

CURRICULUM VITAE
The Johns Hopkins University School of Medicine

February 5, 2021

Alison E. Turnbull, D.V.M., M.P.H., Ph.D.

DEMOGRAPHIC AND PERSONAL INFORMATION

Current Appointments

University
2021 – present Associate Professor, Pulmonary & Critical Care Medicine, Johns Hopkins University School of Medicine
2015 – present Assistant Professor, Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health (joint appointment)
2015 – present Member, Johns Hopkins Hospital, Hospital Ethics Committee

Personal Data

1830 East Monument Street
Division of Pulmonary and Critical Care Medicine
Department of Medicine
5th Floor, Room 515
Baltimore, MD 21205
E-mail: turnbull@jhmi.edu

Education and Training

Undergraduate
2002 Bachelor of Arts (B.A.), Carleton College, Northfield, Minnesota
Doctoral/graduate
2006 Doctor of Veterinary Medicine (D.V.M.), Tufts University School of Veterinary Medicine, North Grafton, MA
2006 Master of Public Health (M.P.H.), Tufts University School of Medicine, Boston, MA
2013 Doctor of Philosophy (Ph.D.) in Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

Professional Experience

2004 – 2005 ER/ICU Veterinary Technician, Tufts University Foster Hospital for Small Animals, North Grafton, MA
2006 – 2007 Field Program Facilitator, Participatory Disease Surveillance and Response Project for Avian Influenza Control, United Nations Food and Agriculture Organization, Indonesia
2007 – 2008 Monitoring and Evaluation Field Coordinator, Participatory Disease Surveillance and Response Project for Avian Influenza Control, United Nations Food and Agriculture Organization, Indonesia
2008 – 2009 Relief Veterinarian, Banfield Pet Hospital, Bel Air, MD
2009 – 2010 Research Assistant, Hospital Epidemiology and Infection Control, Johns Hopkins Hospital, Baltimore, MD
2010 – 2013 Data Analyst, Pediatric Antibiotic Stewardship Program, Johns Hopkins University, Baltimore, MD
2014 – 2015 Instructor, Pulmonary and Critical Care Medicine, Johns Hopkins University, Baltimore, MD
2014 – 2015 Instructor, Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health (joint appointment), Baltimore, MD
2015 – 2021 Assistant Professor, Pulmonary and Critical Care Medicine, Johns Hopkins University, Baltimore, MD
2015 – present Assistant Professor, Epidemiology, Johns Hopkins University, Baltimore, MD
2021 – present Associate Professor, Pulmonary and Critical Care Medicine, Johns Hopkins University, Baltimore, MD

PUBLICATIONS

Original Research [OR]

