

Curriculum Vitae

Date Prepared: May, 2019
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Education

1998	B.A. (<i>summa cum laude</i>)	Chemistry	Columbia University New York, NY
2002	M.D.	Medicine	Harvard Medical School Boston, MA
2009	M.B.A. (with distinction)	Business Administration	Harvard Business School Boston, MA

Postdoctoral Training

06/2002- 06/2003	Intern	Surgery	Beth Israel Deaconess Medical Center/Harvard Medical School, Boston, MA
07/2003- 06/2006	Resident	Anesthesia	Beth Israel Deaconess Medical Center/Harvard Medical School, Boston, MA
7/01/2008- 6/30/2009	Fellowship	Morgan-Zinsser Fellowship in Medical Education	Harvard Medical School Academy, Harvard University, Boston, MA

12/2017- 07/2018	Fellowship	Quality Improvement	Health Research and Education Trust (HRET) /Institute for Healthcare Improvement (IHI), Chicago, IL
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Certificates

08/1999	Certificate	Medical Ethics Summer Fellowship	Harvard Medical School, Boston, MA
05/2002	Course credits	Healthcare Policy and Management	Harvard School of Public Health, Boston, MA
05/2005	Certificate	Administration and Management with concentration in Finance	Harvard University Extension School, Boston, MA
11/2012	C.P.E.	Certified Physician Executive	American College of Physician Executives (ACPE), Tampa, FL
08/2017	FASA	Fellow of the ASA	American Society of Anesthesiologists, Chicago, IL

Faculty Academic Appointments

07/2006-	Instructor	Anaesthesia 04/2010	Harvard Medical School, Boston, MA
04/2010-	Assistant Professor	Anaesthesia 2/2015	Harvard Medical School, Boston, MA
03/2015-	Associate Professor	Anaesthesia	Harvard Medical School, Boston, MA

Adjunct (Honorary) Faculty Academic Appointments

08/2015-	Professor, Research (Gratis)	Anesthesiology	Department of Anesthesiology, Louisiana State University School of Medicine, Health Sciences Center, New Orleans, LA
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Appointments at Hospitals/Affiliated Institutions

07/2006-	Staff Anesthesiologist	Anesthesia	Brigham and Women’s Hospital (BWH), Boston, MA
07/2007-	Staff Anesthesiologist	Surgery (courtesy)	Dana-Farber Cancer Institute (DFCI), Boston, MA
12/2013-	Staff Anesthesiologist	Anesthesia	BWH Health Care Center – Chestnut Hill, Boston, MA

Major Administrative & Leadership Positions (BWH)

2009-	Medical Director, Sedation Services for Interventional Medicine	BWH
2014-	Director (Anesthesia), Center for Perioperative Research (C.P.R.)	Departments of Anesthesiology and Surgery, BWH
2014-	Director of Anesthesia Services	Brigham and Women’s Health Care Center at Chestnut Hill, MA
2015-	Program Director, Perioperative Medicine Fellowship	Department of Anesthesiology, BWH
2013-	Anesthesia Department leader for the clinical teaching missions	Indian Health Service (IHS)/BWH
2016-2018	Co-Investigator, Multi-Institutional Perioperative Outcomes Group (MPOG) collaborative	BWH

Research Positions

1996-1998	Research Assistant	Center for Molecular Recognition, Columbia University College of Physicians and Surgeons, New York, NY
2000-2001	Research Assistant	Department of Radiology, Brigham and Women’s Hospital, Boston MA
2014-	Director, Primary Investigator	Center for Perioperative Research, BWH

	(Anesthesia)	Departments of Anesthesia and Surgery
2014-2016	Research Advisor	The Doctors Company, Napa, CA
2015-	Faculty Member, Research Core Group: Brigham Surgical Health Scientist Aligning with Patient Priorities (SHARPP)	Center for Surgery and Public Health, and Women's Hospital, Boston, MA Research
2016-	Research Consultant	Bixby Center for Global Reproductive Health, University of California, San Francisco, CA
2016-	Member, Opioid-Related Adverse Drug Events (ORADEs) Research Group	Division of Internal Medicine, Department of Medicine, Brigham and Women's Hospital, Boston, MA
2016-	Research Collaborator/ Primary Investigator	Harvard Risk Management Foundation (CRICO), Boston, MA
2017-	Research Collaborator/Member	MGH/BWH Clinical Trials Collaborative Boston, MA

Other Professional Positions

2007-2008	Management Consultant	Volunteer Consulting Organization (VCO), Harvard Business School, Boston, MA
2009-	Co-Founder and Director	The Institute for Safety in Office-Based Surgery, Boston, MA
		National Quality Forum (NQF), Washington DC
		Core National Faculty, Chicago, IL

Brigham and Women's Hospital, Boston, MA

International Consortium in Operating Room

Education and Management (iCORMET)

The Joint Commission (TJC)

The Joint Commission (TJC)

2010-2012 Serious Reportable Event Panel,
Subcommittee of Ambulatory and
Officebased surgery technical Advisor
Panel

2013-2016 AHRQ Safety Program for
Ambulatory Surgery Collaborative

2014-2016 Member, OR Management Research
Group

2015- Founding Member

2015- Alternate Representative to the
Professional and Technical Advisory
Committee (PTAC) for SAMBA

2018- Member, Technical Advisory Panel,
Reducing Harm from Anticoagulant
Therapy

2016- Chair, Medical Innovation

Incubator for Patient Safety and Outcomes
(IPSO), www.ipsohq.org, a Division of

ISOBS

2018 National Leader

ISCR (Improving Surgical Care and
Recovery) AHRQ Safety Program

Committee Service Local

2002-2003	Residency Education Committee, Surgery	Department of Anesthesia, BIDMC Member
2004-2006	ICU Executive Committee	Department of Anesthesia, BIDMC Member
2004-2006	Health Information Management Committee	Department of Anesthesia, BIDMC Member
2007-2010	Medical Student Instruction Design Group	Department of Anesthesiology, BWH Member
2007	Main O.R. Work Environment Committee	Department of Anesthesiology, BWH Member
2009-	Committee on Hospital Pain and Sedation Management	BWH Member
2009-	Education Committee, Ambulatory Anesthesia Division	Department of Anesthesiology, BWH Member
2009-	Procedural Sedation Committee	BWH Chair
2010-2012	OR Management Committee	BWH Member
2010-2012	OR flow Subcommittee	Department of Anesthesiology, BWH Member
2010-2011	Clinical Investigation Committee	Department of Anesthesiology, BWH Member
2011-	Anesthesia and Nursing Perioperative Information Management System (PIMS) Steering Committee	Department of Anesthesiology, BWH Member
2012-	Coding Complications Committee	Center for Clinical Excellence, BWH Member 2012-
	Checklist Implementation Sub-Committee	BWH Member
2013-	Endoscopy Services Committee	Department of Anesthesiology BWH Member
2014-	OR Management Research Group	Department of Anesthesiology,

			BWH Member
2014-	EPIC: Subject Matter Expert - Sedation	BWH	Member
2015-2017	OPPE/FPPE Oversight Committee		BWH Anesthesia Department Representative
2015-	Internal Review Committee (Residencies and Fellowships)	GME Office	BWH
2016-	Perioperative Pathways/ERAS Task Force	BWH	
2016-	Consultant to the IRB, Procedural Sedation		BWH
2018	Drug Shortages Ad hoc workgroup		BWH
2018-	Mentor Award Committee		BWH, Anesthesia
2018-	Partners 2.0 – Managing Anesthesia Resources		Partners Healthcare

Professional Societies and Foundations

2001-2005	American Medical Association (AMA)		Member
	2004-2005	Credentialing Committee, House of Delegates	
	2006	Abstract reviewer, 2 nd Annual RFS Research Symposium	
2002-2007	Massachusetts Medical Society (MMS)		Member
	2002-2003	Committee on Tax-Supported Healthcare	
	2003-2004	Committee on Quality of Medical Practice	
	2004-2006	Committees on Finance	
	2004-2008	Committee on Membership	
	2003-2005	State Delegate	
	2005-2006	Vice Chair, Resident and Fellows Section	
	2015-	Society for Education in Anesthesia (SEA)	Member
	2016-	Committee on Research,	Member
	2017-	Abstract Reviewer	

2005-	Society for Ambulatory Anesthesia (SAMBA)	Member
2010-	Member, Committee on Office-Based Anesthesia	
2010-	Member, Committee on Education	
2015-2018	Member, Committee on International Relations	
2014	Associate Course Director: Office-Based Anesthesia: Nuts and Bolts	
2015-	Alternate Representative, The Joint Commission Professional and Technical Advisory Committee (PTAC)	
2015-	Member, Board of Directors (ex officio)	
2018-	Member, Committee on Outcomes Measurement	
2018-	Chair, Communications Committee	
2018-	Member, ASA-SAMBA Technical Expert Panel	
2005-2007	International Anesthesia Research Society (IARS)	Member
2007-	Massachusetts Society of Anesthesiologists (MSA)	Member
Governmental Affairs	2007- Committee on	
2008-	Member, Executive Committee	
2008-	Committee on Economics	
2009-12,16-	Delegate to the ASA House of Delegates Chair, Committee on Publications	
2009-2014	Member, Sub-Committee on Website Design	
2012-16	Alternate Delegate to the ASA House of Delegates	
2014	Course Director: 7 th Update in Sedation and Analgesia	
2014-2015	Course Co-Director: Airway Management	
2014-	Chair, Committee on Programs and Education	
2015-	Task Force on Financial Management	
2016	Course Director, 8 th Update in Sedation and Analgesia	
2016-	Member, Office Oversight Committee	
2016-2017	President-Elect	
2017-2018	President	
2003-	American Society of Anesthesiologists (ASA)	Member
2004-	Delegate to the House of Delegates	
2007-2010	Committee on Physician Resources	

2006-2007	Committee on Economics
2008-2010	Anesthesia Care Team Committee
2008-2010	Subcommittee on Drug Disposition
2008-2014	Subcommittee on Ambulatory and Geriatric Anesthesia
2008-2009	Committee on Anesthesia Care Team
2012-2015	Subcommittee on Equipment, Monitoring, and Engineering Technology
2012-	Committee on Performance Outcomes Measurement
	Ambulatory Outcomes Metrics Subgroup
	PQRS/non-PQRS QCDR Measure Development Subgroup
	Patient Satisfaction and Experience with Anesthesia Workgroup
2014-2016	Committee on Surgical and Procedural Anesthesia
2013-	Subcommittee on Patient Safety and Practice Management
	Vice Chair (2017-)
	Chair (2018-)
2015-	Committee on Patient Safety and Education
2015-2017	Committee on Ambulatory Surgical Care
2016-2018	Committee on Trauma and Emergency Preparedness
2016-2017	Subcommittee on Geriatric Anesthesia (abstract review)
2017-	Committee on Standards and Practice Parameters
2018-	Committee on Scientific Advisory
2018-	Educational Track Subcommittee for Professional Issues

ASA Annual Meeting Poster Moderator Activities

2008	Patient Safety and Monitoring. Session consisting of 10 oral poster presentations. Orlando, FL.
2009	Ambulatory and Geriatric Anesthesia. Session consisting of 10 oral poster presentations. New Orleans, LA.
2013	Equipment, Monitoring and Engineering Technology. Session consisting of 12 oral poster presentations. San Francisco, CA.
2014	Patient Safety and Monitoring. Session consisting of 8 oral poster presentations. New Orleans, LA.
2014	Ambulatory and Geriatric Anesthesia. Session consisting of 10 oral poster presentations. New Orleans, LA.
2015	Patient Safety and Practice Management. Session consisting of 12 oral poster presentations. San Diego, CA.

