COLLEGE OF PUBLIC HEALTH CURRICULUM VITAE

Emine Ozgur Bayman

May 8, 2019

I. EDUCATION AND PROFESSIONAL HISTORY

A. Education

Institution	Field of Study	Degree <u>Obtained</u>	Degree <u>Date</u>
Hacettepe University, Faculty of Science, Ankara, Turkey	Statistics	BS	1999
Uludag University, School of Medicine, Bursa, Turkey	Biostatistics	MS	2002
University of Iowa, College of Public Health, Iowa City, Iowa, United States	Biostatistics	MS	2004
University of Iowa, College of Public Health, Iowa City, Iowa, United States	Biostatistics	PhD	2008

B. Professional and Academic Positions

Position Title	Dates of <u>Service</u>	Location/Institution
Research/Teaching Assistant	2000-2003	Department of Biostatistics, Uludag University, School of Medicine, Bursa, Turkey
Research Assistant	2004-2005	Biostatistics Consulting Center, University of Iowa, College of Public Health, Iowa City, Iowa
Research Assistant	2005-2008	Department of Biostatistics, University of Iowa, College of Public Health, Iowa City, Iowa
Teaching Assistant	2008	Department of Anesthesia, University of Iowa Health Care, Carver College of Medicine, Iowa City, Iowa
Associate	2008-2011	Department of Anesthesia, University of Iowa Health Care, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa

Position Title	Dates of <u>Service</u>	Location/Institution
Associate (Secondary Faculty)	2008-2011	Department of Biostatistics, University of Iowa, College of Public Health, Iowa City, Iowa
Assistant Professor	2011-2017	Department of Anesthesia, University of Iowa Health Care, Carver College of Medicine, Department of Anesthesia, Iowa City, Iowa
Assistant Professor (Secondary Faculty)	2011-2017	Department of Biostatistics, University of Iowa, College of Public Health, Iowa City, Iowa
Associate Professor (Secondary Faculty)	2017-2019	Department of Biostatistics, College of Public Health/University of Iowa, Iowa City
Associate Professor	2017-2019	Department of Anesthesia, University of Iowa, Carver College of Medicine, Iowa City, Iowa
Associate Professor	2019-Present	Department of Biostatistics, College of Public Health/University of Iowa, Iowa City
Associate Professor (Secondary Faculty)	2019-Present	Department of Anesthesia, University of Iowa, Carver College of Medicine, Iowa City
Deputy Director, Clinical Trials Statistical & Data Management Center (CTSDMC)	2019-Present	Department of Biostatistics, University of Iowa, College of Public Health, Iowa City, Iowa

C. Honors, Awards, Recognitions, and Outstanding Achievements

<u>Year</u>	<u>Title</u>
2003-2007	Graduate Education Scholarship, Council of Higher Education Council
2007	Poster Competition Winner, University of Iowa, Carver College of Medicine
2007	Tuition Scholarship, University of Iowa, College of Public Health, Department of Biostatistics
2007	Accommodation and Travel Award, Design and Analysis Experiments (DAE) Conference
2008	Travel Award, Bayesian Biostatistics Conference
2013	Best Abstract Award, American Society of Anesthesiologists (ASA)

II. TEACHING

A. Teaching Assignments on a semester-by-semester basis (classroom, seminar, teaching lab)

1. University of Iowa

Semester/Year	Course Title/Number	Semester <u>Hours</u>	# <u>Students</u>	<u>Role</u>	Percent <u>Responsible</u>
Fall 2016	BIOS:7600 Advanced Clinical Trials Seminar			Primary Instructor	

2. Other Institutions

Semester /	Course	Semester	#	Dele	Percent Respon	La a Charlana
<u>Year</u>	<u>Title/Number</u>	<u>Hours</u>	<u>Students</u>	<u>Role</u>	<u>sible</u>	<u>Institution</u>
Spring 2000	Introduction to Biostatistics II			Teaching Assistant		Uludag University School of Medicine
Fall 2000	Data Analysis with Statistical Packages I			Teaching Assistant		Uludag University School of Medicine
Fall 2000	Introduction to Biostatistics I			Teaching Assistant		Uludag University School of Medicine
Spring 2001	Data Analysis with Statistical Packages II			Teaching Assistant		Uludag University School of Medicine
Spring 2001	Introduction to Biostatistics II			Teaching Assistant		Uludag University School of Medicine
Fall 2001	Data Analysis with Statistical Packages I			Teaching Assistant		Uludag University School of Medicine

Semester / <u>Year</u>	Course <u>Title/Number</u>	Semester <u>Hours</u>	# Students	<u>Role</u>	Percent Respon sible	Institution
Spring 2002	Survival Data Analysis			Teaching Assistant		Uludag University School of Medicine
Fall 2002	Introduction to Biostatistics I			Teaching Assistant		Uludag University School of Medicine
Spring 2008	171:266 Statistical Methods in Clinical Trials			Teaching Assistant		University of Iowa, College of Public Health, Department of Biostatistics
Spring 2009	171:266 Statistical Methods in Clinical Trials	3		Primary Instructor		University of Iowa, College of Public Health, Department of Biostatistics
June 2009 - August 2009	171:161 Introduction to Biostatistics	3		Primary Instructor		University of Iowa, College of Public Health, Department of Biostatistics
November 2009	156:204 Biostatistics for Biomedical Research	1		Primary Instructor		University of Iowa, Bioscience Program
	Also 171:151					
Spring 2010	171:266 Statistical Methods in Clinical Trials	3		Primary Instructor		University of lowa, College of Public Health, Department of Biostatistics
April 2010	156:204 Biostatistics for Biomedical Research	1		Primary Instructor		University of lowa, Bioscience Program
	Also 171:151					

Semester / Year	Course Title/Number	Semester Hours	# Students	<u>Role</u>	Percent Respon sible	Institution
November 2010	156:204 Biostatistics for Biomedical Research	1		Primary Instructor	_	University of lowa, Bioscience Program
	Also 171:151					
Spring 2011	171:266 Statistical Methods in Clinical Trials	3		Primary Instructor		University of Iowa, College of Public Health, Department of Biostatistics
November 2011	156:204 Biostatistics for Biomedical Research	1		Primary Instructor		University of lowa, Bioscience Program
	Also 171:151					
Spring 2012	171:266 Statistical Methods in Clinical Trials	3		Primary Instructor		University of lowa, College of Public Health, Department of Biostatistics
November 2012	156:204 Biostatistics for Biomedical Research	1		Primary Instructor		University of lowa, Bioscience Program
	Also 171:151					
Spring 2013	171:266 Statistical Methods in Clinical Trials	3		Primary Instructor		University of lowa, College of Public Health, Department of Biostatistics
Spring 2014	171:266 Statistical Methods in Clinical Trials	3		Primary Instructor		University of Iowa, College of Public Health, Department of Biostatistics