1. Tamma PD, **Turnbull AE**, Milstone AM, Cosgrove SE, Valsamakis A, Budd A, Perl TM. Clinical outcomes of seasonal influenza and pandemic influenza A (H1N1) in pediatric inpatients. *BioMed Central Pediatrics*. 2010;10(1):72.
2. Tamma PD, **Turnbull AE**, Milstone AM, Lehmann CU, Sydnor ER, Cosgrove SE. Ventilator-associated tracheitis in children: Does antibiotic duration matter? *Clin Infect Dis*. 2011;52(11):1324–1331.
3. Tamma PD, **Turnbull AE**, Milstone AM, Hsu AJ, Carroll KC, Cosgrove SE. (2012) Does the piperacillin minimum inhibitory concentration for *Pseudomonas aeruginosa* influence clinical outcomes of children with pseudomonas bacteremia? *Clin Infect Dis*. 2012;55(6):799-806.
4. Tamma PD, **Turnbull AE**, Harris AD, Milstone AM, Hsu AJ, Cosgrove SE. Less is More: Combination Antibiotic Therapy for the Treatment of Gram-Negative Bacteremia in Pediatric Patients. *Journal of the American Medical Association Pediatrics*. 2013;167(10):1-8.
5. Tamma PD, Tan K, Nussenblatt VR, **Turnbull AE**, Carroll KC, Cosgrove SE. Can Matrix-Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry (MALDI-TOF) Enhance Antimicrobial Stewardship Efforts in the Acute Care Setting? *Infect Control Hosp Epidemiol*. 2013;34(9):990-995.
6. **Turnbull AE**, Ruhl AP, Lau BM, Mendez-Tellez PA, Shanholtz CB, Needham DM. Timing of Limitations in Life Support in Acute Lung Injury Patients: A Multisite Study. *Critical Care Medicine*. 2014;42(2):296-302.
7. **Turnbull AE**, Krall JR, Ruhl AP, Curtis JR, Halpern SD, Lau BM, Needham DM. A scenario-based, randomized trial of patient values and functional prognosis on intensivist intent to discuss withdrawing life support. *Crit Care Med*. 2014;42(6):1455-1462.
8. Sick AC, Tschudin-Sutter S, **Turnbull AE**, Weissman SJ, Tamma PD. Empiric Combination Therapy for Gram-Negative Bacteremia. *Pediatrics*. 2014;133(5):1148-1155.
9. **Turnbull AE**, Ruhl AP, Needham DM. Timing of limitations of life support in the intensive care unit and sequential organ failure assessment (SOFA) scores: the authors reply. *Crit Care Med*. 2014;42(8):e596.
10. **Turnbull AE**, Lau BM, Ruhl AP, Mendez-Tellez PA, Shanholtz CB, Needham DM. Age and Decisions to Limit Life Support for Patients with Acute Lung Injury: A Prospective Cohort Study. *Critical Care*. 2014;18(3):R107.
11. Dinglas VD, Parker AM, Reddy DR, Colantuoni E, Zanni JM, **Turnbull AE**, Nelliott A, Ciesla N, Needham DM. A Quality Improvement Project Sustainably Decreased Time to Onset of Active Physical Therapy Intervention in Acute Lung Injury Patients. *Ann Am Thorac Soc*. 2014;11(8):1230-1238.
12. **Turnbull AE**, O'Connor CL, Lau B, Halpern SD, Needham DM. Allowing Physicians to Choose the Value of Compensation for Participation in a Web-Based Survey: Randomized Controlled Trial. *Journal of Medical Internet Research*. 2015;17(7):e189.
13. Lane-Fall MB, Collard ML, **Turnbull AE**, Halpern SD, Shea JA. ICU Attending Handoff Practices: Results from a National Survey of Academic Intensivists. *Critical Care Medicine*. 2016;44(4):690-698.
14. Halwani MA, **Turnbull AE**, Harris M, Witter F, Perl TM. Post-discharge Surveillance for Infection Following Caesarian Section: A Prospective Cohort Study Comparing Methodologies. *American Journal of Infection Control*. 2016;44(4):445-447.
15. **Turnbull AE**, Hayes MM, Hashem MD, Needham DM. Interactive online module failed to improve sustained knowledge of the Maryland Orders for Life Sustaining Treatment (MOLST) form. *Annals of the American Thoracic Society*. 2016;13(6):926-932.
16. **Turnbull AE**, Davis WE, Needham DM, White DB, Eakin MN. Intensivist-reported facilitators and barriers to discussing post-discharge outcomes with ICU surrogates: A qualitative study. *Annals of the American Thoracic Society*. 2016;13(9):1564-1552.
17. Wang R, Cosgrove SE, Tschudin-Sutter S, Han JH, **Turnbull AE**, Hsu AJ, Avdic E, Carroll KC, Tamma PD. Cefepime Therapy for Cefepime-Susceptible Extended-Spectrum Beta-Lactamase-Producing Enterobacteriaceae Bacteremia. *Open Forum Infectious Disease*. 2016; 3(3):ofw132.
18. **Turnbull AE**, Sahetya SK, Needham DM. Aligning Critical Care Interventions with Patient Goals: a Modified Delphi Study. *Heart & Lung: The Journal of Acute and Critical Care*. 2016; 45:517-524.
19. Hodgson CL, **Turnbull AE**, Iwashyna TJ, Parker AM, Davis WE, Bingham CO, Watts N, Finfer S, Needham DM. Clinician and Researcher Perspectives on Core Domains in Evaluating Post-Discharge Patient Outcomes after Acute Respiratory Failure. *Physical Therapy Journal*. 2017;97(2):168-174.