2015	Equipment, Monitoring, and Engineering Technology. Session consisting of 10 oral poster presentations. San Diego, CA.	
2016	Poster Moderator, Patient Safety and Practice Management	
2017	Poster Moderator, Patient Safety and Practice Management	
2018	Poster Moderator, Patient Safety and Practice Management	
2009-	Institute for Safety in Office-Based Surgery	Member, Officer
2011-2014	American College of Physician Executives	Vanguard Member
2011-2012	National Quality Forum	Technical Advisory Panel for Serious Reportable Events (SREs), Ambulatory and Office-Based Surgery
2014-	Society of Non-OR Interventionalists and Anesthesiologists (2014-)	Founding member
	(SONORIA)	Treasurer (2015-)
2014-	Committee on Development and Membership	Chair
2014-	Committee on Best Practice, Guidelines and Standards	Member
2015-	Society for Perioperative Medicine and Quality Improvement (SPAQI)	Member
2016-	Abstract Review Committee and judge, poster session	
2016-	Judge, best abstract oral presentation	
2016-	Treasurer	
2016-	Executive Committee/Board (ex-officio)	
2015-	International Consortium in Operating Room Education and Management (iCORMET)	Member

2015- Founding Officer
2015- Treasurer/Secretary

2015- Association of University Anesthesiologists (AUA) Active (Full) Member (elected)

2014- Anesthesia Quality Institute (AQI) Researcher
2016- Data Use Committee Member

2016- Enhanced Recovery After Surgery (ERAS) Society – USA Charter Founding Member
2016- Executive Committee Member
2016- Treasurer
2016- Chair, Committee on Protocols and Guidelines

2016- Association of Anesthesia Clinical Directors (AACD)
2016- Member and Liaison to iCORMET
2017- Chair, Committee on Communications
2018- Board Member

2016- European Society of Anaesthesiology (ESA)
Member, European Patient Safety Expert Collaborative

2016- Anesthesia Patient Safety Foundation (APSF)
Co-Chair, APSF Grant Alumni Academy (AGAA)

2016- American Society for Enhanced Recovery (ASER)
Founding Member, International Perioperative Medicine (iPOM) Curriculum Development Group

2017- Society for Advancement of Geriatric Anesthesia (SAGA)
Member

2018- Foundation of Anesthesia Research and Education (FAER)
Member, Development Committee

Grant Review Activities

2014	Grant review activities pertaining to perioperative care	Physician Services Incorporated (PSI) Foundation Ontario, Canada
2017	Grant reviewer, Harvard Catalyst Data Ideation Challenge	Harvard Catalyst, Harvard Medical school
2017	Scientist Reviewer, Peer Reviewed Orthopedic Research Program (PRORP)	Department of Defense, Washington, DC

Editorial Activities

Editorial Boards

2011-2014	Editor-In-Chief, MSA Record	Massachusetts Society of Anesthesiologists
2015-	Member, Editorial Board	Perioperative Care and Operating Room Management
2015-	Member, Editorial Board	Journal of Patient Safety
2015-	Member, Honorary Editorial Board	Journal of Ambulatory Anesthesia
2015-	Associate Editor, Acute Pain Management Section	Scientific American Pain and Palliation
2016-	Guest Editor, Enhanced Recovery After issue	International Anesthesiology Clinics Surgery
2016-	Affiliating Editor	Journal of Medical Practice Management
2017-	Member, Editorial Board Section Editor, Perioperative Medicine	Journal of Clinical Anesthesia (JCA)
2018-	Member, Editorial Board	Anesthesia & Analgesia (A & A)

Ad Hoc Reviewer

Digestive Diseases and Sciences (DDS) Journal
Anesthesia and Analgesia Journal
The Oschner Journal
Comparative Medicine Journal

Journal of Alternative and Complementary Medicine
 Critical Care Medicine
 Anesthesiology
 Journal of Clinical Anesthesia (JCA)
 JAMA Surgery
 J. Anesthesia
 PLOSOne
 J The Joint Commission and Quality Improvement

Other Editorial Roles

2009-2014	Editor-in-Chief	MSA Anesthesia Record, Massachusetts Society of Anesthesiologists
2013	Guest Editor, Advances in Perioperative Current Challenges, Volume I	Best Practice & Research Clinical Analgesia: Anaesthesiology J.
2014	Guest Editor, Advances in Perioperative Future Directions, Volume II	Best Practice & Research Clinical Analgesia: Anaesthesiology J.
2015	Guest Editor, Perioperative Medicine	J. Medical Practice Management Volume
2017	Guest Editor, Enhanced Recovery After Surgery Volume	International Anesthesiology Clinics
2018	Guest Editor, Preoperative Assessment	Anesthesiology Clinics
2018	Guest Editor, Pharmacology	Best Practice & Research Clinical Clinical Anaesthesiology J.

Honors and Prizes

1994	Unilever Research Scholarship	Unilever Research U.S. Corporation
1997	Summer Research Fellowship	NSF (National Science Foundation)
1997-1998	Undergraduate Chemistry Teaching Award	Columbia University
1997	Student Health Advisory Committee Award	Columbia University
1997-1998	Undergraduate Chemistry Teaching Award	Columbia University

1998	Pushkin Poetry Prize	Columbia University
1998	Phi Beta Kappa	Columbia University
1998	Summa Cum Laude	Columbia University
1998	Organizational Achievement Award	Columbia University
1999	Abraham Watson Scholarship	HMS
2000	Richard H. Wallace Scholarship	HMS
2001	Membership, The Aesculapian Club	HMS
2005	Invited Member, MENSA	MENSA International
2005	Research Symposium 1st Place Prize Winner (Health Policy & Education)	American Medical Association
2005	Certificate of Appreciation to Board Member	Pathways to Wellness Nonprofit Org
2005	Ambulatory Anesthesia Exam Prize Winner,	BIDMC
2005	Certificate in Management with Distinction	Harvard University
2005	Physician Recognition Award	American Medical Association
2005	Class Marshal Award for Academic Distinction	Harvard University
2005	Medical Humanities Leadership Award	American Medical Association Foundation and Pfizer
2006	RFS Governing Council Cert Appreciation	Massachusetts Medical Society
2006	Malignant Hyperthermia Association Essay 1st Place	MHAUS Foundation (Malignant Award – Hyperthermia Association U.S.)
2006	Board Member Appreciation Award	English-At-Large Nonprofit Organization
2006	Legislative Awareness Internship Winner	American Medical Association
2006	Health Policy Promotion Award	American Medical Association
2008-2009	Morgan-Zinsser HMS Academy Fellow in	HMS

Medical Education

2008-2009	Eleanor & Myles Shore Scholars in Medicine Fellow	HMS
2014	APSF/ASA President's Research Award	Anesthesia Patient Safety Foundation
2014	Ellison C. Pierce, Jr., MD Merit Award	Anesthesia Patient Safety Foundation
2015	Mentor Award	Department of Anesthesiology, Brigham and Women's Hospital
2015	Partners in Excellence Award (Coding Complications Team, Center for Clinical Excellence)	Partners Healthcare, Brigham and Women's Hospital
2015	Elected Active Member	Association of University Anesthesiologists
2016	Best E-Poster Presentation Certificate	8 th World Congress of the World Institute of Pain, New York, NY
2016	2 nd Place E-Poster Prize	16 th World Congress of Anaesthesiologists and the Society of Anaesthetists of Hong Kong
2017	Partners in Excellence Award (Enhanced After Surgery Taskforce)	Partners Healthcare, Brigham and Recovery Women's Hospital
2017	2 nd place Prize, Oral Poster Presentation	Perioperative Medicine Summit, Fort Lauderdale, FL
2017	Senior Mentor Award	Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital
2017	Winner, Oral poster presentation	American Society of Regional Anesthesia and Pain Medicine meeting, Lake Buena Vista, FL, November 16-18.
2018	Mentor for Resident Travel Award Winner	Society for Ambulatory Anesthesia Annual Meeting, Miami, FL, May 3-5.
2018	Mentor for White Mountain Institute Research	Society for Ambulatory Anesthesia

Award Winner

Annual Meeting, Miami, FL, May 3-5.

Report of Local Teaching and Training

Teaching of Students in Courses

2005-2007	Gilbert Program in Medical Simulation; 10 medical students	HMS, Boston, MA 3 hrs/month
2005-2009	Pre-Medical Tutor, Winthrop House	Harvard College, Harvard University, Boston, MA 20 hrs per year
2009	IN 555.0 Introduction to the Professions Course	HMS, Boston, MA 3 hrs/course

Formal Teaching of Residents, Clinical Fellows and Research Fellows

Brigham and Women's Hospital

2008-2009	Resident Curriculum Lecture: Preoperative Considerations for Ambulatory Surgery Audience number: 3 residents	Department of Anesthesiology, BWH, Boston, MA One hour lecture – Weiner Center for Preoperative Testing Department of
2009	Resident Curriculum Lecture Series: Intravenous Anesthetic Agents Audience number: 33 residents	Anesthesiology, BWH, Boston, MA One hour lecture
2012	Office-based anesthesia Audience number: 3 residents	Weiner Center, BWH, Boston, MA One hour lecture
2013	Wednesday Resident Curriculum Lecture Series: Liability in anesthesiology and practice management One hour lecture Audience number: 38 residents	Dept. Anesthesiology, BWH, Boston, MA
2013	Preoperative considerations for ambulatory surgery Boston, MA Audience number: 3 residents	Weiner Center, BWH One hour lecture

2013	Office-based anesthesia residents Boston, MA	Weiner Center, BWH Audience number: 3	One hour lecture
2014	Anesthesia for robotic surgery residents Boston, MA	Weiner Center, BWH Audience number: 3	One hour lecture
2014	Ambulatory and office based anesthesia number: 4 residents Boston, MA	Weiner Center, BWH Audience	One hour lecture
2014	Wednesday Resident Curriculum Lecture Preoperative issues Boston, MA	Dept. Anesthesiology, BWH, Series: Audience number: 23 residents	One hour lecture
2015	Wednesday Resident Curriculum Lecture Series: Preoperative management of medications Audience number: 20 residents	Dept of Anesthesiology, BWH Boston, MA	One hour lecture
2015	Wednesday Resident Curriculum Lecture Series: Preoperative issues in Non-OR locations Audience number: 21 residents	Dept of Anesthesiology, BWH Boston, MA	One hour lecture
2015	Preoperative Considerations for Patients on Steroid Medications Audience number: 3 residents, 1 medical student	Weiner Center, BWH Boston, MA	One hour lecture
2016	Preoperative Considerations for Patients on Steroid Medications Audience number: 3 residents, 1 medical student	Weiner Center, BWH Boston, MA	One hour lecture
2016	Wednesday Resident Curriculum Lecture Series: Medication management during the preoperative evaluation Audience number: 23 residents	Dept of Anesthesiology, BWH Boston, MA	One hour lecture
2017	Wednesday Resident Curriculum Lecture Series: Novel anesthetic agents Audience number: 26 residents	Dept of Anesthesiology, BWH Boston, MA	One hour lecture

2017	Patient selection for ambulatory surgery Audience: 4 residents	Weiner Center, BWH Boston, MA One hour lecture
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Clinical Supervisory and Training Responsibilities

2005	Calling 911 in the Office: Office-Based Anesthesia Program; Resident Education Program	Dept. Anesthesia, BIDMC Simulation 4 hrs per year
2006	Emergency Simulation in the Office, Anesthesia Resident Education Program	Dept. Anesthesia, BIDMC Simulation Program; 4 hrs per year
2006-	Preceptor – Core and Elective Clinical Rotations in Anesthesiology. Teaching of medical and dental students, EMT rotators	Dept. Anesthesia, BWH 8 hrs/month
2006-	Supervision and teaching of Medical Students in the OR	Dept. Anesthesia, BWH 50 hrs per year
2006-	Supervision and teaching of Resident Trainees in the OR	Dept. Anesthesia, BWH 2000 hrs per year
2008- 2009	Patient-Doctor II OSC Examination Preceptor	HMS 10 hrs/year

Laboratory and Other Research Supervisory and Training Responsibilities

2007-	Supervision of clinical research assistant Dept. of Anesthesia, BWH	5 hrs per week
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Formal Teaching of Peers

2007	Anesthesia in the Office-Based Setting CME-approved course Sedative and Analgesic Agents Lecture, Harvard Medical School
2007	Simulator: Calling 911 in the office, CME Course Lecture, Anesthesia in the Office-Based Setting: Safe, Simple and Pain Free, Harvard Medical School
2007	Which is the Safest Anesthetic for the Office? CME Course Lecture, Anesthesia in the Office-Based Setting: Safe, Simple and Pain Free, Harvard Medical School
2008-09	Instructor, Airway Management Workshop, Airway Station Combined BWH/MGH course, CME-approved course

2015 Instructor, Flexible Fiberoptics Station,
Difficult Airway Management Course and Workshop, Massachusetts Society of
Anesthesiologists

Local Invited Presentations

None of the following presentations was sponsored by an outside entity.

- 2004 An Elderly Patient Undergoing Carotid Endarterectomy, BIDMC (Multidisciplinary Seminar), Boston MA.
- 2004 Anesthetic Considerations in Renal Failure, BIDMC (Seminar), Boston MA.
- 2004 Statins and Perioperative Mortality, BIDMC (Seminar), Boston MA.
- 2005 New Resident Curriculum in Office-Based Anesthesia, HMS/Medical Education Day (Educational Exhibit), Boston MA.
- 2009 Intravenous Anesthetic Agents, Resident Lecture, Dept. Anesthesia, BWH, Boston MA.
- 2009 Principles of Procedural Sedation, Invited Lecture for Physician Assistants, BWH, Boston MA.
- 2009 Preoperative Considerations for Ambulatory Surgery, Resident Lecture, Weiner Center for Preoperative Evaluation, BWH, Boston MA.
- 2010 Updates in Moderate Procedural Sedation, Invited Lecture for Body Imaging Division, Radiology Department, BWH, Boston MA.
- 2011 Improving Safety in the Office-Based Surgical Setting. BIDMC, Department of Podiatry Lecture Series, September 21, Boston MA.
- 2011 Improving Safety in the Office-based Surgical Setting. Podiatry Department Teaching Rounds, BIDMC, Boston MA.
- 2012 Office-based Anesthesia: Updates. Grand Rounds lecture, Department of Anesthesiology, BWH, Boston MA.
- 2012 Procedural Sedation Management. Department of Medicine lecture, BWH, Boston MA.
- 2012 Procedural Sedation Safety. Department of Radiology lecture, BWH, Boston MA.
- 2013 Procedural Sedation Updates. Department of Radiology lecture. BWH, Boston MA.
- 2014 Anesthetic considerations in the ambulatory setting. Ambulatory Care Center – Chestnut Hill, BWH, Boston MA.
- 2014 Procedural Sedation Updates. Department of Radiology lecture. BWH, Boston MA.
- 2014 Computer-assisted Personalized Sedation: Friend or Foe? Grand Rounds lecture, Department of Anesthesiology, BWH, Boston MA.
- 2016 Nursing sedation vs anesthesia outcomes: what does the data say? Grand Rounds lecture, Department of Anesthesiology, BWH, Boston MA.
- 2016 Hip surgery in patients with DNR status. Lecture presentation. Center for Surgery and Public Health, Brigham and Women’s Hospital, Boston MA.

- 2016 Current requirements for sedation in interventional radiology. Lecture Presentation. Department of Radiology, Brigham and Women's Hospital, Boston MA.
- 2016 Using big data for research in anesthesiology. Grand Rounds presentation. Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital, Boston MA.
- 2017 Update from the Center for Perioperative Research. Lecture presentation. Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital, Boston MA.
- 2017 Procedural sedation for interventional radiology. Lecture presentation. Department of radiology, Brigham and Women's Hospital, Boston, MA
- 2017 Ethics case presentation and discussion. Hospital Ethics Committee, Brigham and Women's Hospital, Boston, MA.

Report of Regional, National and International Invited Teaching and Presentations

Invited Presentations and Courses

Regional

Those presentations below sponsored by an outside entity are so noted and the sponsor identified.

- 2011 Safe Anesthetic Practices in the Ambulatory and Office-Based Settings. Lecture Presentation. Harvard Odontological Society, Boston, MA.
- 2012 Safety and medico-legal risks. Lecture presentation. 6th Update in Sedation and Analgesia Course, Massachusetts Society of Anesthesiologists, Waltham, MA.
- 2014 The evolving landscape of procedural sedation. Lecture presentation. 7th Update in Sedation and Analgesia Course, Massachusetts Society of Anesthesiologists, Waltham, MA.
- 2014 Safety and medico-legal issues. Lecture presentation. 7th Update in Sedation and Analgesia Course, Massachusetts Society of Anesthesiologists, Waltham, MA.
- 2014 Sedation Panelist. 7th Update in Sedation and Analgesia Course, Massachusetts Society of Anesthesiologists, Waltham, MA.
- 2015 Difficult Airway panel moderator. Difficult Airway Management Course, Massachusetts Society of Anesthesiologists, Waltham, MA.
- 2015 Computer-assisted personalized sedation and the anesthesiologist. Grand Rounds Lecture, Tufts Medical Center, Department of Anesthesiology, Boston MA.
- 2015 Robotic systems in anesthesia: is this the future? Grand Rounds Lecture, University of Massachusetts Medical Center, Department of Anesthesiology, Worcester MA.
- 2015 Crisis checklists in clinical practice. Resident Education Lecture, University of Massachusetts Medical Center, Department of Anesthesiology, Worcester MA.

- 2016 Sedation for Interventional Procedures: Current Challenges. Lecture presentation. 8th Update in Sedation and Analgesia Course, Massachusetts Society of Anesthesiologists, Waltham, MA.
- 2016 Anesthesia vs Sedation: Delivering Value in Interventional Medicine. Lecture presentation. 8th Update in Sedation and Analgesia Course, Massachusetts Society of Anesthesiologists, Waltham, MA.
- 2017 Shared decision making. Grand Rounds presentation. Massachusetts General Hospital, Boston, MA. December 7.

National

Those presentations below sponsored by an outside entity are so noted and the sponsor identified.

- 2005 "The impaired physician - it's not just drugs." An innovative and interactive computer education program on physician impairment, American Society of Anesthesiologists. Educational Exhibit, Atlanta, GA.
- 2006 "Improving safety in office-based practices: policy, patients, personnel." A panel on the safety of office-based anesthesia organized during the annual meeting. Gave a lecture on simulation and resident education and participated in the panel discussion, American Society of Anesthesiologists Annual Meeting, Chicago, IL.
- 2011 "Ambulatory Surgery: how can we make it safer?" American College of Physicians: An Overview of Perioperative Medicine 2011: From Outpatient Preoperative Assessment to Inpatient Postoperative Care, October 15, Chicago, IL.
- 2012 Office-based anesthesia: keeping it safe. Grand Rounds Lecture, Department of Anesthesiology, Louisiana State University, New Orleans, LA.
- 2012 Safety in the Outpatient Setting. Grand Rounds Lecture, Department of Anesthesiology, Tulane University, New Orleans, LA
- 2012 Office-based surgery. Grand Rounds Lecture, Department of Anesthesiology, Ochsner Clinic, New Orleans, LA.
- 2012 Anesthesia outside of the operating room. Journal club presentation. Department of Anesthesiology, Ochsner Clinic, New Orleans, LA.
- 2013 Procedural Sedation: Developing a policy. Grand Rounds Lecture. Shiprock-Northern Navajo Medical Center, Shiprock, NM.
- 2013 Risk Mitigation Strategies for Sedation Services. Grand Rounds Lecture. ShiprockNorthern Navajo Medical Center, Shiprock, NM.
- 2013 Procedural Sedation Basics. Grand Rounds. Red Mesa Regional Health Center, Red Mesa, AZ
- 2013 Emergency Department and Sedation Considerations. Grand Rounds lecture. Red Mesa Regional Health Center, Red Mesa, AZ
- 2013 Pain and Sedation Panel. Lecture: "Considerations for Developing a Sedation Policy". Radiologic Society of North America (RSNA) Annual Meeting, Chicago, IL

- 2013 Customizable, Office-Based Surgical Safety Checklist Improves the Rates of Key Patient Safety Indicators and Outcomes Institute for Safety in Office-Based Surgery. The Institute for Healthcare Improvement 25th Annual National Forum, Orlando, FL.
- 2013 Robotic Surgery: Hysterectomy in the outpatient setting. Problem-based learning discussion. Society for Ambulatory Anesthesia Mid-year meeting, San Francisco, CA.
- 2014 Update on ASA guidelines and standards. Lecture presentation. American Society of Dentist Anesthesiologists annual meeting, Boston, MA.
- 2014 Office-based anesthesia and safety. Panel discussion. American Society of Dentist Anesthesiologists annual meeting, Boston, MA.
- 2014 Improving safety in the office-based setting. Lecture presentation. Association of Perioperative Nurses (AORN) annual congress, Chicago, IL.
- 2014 Surgical safety checklists. Grand Rounds lecture. Shiprock-Northern Navajo Medical Center, Shiprock, NM.
- 2014 Mechanical ventilation: clinical pearls. Lecture presentation. Shiprock-Northern Navajo Medical Center, Shiprock, NM.
- 2014 Sedation and airway management. Lecture presentation. Red Mesa Regional Health Center, Red Mesa, AZ.
- 2014 Anesthesia and perioperative care in robotic gynecologic surgery. Lecture presentation. Robotic Gynecologic Surgery: Patient Safety and Advanced Techniques course. Harvard Medical School CME program, Boston, MA.
- 2014 Pediatric sedation: what goes wrong and why? Lecture presentation. American Society of Dentist Anesthesiologists (ASDA) Emergency Management Course. Nashville, TN.
- 2014 Office-based anesthesia literature review. Lecture Presentation. Office-Based Anesthesia: Nuts and Bolts. Society for Ambulatory Anesthesia (SAMBA)/ASDA joint meeting. Nashville, TN.
- 2014 What's on the horizon for OBA: rules, regulations and benchmarking. Lecture Presentation. Office-Based Anesthesia: Nuts and Bolts. Society for Ambulatory Anesthesia (SAMBA)/ASDA joint meeting. Nashville, TN.
- 2014 TIVA: the evolution of general anesthesia. Lecture Presentation. American Society of Anesthesiologists annual meeting. New Orleans, LA.
- 2014 Pro: Technology Being Used to Assist Skill Sets, Matching Resources with Anesthesia Needs, CAPS Can Actually Help Us Point; Counterpoint Lecture Presentation. American Society of Anesthesiologists annual meeting. New Orleans, LA.
- 2014 Technology Being Used to Assist Skill Sets. Matching Resources with Anesthesia Needs. CAPS Can Actually Help Us; Lecture Presentation. American Society of Anesthesiologists annual meeting. New Orleans, LA.
- 2014 Panelist. Potential Pitfalls Panel Discussion. Emergency Manuals Implementation Collaborative Meeting. American Society of Anesthesiologists annual meeting. New

Orleans, LA.

- 2014 Pain and Sedation Panel. Lecture: “Considerations for Developing a Sedation Policy”. Radiologic Society of North America (RSNA) Annual Meeting, Chicago, IL.
- 2015 Lecturer: Improving Patient Assessment for Procedures Outside of the Operating Room. The 10th Perioperative Medicine Summit, Scottsdale, AZ.
- 2015 Lecturer: Computer-assisted Personalized Sedation: Is this a reality? Anesthesiology Update 2015, Boston, MA
- 2015 Lecturer: Safety and Medicolegal Issues in Sedation and Analgesia. Association of Perioperative Nurses (AORN) Annual Surgical Conference and Expo, Denver, CO.
- 2015 Lecturer: Sedation and Quality Equals Patient Safety. Outpatient Endovascular and Interventional Society (OEIS) annual meeting, Chicago, IL.
- 2015 Lecturer: Review of Closed Claims Data as Reflection of Clinical Outcomes and Legal Liability. Outpatient Endovascular and Interventional Society (OEIS) annual meeting, Chicago, IL.
- 2015 Visiting Professor. Grand Rounds Lecture: Computer-Assisted Personalized Sedation and Implications for Anesthesia Practice. Ohio State University Department of Anesthesiology, Columbus, OH.
- 2015 Grand Rounds Lecture: Topics in Ambulatory Anesthesia. Chinle Medical Center, Chinle, AZ.
- 2015 Lecturer: Surgical Safety Checklists and Patient Safety. Chinle Medical Center, Chinle, AZ.
- 2015 Presenter. Care Redesign and Non-OR Anesthesia (NORA): A Strategic Imperative-the Data Speaks. Anesthesiology Journal Symposium: The Anesthesiologist and Health Care Redesign, American Society of Anesthesiologists Annual Meeting, San Diego, CA.
- 2015 Speaker. Costs and Benefits of Nurse Sedation Versus Anesthesiology Care and the Implications for Medical Advancement. Panel: NORA and Care Integration: The ValueAdded of Anesthesiology in the Emerging Healthcare Marketplace. American Society of Anesthesiologists Annual Meeting, San Diego, CA.
- 2015 Speaker. Turning Off the Infusions: Optimizing Emergence from Total Intravenous Anesthesia. Panel: It’s Time to Wake Up: Optimizing Emergence for Ambulatory Procedures. American society of Anesthesiologists Annual Meeting, San Diego, CA.
- 2015 Speaker. Advantages of CAPS. Panel: Computer-Assisted Personalized Sedation (CAPS): Pro and Con. American society of Anesthesiologists Annual Meeting, San Diego, CA.
- 2015 Speaker. How I used AQI data for research. Anesthesia Quality Institute (AQI) Anesthesia Data Conference, Schaumburg, IL.

- 2015 Speaker. Outcomes data for office-based dental anesthesia. Society for Ambulatory Anesthesia (SAMBA) Mid-year meeting, San Diego, CA.
- 2015 Speaker. Crisis checklists in the office-based setting. Problem-based learning discussion. Society for Ambulatory Anesthesia (SAMBA) Mid-year meeting, San Diego, CA.
- 2015 Speaker. Non-operating room anesthesia: advances in sedation and anesthesia outside the operating room. The 69th Postgraduate Assembly in Anesthesiology (PGA) annual meeting, New York, NY.
- 2015 Speaker. Improving patient safety in the office-based surgical and procedural setting. 41st Annual Meeting of the American Society of Plastic Surgical Nurses (ASPSN), Boston, MA.
- 2015 Speaker. Pain and Sedation: Improving Quality and Patient Outcomes. 101st Scientific Assembly and Annual Meeting. Radiology Society of North America (RSNA), Chicago, IL.
- 2016 Visiting Professor. Cognitive Aids in the Perioperative Setting. Grand Rounds Presentation. Department of Anesthesiology, University of Vermont, Burlington, VT.
- 2016 Speaker. Educational Goals in the Operating Room Management: How Do We Teach it to Our Residents? Perioperative Leadership Summit, Association of Anesthesia Clinical Directors (AACD) Annual Meeting, Miami, FL.
- 2016 Speaker Panel Moderator: iCORMET special panel on operating room management education. Perioperative Leadership Summit, Association of Anesthesia Clinical Directors (AACD) Annual Meeting, Miami, FL.
- 2016 Speaker. Sedation, Anesthesia, and Outcomes: What the data thinks it says. Advancing Anesthesiology and Interventional Medicine Through Collaboration, SONORIA and the University of Tennessee joint meeting, Memphis, TN.
- 2016 Panelist. Teamwork in the office-based procedural setting. Association of Perioperative Nurses (AORN) annual congress, Anaheim, CA.
- 2016 Speaker. Anesthesia versus sedation: Delivering value for interventional medicine procedures. 8th Annual Update in Sedation and Analgesia Course, Waltham, MA.
- 2016 Speaker. Safety and medicolegal issues. 8th Annual MSA Update in Sedation and Analgesia Course, Waltham, MA.
- 2016 Presenter. Challenging Cases in Ambulatory Anesthesia. Harvard Anesthesia Review Course, Harvard Medical School, Boston, MA.
- 2016 Speaker. Transversus Abdominis Plane (TAP) blocks. MSA Regional Anesthesia and Ultrasound Course, Waltham, MA.
- 2016 Speaker. Teaching Leadership, Quality and Operating Room Management. Society for Education in Anesthesia (SEA) annual meeting, June 3, Baltimore, MD.

- 2016 Speaker. Standardization of anesthesia care for robotic surgery. Robotic Gynecologic Surgery: Patient Safety and Advanced Techniques Course, Boston, MA, Sept 24.
- 2016 Speaker and Moderator. Drug shortages in the United States. American Society of Anesthesiologists Annual Meeting, Chicago, IL, October 26.
- 2016 Speaker. Non-operating room anesthesia: Should I stay or should I go? American Society of Anesthesiologists Annual Meeting, Chicago, IL, October 22.
- 2016 Speaker. Anesthesia in the Gastrointestinal Suite: A high risk area? American Society of Anesthesiologists Annual Meeting, Chicago, IL, October 26.
- 2016 Grand Rounds Speaker: How anesthesiologists add value in interventional procedural medicine. John H. Stroger Hospital of Cook County, Chicago, IL, October 25.
- 2016 Speaker. Non-OR anesthesia: creating a safe and effective practice model. 22nd Annual Advances in Physiology and Pharmacology in Anesthesia and Critical Care Course. Wake Forest School of Medicine, Hilton Head, SC, November 7.
- 2016 Speaker. New drugs in the perioperative setting. 22nd Annual Advances in Physiology and Pharmacology in Anesthesia and Critical Care Course. Wake Forest School of Medicine, Hilton Head, SC, November 7.
- 2016 Speaker. Hot topics in ambulatory anesthesia. 22nd Annual Advances in Physiology and Pharmacology in Anesthesia and Critical Care Course. Wake Forest School of Medicine, Hilton Head, SC, November 7.
- 2016 Visiting Professor. Virginia Mason Medical Center, Seattle, WA.
Lectures:
1. Hot Topics in Ambulatory Anesthesia, December 5.
2. Novel Anesthetic Agents, December 6.
- 2016 Lectures:
1. Speaker. Updates in Anesthesia for Gastroenterology. Panel: Non-Operating Room Anesthesia (NORA): Many NORAs, Different Challenges. 70th Post Graduate Assembly in Anesthesiology (PGA), New York, NY, December 9.
2. Speaker. Newer Drugs in the Perioperative Setting. Panel: Technology, Monitoring and Pharmacology in Anesthesiology: Cutting Edge Practices. 70th Post Graduate Assembly in Anesthesiology (PGA), New York, NY, December 9.
- 2017 1. Speaker. Time Drive Activity-Based Costing. Association of Anesthesia Clinical Directors (AACD) Annual Meeting. Scottsdale, AZ, March 4.
2. Moderator: iCORMET Panel. Association of Anesthesia Clinical Directors (AACD) Annual Meeting. Scottsdale, AZ, March 4.
- 2017 Plenary speaker. Preoperative Challenging in the Non-Operating Room Setting. Perioperative Medicine Summit. Fort Lauderdale, FL, March 9.
- 2017 Visiting Professor. Anesthesiology for Gastroenterology Procedures. New York University Langone Medical Center, New York, NY, March 22.

- 2017 Speaker. Introduction to ERAS. Advanced in Enhanced Recovery After Surgery, ERAS Society USA/MSA course, Boston, MA, March 25-26.
- 2017 Speaker. Wrong Side Surgery: What the Literature Says. AORN Global Surgical Conference and Expo, Boston, MA, April 2.
- 2017 Speaker. Patient selection for office-based surgery. Society for Ambulatory Anesthesia (SAMBA) annual meeting, Scottsdale, AZ, May 6.
- 2017 Presenter. Liability related to chronic pain management – recent research findings. CRICO National Webinar. June 26.
- 2017 Speaker. Lectures:
1. New drugs in anesthesia practice;
 2. Hot topics in ambulatory anesthesia.
60th Annual New England Society of Anesthesiologists Fall Conference, Brewster, MA. September 16.
- 2017 Invited opinion leader. Topic: Establishing Standards for the Delivery of Goal Concordant Surgical Care for Older Patients. This meeting directly informed the standards put forth by the American College of Surgeons Coalition for Quality in Geriatric Surgery. The Radcliffe Institute for Advanced Study, Cambridge, MA, January 19.
- 2017 Panelist:
1. Optimizing outcomes in office-based anesthesia: Patient selection
 2. The nuts and bolts of building your own NORA program: contracts and quality improvement
 3. SAMBA Panel – the opioid epidemic: implications for ambulatory anesthesia: intraoperative management
 4. Anesthesia Drug shortages: can capitalism and a lack of price controls improve patient safety?
American Society of Anesthesiologists Annual Meeting, Boston, MA October 22-25, 2017.
- 2017 Speaker: The mechanisms underlying the multimodality pain management. ERAS Society – USA Annual meeting, Dallas, TX, November 10.
- 2017 Speaker:
1. Preoperative Code Status Discussions and Shared Decision Making.
 2. Ethical issues in anesthesiology
Postgraduate Assembly in Anesthesiology, New York, NY, December 8-10.
- 2018 Grand Rounds Speaker/Visiting Professor

1. Shared Decision Making in the Perioperative Setting
2. Novel Medications in the Perioperative Setting
Department of Anesthesiology, Albany Medical Center, Albany NY, February 7-8

2018 National Lecture Webinar: Preoperative optimization of patients undergoing colorectal surgery. ISCR (Improving Surgical Care and Recovery) AHRQ Safety Program, sponsored by the Johns Hopkins University and American College of Surgeons, February 27.

2018 Visiting Professor. Lectures:

1. Newer medications in the perioperative setting
2. Shared decision making

Department of Anesthesiology, Louisiana State University, New Orleans, LA, March 1

2018 Speaker. Lecture title:

Shared decision making and improving value in anesthesia care

Association of Anesthesia Clinical Directors (AACD) Annual meeting, New Orleans, LA, March 3

2018 Speaker. Lecture titles

Understanding anesthesia and the anesthesiologist

Meet the Professor morning session

Perioperative Medicine Summit and SPAQI Society Annual Meeting, Fort Lauderdale, FL, March 8-10

2018 Speaker. Lecture titles

Patient selection for office-based surgery

Patient safety in office-based surgery: ask the experts

Society for Ambulatory Anesthesia Annual Meeting Miami,
FL, May 3-5.

International

Those presentations below sponsored by an outside entity are so noted and the sponsor identified.

2014 Office-based surgery and anesthesia: a team approach to patient safety. Lecture presentation. 21st Annual Anesthesiology Congress, Fundacion Universitaria Sanitas, Bogota, Colombia.

- 2014 Checklists for ambulatory and office-based surgery. Lecture presentation. 21st Annual Anesthesiology Congress, Fundacion Universitaria Sanitas, Bogota, Colombia.
- 2014 Anesthesia outside of the OR. Expert panel. 21st Annual Anesthesiology Congress, Fundacion Universitaria Sanitas, Bogota, Colombia.
- 2014 Robotic surgery: perioperative considerations. Grand Rounds lecture. University of Toronto, Princess Anne Hospital, Toronto, Canada.
- 2014 Malignant hyperthermia in the ambulatory setting. Lecture presentation. International Anesthesia Research Society Annual Meeting, Montreal, Canada.
- 2014 SAMBA Panel discussion. International Anesthesia Research Society Annual Meeting, Montreal, Canada.
- 2014 Surgical safety checklists in clinical practice. Grand Rounds lecture. Oslo University Hospital, Oslo, Norway
- 2014 Acute pain management. Lecture and discussion with clinical staff. Oslo University Hospital, Oslo, Norway
- 2016 National registries in ambulatory surgery – using “big data” to examine outcomes. Panel Speaker. 16th World Congress of Anaesthesiologists, Hong Kong, China.
- 2016 E-Poster discussion: ambulatory anesthesia. Moderator. 16th World Congress of Anaesthesiologists, Hong Kong, China.
- 2016 The present state of checklists in medicine. Grand Grounds speaker. Centre Hospitalier Universitaire De Bicetre. Paris, France.
- 2016 National databases and ambulatory surgery. Lecture presentation and discussion. Society of Anesthesia and Intensive Care (SFAR) officers meeting, Paris, France.
- 2016 Emergency manuals in the perioperative setting. Grand Rounds speaker. Academic Medical Center, University of Amsterdam, Amsterdam, The Netherlands.
- 2016 First European Patient Safety Expert Meeting. Invited Panelist. Euroanesthesia (European Society of Anesthesiologists) annual meeting, London, UK, May 29.
- 2016 Using big data to analyze perioperative outcomes. Grand Grounds speaker. University College Hospital, London, UK, May 31.
- 2017 Second International Perioperative Medicine Symposium, Medellin, Colombia, February 2-4. Lectures:
 a. Novel anesthetic agents; b. Perioperative hyperalgesia; c. Using large databases for research in anesthesia.
- 2017 Hot topics in ambulatory anesthesia. Grand Rounds speaker. Inselspital University Hospital, Berne, Switzerland, April 27.

- 2017 Multimodal analgesia. Panelist. Society for Enhanced Recovery After Surgery (ERAS) annual meeting, Lyon, France, May 12.
- 2017 Brain health in the ambulatory setting: what do we know about delirium and cognitive dysfunction in this setting? Problem-based learning discussion. International Anesthesia Research Society, Washington, DC, May 8.
- 2017 Invited Panelist. Second European Patient Safety Expert Meeting. Euroanesthesia (European Society of Anesthesiologists) annual meeting, Geneva, Switzerland, June 3.
- 2017 Lecturer. Colombian Society of Anesthesiologists Annual Congress, June 15-16.
Delivered 3 lectures:
1. New Drugs in Anesthesia
 2. Perioperative Hyperalgesia
 3. Breathing Problems in the PACU
- 2018 Lecturer, Winter Anesthesia Meeting, Leuven, Belgium, February 9 Lecture
topic: Every ERCP Needs an Anesthesiologist – PRO
- 2018 Lecturer, 3rd Perioperative Summit, Cartagena, Colombia, March 22-24
Lecture topics: 1. Ambulatory Patient Selection; 2. Safety in Non-OR Anesthesia; 3. Newer Medications in Anesthesia
- 2018 Lecturer, 6th Annual Meeting of the Enhanced Recovery After Surgery Society, Stockholm, Sweden, May 23-25
Lecture Topic: New Frontiers in ERAS: Ambulatory
- 2018 Lecturer, The European Society of Anesthesiologists Annual Meeting, Copenhagen, Denmark, June 2-4; International Forum on Perioperative Safety and Quality
1. Topic: Does Medical Simulation Affect Patient Outcomes?
 2. Participant, International Safety Expert Panel

Report of Clinical Activities and Innovations

Current Licensure and Certification:

- 2000 National Boards of Medical Examination, Part I
- 2001 National Boards of Medical Examination Part, Part II
- 2003- BLS and ACLS Certified Provider
- 2004 National Boards of Medical Examination, Part III
- 2006 Certificate, Simulation as a Teaching Tool, MIT/Harvard Simulator Center
- 2006 Massachusetts Board of Registration in Medicine

2008 Diplomat, American Board of Anesthesiology
 2012 Diplomat, American College of Physician Executives (ACPE)

Practice Activities

Activity	Location	Hours per week
2006- General and Ambulatory surgery. Supervise residents, anesthetists.	Main Operating Room, BWH	16 hrs/wk
2008- Preoperative Evaluation	Weiner Center for Preoperative Evaluation, BWH	8 hrs/wk Clinic
2006- Anesthesia for procedures by radiologists, endoscopists, electrophysiologists, radiation oncologists	Outside of the Operating Room Locations, BWH	4 hrs/wk
2014- Ambulatory anesthesia. Provide anesthesia services for procedures	HealthCare Center – Chestnut Hill, BWH endoscopic	4 hrs/wk

Report of Clinical Innovations

2009 - new BWH procedural sedation policy assurance reporting. Including new procedural site guidelines and streamlining of quality assurance reporting. Developed new educational guidelines for administration of moderate and deep sedation.

2009 - BWH ambulatory anesthesia educational intranet website
 Including clinical protocols, references and mini-lectures designed to establish evidence-based, up-to-date practice of ambulatory anesthesia.

2010 - Surgical Safety Checklist for Office-Based Surgery
 Developed in conjunction with the Institute for Safety in Office-Based Surgery. Spearheaded development of the specialized checklist based on the WHO template for use in ambulatory and office-based practices. Available at www.ISOBS.org. First published in Shapiro FE, Punwani N, Urman RD. Checklist implementation for office-based surgery: a team effort. AORN J. 2013 Sep;98(3):305-9 and Rosenberg NM, Urman RD, Gallagher S, Stenglein J, Liu X, Shapiro FE. Effect of an office-based surgical safety system on patient outcomes. Eplasty. 2012;12:e59.

- 2011 - A Patient's Checklist template
 Developed in conjunction with the Institute for Safety in Office-Based Surgery. This checklist is designed for use by patients in the ambulatory surgery setting, distinct from currently existing checklists for healthcare provider use. Can be modified by providers to suite specific practice and patient needs. Available at www.ISOBS.org. First published in Shapiro FE, Punwani N, Urman RD. Putting the patient into patient safety checklists. AORN J. 2013 Oct;98(4):413-8.
- 2010 - Office-based anesthesia educational website
 For providers and patients, available through the Institute for Safety in Office-Based Surgery. Contains slide presentations on a variety of safety topics. Available at www.ISOBS.org.
- 2013 - Sedation checklist
 Developed in conjunction with the National Adult Sedation Consortium. Uses an innovative safety approach for patients undergoing sedation by non-anesthesia providers. Checklist first published in Caperelli-White L, Urman RD. Developing a moderate sedation policy: essential elements and evidence-based considerations. AORN J. 2014 Mar;99(3):416-30.
- 2013 - Anesthesia scorecard
 An innovative, integrated reporting tool that tracks performance of individual anesthesia providers, including specific metrics. Original manuscript describing the process of creating the scorecard framework is currently under consideration in J. Med Sys.
- 2014-“OneMask” concept
 Developed a concept for a new type of ventilation mask that can be manually adjusted to fit any face size. It can potentially replace the need of having multiple masks sizes available.
 Website: <https://onemask.herokuapp.com>
- 2016-
 Member, Sedation Consortium on Endpoints and Procedures for Treatment, Education, and Research (SCEPTER). To address the limitations and future opportunities in clinical trial designs for sedation products. It is sponsored by the Analgesic, Anesthetic, and Addiction Clinical Trial Translations, Innovations, Opportunities, and Networks (ACTION) public-private partnership with FDA. The overall goal of SCEPTER is to accelerate the development of pediatric and adult sedation products with greater efficacy and safety by improving the design, analysis, and interpretation of sedation clinical trials.
- SCEPTER Consensus Product: “Evaluating Patient-Centered Outcomes in Clinical Trials of Procedural Sedation, Part 2 Safety: Sedation Consortium on Endpoints and Procedures for Treatment, Education, and Research Recommendations” – publication target in Anesthesia and Analgesia J.

- 2017 Invited Member, exploratory meeting to “Develop Standards for the Delivery of Goal Concordant Surgical Care for Older Patients.” This interdisciplinary group of researchers and clinicians convened to update the metrics used by the American College of Surgeons and the Coalition for Quality in Geriatric Surgery (CQGS), to: 1. Identify desired standard elements of a preoperative conversation about patient goals; 2. Establish patient-centered outcomes for surgical procedures; 3. Identify elements needed to establish advance care planning around a procedure; 4 Ways to readdress goals of care and decisions through the perioperative period.
- 2017- Development of the Emergency Manual for Office-Based Surgery. This project involved the development of an Emergency Manual (aka “Crisis Checklist”) that is specific to the office-based surgical and procedural locations. The manual follows the same overall structure, which has been utilized for the other types of Emergency Manuals such as the ones to be used in the Operating Rooms and Obstetrics. This is a collaboration between the Institute For Safety in Office Based Surgery, Incubator for Patient Safety and Outcomes, and the Ariadne Labs, Boston, MA.
- 2017 Development of the ASA Position Statement on AORN Surgical Attire Recommendations, as member of the ASA Committee on Surgical and Procedural Anesthesia (COSPA), in collaboration with the ASA Committee on Quality Management and Administration.
- 2017 With collaborators from the department of Obstetrics and Gynecology and Center for Clinical Investigation (Brigham and Women’s Hospital), I worked to develop an innovative clinical algorithm: Algorithm for Abortion Intravenous sedation Dosing (AAID). The algorithm was published as a randomized-controlled trial in the journal Contraception and can potentially improve clinical care of women undergoing D & E procedures under nursing sedation, and is being used by other providers.
- 2017 Co-Chair, Taskforce to Update the AACE (American Association of Clinical Endocrinologists)/ACE (American College of Endocrinology) Bariatric Surgery Clinical Practice Guidelines.
- 2017 Development of the Clinical Dashboard for Opioid-Related adverse drug events (ORADEs) in surgical patients using a national administrative claims data (CMS-Medicare). This is a collaborative project with Dexur Inc healthcare data research company to develop IT platforms and study ORADEs based on billing (ICD 10) codes. Currently we have published several abstracts related to this work.

Report of Education of Patients and Service to the Community

Activities

2005-2009 Board Member, Pathways to Wellness, Inc. – a nonprofit organization devoted to providing affordable alternative medical treatments to patients.

2005-2008 Board Member, Bread and Jams, Inc. – a nonprofit organization in Cambridge, MA dedicated to providing housing and job training resources for homeless individuals.

2005-2007 Founder, Health Literacy Now, Inc. – an organization with the mission to improve the patient’s understanding of their personal health issues and help them navigate the healthcare system.

2006-2007 Board Member, English-At-Large, Inc. – a nonprofit organization with the mission to assist non-English speakers with improving their language skills and increasing their employment opportunities.

2008-2009 Consultant, Volunteer Consulting Organization (VCO), Harvard Business School. Acted as a consultant for nonprofit organizations to address strategy, board development, and fundraising.

2009- Institute for Safety in Office-Based Surgery (www.isobs.org) –Co-Founder, and formerly serving as an officer. The Institute’s mission is to promote patient safety in office-based surgery and to encourage collaboration, scholarship, and physician and patient education.

Recognition:

2007	Pathways Certificate of Appreciation to Board member	Awarded for significant service to the organization and for educating clients about health-related issues
2014	Safety of anesthesia. Television Interview.	TV Program: Supersalud - historias de vida, Bogota, Colombia

Report of Scholarship

Peer reviewed publications in print or other media

Original Research Investigations (PubMed)

1. Sarin P, Philip B, Eappen S, **Urman R**. Specialized ambulatory anesthesia teams contribute to decreased ambulatory surgery recovery room length of stay. *Ochsner J*. 2012 (Summer); 12(2):94100.
2. **Urman R.**, Sarin P, Philip B., Mitani A, Eappen S. Presence of anesthesia resident trainees in day surgery unit has mixed effects on operating room efficiency measures. *Ochsner J*. 2012 (Spring); 12(1):25-90.
3. Sarin P. **Urman R**, Ohno-Machado L. An improved model for predicting postoperative nausea and vomiting in ambulatory surgery patients using physician-modifiable risk factors. *J Am Med Inform Assoc*. 2012 (Nov 1); 19(6):995-1002.
4. Rosenberg, NM, **Urman RD**, Gallagher S, Stenglein J, Shapiro F. Effect of an office-based surgical safety system on patient outcomes. *Eplasty*. 2012; December (12):493-499.
5. Steinbrook RA, Garfield F, Batista SH, **Urman RD**. Caffeine for the prevention of postoperative nausea and vomiting. *J Anaesth Clin Pharm* 2013;29(4):526-529.
6. Kodali BS, Kim D, Flanagan H, **Urman RD**. Successful strategies for the reduction of operating room turnover times in a tertiary care academic medical center. *J Surg Res* 2014; Apr;187(2):40311.
7. Chang B, Vacanti JC, Michaud Y, Flanagan H, **Urman RD**. Emotional intelligence in the operating room: analysis from the Boston Marathon bombing. *Am J Disaster Med* 2014; 9(2):77-85.
8. Shapiro FE, Jani SR, Liu X, Dutton RP, **Urman RD**. Initial Results from the National Anesthesia Clinical Outcomes Registry and Overview of Office-Based Anesthesia. *Anesthesiol Clin*. 2014 Jun;32(2):431-444.
9. Kodali BS, Flanagan H, Kim KD, **Urman RD**. Variability of subspecialty-specific anesthesiacontrolled times at an academic institution. *J Med Sys*, 2014 Feb;38(2):11-18.
10. Karamnov S, Sarkisian N, Grammer R, Gross W, **Urman RD**. Analysis of adverse events associated with adult moderate procedural sedation outside of the operating room. *J Patient Saf* 2017; 13(3):111-121.
11. Shapiro, FE, Pawlowski JB, Rosenberg NM, Liu X, Feinstein DM, **Urman RD**. The use of in-situ simulation to improve safety in the plastic surgery office: a feasibility study. *Eplasty* 2014; 14:1-20.
12. Shapiro FE, Fernando RJ, **Urman RD**. Barriers to the implementation of checklists in the officebased procedural setting. *J Healthc Risk Manag*. 2014; 33(4):35-43.
13. Sutherland T, Beloff J, David-Kasdan J, Marie Lightowler M. Liu X, Nascimben L, **Urman RD**. Process measures to improve perioperative prophylactic antibiotic compliance: quality and financial implications. *Health Care Manag* 2014; Oct 33(4):289-96.
14. Kodali BS, Sa Rego M, Kaynar AM, **Urman RD**. The effects of 2-chloroprocaine on coagulation and fibrinolysis in the parturient: an in vitro study. *J Anesth*. 2014;28(6):906-10.
15. Ranum D, Ma H, Shapiro FE, Chang B, **Urman RD**. Analysis of Patient Injury Based on Anesthesiology Closed Claims Data from a Major Malpractice Insurer. *J Healthc Risk Manag*. 2014;34(2):31-42.

16. Peccora C, Gimlich R, Cornell RP, Vacanti CA, Ehrenfeld JM, **Urman RD**. Anesthesia Report Card - A Customizable Tool for Performance Improvement. *J Med Sys*. 2014;38(9):105-115.
17. Sutherland TN, Beloff J, Lightowler M, Liu X, Nascimben L, Kaye AD, and **Urman RD**. Description of a multidisciplinary initiative to improve SCIP measures related to pre-operative antibiotic prophylaxis compliance: A single-center success story. *Patient Saf Surg*, 2014;8(1):37.
18. Gabriel RA, Gimlich R, Ehrenfeld JM, **Urman RD**. Operating room metrics score card – creating a prototype for individualized feedback. *J Med Sys*. 2014;38(11):144.
19. Sutherland S, Beloff J, Lightowler M, Liu X, Kachalia A, Bates, DW and **Urman RD**. Implementation of measures to improve SCIP perioperative beta blocker compliance: quality and financial implications. *Health Care Manag* 2015;34(3):192-8.
20. Preiss DA, Azami T, **Urman RD**. Variations in respiratory excretion of carbon dioxide can be used to calculate pulmonary blood flow. *J Clin Med Res* 2015;7(2):83-90.
21. Saw N, Vacanti JC, Liu X, SaRego M, Flanagan H, Kodali BS, **Urman RD**. Process redesign to improve first case surgical starts in an academic institution. *J Invest Surg* 2014 Dec 17.
22. Chang B, MD, Kaye AD, Diaz JH, Westlake B, Dutton RP, **Urman RD**. Interventional procedures outside of the operating room: results from the National Anesthesia Clinical Outcomes Registry. *J Patient Saf* 2018;14(1):9-16.
23. Diaz JH, Prabhakar A, **Urman RD**, Kaye AD. Propofol infusion syndrome: a retrospective analysis at a level 1 trauma center. *Crit Care Res Pract* 2014 Epub Dec 17.
24. Metzler EC, Kodali BS, SaRego M, Flanagan H, **Urman RD**, Vacanti JC. Strategies to maintain operating room functionality following the complete loss of the recovery room due to an internal disaster. *Am J Disaster Med* 2015;10(1):5-12.
25. Malapero RJ, Gabriel RA, Gimlich R, Ehrenfeld JM, Philip BK, Bates DW, **Urman RD**. An anesthesia medication cost scorecard – concepts for individualized feedback. *J Med Sys* 2015;39(5):226.
26. Vacanti JC, Sarin P, **Urman R**, Kodali B. Development and Implementation of a Dedicated PostAnesthesia Evaluation Service to Improve Compliance with Post-Anesthesia Visits. *J Anaesth Clin Pharm* 2015;31(1):80-85.
27. Najjar P, Kachalia AB, Sutherland T, Beloff J, David-Kasdan JA, Bates DW, **Urman RD**. A multidisciplinary three-phase approach to improve the clinical utility of patient safety indicators. *Qual Manage Health* 2015;24(2):62-8.
28. Sutherland T, Beloff J, Lightowler M, Liu X, Pimentel MT, Kachalia A; Bates, DW, **Urman RD**. A single-center multidisciplinary initiative to reduce catheter-associated urinary tract infection (CAUTI) rates: quality and financial implications. *Health Care Manag* 2015;34(3):218-24.
29. Robert MC, Choi C, Shapiro FE, **Urman RD**, Melki S. Avoidance of "never-events" in refractive surgery using a customized pre-operative checklist. *J. Cataract Refract Surg* 2015 Oct;41(10):2171-8.

30. Fernando R, Shapiro FE, **Urman RD**. A survey analysis of an ambulatory surgical checklist designed for use by patients. *AORN J* 2015 Sep;102(3):290.
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59. Abrecht, CR, Gabriel RA, Dutton, RP, **Urman RD**. Peri-operative complications in intrathecal pump, spinal cord stimulator, and peripheral nerve stimulator procedures: Insight from the National Anesthesia Clinical Outcomes Registry. American Society of Anesthesiologists Annual Meeting, San Diego, CA 2015.
60. Valovska A, Zaccagnino MP, Weaver MJ, Valovski I, Kaye AD, **Urman RD**. Intrapelvic obturator internus muscle injections: a novel fluoroscopic technique. American Academy of Pain Management, 26th Annual Clinical Meeting, Washington DC, 2015.
61. Rosenberg N, Young M, **Urman RD**, Shapiro F. Patient engagement in office-based surgical safety: reviewing the evidence to develop a checklist for patient use. Medical Education Day, Harvard Medical School, Boston MA, 2015.
62. Brovman E, Lekowski R, **Urman RD**. Risk factors and outcomes after unplanned reintubation following cardiac surgery. Society of Cardiovascular Anesthesiologists Annual Meeting, San Diego, CA 2016.
63. Morris A, Hickey T, Ash J, Rye D, Guzman A, Warsh J, Feeley T, Preiss D, **Urman RD**, Gross WL, Naylor J, Saltzman J, Bertone K, Cialfi S, Morrissey L, Bader AM. Time-driven activity-based

costing in Brigham and Women's Hospital endoscopy. Anesthesia Poster Session, Harvard Medical School, November 2016.

64. Abrecht CR, Greenberg P, **Urman RD**, Rathmell JR. A contemporary medicolegal analysis of implanted devices for chronic pain management: insight from the controlled risk insurance company. 8th World Congress of the World Institute of Pain (WIP), New York, NY, May 2016.
65. **Urman RD**, Wu A, Melito JS, O'Donnell SE, Tsai MH. Non-OR turnover times: neither here nor there. International Anesthesia Research Society (IARS) Annual Meeting, San Francisco, CA, May 2016.
66. Nagrebetsky A, Gabriel RA, **Urman RD**. The utilization of interscalene block for total shoulder arthroplasty in the United States: a national registry analysis. European Society of Anesthesiologists (ESA) Euroanaesthesia Congress, London, UK, May 2016. Published in supplement, Eur J. Anaesthesiology.
67. Jones MR, Kaye AD, **Urman RD**. The emerging therapeutic role of kappa opioid agonists. American Society of International Pain Physicians (ASIPP) annual meeting, Dallas, TX, April 2016.
68. Beverly A, Brovman EY, **Urman RD**. Comparing outcomes of hip surgery in patients with and without DNR status. World Congress of Anaesthesiologists, Hong Kong. Anesth Analg 123(3S Suppl):23, September 2016.
69. Brovman EY, Beverly A, **Urman RD**. Incidence and risk factors predicting postoperative reintubation. World Congress of Anaesthesiologists, Hong Kong. Anesth Analg 123(3S Suppl):24, September 2016.
70. Sanford J, Andritsos DA, Tsai MH, **Urman RD**, O'Donnell SE, Tran B. Non-Operating Room Cancellation Rates. International Anesthesia Research Society (IARS) Annual Meeting, San Francisco, CA, May 2016.
71. Tsai MH, Sanford J, Genziano J, O'Donnell SE, **Urman RD**, Boggs SD. NORA Scheduling Error: A Game of Over and Under. International Anesthesia Research Society (IARS) Annual Meeting, San Francisco, CA, May 2016.
72. Ehrhardt KP, Elbaridi N, Kaye AD, Choi S, Diaz JH, **Urman RD**. Phenylpiperidine formulations and their role in pain management. Southern Pain Society Meeting, New Orleans, LA, October 2016.
73. Ejiofor JI, Hamidi , Sharma G, Lyu H, Brovman E, **Urman RD**, Clancy T, Whang E. A comparative analysis of perioperative outcomes between open distal pancreatectomy versus minimally invasive approaches using the NSQIP targeted pancreatectomy dataset. New England Surgical Society meeting, Boston, MA, September, 2016.
74. Pham A, Hansen RN, Lovelace B, Boing EA, Wan GJ, **Urman RD**. Reduced length of stay and hospitalization costs among inpatient hysterectomy surgery patients with postoperative pain management including IV versus Oral acetaminophen. ASRA 15th Annual Pain Medicine Meeting, San Diego, CA, Nov 17-19, 2016.

75. Tsai M, Sanford JA, Genziano JL, O'Donnell SE, **Urman RD**, Boggs SD. NORA scheduling error: a game of over and under. American Society of Anesthesiologists Annual Meeting, Chicago, IL, October 22-26, 2016.
76. Nagrebetsky A, Gabriel RA, Dutton RP, **Urman RD**. Efficiency of non-operating room anesthesia in the United States: a national registry analysis. American Society of Anesthesiologists Annual Meeting, Chicago, IL, October 22-26, 2016.
77. Nagrebetsky A, Gabriel RA, Dutton RP, **Urman RD**. Non-operating room anesthesia care in the United States: a national registry analysis. American Society of Anesthesiologists Annual Meeting, Chicago, IL, October 22-26, 2016.
78. **Urman RD**, Valovska T, Beverly A, Valovska AT, Davidiyuk G, Brovman EY. Comparing outcomes of hip surgery in patients with and without DNR status. American Society of Anesthesiologists Annual Meeting, Chicago, IL, October 22-26, 2016.
79. Brovman EY, **Urman RD**. Risk factors for unplanned reintubation after vascular surgery. American Society of Anesthesiologists Annual Meeting, Chicago, IL, October 22-26, 2016.
80. Zhang S, **Urman RD**, Kaye AD. New approaches and drug preparations on the horizon for treatment of chronic low back pain. AAPM annual meeting, March 16-19, Orland, FL.
81. Ehrhardt K, Kaye AD, Knezevic NN, Candido K, **Urman RD**. Novel treatment of lower back pain with matrix metalloproteinases. ASIPP annual meeting, April 20-22, Las Vegas, NV.
82. Foley J, Ranum D, Shapiro FE, **Urman RD**. Anesthesia closed claims in the Ambulatory Surgery Centers. Practice Management Conference, American Society of Anesthesiologists, Dallas, TX, Jan 27-29, 2017.
83. Changala M, Lilley EJ, Bader A, **Urman RD**, Sadovnikoff N, Cooper Z. Suboptimal management of code status for patients receiving venting gastrostomy tube (VGT) placement for malignant bowel obstruction (MBO). American Congress of Surgeons Clinical Congress, San Diego, CA 2017
84. Changala, Lilley EJ, **Urman RD**, Cooper Z, Bader A. Management of code status in patients undergoing venting gastrostomy tube (VGT) placement for malignant bowel obstruction (MBO). Selected for oral presentation. Perioperative Medicine Summit, Fort Lauderdale, FL, March 9.
85. Earhardt K, Kaye AD, with Matrix Metalloproteinases."Knezevic N, American Society of Interventional Pain Physicians National Candido KD, **Urman RD**. New Treatment of Lower Back Pain

Meeting, Oral Presentation, April 2017, Las Vegas, NV.

86. Nagrebetsky A, Voronov G, Nasr N, Al Jindi P, Dutton RP, **Urman RD**. Frequency of arterial, central venous and pulmonary artery catheter placement for kidney transplantation: a national database analysis. Society for Critical Care Anesthesiologists (SOCCA) Annual Meeting, Washington DC, May 5, 2017.
87. Greenbaum S, Abrecht C, Cornelius M, **Urman RD**, Edwards R, Schreiber K. Prediction of pain and opioid utilization in the perioperative period in patients undergoing primary knee arthroplasty: psychological and psychosocial factors. *J. Pain* 2017;18(4) supplement S28.
88. Muller IR, Eldakar-Hein ST, Ames SE, Rosen LD, **Urman RD**, Tsai MH. Potential association between physician burnout rates and operating margins: specialty-specific analysis. University of Vermont Student Research Conference, Burlington, VT, April 27, 2017.
89. Kuo C, Brovman EY, **Urman RD**. Web App for NSQIP Data analysis. Scientific and Educational Exhibit, American Society of Anesthesiologists Annual Meeting, Boston, MA, October 2017.
90. Saadat LV, Fields AC, Lyu H, **Urman RD**, Whang EE, Goldberg J, Bleday R, Melnitchouk N. Unplanned reoperation in patients undergoing low anterior resection or abdominoperitoneal resection for rectal cancer, Massachusetts American College of Surgeons meeting, 2017.
91. Foley J, Ranum D, Shapiro FE, **Urman RD**. Analysis of closed claims data in ambulatory surgical centers. Harvard Anesthesia Departments Research Meeting, Boston, MA, October 4, 2017.
92. Nagrebetsky A, Dutton RP, **Urman RD**. Frequency of arterial, central venous and pulmonary artery catheter placement during kidney transplantation: a national database analysis. Harvard Anesthesia Departments Research Meeting, Boston, MA, October 4, 2017.
93. Jones MR, Karamnov S, **Urman RD**. Characteristics of reported adverse events during moderate procedural sedation. Harvard Anesthesia Departments Research Meeting, Boston, MA, October 4, 2017.
94. Jones MR, Stone A, Rao N, **Urman RD**. Clinical dashboard development for opioid-related adverse drug events in surgical patients using a national administrative claims database. Harvard Anesthesia Departments Research Meeting, Boston, MA, October 4, 2017.
95. Nagrebetsky A, Dutton RP, **Urman RD**. Frequency of Arterial, Central Venous and Pulmonary Artery Catheter Placement for Kidney Transplantation: A National Database Analysis. American Society of Anesthesiologists Annual Meeting, Boston, MA October 22-25, 2017.
96. Nagrebetsky A, Dutton RP, **Urman RD**. Trends in Monthly Frequency of Common Elective Procedures Based on Insurance Status: A National Inpatient Sample Analysis. American Society of Anesthesiologists Annual Meeting, Boston, MA October 22-25, 2017.
97. Brovman EY, Kuo CE, **Urman RD**. Elective Surgery Outcomes in Patient With Do-Not-Resuscitate Status. American Society of Anesthesiologists Annual Meeting, Boston, MA October 22-25, 2017.

98. Palsen SE, Wu A, Gimlich R, Beutler SS, Yang K, **Urman RD**. Depth of Intraoperative Paralysis: Practice Patterns in a Multispecialty Setting. American Society of Anesthesiologists Annual Meeting, Boston, MA October 22-25, 2017.
99. Foley J, Shapiro FE, **Urman RD**, Ranum D. Analysis of Closed Claims Data in Ambulatory Surgical Centers. American Society of Anesthesiologists Annual Meeting, Boston, MA October 22-25, 2017.
100. Pisansky A, **Urman RD**, Brovman E, Kuo C, Kaye A. Perioperative Outcomes After Peripheral Nerve Block or Neuraxial Versus General Anesthesia for Above Knee Amputations. American Society of Regional Anesthesia (ASRA) Meeting, Lake Buena Vista, Florida, November 16-18, 2017.
101. Jones M, Stone A, Rao N, Urman RD. Clinical Dashboard Development for Opioid-Related Adverse Drug Events in Surgical Patients Using a National Administrative Claims Database. American Society of Regional Anesthesia (ASRA) Meeting, Lake Buena Vista, Florida, November 16-18, 2017.
102. Pham A, Khangulov V, **Urman RD**, Boing E, Fain R, Nathanson B, Zhang X, Lovelace B, Cirillo J. Clinical and Economic Outcomes Associated with the Use of Intravenous versus Oral Acetaminophen for Management of Acute Postoperative Pain in Obstetrics and Gynecology Patients. American Society of Regional Anesthesia (ASRA) Meeting, Lake Buena Vista, Florida, November 16-18, 2017.
103. Pham A, Hansen R, **Urman RD**, Boing E, Lovelace B, Wan G. Reduced Length of Stay and Hospitalization Costs Among Inpatient Appendectomy Patients with Postoperative Pain Management Including Intravenous Versus Oral Acetaminophen. American Society of Regional Anesthesia (ASRA) Meeting, Lake Buena Vista, Florida, November 16-18, 2017.
104. Pham A, Hansen R, **Urman RD**, Boing E, Lovelace B, Wan G. Reduced Length of Stay and Hospitalization Costs Among Inpatient Bariatric Patients with Postoperative Pain Management Including Intravenous Versus Oral Acetaminophen. American Society of Regional Anesthesia (ASRA) Meeting, Lake Buena Vista, Florida, November 16-18, 2017.
105. Tsai MH, Wong T, King B, Breidenstein MW, Morrell N, **Urman RD**. Applying Pareto efficiencies to different anesthesia environments. International Anesthesia Research Society (IARS) annual meeting, Chicago, IL, April, 2018.
106. Abrecht CR, Greenberg P, Yu W, Song E, **Urman RD**. A contemporary closed claims analysis of chronic pain management cases from a malpractice insurer. American Society of Regional Anesthesia (ASRA) Meeting, Las Vegas, NV, May 2015.
107. Malik O, Brovman EY, **Urman RD**. The use of regional or local anesthesia or carotid endarterectomies (CEA) may reduce blood loss and pulmonary complications. American Society of Regional Anesthesia (ASRA) Meeting, New York, NY, April 2018.

108. Pak LM, Mahvi DA, Lipsitz SR, **Urman RD**, Gold JS, Whang EE. A risk model to predict delayed gastric emptying after pancreaticoduodenectomy: a national surgical quality improvement program analysis. Harvard Surgery Research Day, Boston, MA, April 7, 2018
109. Jones MR, Karamnov S, **Urman RD**. Characteristics of reported adverse events during moderate procedural sedation. Society for Ambulatory Anesthesia annual meeting, Miami, FL, May 3, 2018.
110. Stone AB, Brovman EY, **Urman RD**. Contemporary analysis of professional liability related to gastroenterology procedures. Society for Ambulatory Anesthesia annual meeting, Miami, FL, May 3, 2018.
111. Tsai MH, Wong T, King BS, Breidenstein MW, Marroquin C, **Urman RD**. Applying Pareto efficiencies to different anesthesia environments. International Anesthesia Research Society (IARS) Annual Meeting, Chicago, IL, April 30, 2018.
112. Brovman EY, Lekowski RW, **Urman RD**. Outcomes after transcatheter aortic valve replacement: a propensity matched retrospective cohort study. Society for Cardiac Anesthesia (SCA) Annual Meeting, Phoenix, AZ, May 2.
113. Mahvi DA, Pak LM, Bose SK, **Urman RD**, Gold J, Whang EE. Ultrafast track pancreaticoduodenectomy: who qualifies? Scientific Forum program, American College of Surgeons Clinical Congress, October 21-25, 2018, Boston, MA
114. Pak LM, Mahvi DM, Gold J, **Urman RD**, Whang EE. Risk calculator to predict delayed gastric emptying after pancreaticoduodenectomy: a National Surgical Quality Improvement Program analysis. Scientific Forum program, American College of Surgeons Clinical Congress, October 21-25, 2018, Boston, MA.
115. Saadat LV, Mahvi DA, Gabriel RA, **Urman RD**, Gold JS, Whang EE. 23-hour-stay colectomy without increased readmissions: an analysis of 1,461 cases from the National Surgical Quality Improvement Program. Scientific Forum program, American College of Surgeons Clinical Congress, October 21-25, 2018, Boston, MA.
116. Mahvi DA, Pak LM, **Urman RD**, Gold J, Whang EE. Post-pancreatectomy discharge destination: impact of modifiable risk factors. Scientific Forum program, American College of Surgeons Clinical Congress, October 21-25, 2018, Boston, MA.
117. Mahvi DA, Pak LM, **Urman RD**, Gold J, Whang EE. Discharge destination following major hepatectomy: an analysis of preoperative and intraoperative predictive factors. Scientific Forum program, American College of Surgeons Clinical Congress, October 21-25, 2018, Boston, MA.
118. Jolissaint JS, Fields AC, Mavhi DA, **Urman RD**, Whang EE. Operative duration: an independent determinant of morbidity and mortality following hepatectomy. Scientific Forum program, American College of Surgeons Clinical Congress, October 21-25, 2018, Boston, MA.

119. Sarabakhsh K, **Urman RD**, Gabriel RA, O'Donnell S, Tsai MH. Trends In Non-operating Room Anesthesia End Times. American Society of Anesthesiologists Annual Meeting, October 13, 2018, San Francisco, CA.

Professional educational materials or reports, in print or other media

1. **Urman R**, Adams D. ²⁹Si NMR of silicones in breast implant patients. Columbia University Student Research Report 1998; 1:49.
2. **Urman RD**, Lieberman G. Evaluation of thyroid disease by ultrasound: Mini-seminars on radiologic topics 2001. Beth Israel Deaconess Medical Center, Boston, MA.
3. **Urman RD**, Barnett SR. The Impaired Physician - It's Not Just Drugs. Innovative and Interactive Computer Program on Physician Impairment 2005. Beth Israel Deaconess Medical Center, Boston MA.
4. Jervis K, Linn A, Kaper J., **Urman RD**, Shapiro F. New Resident Curriculum in Office-Based Anesthesia. American Society of Anesthesiologists Exhibit, 2006.
5. Shapiro F, Bernardini J, **Urman RD**. Teaching Patient Safety to Anesthesia Residents. Printed materials, 2006.
6. Shapiro F, **Urman RD**. Office-based anesthesia: educating practitioners about core safety principles. Printed materials, 2007.
7. Ambulatory Anesthesia: online curriculum. Available through BWH anesthesiology intranet. Used by all residents during their ambulatory anesthesia rotation. The curriculum includes slide presentations on topics such as multimodal analgesia, laparoscopy, preoperative evaluation, airway management, 2009.
8. Ambulatory Anesthesia resident rotation curriculum requirements, written update. Submitted to the BWH GME office to comply with ACGME anesthesia residency requirements. Outlines curriculum, learning objectives and expectations for CA-1, 2 and 3 residents, 2009.
9. **Urman, RD**, Rosow C, Pawlowski, J. Comprehensive HMS YR. 2 Pharmacology Syllabus. Product of my HMS Academy Fellowship in Medical Education. Updated syllabus reflects the latest information about drugs and drug interactions, as well as research developments and clinical applications, 2009.
10. **Urman RD**, Barnett SR. The Impaired Physician - It's Not Just Drugs. Innovative and Interactive Computer Program on Physician Impairment. This curriculum was made available online for anesthesia practitioners and also presented at the ASA annual meeting, 2009.
11. Serious Reportable Events in Healthcare - 2011 update: A Consensus Report of the Subcommittee of Ambulatory and Office-based surgery technical Advisor Panel. National

Quality Forum (NQF). Co-authored the report as an appointed member of the panel, 2011.

12. ASA Committee on Performance Outcomes Measurement. Worked to improve the experiences and outcomes of patients through the development of measures of anesthesiologist performance and the outcomes of patient care by anesthesiologists. Contributed to strategic plan and several proposed anesthesia outcomes measures, 2012-2014.
13. **Urman, RD.** Publications Committee Annual Report. Massachusetts Society of Anesthesiologists (MSA), Anesthesia Record. Yearly reports outlining achievements of the committee responsible for MSA website development, Anesthesia Record writing and distribution, and other public relations activities, 2010-2014.
14. Ranum D, Shapiro FE, **Urman RD.** A Study of Anesthesia-Related Patient Injuries Identified in Medical Malpractice Claims and Suits. The Doctors Company report, Napa, CA, 2014.
15. August D, Raemer DB, **Urman RD.** Introduction to Crisis Checklists. Educational Video, Center for Medical Simulation, Boston, MA 2015.
16. August D, Raemer DB, **Urman RD.** Clinical Simulation Scenarios: Sepsis; Transfusion reaction. Center for Medical Simulation, Boston, MA 2015.
17. Patient's Checklist for Anesthesia. Online patient education tool. Member, Committee on Patient Safety and Education, American Society of Anesthesiologists, 2015.
18. Boggs S, Vig S., Tsai M, **Urman RD.** Operating room management curriculum template for anesthesiology trainees. International Collaborative on Operating Room Management Education and Training (iCORMET), 2016.
19. **Urman RD, Bader AM.** Curriculum for Perioperative Medicine Fellowship. Fellowship Manual. Brigham and Women's Hospital, Boston, MA, 2016.
20. Patient Decision Aids for regional anesthesia. Member, Committee on Patient Safety and Education, American Society of Anesthesiologists, 2016.
21. Emergency Manuals Implementation Collaborative. Member, 2014-.

Clinical Guidelines and Reports

1. **Urman R.** Anesthesia workforce issues - 2004 update. Anesthesia Finance and Management Newsletter. 2005;2(1):2-3.
2. **Urman R.** ASA House of Delegates Resolution: Initiative to improve communication skills among anesthesia residents. Included in the Delegate Book for the American Society of Anesthesiologists Annual House of Delegates, 2005.

3. **Urman R.** The first annual Massachusetts Medical Society resident and fellow research poster symposium. An article in: Resident's Report. 2006.
4. As member of the ASA Committee on Physician Resources. Data Repository for the Anesthesia Workforce (D.R.A.W) - a resource for the latest information on anesthesia personnel market, demand of service, and supply of personnel, 2007-2009.
5. As member of the ASA Committee on Anesthesia Care Team. Revision of the ASA Statement on the Anesthesia Care Team, 2008.
6. **Urman R.** BWH Procedural Sedation Policy, updated 2010.
7. Arriaga A., Shapiro F, **Urman R:** The Institute for Safety in Office-Based Surgery surgical safety checklist (a.k.a. "The ISOBS Checklist"), 2010.
8. ACGME Goals and Objectives for the Ambulatory and Gynecologic Anesthesia resident rotation, BWH, 2011.
10. Ambulatory anesthesia fellowship curriculum update, Office of Graduate Medical Education, BWH, 2014.
11. Anesthesia for robotic surgery protocol updates, Department of Anesthesiology, BWH, 2014.
12. Development of clinical protocols for the Ambulatory Care Center – Chestnut Hill, BWH. Examples include anesthesia consultation criteria, emergency preparedness and algorithm, governance, intraoperative care, patient discharge criteria.
13. Committee on Performance and Outcomes Measurement. Annual Report. ASA House of Delegates, August 16, 2015.
14. Committee on Performance and Outcomes Measurement. Principles for Quality Incentive Programs in Anesthesiology. Guideline update. ASA House of Delegates, 2016.
15. Committee on Ambulatory Surgical Care. Annual Report. ASA House of Delegates, August 2015.
16. Committee on Ambulatory Surgical Care. Statement on Granting Privileges for Administration of Moderate Sedation to Practitioners Who Are Not Anesthesia Professionals. Guideline update. ASA House of Delegates, 2016.
17. American Society of Interventional Pain Physicians. Part 1: Prescription Opioid Abuse in Chronic Pain: An Updated Review of Opioid Abuse Predictors and Strategies to Curb Opioid Abuse. Updated Guidelines. Pain Physician, 2016.
18. American Society of Interventional Pain Physicians. Part 2: Prescription Opioid Abuse in Chronic Pain: An Updated Review of Opioid Abuse Predictors and Strategies to Curb Opioid Abuse. Updated Guidelines. Pain Physician, 2016.

19. Committee on Surgical and Procedural Anesthesia. Guidelines for Patient Care in Anesthesiology. Guideline update. Five-year review, 2016.
20. Committee on Performance and Outcomes Measurement. ASA Statement on Principles for Quality Incentive Programs in Anesthesiology. Five-year review, 2016.
21. Committee on Performance and Outcomes Measurement. Review of the ASA Comments on the CMS Measure Development Plan (MDP), 2016.
22. Committee on Data Use. Anesthesia Quality Institute, 2016. Participated in the development and approval of the following policies:
 - Policy on Access to the NACOR Participant User File (PUF)
 - Policy on Scientific Review of Data Requests
 - Policy on Data Retention and Storage
 - Qualified Expert Agreement
 - Data Use Agreement
23. Committee on Performance and Outcomes Measurement. QCDR Measure Workflows development, 2015-2016: Perioperative Blood Management; Perioperative Management of Patients with Obstructive Sleep Apnea; Management of the Difficult Airway; Prevention, Detection and Management of Respiratory Depression Associated with Neuraxial Opioid Administration; Acute Pain Management in the Perioperative Setting.
24. The Joint Commission Professional and Technical Advisory Committee (PTAC). Accreditation Standard Development: Addressing Antimicrobial Stewardship in Ambulatory Care and OfficeBased Surgery. Ambulatory Care Accreditation Program, 2016.
25. The Joint Commission Professional and Technical Advisory Committee (PTAC). Accreditation Standard Development: Standards and Elements of Performance for Sleep Centers. Ambulatory Care Accreditation Program, 2016.
26. The Joint Commission Professional and Technical Advisory Committee (PTAC). Accreditation Standard Development: Standards and Elements of Performance for Diagnostic Imaging Services. Ambulatory Care Accreditation Program, 2016.
27. American Society of Anesthesiologists, Committee on Outcomes and Performance Improvement. Development of outcomes measures concepts for ambulatory anesthesia; Workgroup, 2016.
 - i. Preoperative Anesthesia Evaluation: Avoidance of baseline laboratory studies in patients without significant systematic disease (ASA I or II) undergoing outpatient surgery.
 - ii. Preoperative Anesthesia Evaluation: Avoidance of baseline diagnostic cardiac testing (transthoracic/esophageal echocardiography – TTE/TEE) or cardiac stress testing in asymptomatic stable patients with known cardiac disease (e.g. CAD, valvular disease) undergoing outpatient noncardiac surgery.
 - iii. Care Coordination: Assessment of Patient Frailty: Screening patients for frailty using standardized instrument prior to the surgical procedure.
 - iv. Care Coordination: Assessment of Patients for Obstructive Sleep Apnea: Screening patients for obstructive sleep apnea using a standardized instrument prior to the surgical procedure.

28. American Society of Anesthesiologists Committee on Ambulatory Surgical Care. ASA Guidelines for Ambulatory Anesthesia and Surgery Contributor, 5 year Committee update. 2017.
29. American Society of Anesthesiologists Committee on Standards and Practice Parameters. As a full committee member, I vote and oversee development of new and updates of existing practice guidelines. Examples:
 - Practice Guideline for Deep Procedural Sedation
 - Practice Guideline for Moderate Procedural Sedation
 - Practice Advisory for the Prevention of Perioperative Peripheral Neuropathies
 - Practice Advisory for the Perioperative Management of Patients with Cardiac Implantable Electronic Devices
 - Practice advisory for the prevention of perioperative visual loss associated with spine surgery
 - Practice Guidelines for Transesophageal Echocardiography
30. Enhanced Recovery After Surgery (ERAS) Colorectal surgery guidelines. I participated as a coauthor and anesthesia expert on revising current guidelines due in 2018. Guidelines for Perioperative Care in Elective Colonic Surgery: Enhanced Recovery After Surgery (ERAS) Society Recommendations. World J. Surgery, expected 2018.
31. Recommendations for Preoperative Management of Frailty from the Society for Perioperative Assessment and Quality Improvement (SPAQI). J Clin Anesth 2018 Jun;47:33-42.
32. Evaluating Patient-Centered Outcomes in Clinical Trials of Procedural Sedation, Part 2 Safety: Sedation Consortium on Endpoint and Procedures for Treatment, Education and Research Recommendations. Anesth Analg 2018 May 17.
33. Recommendations for Substance Abuse and Pain Control in Patients with Chronic Pain. Curr Pain Headache Rep 2018;22(4):25.
34. Buprenorphine Formulations: Clinical Best Practice Strategies Recommendations for Perioperative Management of Patients Undergoing Surgical or Interventional Pain Procedures. Pain Phys 2018;21(1):E1-E12.