Semester / Year	Course <u>Title/Number</u>	Semester <u>Hours</u>	# <u>Students</u>	<u>Role</u>	Percent Respon sible	<u>Institution</u>
November 2014	156:204 Biostatistics for Biomedical Research	1		Primary Instructor		University of lowa, Bioscience Program
	Also 171:151					
Spring 2015	171:266 Statistical Methods in Clinical Trials	3		Primary Instructor		University of lowa, College of Public Health, Department of Biostatistics
Spring 2016	171:266 Statistical Methods in Clinical Trials	3		Primary Instructor		University of lowa, College of Public Health, Department of Biostatistics
Fall 2016	BIOS:7600 Advanced Clinical Trials Seminar			Primary Instructor		University of lowa, College of Public Health, Department of Biostatistics
	Responsibility: Bayesian lectures					
Spring 2017	171:266 Statistical Methods in Clinical Trials	3		Primary Instructor		University of lowa, College of Public Health, Department of Biostatistics
Spring 2018	171:266 Statistical Methods in Clinical Trials	3		Primary Instructor		University of Iowa, College of Public Health, Department of Biostatistics

Semester / Year	Course <u>Title/Number</u>	Semester <u>Hours</u>	# Students	<u>Role</u>	Percent Respon sible	Institution
Fall 2018	BIOS:7600 Advanced Clinical Trials Seminar Responsibility: Bayesian lectures			Primary Instructor		University of lowa, College of Public Health, Department of Biostatistics

B. Course Materials (syllabi, instructional web pages, computer lab materials) (Description only - *full materials to be included in promotion dossier*)

III. SCHOLARSHIP

A. Publications or Creative Works

1. Peer-Reviewed Papers

- 1. Ozkan T, Kıyıcı M, Memesa A, Dolar E, Ozakın C, Unlu (Bayman) EO, Ozeke T (2002). Value of stool antigen test in diagnosis of helicobacter pylori infection. *Hepato-Gastroenterology Supplement II*, 49:321.
- 2. Demircan C, Cikriklar HI, Engindeniz Z, Cebicci H, Atar N, Guler V, Unlu (Bayman) EO, Ozdemir B (2005). Comparison of the effectiveness of intravenous diltiazem and metoprolol in the management of rapid ventricular rate in atrial fibrillation. *Emergency Medical Journal*, 22(6):411-4. PMC: PMC1726824, PMID: 15911947 http://emj.bmj.com/content/22/6/411.long

Contribution: I performed statistical analysis of the study.

3. Ercan I, Özkaya G, Alper Z, Ediz B, Bayman EÖ, Kan İ, Bilgel N (2006). Algorithm for increasing patient satisfaction related with non-technical dimension of services in Turkey. *European Journal of General Medicine*, 3(2):73-7. http://www.ejgm.org/ozet.php?makale_id=1108&dil=en

Contribution: I helped with the statistical analysis of the study and writing the manuscript for a non-Turkish journal.

4. Cakar E, Dincer U, Kiralp MZ, Taskaynatan MA, Yasar E, Bayman EO, Ozgul A, Dursun H (2007). Sexual problems in male ankylosing spondylitis patients: relationship with functionality, disease activity, quality of life, and emotional status. *Clinical Rheumatology*, 26(10):1607-13. PMID: 17285222 https://link.springer.com/article/10.1007%2Fs10067-007-0545-x

Contribution: I performed statistical analysis of the study.

 McGregor DG, Lanier WL, Pasternak JJ, Rusy DA, Hogan K, Samra S, Hindman B, Todd MM, Schroeder DR, Bayman EO, Clarke W, Torner J, Weeks J (2008). Effect of nitrous oxide on neurologic and neuropsychological function after intracranial aneurysm surgery. *Anesthesiology*, 108(4):568-79. PMID: 18362587 http://anesthesiology.pubs.asahq.org/article.aspx?articleid=1932342

Contribution: I performed statistical analysis of the study.

6. Coghlan LA, Hindman BJ, Bayman EO, Banki NM, Gelb AW, Todd MM, Zaroff JG (2009). Independent associations between electrocardiographic abnormalities and outcomes in patients with aneurysmal subarachnoid hemorrhage: findings from the intraoperative hypothermia aneurysm surgery trial. *Stroke*, 40(2):412-8. PMC: PMC2684783, PMID: 19095990 http://stroke.ahajournals.org/content/40/2/412.long

Contribution: I performed statistical analysis of the study.

Todd MM, Hindman BJ, Clarke WR, Torner JC, Weeks JB, Bayman EO, Shi Q, Spofford CM (2009). Perioperative fever and outcome in surgical patients with aneurysmal subarachnoid hemorrhage. *Neurosurgery*, 64(5):897-908; discussion 908. PMID: 19404150 https://academic.oup.com/neurosurgery/article-lookup/doi/10.1227/01.NEU.0000341903.11527.2F

Contribution: I performed statistical analysis of the study.

 Hindman BJ, Bayman EO, Pfisterer WK, Torner JC, Todd MM (2010). No association between intraoperative hypothermia or supplemental protective drug and neurologic outcomes in patients undergoing temporary clipping during cerebral aneurysm surgery: findings from the Intraoperative Hypothermia for Aneurysm Surgery Trial. *Anesthesiology*, 112(1):86-101.
 PMID: 19952722 http://anesthesiology.pubs.asahq.org/article.aspx?articleid=1932453

Contribution: I performed statistical analysis of the study and helped write the Methods and Results sections of the paper.

9. Dexter F, Bayman EO, Epstein RH (2010). Statistical modeling of average and variability of time to extubation for meta-analysis comparing desflurane to sevoflurane. *Anesthesia and Analgesia*, 110(2):570-80. PMID: 19820242 http://journals.lww.com/anesthesia-analgesia/fulltext/2010/02000/Statistical_Modeling_of_Average_and_Variability_of.50.aspx

Contribution: This was a heavy statistical methodological paper. I was responsible for the Bayesian analysis of the study and writing the Bayesian sections of the paper. [This paper received an editorial.]