20. Eakin MN, Patel Y, Mendez-Tellez P, Dinglas VD, Needham DM, **Turnbull AE**. Patients' outcomes after acute respiratory failure: A qualitative study of survivors' experience using the PROMIS framework. *American Journal of Critical Care*. 2017; 26(6):456-465.
21. **Turnbull AE**, Sepulveda KA, Dinglas VD, Bingham CO, Needham, DM. Core Domains for Clinical Research in Acute Respiratory Failure Survivors: An International Modified Delphi Consensus Study. *Critical Care Medicine*. 2017;45(6):1001-1010.
22. Needham DM, Sepulveda KA, Dinglas VD, Chessare CM, Friedman LA, Bingham III CO, **Turnbull AE**. Core outcome measures for clinical research in acute respiratory failure survivors: an international modified Delphi consensus study. *Am J Respir Crit Care Med*. 2017;196(9):1122-1130.
23. **Turnbull AE**, Hashem MD, Rabiee A, To A, Chessare CM, Needham DM. Evaluation of a strategy for enrolling the families of critically ill patients in research using limited human resources. *PLoS ONE*. 2017;12(5):e0177741.
24. **Turnbull AE**, Chessare CM, Coffin, RK, Needham DM. A brief intervention for preparing ICU families to be proxies: A phase I study. *PLoS ONE*. 2017;12(10):e0185483.
25. Dinglas VD, Chessare CM, Davis WE, Parker A, Friedman LA, Colantuoni E, Bingham CO, **Turnbull AE**, Needham DM. Perspectives of survivors, families, and researchers on key outcomes for research in acute respiratory failure. *Thorax*. 2018;73(1): 7-12.
26. **Turnbull AE**, Dinglas VD, Friedman LA, Chessare CM, Sepulveda KA, Bingham CO, Needham DM. A Survey of Delphi Panelists after Core Outcome Set Development Revealed Positive Feedback and Methods to Facilitate Panel Member Participation. *Journal of Clinical Epidemiology*. 2018; 102:99-106.
27. **Turnbull AE**, Sahetya SK, Colantuoni E, Kweku J, Nikooie R, Curtis JR. Inter-rater agreement of intensivists evaluating the goal-concordance of preference-sensitive ICU interventions. *Journal of Pain and Symptom Management*. 2018;56(3):406-413.
28. Detsky ME, Kohn R, Delman AM, Buehler AE, Kent SA, Ciuffetelli IV, Mikkelsen ME, **Turnbull AE**, Harhay MO. Patients' Perceptions of Quality of Life Following Critical Illness: Associated Patient Characteristics and Predictions Made by ICU Physicians and Nurses. *Journal of Critical Care*. 2018; 48:352-356.
29. **Turnbull AE**, Chessare CM, Coffin, RK, Needham DM. More than one in three proxies do not know their loved one's current code status: An Observational Study in a Maryland ICU. *PLoS ONE*. 2019; 14(1): e0211531.
30. Konig C, Matt B, Kortgen A, **Turnbull AE**, Hartog CS. What matters most to sepsis survivors: a qualitative analysis to identify specific health-related quality of life domains. *Quality of Life Research*. 2019; 28(3)637-647.
31. **Turnbull AE**, Hayes MM, Brower RG, Colantuoni E, Sharma Basyal P, White DB, Curtis JR, Needham DM. The effect of documenting prognosis on the information provided to ICU proxies: A randomized trial. *Critical Care Medicine*. 2019; 47(6):757-764.
32. **Turnbull AE**, Ning X, Ramesh A, Tao JJ, Needham DM. Demonstrating the Impact of POLST Forms on Hospital Care Requires Information not Contained in State Registries. *PLoS ONE*. 2019;14(6):e0217113.
33. Dinglas VD, **Turnbull AE**, Akinremi A, Chessare CM, Bingham CO, Needham DM. Delphi panelists for a core outcome set project suggested both new and existing dissemination strategies that were feasibly implemented by a research infrastructure project. *Journal of Clinical Epidemiology*. 2019; 114:104-107.
34. Vasher ST, Zaeh SE, Eakin MN, **Turnbull AE**. Responses to a Daughter's Question about Prognosis when the Patient is Expected to Die: A Qualitative Analysis. *Ann Am Thorac Soc*. 2019;16(12):1595-1598.
35. Moale A, Teply ML, Liu T, Singh AL, Sharma Basyal P, **Turnbull AE**. Intensivist Religiosity and Perceived Conflict During a Simulated ICU Family Meeting. *J Pain Symptom Manage*. 2020;59(3):687-693.e1.
36. Oppenheim IM, Lee EM, Vasher ST, Zaeh SE, Hart JL, **Turnbull AE**. Effect of Intensivist Communication in a Simulated Setting on Interpretation of Prognosis Among Family Members of Patients at High Risk of Intensive Care Unit Admission. *JAMA Network Open*. 2020;3(4):e3201945.
37. Vasher ST, Oppenheim IM, Sharma Basyal P, Lee EM, Hayes MM, **Turnbull AE**. Physician Self-Assessment of Shared Decision Making in Simulated Intensive Care Unit Family Meetings. *JAMA Network Open*. 2020;3(5):e3205188.
38. Abshire M, Li X, Sharma Basyal P, Teply ML, Singh AL, Hayes MM, **Turnbull AE**. Actor feedback and rigorous monitoring: Essential quality assurance tools for testing behavioral interventions with simulation. *PLoS ONE*. 2020;15(5):e0233538.

39. **Zaeh SE**, Hayes MM, Eakin MN, Rand CS, **Turnbull AE**. Housestaff Perceptions on Training and Discussing the Maryland Orders for Life Sustaining Treatment Form (MOLST). *PLoS ONE*. 2020;15(6):e0234973.

Review Articles [RA]

1. **Turnbull AE**, Rabiee A, Davis WE, Nasser MF, Venna VR, Lolitha R, Hopkins RO, Bienvenu OJ, Robinson KA, Needham DM. Outcome Measurement in ICU Survivorship Research from 1970-2013: A Scoping Review of 425 Publications. *Critical Care Medicine*. 2016;44(7):1267-1277.
2. Rabiee A, Nikayin S, Hashem MD, Huang M, Dinglas VD, Bienvenu OJ, **Turnbull AE**, Needham DM. Depressive symptoms after critical illness: a systematic review and meta-analysis. *Critical Care Medicine*. 2016;44(9):1744-1753.
3. Robinson KA, Davis WE, Dinglas VD, Mendez-Tellez PA, Rabiee A, Sukrithan V, Yalamanchilli R, **Turnbull AE**, Needham DM. A systematic review finds limited data on measurement properties of instruments measuring outcomes in adult intensive care unit survivors. *Journal of Clinical Epidemiology* 2016 Nov 16. pii.0895-4356(16)30626-6.
4. Nikayin S, Rabiee A, Hashem MD, Huang M, Bienvenu OJ, **Turnbull AE**, Needham DM. Anxiety Symptoms in Survivors of Critical Illness: A Systematic Review and Meta-Analysis. *General Hospital Psychiatry*. 2016; 43:23-29.
5. **Turnbull AE**, **Sahetya SK**, Daugherty Biddison EL, Hartog CS, Rubenfeld GD, Benoit DD, Guidet B, Gerritsen RT, Tonelli MR, Curtis JR. Competing and conflicting interests in the care of critically ill patients. *Intensive Care Medicine*. 2018. 44(10):1628-1637.
6. **Turnbull AE**, Bosslet GT, Kross EK. Aligning ICU Care with Patient Values in the United States: Past, Present, and Future. *Lancet Respiratory Medicine*. 2019; 7(7):626-628.
7. **Turnbull AE**, Hurley MS, **Oppenheim IM**, Hosey MM, Parker AM. Curb Your Enthusiasm: Definition, Adaptation, and Expectations for Quality of Life in ICU Survivorship. *Annals of the American Thoracic Society*. 2020;17(4):406-411.

Guidelines/Protocols, Consensus Statement, Expert Opinion, Consortium Articles [GL]

1. Hayes MM, **Turnbull AE**, **Zaeh S**, White DB, Bosslet GT, Wilson KC, Thomson CC. Responding to Requests for Potentially Inappropriate Treatments in Intensive Care Units. *Annals of the American Thoracic Society*. 2015;11(1):1697-1699.
2. **Turnbull AE**, Hartog, CS. Goal-concordant care in the ICU: a conceptual framework for future research. *Intensive Care Medicine*. 2017;43:1847-1849.
3. Hart JL, **Turnbull AE**, **Oppenheim IM**, Courtright KR. Family-Centered Care During the COVID-19 Era. *Journal of Pain and Symptom Management*. 2020;60(2):e93-397.

Editorials [ED]

1. **Turnbull AE**. Fear, Numbers, and Measles. *Health Communication*. 2011;26(8):775-776.
2. **Turnbull AE**, Parker AM, Needham DM. Supporting small steps toward big innovations: the importance of rigorous pilot studies in critical care. *Journal of Critical Care*. 2014;29(4):669-670.
3. **Turnbull AE**, Neufeld KJ, Needham DM. Contradictory findings on 1-year mortality following ICU delirium. *Critical Care*. 2015;19(29).
4. Bosslet GT, Hart JL, **Turnbull AE**. The importance of showing our work: process transparency in dispute resolution. *Annals of the American Thoracic Society*. 2019; 16(10):679-680.
5. Hosey MM, Bienvenu JO, Dinglas VD, **Turnbull AE**, Parker AM, Hopkins RO, Neufeld KJ, Needham D. The IES-R Remains a Core Outcome Measure for PTSD in Critical Illness Survivorship Research. *Critical Care*. 2019; 23:362.
6. Miles AH, **Turnbull AE**, Sterni LM. The Importance of Advance Care Planning for Children with Chronic Respiratory Failure. *Pediatric Pulmonology*. 2020;55:2489-2491.
7. Law AC, **Turnbull AE**. Patient-Centered Outcomes After Sepsis: Disentangling Mind and Matter. *CHEST*. 2020;158(5):1808-1809.

Other Media [OM] (Videos, Websites, Blogs, Social Media, etc.)

1. Research website: Partnership for ICU Patient-family Engagement Research (PIPER) www.piperscience.org
2. I currently have >2,400 followers on Twitter where I both disseminate my own research and comment on related research using the handle @vitaincerta

Publically available datasets

1. **Turnbull, AE**, Hashem, Mohamed D, Rabiee A, To A, Chessare, C, Data associated with the *PLoS ONE* publication 'Evaluation of a strategy for enrolling the families of critically ill patients in research using limited human resources' by Turnbull et al. 2017; doi:10.7281/T1/FN9EH6 Johns Hopkins University Data Archive Dataverse, V1.
2. **Turnbull, Alison E.**; Chessare, Caroline M.; Coffin, Rachel; Needham, Dale M., 2018, "Data associated with the *PLoS ONE* publications "A Brief Intervention for Preparing ICU Families to be Proxies: A Phase I Study" and "More than one in three ICU proxies do not know their loved one's current code status," doi:10.7281/T1/4AJ8Y1, Johns Hopkins University Data Archive Dataverse
3. **Turnbull, Alison E.**; Ning, Xuejuan; Rao, Anirudh; Tao, Jessica J.; Needham, Dale M., 2019, "Data association with the publication entitled: 'Demonstrating the Impact of POLST Forms on Hospital Care Requires Information not Contained in State Registries'", <https://doi.org/10.7281/T1/LJZQPI>, Johns Hopkins University Data Archive, V2
4. **Turnbull, Alison E.**; Li, Xintong; Basyal, Pragyashree S.; Teply, Melissa L.; Singh, Arun L., 2020, "Data associated with the 2020 PLoS One publication entitled "Actor feedback and rigorous monitoring: Essential quality assurance tools for testing behavioral interventions with simulation"", <https://doi.org/10.7281/T1/6BHBC4>, Johns Hopkins University Data Archive, V1.

FUNDING

EXTRAMURAL Funding

Current

4/1/2018 - 3/31/2023 *Understanding Response Shift in ARDS survivors*
Grant #K01HL141637
National Heart, Lung and Blood Institute
Role: PI (Alison E. Turnbull), 90% effort

7/1/2019 – 6/30/2021 Loan Repayment Program – 2nd Renewal
NIH - National Heart, Lung and Blood Institute
PI: Alison E. Turnbull, DVM, MPH, PhD

Previous

04/01/2010 – 03/31/2012 *Epidemiology and Biostatistics of Aging*
T32 AG000247
Institutional Training Grant from the National Institute on Aging
Program director: Karen Bandeen-Roche
Role: Postdoctoral fellow

10/01/2010 – 09/30/2014 *ICU/Acute Care Multi-site Demonstration Project*
Grant # 3186.01
Gordon and Betty Moore Foundation
ICU/Acute Care Multi-site Demonstration Project
PI: Peter Pronovost
Role: Co-investigator

7/15/2013 – 3/31/2018 *R24 Improving Long-Term Outcomes Clinical Research for Acute Respiratory Failure*
Grant # R24HL111895
National Heart, Lung and Blood Institute
PI: Dale M. Needham, MD, PhD.
Role: Co-investigator, 50% Effort in years 2 - 4

8/1/2014 – 12/31/2015 *Libretto Consortium*
Gordon and Betty Moore Foundation
PI: Peter Pronovost
Role: Co-investigator

10/01/2014 – 7/31/2015 *Enhancements to Project Emerge Prototype System*
Grant # 3186.01
Gordon and Betty Moore Foundation
PI: Peter Pronovost
Role: Co-investigator

10/1/2014 - 9/30/2016 *Establishing Clinically Relevant Antibiotic Breakpoint Interpretive Criteria*
Grant # HHSF223201400096C
Food and Drug Administration
PI: Pranita Tamma, MD, MHS
Role: Statistician, 15% Effort in year 3

12/1/2014 - 11/30/2019 *Engaging Surrogates and Physicians to Ensure Concordant Critical Care*
Grant #4626
Gordon and Betty Moore Foundation - Early Career Investigator Award
Role: PI, 50% Effort in years 1 - 3

7/1/2015 – 6/30/2017 Loan Repayment Program
NIH - National Heart, Lung and Blood Institute
PI: Alison E. Turnbull, DVM, MPH, PhD

10/1/2016 – 9/30/2018 *Development of an Automated and Sustainable Electronic Approach for Data Mining to Evaluate Clinical Outcomes of Patients with Bacterial Infections*
Grant # HHSF223201610070C
Food and Drug Administration
PI: Pranita Tamma, MD, MHS
Role: Co-investigator 5% Effort in years 1 and 2

7/1/2017 – 6/30/2019 Loan Repayment Program – 1st Renewal
NIH - National Heart, Lung and Blood Institute
\$58,037
PI: Alison E. Turnbull, DVM, MPH, PhD

INTRAMURAL Funding

System Innovation or Quality Improvement Intramural Funding

Previous

05/01/2014 – 04/30/2019 *MOLST Compliance Training and Evaluation*
Vice President of Medical Affairs Office
\$25,000
Role: PI

CLINICAL ACTIVITIES

Clinical Focus

I have been a consistent presence at Johns Hopkins Clinical Ethics Committee monthly meetings since 2012, and have led clinical consults since 2015. I serve as team leader ≥ 4 weeks each year and as a team member for an additional 4 weeks each year. In 2018, I fielded 18 pages, and led 7 in-person multidisciplinary consults. I represent the ethics committee during multidisciplinary rounds in the medical ICU at least once each month. I also developed a system for tracking and archiving the committee's response to all pages received. All service within the committee is voluntary and uncompensated.

EDUCATIONAL ACTIVITIES

Teaching

Classroom instruction

JHMI/Regional

- 2010 Teaching Assistant, Healthcare Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
- 2010 – 2011 Teaching Assistant, Fundamental of Epidemiology, Johns Hopkins Krieger School of Arts and Sciences, Baltimore, MD
- 2012 Teaching Assistant, Data Analysis Workshop I & II, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD
- 2012 Developer and Lead Instructor, *Math, Money, and the Mind: Controversies in Medical Decision Making*, Dean's Teaching Fellowship, Johns Hopkins Krieger School of Arts and Sciences
- 12/8/15 Lecturer, Ethics of Healthcare Decision-Making: Theory and Practice; "*Decisions about Patients who are Critically Ill or Dying*" Johns Hopkins Bloomberg School Public Health, Baltimore, MD
- 2015 – 2018 Co-Lead, Student Outbreak Response Team (SORT), Johns Hopkins Bloomberg School of Public Health – organized and co-led weekly meetings during the academic year. Liaised with the Maryland State Health Department to identify opportunities for doctoral students to observe or assist in outbreak response activities. Baltimore, MD
- 11/21/17 Lecturer, Ethics and Decision-Making in Clinical Practice, "*Decisions for Patients who are Critically Ill or Dying*", Johns Hopkins Bloomberg School of Public Health, Baltimore, MD

Clinical instruction

- 2020 - Course Director, *Structured Communication with Patient Families during the COVID-19 Pandemic*. Elective course for Johns Hopkins medical students developed in response to restrictions on family presence in the adult ICU during the COVID-19 pandemic.

CME instruction

JHMI/Regional

- 9/27/19 Invited Presenter, *Palliative care and Hospice*. 16th Annual Multidisciplinary Cardiovascular and Thoracic Critical Care Conference, Baltimore, MD.
- 11/5/20 Presenter, *Patient Expectations for Recovery*. 9th Annual Johns Hopkins Critical Care Rehabilitation Conference, presented virtually due to COVID-19.

National

- 5/13/16 Invited Presenter, *End-of-life care in the ICU: Research challenges*. ATS postgraduate course presentation, San Francisco, CA, USA
- 8/13/16 Invited Presenter, *Shared Decision-Making and Responding to Family Requests in the ICU*, Updates in Pulmonary, Critical Care, and Sleep Medicine, Santa Fe, NM.

Workshops / seminars

JHMI/Regional

- 1/8/16 Lecturer, *Interpreting Clinical Trials*, Presentation for Johns Hopkins Pulmonary and Critical Care fellows, Baltimore, MD
- 4/22/16 Lecturer, *Primary palliative care in the MICU*, Presentation for Johns Hopkins Palliative Care fellows, Baltimore, MD
- 12/20/16 Panelist, *Patient Spirituality and the Receiving of Spiritual Care in the Hospital*, Johns Hopkins Ethics for Lunch Case Presentation and Discussion, Baltimore, MD
- 1/20/17 Lecturer, *Helping Prepare ICU Families to Make Decisions*, Presentation for Johns Hopkins Palliative Care Fellows, Baltimore, MD
- 1/18/18 Lecturer, *Surrogates, Agents, and Guardians: The Roles and Rights of ICU Families*, Presentation for Johns Hopkins Pulmonary and Critical Care Fellows, Baltimore, MD
- 3/23/18 *ICU Patient/family engagement: How will we know when we're doing it well?* Presentation for Johns Hopkins Palliative Care Fellows, Lecturer, Baltimore, MD
- 2/22/19 *Trials of Prompting Intensivists to Offer Palliative Options*. Presentation for Johns Hopkins Palliative Care Fellows, Lecturer, Baltimore, MD
- 4/13/19 Panelist, *Social media and science: the do's, the don'ts, and the doo-doo's*. Workshop for the D.C. Science Writers Association Professional Development Day, Washington, DC.

National

- 11/16/17 Invited Presenter, *Core Outcome Measures for Clinical Research in Acute Respiratory Failure Survivors: An International Modified Delphi Consensus Study*, ATS Critical Care Journal Club Presentation, Internet-based
- 1/28/19 Panelist, ATS Journal Club Podcast on *Control of Confounding and Reporting of Results in Causal Inference Studies*, Internet-based

MENTORING

Pre-doctoral Advisees / Mentees

- 2015 – 2016 Rachel Coffin, R.N., Medical ICU Nurse, Johns Hopkins Hospital, Baltimore, MD
Co-authored articles: OR 24, 29
- 2016 – 2017 An To, B.S., M.S., Research Program Assistant, Pulmonary and Critical Care Medicine, Johns Hopkins University, Baltimore, MD (Current Position – Research Coordinator for Phase I oncology trials, University of California, Irvine)
Co-authored article: OR 23
- 2018 Xuejuan Ning, M.H.S, Master's Student in Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, Advisor: Kunihiro Matsushita, MD (Current Position – Staff Biostatistician, Johns Hopkins Bloomberg School of Public Health)
Co-authored article: OR 32
- 2018 Tainge Liu, M.H.S, M.B.B.S. Master's Student in Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, (Current Position – Research Data Analyst, Lerner Center for Public Health Promotion, Johns Hopkins Bloomberg School of Public Health)
Co-authored article: OR 35
- 2016 – 2019 Pragyashree Sharma Baysal, B.S., C.N.A., Research Program Assistant, Pulmonary and Critical Care Medicine, Johns Hopkins University, Baltimore, MD (Current Position – Research Program Coordinator, Department of Geriatric Medicine and Gerontology, Johns Hopkins University)
Co-authored article: OR 31, 35, 37, 38

Post-doctoral Advisees / Mentees

- 2015 Anirudh Rao, MD, Medicine Resident research elective time, Johns Hopkins University, Baltimore, MD (Current Position – Assistant Professor, School of Medicine, Georgetown University)
Co-authored article: OR 32

- 2015 Jessica Tao, MD, Medicine Resident research elective time, Johns Hopkins University, Baltimore, MD (Current Position – Assistant Professor of Oncology, Johns Hopkins University)
Co-authored article: OR 32
- 2015 – 2016 Mohamed Hashem, MD, Post-doctoral Research Fellow, Johns Hopkins University, Baltimore, MD (Current Position – Clinical Associate of Medicine, University of Chicago)
Co-authored article: OR 15, 32, RA 2, 4
- 2015 – 2018 Sarina Sahetya, MD, Pulmonary and Critical Care Fellow, