee	Acting Chairperson

Editorial Activities:

- **Ad hoc Reviewer**

**Indicates 5 or more reviews*

*Anesthesia and Analgesia**

American Journal of Epidemiology

*American Journal of Obstetrics and Gynecology**

American Journal of Perinatology

American Journal of Preventive Medicine

American Journal of Respiratory and Critical Care Medicine

*Anesthesiology**

Journal of Clinical Anesthesia

British Journal of Obstetrics and Gynecology

BMC Pregnancy and Childbirth

BMJ Quality and Safety

British Medical Journal

British Journal of Anesthesia

*Circulation**

Circulation: Cardiovascular Quality and Outcomes
Clinical Pharmacology & Therapeutics
Drug and Alcohol Dependence
Drug Safety
Epidemiology
European Journal of Neurology
European Journal of Obstetrics and Gynecology and Reproductive Medicine
Intensive Care Medicine
International Journal of Stroke
*New England Journal of Medicine**
Pediatric Research
Perioperative Medicine
PLoS One
PLoS Medicine
Pharmacoepidemiology and Drug Safety
Hypertension
The Joint Commission Journal on Quality and Patient Safety
Journal of Women's Health
JAMA
JAMA Pediatrics
JAMA Internal Medicine
JAMA Network Open
JAHA-Journal of the American Heart Association
Journal of Obstetrics and Gynaecology Research
Journal of Neurosurgical Anesthesiology
Perioperative Medicine
*Obstetrics and Gynecology**
Transfusion
Tropical Medicine & International Health

• **Other Editorial Roles**

2014-2020	Associate Editor	Anesthesiology (>250 completed reviews)
2021-	Editor	Anesthesiology
2019-present	Associate Editor	Frontiers in Global Reproductive Health
2014	Expert Reviewer	Evidence Review “Management of Postpartum Hemorrhage”, Agency for Healthcare Research & Quality Report

2018	Associate Editor	Chestnut's Obstetric Anesthesia: Principles and Practice. 6 th edition
2019	Reviewer	"Framing Opioid Prescribing Guidelines for Acute Pain: Developing the Evidence", National Academy of Medicine
2020	Reviewer	"Treatments for Acute Pain: A Systematic Review" for the AHRQ Evidence-based Practice Center Program
2020	Reviewer	Doctoral thesis from the Faculty of Health Sciences, University of Witwatersrand, Johannesburg, South Africa
2020	Associate Editor	Colorado's Opioid Solution: Clinicians United to Resolve the Epidemic (CO's CURE) Obstetrics and Gynecology 2020 Opioid Prescribing and Treatment Guidelines

Honors and Prizes:

2005	Alfred Steiner Award for Most Outstanding Medical Student Research, Dean's Day Poster Session	Columbia University College of Physicians and Surgeons	
2006	Elected to the Arnold P. Gold Humanism Honors Society	Columbia University College of Physicians and Surgeons	
2006	The Doctors William Nastuk, Beatrice Seegal, Konrad Hsu Award	Columbia University College of Physicians and Surgeons	To a graduating student who has demonstrated successful research collaboration between student and faculty

2006	Virginia P. Apgar Award	Columbia University College of Physicians and Surgeons	For Excellence in Anesthesia and Critical Care
2006	Janeway Prize	Columbia University College of Physicians and Surgeons	For the highest achievement and abilities in the graduating class
2008	Foundation for Anesthesia Education and Research /Abbott Resident Scholar	American Society of Anesthesiologist Annual Meeting	
2009, 2012	Research Abstract Selected as one of 12 Best Abstracts of Meeting	American Society of Anesthesiologist Annual Meeting	
2009	Manuscript “Perioperative Acute Ischemic Stroke in Non-Cardiac and Non-Vascular Surgeries: Incidence, Risk factors and Outcomes”, was one of 12 articles in the <i>Anesthesiology</i> 2009 Year in Review.	Journal <i>Anesthesiology</i>	The review highlighted “articles that the Editorial Board believed exemplified the mission of Anesthesiology, to advance the science and practice of perioperative, critical care, and pain medicine through the promotion of seminal discovery.”
2011, 2012, 2014, 2015, 2019, 2020	Research Abstract Selected as one of 6 Best Papers of the Meeting	Society of Obstetric Anesthesiology and Perinatology Annual Meeting	
2011	Research abstract, “The Influence of Patient Co-Morbidities on the Risk of Near-miss Maternal Morbidity and Mortality” Awarded Best Patient Safety Paper (Co-first author)	Society of Obstetric Anesthesiology and Perinatology Annual Meeting	

2011	Research abstract “Exome sequencing in severe, early-onset preeclampsia” 2 nd prize, departmental award (first author)	MGH Clinical Research Day
2012	Research abstract “Hypertension risk variants and risk of preeclampsia” 2 nd prize, departmental award (second author)	MGH Clinical Research Day
2012, 2013	Top 10% of Reviewers	Journal <i>Anesthesiology</i>
2013	Selected for NIH loan repayment program	National Institutes of Child Health and Human Development
2014	First author of paper (Type of stress ulcer prophylaxis and the risk of nosocomial pneumonia in cardiac surgical patients: a cohort study) awarded the American Society of Health-System Pharmacist Literature Drug Therapy Research Award	
2015	Research abstract: “Labor Induction and Offspring Risk of Autism Spectrum Disorder” won second-prize Best Papers of the Meeting session (first author)	Society of Obstetric Anesthesiology and Perinatology Annual Meeting

2015	Research abstract, “Labor Induction and Offspring Risk of Autism Spectrum Disorder” Awarded Runner-up for Best Patient Safety Paper (first author)	Society of Obstetric Anesthesiology and Perinatology Annual Meeting	
2015	Elected to the Association of University Anesthesiologist		
2016	Research abstract, “Peripartum sepsis: A case control study” Awarded Best Patient Safety Paper (Senior author)	Society of Obstetric Anesthesiology and Perinatology Annual Meeting	
2016	First prize, Gertie Marx Competition for the Best Abstract Presented by a Resident/Fellow (Senior author)	Society of Obstetric Anesthesiology and Perinatology Annual Meeting	
2017	Top Reviewer	Pharmacoepidemiology and Drug Safety	
2017	First prize, Gertie Marx Competition for the Best Abstract Presented by a Resident/Fellow (Senior author)	Society of Obstetric Anesthesiology and Perinatology Annual Meeting	
2017	Gerald Ostheimer Memorial Lecturer	Society of Obstetric Anesthesiology and Perinatology	Honors “a leading clinician, research scientist, and/or educator who has made significant contributions to the field of obstetric anesthesia”

2018	James E. Cottrell Presidential Scholar Award	American Society of Anesthesiologists	Given to one clinical- scientist each year within 10 years of initial faculty appointment for accomplishment in research.
2019	First Prize (Clinical research), Best Abstract of Meeting (First author)	Society of Obstetric Anesthesiology and Perinatology Annual Meeting	
2019	Nominated for Honorary Citizen of Hanoi, Vietnam designation		For leading collaboration between Brigham and Women's Hospital and Hanoi Hospital for Obstetrics and Gynecology
2020	First Prize (Clinical research), Best Abstract of Meeting (Senior author)	Society of Obstetric Anesthesiology and Perinatology Annual Meeting	
2021	Ronald D. Mann Best Paper Award	<i>Pharmacoepidemiology and Drug Safety</i>	

Report of Funded and Unfunded Projects

Past

2004-2004	Studies in stroke epidemiology (PI: Bateman) Doris Duke Clinical Research Fellowship Medical student mentored research training grant Goal: Performed mentored research focused on the epidemiology of stroke treatment
2011-2012	Case-crossover study of triggers of preterm labor/rupture of membranes (co-PI: Hernandez-Diaz/Bateman) Harvard School of Public Health Incubator Grant Co-Principal Investigator Goal: To define potentially modifiable triggers of preterm labor and rupture of membranes
2011-2012	Training in the epidemiology of pregnancy-related disorders (PI: Miller)

- Basic Science Research Training for Anesthetists
T32 GM007592
Role: T32 Trainee
Goal: To receive training in the conduct of epidemiologic research, focused on pregnancy-related disorders
- 2013-2015 The Genetic Predisposition to Cardiovascular Disease and the Risk of Preeclampsia (co-PI: Saxena/Bateman).
Gertie Marx Research Award
Co-Principal Investigator
Goal: To define the association between CV disease risk variants on the risk of preeclampsia
- 2016-2017 Thromboembolic outcomes with the FEIBA and rFVIIa
Baxalta
Principal investigator
To conduct the assessment of thromboembolic outcomes associated with the FEIBA and/or rFVIIa in hemophilia A and hemophilia B patients with inhibitors
- 2017 FDA Scientific Inquiry related to Opioid Prescribing
Lead Investigator
Study defined opioid prescribing patterns in the primary care setting in response to a FDA request under Scientific Program to Support Pharmacoepidemiologic Investigations of Safety Related Issues of Marketed Drugs, and Evaluations of Risk Communications and Management Programs contract
- 2016-2017 Using Claims Data to Define Opioid Misuse and Abuse
Pfizer Inc. (PI: Bateman)
Principal Investigator
To implement published claims-based algorithms to identify patients with potential opioid misuse/abuse based on opioid filling patterns and to validate these algorithms with outcomes of physician-diagnosed opioid abuse or overdose. To identify those components of the previously described algorithms with the best performance characteristics and to integrate these into a novel, claims-based algorithm for identifying opioid abuse/misuse based on opioid filling patterns.
- 2013-2017 Hypertensive disorders and diabetes during pregnancy and development: A nationwide study of the Icelandic birth cohort (PI: Zoega)
Icelandic Centre for Research 130814-051
Co-Principal Investigator
Goal: To examine the long-term neurocognitive effects of in-utero exposure to maternal hypertensive disorders and diabetes
- 2013-2018 Comparative safety and effectiveness of antihypertensives in pregnancy National Institute Of Child Health & Human Development of the National Institutes of Health/K08HD075831 (PI: Bateman)
Principal Investigator
To define the comparative safety and effectiveness of antihypertensive medications commonly used during pregnancy

- 2016-2018 Observational Studies to Assess Maternal and Fetal Outcomes Following Exposure to a Pain Medication (PI: Huybrechts)
Eli Lilly and Company
Co-Principal Investigator
To evaluate maternal and fetal/infant outcomes associated with exposure to a pain medication in order to meet the Food and Drug Administration requirement for post-marketing surveillance.
- 2017-2019 Ondansetron and risk of congenital malformations
NIH: National Institute of Child Health and Human Development/R03HD091699
01(PI: Krista Huybrechts)
Co-Investigator
R03 reviewed in October 2016 and received an impact score of 10, 1st percentile.
The study objective is to evaluate the risk of congenital heart defects and cleft palate associated with ondansetron use during pregnancy in a national cohort we developed of 1.6 million pregnancies covered by Medicaid.
- 2017-2019 Pregnancy Registries Nested in International Pooled Health Care Databases
NIH: National Institute of Child Health and Human Development/R21HD092879
01(PI: Sonia Hernandez-Diaz)
Co-Investigator
To develop methodology to for pooling data from the United States, Denmark, Finland, Iceland, Norway, and Sweden to study drug safety in pregnancy.
- 2016-2018 Observational Cohort Study to Assess Maternal Asthma During Pregnancy and Fetal Outcomes
GSK
Site-PI (PI: Sonia Hernandez-Diaz)
specifically identifying asthma and asthma severity in women in the MAX pregnancy cohort and the impact of this condition on relevant infant outcomes.
- 2019-2021 Engaging clinicians to improve opioid safety and reduce overdose risk
Centers for Disease Control and Prevention
(PI: Michael Fischer)
Co-Investigator
The goal of the proposed study is to evaluate the impact of an academic detailing program that aims to improve opioid prescribing.
- 9/15/2017-7/31/2021 The Impact of Prescription Opioid Use on Pregnancy Outcomes
NIH: National Institute on Drug Abuse/1R01DA044293-01A1 (PI: Brian Bateman)
Principal investigator
Reviewed in June 2017 and received an impact score of 14, 1st percentile.
The goal of the proposed study is to provide robust information on the effects of prescription opioid use during pregnancy.
- 9/28/2017-9/27/2021 Developing the Capability of Using National Medicaid Data for FDA Post-Marketing Surveillance to Assess Medication Safety During Pregnancy
Food and Drug Administration (PI: Krista Huybrechts)

Co- Principal Investigator

The goal of the proposed study is to define methods to use nationwide Medicaid healthcare utilization data to study medication safety during pregnancy.

8/1/2018-
5/31/2021

Epidemiology and risk of antipsychotic use in hospitalized elderly with delirium
NIH: National Institutes of Aging/1R01AG056368-01A1

Co-Investigator (PI: Dae Kim)

To determine the epidemiology and risk of the off-label use of antipsychotics and their alternatives in hospitalized older adults with postoperative delirium.

7/1/2018-
6/30/2021

Acute Pain Management and Long-term Opioid Use after Surgery
National Institute of Drug Abuse of the National Institutes of Health/1R01DA042299-01A1

Co-Investigator (PI: Wunsch/Neuman)

Using data from the US and Canada, this study will identify which patients are at highest risk of taking opioid medications long-term after surgery and will assess ways to try to decrease that risk.

2019-2021

Randomized cardiovascular trials duplicated using prospective longitudinal insurance claims: applying techniques of epidemiology (RCT DUPLICATE)

NIH: National Heart, Lung, and Blood Institute

Co-Investigator (PI: Jessica Franklin)

The proposed project provides fundamental knowledge on what types of clinical questions can be answered with real world data and with which methods. Findings will impact public health by improving the conduct of real-world data studies.

8/2020-
7/2021

Postpartum Opioid Related Mortality in Medicaid Patients

NIH: National Institute on Drug Abuse/ 3R01DA049822-01(PI: Bateman/
Huybrechts)

Principal Investigator

Administrative supplement

To define patterns of opioid-related mortality in pregnancy and the postpartum in Medicaid beneficiaries

Current

8/2022-
6/2027

Safety of Benzodiazepines and Non-Benzodiazepine Sedative Hypnotics in Pregnancy

NIH: National Institute of Child Health and Human Development/R01 HD107772

(Co-PIs: Bateman/Huybrechts)

Principal Investigator

The goal of this study is to provide robust information on the effects of benzodiazepines and non-benzodiazepine sedative hypnotics in pregnancy.

- 9/2022-8/2027 Comparative Safety of Antibiotics for Common Bacterial Infections During Pregnancy. NIH: National Institute of Child Health and Human Development/R01 1R01HD107759 (PI: Zhu)
Co-Investigator
The goal of this study is to provide robust information on the effects of antibiotics in pregnancy.
- 9/1/2019-5/31/2024 Comparative Safety of Non-Insulin Agents in Pregnant Women with Pregestational Diabetes.
NIH: National Institute of Child Health and Human Development/R01HD097778 (PI: Sonia Hernandez-Diaz)
Co-Investigator
The goal of the proposed studies are to define the comparative safety of medications used to treat pre-existing diabetes in pregnancy.
- 6/15/2018-3/31/2023 In-utero exposure to psychotropic medications and the risk of neurodevelopmental disorders
NIH: National Institutes of Mental Health/1 R01 MH116194-01
Co-Investigator (PI: Krista Huybrechts)
To identify the impact of psychotropic medication use during pregnancy on the risk of neurodevelopmental disorders in the offspring.
- 4/1/2020-12/30/2023 The Comparative Effectiveness and Safety of Pharmacotherapies for the Treatment of Opioid Use Disorder in Pregnancy
NIH: National Institute on Drug Abuse/ 1R01DA049822-01 (PI: Bateman/Huybrechts)
Principal investigator
Reviewed in June 2019 and received an impact score of 16
The goal of the study is to establish the approach to the treatment of opioid use disorder in pregnancy that is safest and most effective.
- 9/2020-7/2024 Drug interactions and opioid-related emergency room visits and hospitalizations among older adults
Agency for Healthcare Research and Quality/ /R01HS027623 (PI:Gagne)
Co-Investigator
To evaluate drug-drug interactions and the risk for increasing opioid-related adverse outcomes.
- 4/2021-3/2025 Active Surveillance of the Safety of Antipsychotic Medications in Pregnancy
National Institutes of Health/ 1R01HD104646-01 (PI: Huybrechts)
Co-Investigator
To develop and employ active surveillance methods (e.g., TreeScan) to study the safety of antipsychotic use in pregnancy.

Training Grants and Mentored Trainee Grants

- 2019- Genome Wide Association Study of Patients with History of Postpartum Hemorrhage
Mentored Research Training Grant, Foundation for Anesthesia Education and Research
Co-Mentor/PI: Vesela Kovacheva
To define maternal genetic variants by performing the first genome-wide association study of PPH. These results will identify novel targets for PPH prediction and therapy.
- 2019-2020 Second-line Uterotonics in Postpartum Hemorrhage: A Randomized Clinical Trial.
BWH Faculty Career Development Award
Mentor/PI: Naida Cole
To evaluate the comparative effectiveness of methergine versus hemabate for the treatment of uterine atony
- 2019- Tranexamic Acid Administered After Delivery: Maternal Pharmacokinetics, Pharmacodynamics, and Coagulation Status.
Society of Obstetric Anesthesia and Perinatology (SOAP) Young Investigator Grant
Mentor/PI: Sara Seifert
To model the PK/PD of tranexamic acid for the prevention of severe postpartum hemorrhage
- 2019- Tranexamic Acid and ROTEM
BWH Anesthesiology seed grant
Mentor/PI: Michaela Farber
To examine the relationship between TXA PK/PD and ROTEM parameters

Report of Local Teaching and Training

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

2011-2012	Introduction to airway management Anesthesia Residents	Massachusetts General Hospital 2 hours/year
2011-2016	Sedative/hypnotic drugs Anesthesia Residents	Massachusetts General Hospital 2 hours/year
2011-2016	Obstetric emergencies Anesthesia Residents	Massachusetts General Hospital 2 hours/year
2013-2015	Drug safety study in perioperative setting	Brigham and Women's Hospital

Medicine Residents 1 hour/year

2017- Lectures in obstetric anesthesia Brigham and Women's Hospital
2-3 hours/month

Clinical Supervisory and Training Responsibilities:

2011-present Supervise residents in the operating room and on labor and delivery floor 1 day per week and during call

2012-2014 Leader, Departmental Journal Club; Department of Anesthesia, Critical Care, and Pain Medicine, Massachusetts General Hospital 4 times per year, anesthesia residents, fellows, faculty

Formally Mentored Harvard Medical, Dental and Graduate Students:

2014-2015 James Baker/Harvard Dental Student
Mentored student in a study examining patterns of opioid prescribing after dental surgery; Awarded the Judah Folkman Prize for Clinical / Translational Science Research at the Soma Weiss Student Research Day at HMS; Research published in *JAMA*. Manuscript #78 in the Report of Scholarship

Other Mentored Trainees and Faculty:

2011 Vanessa Olbrecht/ Assistant Professor in the Department of Anesthesia at Cincinnati Children's Hospital Medical Center
Mentored resident in completion of research project on subarachnoid hemorrhage in the peripartum period; 2nd prize in Gertie Marx completion at Society of Obstetric Anesthesiology and Perinatology Annual Meeting; Research published in *Anesthesiology*. Publication #21 in the Report of Scholarship

2011 Jonathan Wanderer/ Associate Professor, Department of Anesthesiology, Vanderbilt University
Mentored resident in completion of research project on peripartum ICU utilization; oral presentation at Society of Obstetric Anesthesiology and Perinatology Annual Meeting; Research published in *Critical Care Medicine*. Publication #40 in the Report of Scholarship

- 2012 Matthew Sigakis/Faculty, University of Michigan
Mentored resident in completion of research project on ICD 9 validation of obstetric morbidity diagnoses; poster presentation at Society of Obstetric Anesthesiology and Perinatology Annual Meeting; Research published in *Anesthesia and Analgesia*. Publication #88 in the Report of Scholarship
- 2012 Ade Haastrup/Private Practice
Mentored resident in completion of research project on peripartum cardiomyopathy; poster presentation at Society of Obstetric Anesthesiology and Perinatology Annual Meeting
- 2014 Ayumi Maeda/Faculty, Tokyo
Mentored resident in completion of research project on opioid abuse and obstetric outcomes; Top 6 abstracts selected for Gertie Marx resident research completion at Society of Obstetric Anesthesiology and Perinatology Annual Meeting; Research published in *Anesthesiology*. Publication #49 in the Report of Scholarship
- 2014-2015 Karim Ladha/Faculty, University of Toronto
Mentored this fellow during his participation in the Health Services Research Fellowship; this work led to the completion of 2 manuscripts published in *Anesthesiology*; #81, 82 in the Report of Scholarship
- 2016 Emily McQuaid/Private Practice, Montana
Mentored this fellow in the completion of a research project during her OB anesthesia fellowship/Podium presentation, SOAP meeting, manuscript published in *Obstetrics and Gynecology*, Publication #107 in the Report of Scholarship
- 2016 Fridgeir Andri Sverrisson/Doctoral student
External advisor for Master's thesis, University of Reykjavík
- 2015-2018 Malavika Prabhu/Maternal Fetal Medicine Fellow
Mentored fellow in completion of a research project during her MFM fellowship, manuscripts published in *Obstetrics and Gynecology*, Publication #107, in the Report of Scholarship
- 2015-2017 Mallika Mundkur/Medical officer, Food and Drug Administration,
Mentored fellow in completion of a research project during her general medicine fellowship; manuscript published in *Pharmacoepidemiology and Drug Safety*, Publication #126 the Report of Scholarship

- 2016-2017 Kathryn Rough/ Scientist at Google
Mentored as doctoral student at the Harvard School of Public Health and as a postdoctoral fellow. Publications #87 and 150 in the Report of Scholarship
- 2017-2018 Naida Cole/Faculty at BWH
Mentored this fellow in the completion of a research project during her OB anesthesia fellowship. Manuscript in preparation
- 2017-2019 Sarah Rae Easter/Faculty at BWH
Mentored fellow in completion of a research project during her MFM fellowship, manuscripts published in *Obstetrics and Gynecology* and the *American Journal of Obstetrics and Gynecology*, Publication #139 and 140 in the Report of Scholarship
- 2017-2019 Erica Holland/Faculty at Boston Medical Center
Mentored fellow in completion of a research project during her MFM fellowship, manuscripts published in *Obstetrics and Gynecology*. Publication #140 in the Report of Scholarship
- 2017-2019 Emily Naoum/Fellow at University of Michigan
Mentored resident in completion of a review article, manuscript published in *Anesthesiology*. Publication #15 in Review articles.
- 2016-2018 Yoonyoung Park/Scientist at IBM
Part of team that mentored student during her doctoral studies at the Harvard School of Public Health; manuscripts published in *American Journal of Psychiatry* and *BMJ*. See publication #128, 129 in the Report of Scholarship
- 2017- Vesela Kovacheva/Faculty at Brigham and Women's Hospital
Co-mentor for Foundation for Anesthesia Research (FAER) grant career development award
- 2018-2019 Rochelle Molitor/Faculty at the Mayo Clinic
Mentored fellow in a project examining location of delivery for women with abnormal placentation. Abstract presented at the Society for Obstetric Anesthesia and Perinatology. Manuscript in preparation
- 2017-2019 Yanmin Zhu, PhD/Postdoctoral Fellow at Brigham and Women's Hospital
- 2018- Daina Esposito, MPH/ Doctoral Student at Boston University School of Public Health
- 2018- Sara Seifert, MD/ Obstetric Anesthesia Fellow

2018-2020 Jenny Sun, MS/Doctoral Student at Harvard T.H. Chan School of Public Health

2018- David Combs, MD, PhD/Obstetric Anesthesia Fellow

Local Invited Presentations:

No presentations below were sponsored by 3rd parties/outside entities

2008 “Postpartum Hemorrhage: Epidemiology and Approach to Treatment”/ Case Conference, Speaker
Department of Anesthesia and Critical Care, MGH

2008 “POISE trial: Implications for Our Practice of Perioperative Beta-Blockade”/Department Conference, Speaker
Department of Anesthesia and Critical Care, MGH

2011 “Antihypertensive Medications in Pregnancy” / Seminar
Division of Pharmacoepidemiology and Pharmacoeconomics, BWH

2013 “The Epidemiology of Postpartum Hemorrhage” / Grand Rounds speaker
Beth Israel Deaconess Medical Center, Boston, MA

2014 “Familial Aggregation of Postpartum Hemorrhage”/ MGH Center for Human Genetic Research seminar
Massachusetts General Hospital, Boston, MA

2015 “The Epidemiology of Postpartum Hemorrhage” / Grand Rounds speaker
South Shore Hospital, South Weymouth, MA

2016 “Epidemiology of Postpartum Hemorrhage”/Visiting Professor
Department of Anesthesiology
Brigham and Women’s Hospital
Boston, MA

2018 “Opioid Use in Pregnancy and the Postpartum”/Visiting Professor
Beth Israel Deaconess Medical Center
Boston, MA

2018 “Opioid Use in Pregnancy and the Postpartum”/Visiting Professor
Tufts School of Medicine

Boston, MA

2019 “HELLP! How to Keep Moms with Preeclampsia Safe”/ Invited presentation
Harvard Anesthesia Review Course, Boston, MA

Report of Regional, National and International Invited Teaching and Presentations

No presentations below were sponsored by 3rd parties/outside entities

Regional

2012 “Maternal Hemorrhage”/Invited presentation
Massachusetts Perinatal Quality Collaborative (March of Dimes)
Boston, MA

2014 “Interpreting Comparative Effectiveness and Safety Studies Based on
Healthcare Utilization Data” /Invited presentation
Harvard Anesthesia Review Course
Boston, MA

2015 “Epidemiology of Postpartum Hemorrhage” / Invited presentation
Massachusetts Perinatal Quality Collaborative's Spring 2015 Summit, Waltham, MA

National

2008 "The Epidemiology of Postpartum Hemorrhage in a Nationwide Sample of Deliveries
in the United States"/ Podium Presentation. Obstetrics Session
American Society of Anesthesiologist Annual Meeting
Orlando, FL

2009 "Temporal Trends in the Epidemiology of Severe Postoperative Sepsis Following
Elective Surgery: A Large, Nationwide Sample " / Oral Presentation. Best Abstracts of
the Meeting: Anesthesiology Editors' Picks Special Session
American Society of Anesthesiologist Annual Meeting
New Orleans, LA

2011 “Peripartum hysterectomy—Nationwide 14-year experience” / Oral Presentation. Best
Abstracts of the Meeting
Society of Obstetric Anesthesiology and Perinatology Annual Meeting
Las Vegas, NV

2012 “Recurrence of Postpartum Hemorrhage—the Swedish Medical Birth Register” / Oral
Presentation. Best Abstracts of the Meeting
Society of Obstetric Anesthesiology and Perinatology Annual Meeting
Monterey, CA

- 2012 “Coagulopathy: Nuts and Bolts to Cutting Edge” / Research Symposium
Society of Obstetric Anesthesiology and Perinatology Annual Meeting
Monterey, CA
- 2012 “The Epidemiology of Postpartum Hemorrhage”/ Invited presentation
Vanderbilt University
Nashville, TN
- 2012 “Use of claims data in clinical research” /Invited Presentation
Multicenter Perioperative Outcomes Group Consortium Meeting
American Society of Anesthesiologist, Annual Meeting
Washington, DC
- 2013 “The Epidemiology of Postpartum Hemorrhage” / Visiting Professor
University of Michigan, Department of Anesthesiology
Ann Arbor, MI
- 2013 “Patterns of Antihypertensive Use in Pregnancy” / Invited Lecture
Center for Disease Control and Prevention,
Atlanta, GA, by Teleconference
- 2013 “Development and Validation of an Obstetric Comorbidity Index” / Consultative
working group on obstetric morbidity in the United States
Centers for Disease Control and Prevention
Atlanta, GA
- 2013 “Role of hypertension genetic factors in susceptibility to preeclampsia” / Presentation.
Best Abstracts of the Meeting
Society of Obstetric Anesthesiology and Perinatology Annual Meeting
San Juan, PR
- 2013 “Familial clustering of postpartum hemorrhage in the Swedish population” / Oral
Presentation
Society of Obstetric Anesthesiology and Perinatology Annual Meeting
San Juan, PR
- 2013 “Methyergonovine maleate and the Risk of Myocardial Ischemia and Infraction”/ Oral
Presentation
Society of Obstetric Anesthesiology and Perinatology Annual Meeting
San Juan, PR
- 2013 “Interpreting Comparative Effectiveness Studies in Ambulatory Surgery” / Invited
lecture
American Society of Anesthesiology Annual Meeting
San Francisco, CA
- 2014 “The Epidemiology of Postpartum Hemorrhage” / Invited lecture
State Postpartum Hemorrhage Collaborative Meeting

Newark, NJ

- 2014 “The Epidemiology of Postpartum Hemorrhage” / Invited lecture
State Postpartum Hemorrhage Collaborative Meeting
Atlanta, GA
- 2014 “Interesting Questions in Anesthesia and Approaches to Answer Them” / Invited
lecture
Investigators in Health Services Research in Anesthesiology, sponsored by ASA
Health Policy Research and FAER
American Society of Anesthesiology Annual Meeting
New Orleans, LA
- 2014 “Comparative Safety of Anesthetic Technique for Hip Fracture Surgery in Adults” /
Oral presentation
American Society of Anesthesiology Annual Meeting
New Orleans, LA
- 2014 “Perioperative β -blocker Utilization in Patients Undergoing Intermediate to High Risk
Non-Cardiac Surgery” / Oral presentation
American Society of Anesthesiology Annual Meeting
New Orleans, LA
- 2014 “Methylergonovine maleate and the Risk of MI” / Invited lecture
Department of Anesthesiology, University of Chicago
Chicago, IL
- 2014 “10 Things You Should Know About Preeclampsia to Care for Your Obstetric
Patients” / Invited lecture University of Chicago, 28th Annual Conference, Challenges
for Clinicians
Chicago, IL
- 2014 “Postpartum Hemorrhage: Coming Soon to a Hospital Near You”/Invited lecture
University of Chicago, 28th Annual Conference, Challenges for Clinicians
Chicago, IL
- 2015 “Risk Assessment for Postpartum Hemorrhage” / Invited presentation
New Jersey State Postpartum Hemorrhage Consortium by teleconference
- 2015 “Risk Assessment for Postpartum Hemorrhage” / Invited presentation
Georgia State Postpartum Hemorrhage Consortium by teleconference
- 2015 “Obstetric Comorbidity Score” / Invited presentation
CDC-American College of Obstetricians and Gynecologists, Maternal Mortality
meeting,
San Francisco, CA

- 2015 “Postpartum Hemorrhage” / Grand Rounds
Englewood Hospital
Englewood, NJ
- 2015 “Genetics of preeclampsia” / Invited presentation; Gertie Marx Grant Awardees Session
Society of Obstetric Anesthesiology and Perinatology Annual Meeting
Colorado Springs, CO
- 2015 Labor Induction and Offspring Risk of Autism Spectrum Disorder / Presentation. (Best Abstracts of the Meeting)
Society of Obstetric Anesthesiology and Perinatology Annual Meeting
Colorado Springs, CO
- 2015 “Epidemiology of Postpartum Hemorrhage”/ Visiting Professor
Department of Anesthesia, Stanford University
Palo Alto, CA
- 2015 “Epidemiology of Postpartum Hemorrhage”/ Invited presentation
California Perinatal Quality Care Collaborative
Palo Alto, CA
- 2015 “Factor 7a in Postpartum Hemorrhage” / Invited presentation
New Jersey State Postpartum Hemorrhage Consortium by teleconference
- 2015 “Factor 7a in Postpartum Hemorrhage” / Invited presentation
Georgia State Postpartum Hemorrhage Consortium by teleconference
- 2016 “Epidemiology of Postpartum Hemorrhage”/ Visiting Professor
Department of Anesthesia, Columbia University
New York, NY
- 2016 “What’s New in Postpartum Hemorrhage Management?” / Invited presentation
New Jersey State Postpartum Hemorrhage Consortium
Newark NJ
- 2016 “What’s New in Postpartum Hemorrhage Management?” / Invited presentation
Georgia State Postpartum Hemorrhage Consortium
Atlanta, GA
- 2016 “Peripartum pain management—special considerations to ensure appropriate pain management, to prevent postpartum relapse and a risk of overdose”/Invited presentation
Opioid Use in Pregnancy, Neonatal Abstinence Syndrome, and Childhood Outcomes Workshop, Co-sponsored by NICHD/ACOG/AAP/SMFM/CDC/MOD
Rockville, MD

- 2016 “Using the Medicaid Analytic Extract for Pregnancy Research”/Invited Presentation
Brown University Center for the Study of Children at Risk
Providence, RI
- 2016 “Opioid Use Following Cesarean Delivery”/Invited lecturer
National Meeting on Opioid Use, Abuse, and Overdose in Women
Office of Women’s Health
Department of Health and Human Services
Washington, DC
- 2016 “Uterine Atony”/ Invited presentation
American Society of Anesthesiology Annual Meeting
Chicago, IL
- 2016 “The Epidemiology of Postpartum Hemorrhage”/ Visiting Professor
Wayne State University/Detroit Medical Center
Detroit, MI
- 2016 “Big Data for OB and OB Anesthesia Research”/Invited Speaker
Society for Technology in Anesthesia
San Diego, CA
- 2016 “The Epidemiology of Postpartum Hemorrhage”, “Big Data for OB and OB
Anesthesia Research”/Visiting Professor
University of Texas Southwestern
Dallas, TX
- 2017 “The Epidemiology of Postpartum Hemorrhage”/Visiting Professor
Washington University School of Medicine
St. Louis, MI
- 2017 “What’s New in Obstetric Anesthesia”: Ostheimer Memorial Lecture
Society for Obstetric Anesthesia and Perinatology Annual Meeting
Seattle, WA
- 2017 “What’s New in Obstetric Anesthesia”/ Visiting Professor
Weill Cornell Medical College
New York, NY
- 2017 “Opioid Use in Pregnancy and the Postpartum”/Visiting Professor
Wake Forest School of Medicine
Winston Salem, NC
- 2017 “Opioid Use in Pregnancy and the Postpartum”/Invited speaker
Program Project Grant Symposium, Pain Mechanism Laboratory
Wake Forest School of Medicine
Winston Salem, NC

- 2017 “What’s New in Obstetric Anesthesia”/ Visiting Professor
University of Illinois Chicago School of Medicine
Chicago, IL
- 2017 “Opioid Use in Pregnancy and the Postpartum”, “The Epidemiology of Postpartum Hemorrhage”/ Visiting Professor
Department of Anesthesiology, Feinberg Northwestern School of Medicine
Chicago, IL
- 2017 “Eating during labor”/ Invited presentation
American Society of Anesthesiology Annual Meeting
Boston, MA
- 2017 “Consequential Epidemiology: can population medicine improve maternal morbidity?”/Invited Presentation
Foundation for Anesthesia Education and Research Panel, American Society of Anesthesiology Annual Meeting
Boston, MA
- 2017 “Opioid Use in Pregnancy and the Postpartum”/Invited presentation
Connecticut Hospital Association/ Connecticut Perinatal Quality Collaborative Conference
Hartford, CT
- 2018 “Pain Management: antepartum, intrapartum, postpartum and beyond”/Invited Speaker Workshop on Substance Use Disorders in Pregnancy, Co-sponsored by the Society for Fetal and Maternal Medicine, the American College of Obstetrics and Gynecology, and the American Society of Addiction Medicine
Dallas Texas
- 2018 “Opioid Use in Pregnancy and the Postpartum”/Visiting Professor
Mayo School of Medicine
Rochester, MI
- 2018 “Sam Hughes Memorial Lecture: What’s New In Obstetric Anesthesia”/Invited Lecture Sol Snider Meeting
San Francisco, CA
- 2018 “Opioid Use in Pregnancy and the Postpartum”/Invited Lecture
Sol Snider Meeting
San Francisco, CA
- 2018 “Maternal Early Warning Criteria”/Invited Lecture
Sol Snider Meeting
San Francisco, CA
- 2018 “Opioids In Pregnancy and the Postpartum: Overview and Research Gaps”/ Invited workshop presentation

- Society for Obstetric Anesthesia and Perinaology Annual Meeting
Miami, FL
- 2018 “Research symposium, Opioids in Pregnancy”/Invited Lecture
Society for Obstetric Anesthesia and Perinaology Annual Meeting
Miami, FL
- 2018 “Opioid Use In Pregnancy and the Postpartum”/Visiting Professor
Department of Anesthesiology, University of Colorado Medical School
Denver, CO
- 2018 “Big Data in OB and OB Anesthesia Research”/ Research Seminar
Department of Anesthesiology, University of Colorado Medical School
Denver, CO
- 2018 “The Correlation of Perioperative Anesthesia Approaches with
Long-Term Post-Op Opioid Use”/Invited lecture
International Society of Anesthetic Pharmacology Annual Meeting
San Francisco, CA
- 2018 “Preeclampsia Refresher Course”/ Invited lecture
American Society of Anesthesiology Annual Meeting
San Francisco, CA
- 2018 “Neurological etiologies of postpartum headache”/ Invited lecture
American Society of Anesthesiology Annual Meeting
San Francisco, CA
- 2018 “Opioid Use In Pregnancy and the Postpartum”/Invited lecture
Perinatal Quality Institute Webinar
- 2018 “Opioid Use In Pregnancy and the Postpartum”/Visiting Professor
Westchester Medical Center/ New York Medical College
Valhalla, NY
- 2019 “Big Data to Study Drug Safety in Pregnancy”/Invited presentation
Columbia University Medical Center
New York, NY
- 2019 “Why You Should Care About Maternal Levels of Care”/Panelist
Society for Obstetric Anesthesia and Perinatology Annual Meeting
Phoenix, AZ
- 2019 “Opioid Prescription Use After Vaginal Delivery and Subsequent Persistent Opioid
Use and Misuse”/Invited presentation
Best Papers Session, Society for Obstetric Anesthesia and Perinatology Annual
Meeting, Phoenix, AZ
- 2019 “Pain in Pregnancy and the Postpartum”/Invited presentation

14th annual NIH Pain Consortium Symposium, Advances in Pain Research, Pain Across the Lifespan
Bethesda MD

- 2019 “Opioids after Vaginal and Cesarean Delivery”/Invited presentation
Workshop on Identifying Research Gaps in Clinical Practice Guidelines for Prescribing Opioids for Acute Pain, National Academy of Medicine
Washington, DC
- 2019 “HELLP! How to Keep Women with Preeclampsia Safe” Obstetrics Refresher Course/
Invited lecture
American Society of Anesthesiology Annual Meeting
Orlando, FL
- 2019 “Evaluating the Safety of Medications in Pregnancy”, Invited lecture, Stanford
University School of Medicine
- 2020 "What Do You Need to Know from SOAP Consensus Statements"/Invited lecture
American Society of Anesthesiology Annual Meeting (Virtual)
- 2020 Society for Obstetric Anesthesia and Perinatology, Town Hall, “Epidurals and the
Risk for Autism” (Virtual)
- 2020 Visiting Professor, New York University School of Medicine—Cancelled due to
COVID 19
- 2021 Visiting Professor, University of Arkansas School of Medicine (virtual)
- 2021 “Preeclampsia and the Future Health of the Infant”/Invited lecture
Society for Maternal Fetal Medicine/Preeclampsia Foundation, Workshop on
Preeclampsia (virtual)

International

- 2012 “Epidemiology of Postpartum Hemorrhage” by video conference / Invited lecture
Awareness Rational Use of Blood Conference, Centro Médico Teknon
Barcelona, Spain
- 2013 Methyergonovine maleate and the Risk of Myocardial Ischemia and Infraction / Oral
presentation
International Society of Pharmacoepidemiology Annual Meeting
Montreal, CA
- 2013 Type of stress ulcer prophylaxis and the risk of nosocomial pneumonia in cardiac
surgical patients: a cohort study / Oral presentation
International Society of Pharmacoepidemiology Annual Meeting
Montreal, CA

- 2014 “Risk Factors for Postpartum Hemorrhage” / Invited lecture
19th Annual Internacional de Anestesia Obstetrica Conference
Sao Paulo, Brazil
- 2014 “Update on Cardiac Arrest” / Invited lecture
19th Annual Internacional de Anestesia Obstetrica Conference
Sao Paulo, Brazil
- 2014 “Genetics of Preeclampsia” / Invited lecture
19th Annual Internacional de Anestesia Obstetrica Conference
Sao Paulo, Brazil
- 2014 “Introduction to Big Data for Use in OB Research Including Methodological Considerations”/Invited lecture
Society for Obstetric Anesthesia and Perinatology Annual Meeting
Toronto, Canada
- 2014 “Statins and the Risk of Congenital Malformations: A Cohort Study”/ Oral presentation
International Society of Pharmacoepidemiology, Annual Meeting
Taipei, Taiwan
- 2014 “Opioid Use Following Cesarean Delivery” / Oral presentation
International Society of Pharmacoepidemiology, Annual Meeting
Taipei, Taiwan
- 2015 “Postpartum Hemorrhage: Morbidity and How to Prevent It”/Seminar
Department of Anesthesia, Karolinska Institut
Stockholm, Sweden
- 2015 “Methodological Considerations in Studying Drug Safety in Pregnancy”/Course instructor
International Society of Pharmacoepidemiology, Annual Meeting
Boston, MA
- 2015 “Inductions and the Risk of Autism Spectrum Disorder”/ Oral presentation
International Society of Pharmacoepidemiology, Annual Meeting
Boston, MA
- 2015 “ACE Inhibitor Exposure and the Risk of Congenital Malformations”/ Oral presentation
International Society of Pharmacoepidemiology, Annual Meeting
Boston, MA

- 2015 “The Safety of First Trimester Exposure to ADHD Medications”/ Oral presentation
International Society of Pharmacoepidemiology, Annual Meeting
Boston, MA
- 2015 “Late Pregnancy Exposure to Beta Blockers and the Risks of Neonatal Bradycardia
and Hypoglycemia”/ Oral presentation
International Society of Pharmacoepidemiology, Annual Meeting
Boston, MA
- 2016 “Methodological Considerations in Studying Drug Safety in Pregnancy”/Course
instructor
International Society of Pharmacoepidemiology, Annual Meeting
Dublin, Ireland
- 2016 “Pregnancy outcomes in women with chronic hypertension initiated on labetalol
versus methyldopa”
International Society of Pharmacoepidemiology, Annual Meeting
Dublin, Ireland
- 2017 “What’s New in Obstetric Anesthesia 2016”/Invited lecture
Obstetric Anaesthetists' Association Meeting
London, UK
- 2017 “Big data for obstetric and obstetric anesthesia research”/Invited lecture
Obstetric Anaesthetists' Association Meeting
London, UK
- 2017 “What’s New in Obstetric Anesthesia 2016”/ Invited lecture
24th International Conference of the Israeli Society of Anesthesiologists
Tel Aviv, Israel
- 2017 “Big data for obstetric and obstetric anesthesia research”/Invited lecture
24th International Conference of the Israeli Society of Anesthesiologists
Tel Aviv, Israel
- 2017 “Methodological Considerations in Studying Drug Safety in Pregnancy”/Invited
presentation
International Society of Pharmacoepidemiology, Annual Meeting
Montreal, Canada
- 2017 “Beta Blockers and the Risk for Congenital Malformations”/Invited presentation
International Society of Pharmacoepidemiology, Annual Meeting
Montreal, Canada

- 2018 “Opioid Use in Pregnancy and the Postpartum Period”/ Visiting Professor
British Columbia Women’s Hospital
University of British Columbia
Vancouver, Canada
- 2018 “What’s New In Obstetric Anesthesia”/ Visiting Professor
Vancouver General Hospital, University of British Columbia
Vancouver, Canada
- 2018 “What’s New In Obstetric Anesthesia”/ Visiting Professor
Royal Columbian Hospital, University of British Columbia
Vancouver, Canada
- 2018 “What’s New In Obstetric Anesthesia”/Invited presentation
Annual Internacional de Anestesia Obstetrica Conference
Sao Paulo, Brazil
- 2018 “Applying Early Warning Criteria in Obstetrics”/ Invited presentation
Beijing 2018 National High Risk Obstetric Analgesia and Anesthesia Symposium
Beijing, China
- 2018 “Methodological Considerations in Studying Drug Safety in Pregnancy”/Course
instructor
International Society of Pharmacoepidemiology, Annual Meeting
Prague, Czech Republic
- 2018 “Update on Preeclampsia”/Invited presentation
11th Annual Conference of Association of Obstetric Anesthesiologists
Jodhpur India
- 2019 “Update on Preeclampsia”/Invited presentation
Hanoi Hospital for Obstetrics and Gynecology
Hanoi, Vietnam
- 2019 “Risk Stratification in Obstetrics”/Invited presentation
International Conference on Anesthesia for Obstetrics and Gynecology
Hanoi, Vietnam
- 2019 “Update on Preeclampsia”/Invited presentation
Congresso Paulista De Anestesiologia,
São Paulo, Brazil
- 2019 “Early Warning Systems and Risk Stratification”/Invited presentation

Congresso Paulista De Anestesiologia
São Paulo, Brazil

- 2019 “Opioids After Cesarean Delivery and the Opioid Epidemic”/Invited presentation
International Anesthesia Research Society
Montreal, Canada
- 2019 “Update on Preeclampsia”/Invited presentation
14th National Congress on Obstetric Anesthesia
Baotau, China
- 2019 “Threats to the Validity of Studies of Drug Safety in Pregnancy”/Invited presentation.
International Society of Pharmacoepidemiology, Annual Meeting
Philadelphia, PA
- 2019 “Big Data in Obstetric Anesthesia-what have we learned?”/Invited presentation.
International Congress of Obstetric Anaesthesia, Cape Town, South Africa
- 2019 “Pain During Cesarean Delivery”/Invited presentation.
International Congress of Obstetric Anaesthesia, Cape Town, South Africa
- 2020 Invited speaker, Annual Scientific Meeting in Anaesthesiology, Hong Kong College
of Anesthesia, Hong Kong (cancelled due to civil unrest)
- 2020 “Risk Stratification in Obstetrics”/Invited presentation.
Euroanesthesia, European Society of Anesthesiology, Barcelona, Spain (converted to
virtual meeting due to COVID)
- 2020 “Medication Safety in Pregnancy”/Invited presentation.
Euroanesthesia, European Society of Anesthesiology, Barcelona, Spain (converted to
virtual meeting due to COVID)
- 2020 Invited speaker 25th International Conference of the Israeli Society of
Anesthesiologists, Tel Aviv, Israel (Cancelled due to COVID)
- 2021 “Risk Stratification in Obstetrics”/Invited presentation.
Association of Obstetric Anaesthesiologists, India 13th National Conference (virtual
meeting due to COVID)
- 2021 “Using Big Data to Study the Safety of Medications in Pregnancy”/Invited
presentation
Obstetric Anaesthetists' Association Annual Meeting, United Kingdom (virtual
meeting due to COVID)

- 2021 “Methodological Considerations in Studying Drug Safety in Pregnancy”/Course instructor
International Society of Pharmacoepidemiology, Annual Meeting
(virtual meeting due to COVID)

- 2021 “Using Big Data to Study the Safety of Medications in Pregnancy”/Invited presentation
Annual Scientific Meeting in Anaesthesiology, Hong Kong College of Anesthesia, Hong Kong

- 2021 “Risk Stratification in Obstetrics”/Invited presentation Annual Scientific Meeting in Anaesthesiology, Hong Kong College of Anesthesia, Hong Kong

Report of Clinical Activities and Innovations

Current Licensure and Certification:

- 2006-2010 Restricted License, Massachusetts

- 2006- ACLS Certification

- 2010- Full License, Massachusetts

- 2011- Primary certification, American Board of Anesthesiology
Participating in Maintenance of Certification

Practice Activities:

2011-2017	Attending anesthesiologist (Massachusetts General Hospital)	Main operating theatre, Labor and delivery	1 day per week + call (70 to 80 patient contact hours per month)
2017-	Attending anesthesiologist (Brigham and Women’s Hospital)	Labor and delivery, Main operating theatre	1 day per week + call

Clinical Innovations:

Shared decision making for opioid prescribing after cesarean delivery	Our group pioneered the use of a shared decision-making approach to opioid prescribing after cesarean delivery. In this approach, women are educated about the risks of opioids and select the quantity of opioids they want to be prescribed up to a defined limit, thereby better aligning the quantity of opioids prescribed with patient needs and reducing the leftover opioids available for diversion and misuse. Citing our work, the use of shared decision making to guide postpartum opioid prescriptions was listed as a key recommendation in the recent American College of Obstetrician and Gynecologist guidelines on postpartum pain management. The approach is currently being evaluated in a 14 center, 5,500 patient RCT by the NIH-funded Maternal Fetal Medicine Units Network. Our approach has also been adapted for use in other surgeries by other investigators and has been shown to be effective.
Creation of Maternal Obstetric Comorbidity Index (OB-CMI)	I led the development of a Maternal Obstetric Comorbidity Index (OB-CMI). This score has been validated in independent studies in several other countries and is now an accepted and widely used method by researchers and public health officials for tracking the burden of comorbid illness and for risk adjustment in health services/ epidemiological research. Our group recently adapted the OB-CMI for use in routine clinical practice as a risk stratification tool and validated its performance at BWH. It has now been built into the EMR for use across Partners hospitals.
Safety of cardiovascular medications in pregnancy	Our group pregnancy using cutting edge epidemiological methods applied to large retrospective databases to study the safety of cardiovascular medications in pregnancy including statins, beta blockers, ACE inhibitors, and calcium channel blockers. This work has been cited in national and international guidelines (e.g., ADA, ACC, ESC) and review articles on the management of cardiovascular disease in pregnancy. It informed labelling changes regarding statin use during pregnancy by the FDA.
Safety of prescription opioids in pregnancy	Our research group was the first to described nationwide patterns of prescription opioid utilization during pregnancy, finding that 14% of pregnant women in a nationwide, commercially insured cohort and 21% of pregnant women in a nationwide, Medicaid cohort were exposed to an opioid medication at some point during pregnancy, suggesting that the epidemic of prescription opioid use extends into pregnancy. We have worked to define the risks associated with this exposure during pregnancy, including the risk of neonatal abstinence syndrome associated with varying doses and timing of opioid exposure and the risk of congenital malformations associated with first trimester use. This work has helped to elevate concern about the risks associated with prescription opioid use in pregnancy. It has been cited extensively in work from CDC on this topic, subsequent investigations, and review articles related to the treatment of pain and substance use disorder in pregnancy.
Safety of ondansetron in pregnancy	Ondansetron is a commonly used antiemetic in pregnancy. Our group conducted the largest observational study to date examining the risks associated with its use in the first trimester. We found no increase in the risk

for cardiac malformations or malformations overall, but a small increase in the risk for oral clefts. This resulted in the European Medicines Agency changing the label for ondansetron to state it should not be used in the first trimester of pregnancy.

Safety of psychotropic medications in pregnancy

Our group has a series of studies evaluating the safety of psychotropic medications in pregnancy including antidepressants, antipsychotics, stimulants, and mood stabilizers. This work has been cited widely in clinical review articles.

Safety of medications in the used on labor and delivery units

Our group has evaluated important safety concerns regarding medications prescribed around the time of delivery including uterotonics and opioids. We published a study that refuted a previously postulated link between induction of labor and the risk for autism. We evaluated the association between methylergonovine maleate and myocardial infarction. We quantified the risk of persistent opioid use in opioid-naïve women after cesarean delivery. We defined normative opioid requirements after cesarean delivery. The work has been published in leading clinical journals widely cited, including in clinical guidelines and reviews.

Patterns and predictors of maternal morbidity

I have led studies on a range of pregnancy-related complications, often in collaboration with investigators for the Centers of Disease Control and Prevention including stroke, postpartum hemorrhage, hypertensive disorders, peripartum hysterectomy, sepsis, and cardiac arrest. These articles have been highly cited in subsequent investigations, review articles, and clinical guidelines.

Obstetric Anesthesia Center of Excellence Initiative

I served on a five-person committee that developed the criteria, application and review process for an international Obstetric Anesthesia Center of Excellence Designation by the Society for Obstetric Anesthesia and Perinatology. This designation has subsequently been awarded to approximately 40 institutions. The goal of this initiative is to raise the standards for the practice of obstetric anesthesia both in the US and internationally.

Report of Scholarship

Peer-Reviewed Scholarship in print or other media (h-index 66)

Research Investigations

1. **Bateman BT**, Donegan NP, Jarry TM, Palma M, Cheung AL. Evaluation of a tetracycline-inducible promoter in *Staphylococcus aureus* in vitro and in vivo and its application in demonstrating the role of sigB in microcolony formation. *Infection and immunity* 2001;69:7851-7.

2. Cheung AL, Schmidt K, **Bateman B**, Manna AC. SarS, a SarA homolog repressible by agr, is an activator of protein A synthesis in *Staphylococcus aureus*. *Infection and immunity* 2001;69:2448-55.
3. **Bateman BT**, Pile-Spellman J, Gutin PH, Berman MF. Meningioma resection in the elderly: nationwide inpatient sample, 1998-2002. *Neurosurgery* 2005;57:866-72; discussion -72.
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Professional educational materials or reports, in print or other media:

1. **Continuing medical education modules used in the academic detailing programs described below.**
 - a. **Bateman B**, Kim D, Avorn J, Choudhry NK, Fischer M, Hurley E, and Dancel E. *Managing Pain in the elderly*. Alosa Foundation: Boston, MA. Nov 2014
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 - c. **Bateman B**, Avorn J, Fischer M, Choudhry NK, Kim D, Luo J and Dancel E. *Managing acute pain in the elderly*. Alosa Health: Boston, MA. April 2018.
 - d. Barenie R, **Bateman B**, Avorn J, Fischer M, Luo J, and Dancel E. *Helping patients manage opioid use disorder*. Alosa Health: Boston MA. September 2019.
 - e. Lauffenburger J, **Bateman B**, Avorn J, Fischer M, Luo J, and Dancel E. *Treating acute pain without overusing opioids: Evidence-based management approaches*. Alosa Health: Boston, MA. August 2019.
 - f. **Bateman B**, Bykov K, Avorn J, Fischer M, Luo J, and Dancel E. *Managing chronic non-cancer pain: The most recent evidence on effective, safe strategies*. Alosa Health: Boston, MA. August 2019.

These materials were used for the following academic detailing program focused on the treatment of pain without overusing opioids. I also participated in training seminars for the academic detailers involved in these projects.

Massachusetts: The Bureau of Substance Addiction Services provided emergency funding to launch an educational outreach program to primary care providers in Massachusetts in response to the opioid epidemic. This program ran from February to June 2015 and reached over 200 prescribers in the Commonwealth of Massachusetts. Four clinical educators visited prescribers in communities most significantly impacted with opioid overdose deaths to provide education about improving the safety of opioid use, tapering opioid doses, and prescribing or recommending naloxone to reduce overdose risk.

Pharmaceutical Contract for the Elderly (PACE) through the Pennsylvania Department of Aging: Alosa Health's long-standing partnership with the PACE program reaches over 900 prescribers in the state annually on a variety of topics impacting primary care in older adults. The first module launched in 2014 focused on reducing the risks of opioid prescribing for patients with chronic pain and was delivered in Philadelphia, Pittsburgh, Harrisburg, and Wilkes-Barre areas of the Commonwealth. In early 2018, a launch of updated materials focused primary care provider education on non-opioid pain management options, specifically more robust evaluation of the data for non-pharmacologic option for managing pain, emphasis on tapering, prescribing naloxone, and identification of patients with possible opioid use disorder. Coverage expanded to include the Erie area as well. Funding for the PACE program and the subsequent Alosa work is provided via the state lottery system.

PACE/Department of Aging and Department of Health: In September 2019, a joint program through PACE/Dept of Aging and the PA Department of Health will reach providers in Pennsylvania who write opioid prescriptions, without the restriction of providing care to PACE card holders. It is anticipated that this program will expand coverage in the state to include counties in Central PA that are not already engaged through the PACE program as well as providing additional detailing support in areas such as Pittsburgh. Funding for this work was provided to Pennsylvania from the Centers for Disease Control and Prevention.

Aetna: Beginning in December 2018, Alosa launched a clinical education outreach initiative around acute pain, chronic non-cancer pain, and opioid use disorder in Illinois, Maine, Ohio, Pennsylvania, and West Virginia. This initiative was made possible by an unrestricted educational grant from Aetna.

Maine Independent Clinical Information Service: The 2014 managing pain in the elderly module was but also launched in Maine. This long-standing program through the Maine Medical Society canvases the state using two academic detailers to do one-on-one and small group interactions utilizing materials created by Alosa Health.

2. Co-author of Interim Considerations for Obstetric Anesthesia Care related to COVID19 from the Society for Obstetric Anesthesia and Perinatology.