- 10. Bayman EO, Chaloner K, Cowles MK (2010). Detecting qualitative interaction: a Bayesian approach. *Statistics in Medicine*, 29(4):455-63. PMID: 19950107 http://onlinelibrary.wiley.com/doi/10.1002/sim.3787/full
 - Contribution: Dr. Chaloner and Dr. Cowles are my dissertation advisors. This publication was related to my PhD dissertation. Dr. Chaloner and I wrote the first draft of the paper.
- 11. Agoliati A, Dexter F, Lok J, Masursky D, Sarwar MF, Stuart SB, Bayman EO, Epstein RH (2010). Meta-analysis of average and variability of time to extubation comparing isoflurane with desflurane or isoflurane with sevoflurane. *Anesthesia and Analgesia*, 110(5):1433-9. PMID: 20418303 http://journals.lww.com/anesthesia-analgesia/fulltext/2010/05000/Meta_Analysis_of_Average_and_Variability_of_Time.30.aspx
 - Contribution: This study was an extension of a 2009 Dexter, Bayman, Epstein paper. I performed Bayesian analysis for this study.
- 12. Nguyen HP, Zaroff JG, Bayman EO, Gelb AW, Todd MM, Hindman BJ (2010). Perioperative hypothermia (33 degrees C) does not increase the occurrence of cardiovascular events in patients undergoing cerebral aneurysm surgery: findings from the Intraoperative Hypothermia for Aneurysm Surgery Trial. *Anesthesiology*, 113(2):327-42. PMC: PMC2910193, PMID: 20571361 http://anesthesiology.pubs.asahq.org/article.aspx?articleid=1933103
 - Contribution: I performed statistical analysis of the study and helped write the Methods and Results sections of the paper.
- Hata JS, Stotts C, Shelsky C, Bayman EO, Frazier A, Wang J, Nickel EJ (2011). Reduced mortality with noninvasive hemodynamic monitoring of shock. *Journal of Critical Care*, 26(2):224.e1-8. PMID: 20813490 http://www.sciencedirect.com/science/article/pii/S0883944110001772?via%3Dihub
 - Contribution: I performed statistical analysis of the study and helped write the Methods and Results sections of the paper.
- 14. Oral R, Bayman L, Assad A, Wibbenmeyer L, Buhrow J, Austin A, Bayman EO (2011). Illicit drug exposure in patients evaluated for alleged child abuse and neglect. *Pediatric Emergency Care*, 27(6):490-5. PMID: 21629147 http://journals.lww.com/pec-online/Abstract/2011/06000/Illicit_Drug_Exposure_in_Patients_Evaluated_for.5.aspx
 - Contribution: I helped with the design of the study and wrote the Methods and Results sections of the manuscript.
- Bayman EO, Dexter F, Laur JJ, Wachtel RE (2011). National incidence of use of monitored anesthesia care. Anesthesia and Analgesia, 113(1):165-9. PMID: 21596866 http://journals.lww.com/anesthesiaanalgesia/fulltext/2011/07000/National_Incidence_of_Use_of_Monitored_Anesthesia.28.aspx
 - Contribution: I was responsible for the statistical analysis of the study with the SUDAAN package. We also developed simulations and created a long Appendix to serve as a reference for similar future studies. I was responsible for all the SUDAAN related parts of the study.

16. Spofford CM, Bayman EO, Szeluga DJ, From RP (2012). Anesthesia machine checkout and room setup: a randomized, single-blind, comparison of two teaching modalities. *The Journal of Education in Perioperative Medicine*, 14(1):E060. PMC: PMC4719546, PMID: 27175391

Contribution: I helped with the design of the study, performed power and sample size calculations and provided a randomization list. I also performed statistical analysis and helped write the Methods and Results sections of the paper.

17. Laur JJ, Bayman EO, Foldes PJ, Rosenquist RW (2012). Triple-blind randomized clinical trial of time until sensory change using 1.5% mepivacaine with epinephrine, 0.5% bupivacaine, or an equal mixture of both for infraclavicular block. *Regional Anesthesia and Pain Medicine*, 37(1):28-33. PMID: 22157740

http://journals.lww.com/rapm/Abstract/2012/01000/Triple_Blind_Randomized_Clinical_Trial_of _Time.6.aspx

Contribution: I helped with the design of the study, created the randomization list, performed interim analysis and helped interpret results. I also helped to write the Methods and Results sections.

 Kumar AB, Suneja M, Bayman EO, Weide GD, Tarasi M (2012). Association between postoperative acute kidney injury and duration of cardiopulmonary bypass: a meta-analysis. *Journal of Cardiothoracic and Vascular Anesthesia*, 26(1):64-9. PMID: 21924633 http://www.sciencedirect.com/science/article/pii/S105307701100526X?via%3Dihub

Contribution: This was my very first meta-analysis. I guided Dr. Kumar on how to perform the search and collect the data. I helped with the design of the study, performed meta-analysis and wrote the Methods and Results sections of the manuscript.

19. Mahaney KB, Todd MM, Bayman EO, Torner JC (2012). Acute postoperative neurological deterioration associated with surgery for ruptured intracranial aneurysm: incidence, predictors, and outcomes. *Journal of Neurosurgery*, 116(6):1267-78. PMID: 22404668 http://thejns.org/doi/abs/10.3171/2012.1.JNS111277?url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrossref.org&rfr_dat=cr_pub%3Dpubmed&

Contribution: I performed statistical analysis of the study and helped write the Methods and Results sections of the paper.

 Block RI, Thomas JJ, Bayman EO, Choi JY, Kimble KK, Todd MM (2012). Are anesthesia and surgery during infancy associated with altered academic performance during childhood? *Anesthesiology*, 117(3):494-503. PMID: 22801049 http://anesthesiology.pubs.asahq.org/article.aspx?articleid=1933799

Contribution: I was very involved with this large study from the beginning. I helped with the study design, performed part of the statistical analysis and interpreted the study results. I also helped write the Methods and Results sections of the paper. [This paper received an editorial.]

21. Oral R, Koc F, Bayman EO, Assad A, Austin A, Strang T, Bayman L (2012). Perinatal illicit drug screening practices in mother-newborn dyads at a university hospital serving rural/semi-urban communities: translation of research to quality improvement. *The Journal of Maternal-Fetal & Neonatal Medicine*, 25(11):2441-6. PMID: 22716202 http://www.tandfonline.com/doi/abs/10.3109/14767058.2012.703714?journalCode=ijmf20

Contribution: I helped with the design of the study and writing the Methods section of the manuscript.

22. Kumar AB, Hata JS, Bayman EO, Krishnan S (2013). Implementing a hybrid web-based curriculum for an elective medical student clerkship in a busy surgical intensive care unit (ICU): effect on test and satisfaction scores. *Journal of Surgical Education*, 70(1):109-16. PMID: 23337679

http://www.sciencedirect.com/science/article/pii/S1931720412001791?via%3Dihub

Contribution: I helped with the design of the study and writing the Methods section of the manuscript.

Bayman EO, Chaloner KM, Hindman BJ, Todd MM (2013). Bayesian methods to determine performance differences and to quantify variability among centers in multi-center trials: the IHAST trial. BMC Medical Research Methodology, 13:5. PMC: PMC3599203, PMID: 23324207 https://bmcmedresmethodol.biomedcentral.com/articles/10.1186/1471-2288-13-5

Contribution: This is a Bayesian methodological paper with applications to data from the IHAST trial. I developed the statistical methodology with Dr. Chaloner.

 Ueda K, Puangsuvan S, Hove MA, Bayman EO (2013). Ultrasound visual image-guided vs Doppler auditory-assisted radial artery cannulation in infants and small children by non-expert anaesthesiologists: a randomized prospective study. *British Journal of Anaesthesia*, 110(2):281-6. PMID: 23151422 https://academic.oup.com/bja/article-lookup/doi/10.1093/bja/aes383

Contribution: I was very involved with this large study from the beginning. I helped with the design of the study, performed power and sample size calculations, provided the randomization list, and performed interim analysis. I also served as a statistical mentor to Dr. Ueda on this project. He performed statistical analysis under my guidance and I helped interpret the study results. I also helped write the Methods and Results sections of the paper.

 Dexter F, Epstein RH, Bayman EO, Ledolter J (2013). Estimating surgical case durations and making comparisons among facilities: identifying facilities with lower anesthesia professional fees. *Anesthesia and Analgesia*, 116(5):1103-15. PMID: 23558844 http://journals.lww.com/anesthesiaanalgesia/fulltext/2013/05000/Estimating_Surgical_Case_Durations_and_Making.23.aspx

Contribution: One of the examples in this paper was the IHAST trial, and I was responsible for IHAST-related data analysis.

 Oral R, Koc F, Jogerst K, Bayman L, Austin A, Sullivan S, Bayman EO (2014). Staff training makes a difference: improvements in neonatal illicit drug testing and intervention at a tertiary hospital. *The Journal of Maternal-Fetal & Neonatal Medicine*, 27(10):1049-54. PMID: 24060204

http://www.tandfonline.com/doi/abs/10.3109/14767058.2013.847418?journalCode=ijmf20

Contribution: I helped with the design of the study and helped write the Methods section of the manuscript.

- 27. Bayman EO, Brennan TJ (2014). Incidence and severity of chronic pain at 3 and 6 months after thoracotomy: meta-analysis. *The Journal of Pain*, 15(9):887-97. PMID: 24968967 http://www.sciencedirect.com/science/article/pii/S1526590014007780?via%3Dihub
 - Contribution: Dr. Brennan and I performed searches for the meta-analysis. I performed statistical analyses and wrote the first draft of the paper.
- 28. Bayman EO, Dexter F, Todd MM (2015). Assessing and comparing anesthesiologists' performance on mandated metrics using a Bayesian approach. *Anesthesiology*, 123(1):101-15. PMID: 25906338 http://anesthesiology.pubs.asahq.org/article.aspx?articleid=2288837
 - Contribution: I developed the Bayesian model. Dr. Dexter and I collaborated on the statistical analysis plan, and we wrote the first draft of the paper.
- 29. Eisen SH, Hindman BJ, Bayman EO, Dexter F, Hasan DM (2015). Elective endovascular treatment of unruptured intracranial aneurysms: a management case series of patient outcomes after institutional change to admit patients principally to postanesthesia care unit rather than to intensive care. *Anesthesia and Analgesia*, 121(1):188-97. PMID: 25806401 http://journals.lww.com/anesthesia-analgesia/fulltext/2015/07000/Elective_Endovascular_Treatment_of_Unruptured.28.aspx
 - Contribution: I helped write the Methods section of the manuscript.
- 30. Marian AA, Ranganath Y, Bayman EO, Senasu J, Brennan TJ (2015). A comparison of two ultrasound-guided approaches to the saphenous nerve block: adductor canal versus distal transsartorial: a prospective, randomized, blinded, noninferiority trial. *Regional Anesthesia and Pain Medicine*, 40(5):623-30. PMID: 26110441 http://journals.lww.com/rapm/Abstract/2015/09000/A_Comparison_of_2_Ultrasound_Guided_Approaches_to.25.aspx
 - Contribution: Non-inferiority trials are harder to explain to readers compared to superiority trials. I helped with the design of the study, performed power and sample size calculations and provided the randomization list for this non-inferiority trial. I also served as a statistical mentor to Dr. Anil Marian on this project. He performed statistical analysis under my guidance and I helped interpret the study results. I provided him the statistical analysis results for the non-inferiority testing. I also helped write the Statistical Methods and Results sections of the paper. Our manuscript was accepted for publication after only one revision.
- Ueda K, Bayman EO, Johnson C, Odum NJ, Lee JJ (2015). A randomised controlled trial of radial artery cannulation guided by Doppler vs. palpation vs. ultrasound. *Anaesthesia*, 70(9):1039-44. PMID: 25857597 http://onlinelibrary.wiley.com/doi/10.1111/anae.13062/abstract;jsessionid=E1CB56A33DD618 C6B6DF8B839EFCD453.f04t02

Contribution: I helped with the design of the study, performed power and sample size calculations, provided the randomization list, and performed interim analysis. I also served as a statistical mentor to Dr. Ueda on this project. He performed statistical analysis under my guidance and I helped interpret the study results. I also helped write the Statistical Methods and Results sections of the paper.

32. Bayman EO, Dexter F, Todd MM (2016). Prolonged operative "time to extubation" is not an appropriate metric for comparing the performance of individual anesthesia providers. *Anesthesiology*, 124(2):322-38. PMID: 26545101 http://anesthesiology.pubs.asahq.org/article.aspx?articleid=2470465

Contribution: I developed the Bayesian model. Dr. Dexter and I collaborated on the statistical analysis plan, and we wrote the first draft of the paper. [This paper received an editorial.]

33. Aziz MF, Abrons RO, Cattano D, Bayman EO, Swanson DE, Hagberg CA, Todd MM, Brambrink AM (2016). First-attempt intubation success of video laryngoscopy in patients with predicted difficult airway: a multicenter randomized controlled trial comparing the "C-MAC D-Blade" versus the "GlideScope" in a mixed provider and diverse patient population. *Anesthesia and Analgesia*, 122(3):740-50. PMID: 26579847 http://journals.lww.com/anesthesia-analgesia/fulltext/2016/03000/First_Attempt_Intubation_Success_of_Video.22.aspx

Contribution: I provided the statistical design and analysis for this prospective, randomized, interventional non-inferiority trial. I performed interim and final analyses. In addition, I wrote the Statistical Analysis Plan during the design stage of the study, and the Statistical Methods section of the manuscript at the time of submission for the publication. [This paper received an editorial.]

 Marian AA, Bayman EO, Gillett A, Hadder B, Todd MM (2016). The influence of the type and design of the anesthesia record on ASA physical status scores in surgical patients: paper records vs. electronic anesthesia records. *BMC Medical Informatics and Decision Making*, 16:29. PMC: PMC4776367, PMID: 26936616 https://bmcmedinformdecismak.biomedcentral.com/articles/10.1186/s12911-016-0267-6

Contribution: I mentored Dr. Marian for the basic statistical analysis of the study, conducted bootstrap analysis and helped write the Statistical Methods section of the manuscript.

35. Aziz MF, Bayman EO, Van Tienderen MM, Todd MM, Brambrink AM (2016). Predictors of difficult videolaryngoscopy with GlideScope® or C-MAC® with D-blade: secondary analysis from a large comparative videolaryngoscopy trial. *British Journal of Anaesthesia*, 117(1):118-23. PMC: PMC4913400, PMID: 27317711 https://academic.oup.com/bja/article-lookup/doi/10.1093/bja/aew128

Contribution: I provided the statistical design and analysis for this prospective, randomized, interventional non-inferiority trial. I wrote the statistical analysis plan and performed the planned secondary statistical analysis for this second manuscript related with the StAGE trial.

36. Bayman EO, Dexter F, Ledolter J (2017). Mixed effects logistic regression modeling of daily evaluations of nurse anesthetists' work habits adjusting for leniency of the rating anesthesiologists. *Perioperative Care and Operating Room Management*, 6:14-19. http://www.sciencedirect.com/science/article/pii/S2405603016300206

Contribution: I performed Bayesian analysis for this study related with different statistical methods to examine the evaluation scores.

- 37. Bayman EO, Lennertz R, Brennan TJ (2017). Pain-related limitations in daily activities following thoracic surgery in a United States population. *Pain Physician*, 20(3):E367-E378. PMID: 28339436 http://www.painphysicianjournal.com/linkout?issn=1533-3159&vol=20&page=E367
 - Contribution: Dr. Brennan and I designed the study. I performed the Rasch data analyses, created tables and plots and wrote the first draft of the manuscript.
- 38. Bayman EO, Parekh KR, Keech J, Selte A, Brennan TJ (2017). A prospective study of chronic pain after thoracic surgery. *Anesthesiology*, 126(5):938-951. PMC: PMC5395336, PMID: 28248713
 - Contribution: Dr. Brennan and I designed and conducted the study. I performed data analyses, created tables and plots and wrote the first draft of the manuscript.
- 39. Block RI, Magnotta VA, Bayman EO, Choi JY, Thomas JJ, Kimble KK (2017). Are anesthesia and surgery during infancy associated with decreased white matter integrity and volume during childhood? *Anesthesiology*, 127(5):788-99. PMID: 28837436 http://anesthesiology.pubs.asahq.org/article.aspx?articleid=2652465
- 40. Dexter F, Bayman EO, Dexter EU (2017). Monte Carlo simulations comparing Fisher Exact Test and unequal variances t test for analysis of differences between groups in brief hospital lengths of stay. *Anesthesia and analgesia*, 125(6):2141-5. PMID: 28961563
- 41. Dexter F, Bayman EO, Pattillo S. J, Schwenk ES, Epstein RH (2018). Influence of parameter uncertainty on the tardiness of the start of a surgical case following a preceding surgical case performed by a different surgeon. *Perioperative Care and Operating Room Management*, 13:12-17.
 - https://www.sciencedirect.com/science/article/pii/S2405603018300165?via%3Dihub
- 42. Bayman EO, Parekh KR, Keech J, Larson N, Vander Weg M, Brennan TJ (2019). Preoperative patient expectations of postoperative pain are associated with moderate to severe acute pain after VATS. *Pain medicine*, 20(3):543-554. PMID: 29878248 https://academic.oup.com/painmedicine/article/20/3/543/5033461
- 43. Kurt E, Evrensel T, Gonullu G, Kanat O, Demiray M, Arslan M, Unlu (Bayman) EO, Dilek K, Manavoglu O (2002). Cisplatin'e bagli bobrek toksisitesi ve sentetik oral prostaglandin E1 Analogunun Etkinliginin degerlendirilmesi. *Uludag Universitesi Tip Fakultesi Dergisi*, 28(2):17-20.
 - Contribution: The paper was written by Dr. Kurt and I performed statistical analysis of the study.
- 2. Non-Peer-Reviewed Papers (reports, proceedings, etc.)
- 3. Books/Monographs
- 4. Chapters

5. Electronic Publications

1. Bayman EO, Chaloner K, Cowles MK (2009). Detecting qualitative interaction: a Bayesian approach, Iowa City, IA: *Technical Report* http://www.public-health.uiowa.edu/biostat/research/documents/Bayman-Chaloner-Cowles-Subgroup-Tech-Report-Jan09.pdf

6. Abstracts

7. Other

1. Bayman EO, Taneli Y, Ediz B, Guvendeger N, Kan I, Taneli S (2004). The Reliability and Validity Analysis on Yale Brown Obsessive Compulsive Disorder Scale for Adults and Children in Bursa

Contribution: 16th World Congress of the International Association for Child and Adolescent Psychiatry and Allied Professions (IACAPAP)

2. Çakar E, Dinçer Ü, Kıralp MZ, Bayman EO, Dursun H (2006). Ankilozan Spondilitte Hastalık Aktivitesini Belirlemede akut faz Reaktanları ve BASDAI'nin Karsılastırılması

Contribution: Ulusal Romatizmal Hastalıklar Kongresi

3. International Stroke Conference J, Todd MM, Hindman BJ, Clarke W, Weeks JB, Shi Q, Bayman EO (2007). Early Postoperative Neurological Deficits and Outcome after Subarachnoid Hemorrhage in Good Grade Patients

Contribution: International Stroke Conference

4. Bayman EO, Chaloner K, Cowles MK (2007). Bayesian Sample Size Calculations for Multi-Center Clinical Trials with Binary Responses

Contribution: University of Iowa Carver College of Medicine and the College of Public Health Sciences Research Week

5. Bayman EO, Chaloner K, Cowles MK (2007). Power and Sample Size Calculations for Bayesian Analysis and Assessment of Balance for Multi-Center Clinical Trials with Binary Responses

Contribution: Ball State University Midwest Biopharmaceutical Statistics Workshop

6. Chaloner K, Bayman EO, Han C (2007). Bayesian Experimental Design in Practice: Generalized Linear Mixed Model Example, Nonlinear Mixed Effects Model Example

Contribution: University of Azores Sao Miguel Island International Symposium on Business and Industrial Statistics

7. Bayman EO, Chaloner K, Cowles MK (2007). Bayesian Power and Sample Size Calculations for Multi-center Clinical Trials with Binary Responses

- Contribution: Joint Statistical Meeting
- 8. Chaloner K, Bayman EO, Cowles MK, Shi Q, Zhang L (2007). Multi-center Clinical Trials with Binary Outcomes and Random Effects for Centers: Sample Size and Power Determination
 - Contribution: Joint Statistical Meeting
- 9. Bayman EO, Chaloner K (2008). Detecting Qualitative Interaction: A Bayesian Approach
 - Contribution: Bayesian Biostatistics Conference
- 10. Bayman EO, Chaloner K (2008). Detecting Qualitative Interaction Among Subgroups of a Clinical Trial: A Bayesian Approach
 - Contribution: International Biometric Society ENAR
- 11. Bayman EO, Chaloner K (2008). Power of Test of Qualitative Interaction in Multi-Center Clinical Trials
 - Contribution: Society for Clinical Trials Annual Meeting
- 12. Leira EC, Tomer JC, Davis PH, Bayman EO, Weeks JB, Hindman BJ, Todd MM (2008). A Simple Algorithm to Predict Site of Ruptured Aneurysm in Patients with Good Grade Subarachnoid Hemorrhage
 - Contribution: 12th Congress of the European Federation of Neurological Societies
- 13. Oral R, Bayman EO, Buhrow J, Wibbenmeyer L, Assad A (2008). Illicit Drug Exposure in Children Evaluated for Alleged Abuse & Neglect
 - Contribution: 9th Ray Helfer Society Annual Meeting
- 14. From R, Spofford CM, Bayman EO, Szeluga D, Choi JY, Brenchley P (2009). Anesthesia Machine Setup and Checkout: Web-Based Video Instruction Versus Lecture Group Instruction
 - Contribution: American Society of Anesthesiologists Annual Meeting
- 15. Dexter F, Bayman EO, Epstein RH (2009). Modeling Average and Variability of Time to Extubation for Meta-analysis Comparing Desflurane to Sevoflurane
 - Contribution: American Society of Anesthesiologists Annual Meeting
- 16. Kumar AB, Tarasi M, Bayman EO (2010). Is Time on Cardiopulmonary Bypass During Cardiac Surgery Related to Post Operative Acute Kidney Injury and Outcomes? A Metaanalytic Study
 - Contribution: Midwest Anesthesia Residents Conference (MARC)
- 17. Thomas JJ, Choi JY, Bayman EO, Kimble KK, Todd MM, Block RI (2010). Does Anesthesia Exposure in Infancy Affect Academic Performance in Childhood?

Contribution: International Anesthesia Research Society (IARS) International Science Symposium

18. Kumar AB, Hata JS, Bayman EO (2010). Designing and Implementing a Web-based Curriculum for the Medical Student Clerkship in a Busy Surgical ICU – Our Three-year Experience

Contribution: The Society for Education in Anesthesia

 Bayman EO, Chaloner K, Hindman BJ, Todd MM, I (2011). No Large Differences Among Centers in a Multi-Center Neurosurgical Clinical Trial

Contribution: Society for Clinical Trials Annual Meeting

20. Bayman EO, Chaloner K (2012). Detecting Outliers in Multi-Center Clinical Trials

Contribution: 8th World Congress in Probability and Statistics

21. Ueda K, Johnson C, Odum NJ, Bayman EO (2012). Ultrasound Visual Guided Versus Doppler Auditory Assisted Versus Palpation Technique for Radial Arterial Cannulation in Adult Patients

Contribution: American Society of Anesthesiologists Annual Meeting

22. Todd MM, Bayman EO (2013). Fiberoptic versus videolaryngoscopic management of the difficult airway: problems with postrandomization patient exclusion *Anesthesiology* 118(2):460. PMID: 23340356 http://anesthesiology.pubs.asahq.org/article.aspx?articleid=1918710

Contribution: This was a letter to the editor related to post-randomization and how to deal with missing data. I helped write the missing data related parts.

23. Block RI, Thomas JJ, Bayman EO, Choi JY, Kimble KK, Todd MM (2013). In reply *Anesthesiology* 119(1):234-6. PMID: 23856665 http://anesthesiology.pubs.asahq.org/article.aspx?articleid=1918333

Contribution: This was in response to a comment, and I helped provide a statistically sound response.

24. Bayman EO, Dexter F, Todd MM (2013). An Improved Statistical Method for Assessing and Comparing Anesthesiologists' Performance on Mandated Metrics

Contribution: American Society of Anesthesiologists Annual Meeting

25. Eisen SH, Hasan DM, Bayman EO, Hindman BJ (2013). Factors Associated with ICU Admission after Elective Endovascular Treatment of Unruptured Intracranial Aneurysms

Contribution: American Society of Anesthesiologists Annual Meeting

 Hussey P, Ueda K, Bayman EO (2014). Radial Arterial Line LC-CUSUM Learning Curve Among Residents

Contribution: Midwest Anesthesia Residents Conference (MARC)

 Bayman EO, Brennan TJ (2014). No Change on the Incidence of Chronic Pain after Thoracotomy for Three Decades

Contribution: American Pain Society Annual Meeting

28. Aziz M, Abrons RO, Cattano D, Bayman EO, Swanson D, Hagberg C, Todd MM, Brambrink A (2015). Comparison of the Storz C-MAC D-blade against the Glidescope, Efficacy in the Predicted Difficult Airway: STAGE Trial: A Multi-centered Randomized Controlled Trial

Contribution: International Anesthesia Research Society (IARS) Annual Meeting and International Science Symposium

29. Bayman EO, Brennan TJ (2015). Chronic Pain after Thoracic Surgery

Contribution: University of Iowa Carver College of Medicine and the College of Public Health Sciences Research Week

30. Bayman EO, Brennan TJ (2016). The Danish Questionnaire for Pain after Thoracic Surgery in a United States Population

Contribution: American Pain Society Annual Meeting

31. Bayman EO, Parekh KR, Keech JC, Brennan TJ (2017). A Prospective Study of Predictors of Chronic Pain after Thoracic Surgery

Contribution: University of Iowa Carver College of Medicine and the College of Public Health Sciences Research Week, Iowa City, IA

32. Bayman EO (2017). Use of Bayesian Methods to Correctly Identify True Outliers in Clinical Metrics of Individuals and Provider Performance

Contribution: University of Iowa Scholarship in Family Medicine Conference

33. Bayman EO, Parekh KR, Keech JC, Brennan TJ (2017). A Prospective Study of Predictors of Chronic Pain after Thoracic Surgery

Contribution: American Pain Society Annual Meeting, Pittsburgh, PA

- 34. Hasan DM, Bayman EO, Broderick J (2017). Letter by Hasan et al regarding article, "Aspirin and Risk of Subarachnoid Hemorrhage: Systematic Review and Meta-Analysis", Dallas, TX: *Stroke/American Heart Association, Inc* 48(7):e184-e185. PMC: PMC5497759, PMID: 28536171 http://stroke.ahajournals.org/content/48/7/e184.long
- 35. Bayman EO, Parekh KR, Keech JC, Brennan TJ (2017). Association of Preoperative Expected Pain with Acute Pain After Video-Assisted Thoracoscopic Surgery

Contribution: American Society of Anesthesiologists Annual Meeting

36. Bayman EO (2017). Acute Pain after Thoracic Surgery

Contribution: The ACTTION-APS-AAPM Acute Pain Taxonomy (AAAPT) Meeting

- 37. Bayman EO, Parekh KR, Keech J, Brennan TJ (2017). Response to "Editorial on pain following thoracic surgery" *Journal of thoracic disease* 9(12):E1154-E1155. PMC: PMC5756976, PMID: 29313846
- 38. Bayman EO, Parekh KR, Keech J, Brennan TJ (2017). Response to "VATS vs. thoracotomy regarding postoperative chronic pain" *Journal of thoracic disease* 9(12):E1151-3. PMC: PMC5756990, PMID: 29313852
- 39. Bayman EO, Brennan TJ (2018). In reply *Anesthesiology* 128(1):225. PMID: 29232230 http://anesthesiology.pubs.asahq.org/article.aspx?articleid=2666395
- 40. Bayman EO, Parekh KR, Keech JC, Brennan TJ (2018). Predictors of Moderate-to-Severe Acute Pain after Video-Assisted Thoracoscopic Surgery
 - Contribution: Association of University Anesthesiologists Annual Meeting, Chicago, Illinois
- 41. Ranganath YS, Yap A, Ravindranath S, Bayman EO, Marian A (2018). Adductor Canal Block: An Anatomical Study in Volunteers to Identify the Relationship Between the Two Commonly Described Block Approaches
 - Contribution: American Society of Regional Anesthesia and Pain Medicine Annual Meeting
- 42. Block RI, Magnotta VA, Bayman EO, Choi JY, Thomas JJ, Kimble KK (2018). In reply Anesthesiology 128(6):1261. PMID: 29762360 http://anesthesiology.pubs.asahq.org/article.aspx?articleid=2681391
- 43. Bayman EO, Dexter F (2018). Relative importance of strategies for improving the sample size selection and reporting of small randomized clinical trials in anesthesiology *Canadian journal* of anaesthesia 65(6):607-610. PMID: 29556936 https://link.springer.com/article/10.1007%2Fs12630-018-1110-6
- Bayman EO, Brennan TJ (2018). Video-assisted thoracoscopic surgery versus roboticassisted thoracoscopic surgery and postoperative opioid consumption *Journal of thoracic disease* 10(Suppl 26):S3222-S3223. PMC: PMC6186588, PMID: 30370119 http://jtd.amegroups.com/article/view/23490
 - Contribution: Comment on: Postoperative morphine consumption and anaesthetic management of patients undergoing video-assisted or robotic-assisted lung resection: a prospective, propensity score-matched study. [J Thorac Dis. 2018]
- 45. Bayman EO, Bishop M, Hadlandsmyth K, Lund B, Kang S, Vander Weg MW, Mosher H (2019). Chronic Opioid Use After Thoracic Surgery Among VA Veterans
 - Contribution: American Pain Society Scientific Meeting, Milwaukee, WI, April 3-6, 2019

B. Areas of Research Interest/Current Projects

- 1. Bayesian statistics
- 2. Multi-centered clinical trials
- 3. Power and sample size calculations
- 4. Prediction models for chronic pain related to surgery
- 5. Subgroup analysis

C. Sponsored Research (<u>ALL grants</u>)

(if you are not the PI, state your role or contributions - in a few sentences)

1. Grants Received

Source Title P.I.	Number of Months % Effort	Direct Funds Period of Funding
Baxter Pharmaceuticals Statistical Modeling of Rate and Reliability of Time to Extubation for Meta-Analysis Comparing Desflurane to Sevoflurane Franklin Dexter, Principal Investigator, University of Iowa/Anesthesia Emine O. Bayman, Statistician, University of Iowa/Anesthesia	4 months	11/01/2008- 02/28/2009
SmartTots General Anesthesia During Human Infancy and Brain Development Robert I. Block, Principal Investigator, University of Iowa/Anesthesia Emine O. Bayman, Statistician, University of Iowa/Anesthesia	25 months	06/01/2012- 06/30/2014
Karl Storz Endoscope Storz Against Glidescope Efficacy (StAGE Trial) M Aziz, Principal Investigator Emine O. Bayman, Statistician, University of Iowa/Anesthesia	25 months 25%	10/01/2012- 10/31/2014

Source Title P.I.	Number of Months % Effort	Direct Funds Period of Funding
R03 NS080110-02 National Institute of Neurological Disorders and Stroke (NINDS) Predicting Chronic Pain after Thoracic Surgery: A Bayesian Approach Emine O. Bayman, Principal Investigator, University of Iowa/Anesthesia	25 months 25%	03/01/2013- 04/30/2015
University of Iowa Brain fMRI to Predict Chronic Pain after Thoracotomy Emine O. Bayman, Principal Investigator, University of Iowa/Anesthesia	1 months	\$24,600 02/01/2015- 02/28/2015
5-U01-DK070431-11 NIH / NIDDK Clinical Islet Transplantation Trial Foster, Principal Investigator Emine O. Bayman, Statistician, University of Iowa/Anesthesia	22 months 5%	11/15/2015- 06/30/2017
NIH / NINDK (Subaward from University of Pennsylvania, R01 Award under U01DK082316; Funding Opportunity for Basic and Translational Science Studies in the MAPP Research Network) Bayesian Analysis of MAPP-I Psychosocial and Neuroimaging Data Emine O. Bayman, Co-Principal, University of Iowa/Anesthesia	36 months 27%	01/01/2016- 06/30/2018
This proposal will study subjects in the MAPP database who have UCPPS. The central hypothesis is that neural circuits and psychosocial variables linked to emotion processing and emotion regulation differentiate "pelvic and widespread pain" from "pain in the pelvic area only" subjects. Brain imaging will be used and analyzed using Bayesian statistics to identify brain regions contributing to UCPPS.		

Source Title P.I.	Number of Months % Effort	Direct Funds Period of Funding
NeuroNext Network for Excellence in Neuroscience Clinical Trials M Cudkowicz, Principal Investigator Emine O. Bayman, Co-Investigator, University of Iowa/Anesthesia	73 months 10%	09/30/2011- 08/31/2023
10% support until 2018, 5% to 2023		
Patient Centered Outcomes Institute (PCORI) Extradural vs Intradural Decompression Surgery for Chiari Type I Malformation with Syringomyelia D Limbrick, Principal Investigator Emine O. Bayman, Co-Investigator, University of Iowa/Anesthesia	37 months 20%	10/01/2015- 01/31/2020
University of Iowa Nontraumatic SubArachnoid Hemorrhage (SAH) Registry Emine O. Bayman, Statistician, University of Iowa/Anesthesia	37 months 20%	07/01/2016- 09/30/2019
1R21CA208968 – 01 NIH / National Cancer Institute (NCI) Phase II Trial of Nicotinamide Riboside for Relief of Taxane-Induced Sensory Neuropathy Donna L. Hammond, Principal Investigator, University of Iowa/Anesthesia Emine O. Bayman, Co-Investigator, University of Iowa/Anesthesia	24 months 10%	\$250,000 09/01/2016- 08/31/2019
R01HD089420 NIH/National Institute of Child Health and Human Development (NICHD) General Anesthesia During Early Childhood and Brain Development Robert I. Block, Principal Investigator, University of Iowa/Anesthesia Emine O. Bayman, Co-Investigator, University of Iowa/Anesthesia	10%	07/01/2018- 06/30/2023

Source Title P.I.	Number of Months % Effort	Direct Funds Period of Funding
Iowa Neuroscience Institute (INI) Accelerator Grant Iowa Neuroscience Institute (INI) Personalized Neuromodulation for Treating Post- Surgical Pain Jatin G. Vaidya, Co-Principal, University of Iowa/Psychiatry Emine O. Bayman, Co-Principal, University of Iowa/Anesthesia	24 months 10%	\$75,000 01/01/2019- 12/31/2020
CHDI Foundation Cure Huntington's Disease Initiative (CHDI) J Long, Principal Investigator Emine O. Bayman, Principal Investigator, University of Iowa/Anesthesia	30%	01/01/2019- 09/30/2023
V Foundation for Cancer Research Alleviation of Paclitaxel-Induced Peripheral Neuropathies in Cancer Survivors Donna L. Hammond, Principal Investigator, University of Iowa/Anesthesia Emine O. Bayman, Co-Investigator, University of Iowa/Anesthesia		\$60,000 02/01/2019- 02/01/2022
2. Grants Pending		
Source Title P.I.	Number of Months % Effort	Direct Funds Period of Funding
National Institutes of Health (NIH) Clinical Coordination Center for Common Fund Acute to Chronic Pain Signatures (A2CPS) Program Kathleen A. Sluka, Co-Principal, University of Iowa/Physical Therapy and Rehabilitation Science C Coffey, Co-Principal Emine O. Bayman, Co-Investigator, University of Iowa/Anesthesia	60 months	06/01/2019- 05/31/2022

10% 1st year; 20% 2nd year; 20% 3rd year

Source Title P.I.	Number of Months % Effort	Direct Funds Period of Funding
National Institutes of Health (NIH) A Pharmacist Intervention for Monitoring and Treating Hypertension Using Bidirectional Texting L Polgreen, Principal Investigator Emine O. Bayman, Co-Investigator, University of Iowa/Anesthesia	5%	11/01/2018
5% salary support		
National Institutes of Health (NIH) Coordinating Center for the Stroke Preclinical Assessment Network C Coffey, Principal Investigator Emine O. Bayman, Co-Investigator, University of Iowa/Anesthesia		07/01/2019- 06/30/2022

10% 1st year; 2% 2nd year; 2% 3rd year

D. Presentations

1. Invited Presentations

<u>Year</u>	<u>Title</u>	<u>Organization</u>	Presentation Type
November 2007	Power and Sample Size Calculations for Multi-center Clinical Trials (Bayman EO, Chaloner K, Cowles MK)	Design and Analysis of Experiment (DAE) Conference, University of Georgia, Memphis, Tennessee, United States	Invited Lecture
June 2012	Detecting Qualitative Interaction among Subgroups of a Clinical Trial with a Bayesian Approach (Bayman EO, Chaloner K)	ICSA 2012 Applied Statistics Symposium, International Chinese Statistical Association (ICSA), Boston, Massachusetts, United States	Invited Lecture
April 2014	Chronic Pain after Thoracic Surgery (Bayman EO)	Pain Research Program Work- in-Progress Meeting, University of Iowa, Carver College of Medicine, Iowa City, Iowa, United States	Invited Lecture

	<u>Year</u>	<u>Title</u>	<u>Organization</u>	Presentation Type
	June 2014	Approaches to Assessing Qualitative Interactions (Bayman EO)	Joint Applied Statistics Symposium, International Chinese Statistical Association (ICSA) & Korean International Statistical Society (KISS), Portland, Oregon, United States	Invited Lecture
	June 2014	Who Is Not Performing As Fellow Colleagues? A Bayesian Hierarchical Model For Mandated Faculty Monitoring (Bayman EO)	American Statistical Association Oregon Chapter, Portland, Oregon, United States	Invited Lecture
	September 2014	What does all this 'Greek' mean?: Navigating and Making Sense of Scientific Literature (Bayman EO)	Iowa Association of Nurse Anesthetists, Des Moines, Iowa, United States	Invited Lecture
	March 2015	Assessing and Comparing Anesthesiologists' Performance on Mandated Metrics Using a Bayesian Hierarchical Model (Bayman EO)	Design and Analysis of Experiment (DAE) Conference, University of Georgia, Cary, North Carolina, United States	Invited Lecture
	February 2016	Detecting Performance Outliers with Bayesian Methods (Bayman EO)	University of Iowa, Department of Biostatistics, Iowa City, Iowa, United States	Invited Lecture
	June 2016	Bayesian Outlier Detection: Joint Work with Kathryn Chaloner (Bayman EO)	International Society for Bayesian Analysis, Sardinia, Italy	Invited Lecture
2. Conference Presentations/Posters				
	<u>Year</u>	<u>Title</u>	<u>Organization</u>	Presentation Type
3. Other Presentations				
	<u>Year</u>	<u>Title</u>	<u>Organization</u>	Presentation Type
IV. SERVICE				
A.	. Offices/appointments held in professional organizations			

1. Editorships

Organization <u>Year</u> **Position**

2. Review Panels

<u>Year</u>	<u>Organization</u>	<u>Position</u>
2011	National Science Foundation (NSF) Proposal Review, National Science Foundation (NSF)	Reviewer, Grant Proposals

3. Professional Organizations (state and/or national)

<u>Year</u>	<u>Organization</u>	<u>Position</u>
2003-2013	Institute of Mathematical Statistics	
2005-Present	American Statistical Association	
2006-2014	Eastern North American Region International Biometric Society	
2007-2014	Society for Clinical Trials	
2013-Present	American Society of Anesthesiologists	
2014-Present	American Pain Society	
2017-Present	Association of University Anesthesiologists	

B. Other Professional Service

1. Referee Manuscripts/Journal Reviews

<u>Year</u>	<u>Organization</u>	<u>Position</u>
2009-Present	Springer	Reviewer, Publications
2010-Present	Anesthesia and Analgesia	Reviewer, Publications
2010	Contemporary Clinical Trials	Reviewer, Publications
2011-Present	Neurosurgery	Reviewer, Publications
2011	Statistics in Medicine	Reviewer, Publications
2012-Present	British Medical Journal	Reviewer, Publications
2012-Present	Anesthesiology	Reviewer, Publications
2013-Present	The Journal of Pain	Reviewer, Publications

<u>Year</u>	Organization	<u>Position</u>
2015-Present	Clinical Journal of Pain	Reviewer, Publications
2015	Acta Anaesthesiologica Scandinavica	Reviewer, Publications
2015	PLoS ONE	Reviewer, Publications
2016	Journal of Pain Research	Reviewer, Publications
2016-Present	BMC Anesthesiology	Reviewer, Publications
2017-Present	Pain Medicine	Reviewer, Publications
2. Organize Conferen	ce, Paper Session, etc.	
<u>Year</u>	Organization	Position
3. State Committees		
<u>Year</u>	Organization	<u>Position</u>
4. National Committee	9 S	
<u>Year</u>	Organization	<u>Position</u>
5. Professionally Rele	evant Community Involvement	
<u>Year</u>	Organization	<u>Position</u>
6. Professional Consu	ulting	
<u>Year</u>	Organization	<u>Position</u>
7. Other		
<u>Year</u>	Organization	Position
Departmental, Colle	egiate or University Service	
<u>Year</u>	Organization	<u>Position</u>
2010-Present	University of Iowa, Department of Anesthesia, Research Review Committee	Member
2011-Present	Carver College of Medicine Admissions Committee	Interviewer

C.

<u>Year</u>	<u>Organization</u>	<u>Position</u>
2012-Present	Carver College of Medicine and the College of Public Health Sciences Research Week	Poster Judge
2017	Carver College of Medicine Medical Student Research Conference	Poster Judge
2018-Present	University of Iowa, Carver College of Medicine, Department of Anesthesia, Department of Anesthesia Faculty Promotion and Tenure Committee	Reviewer, Promotion and Tenure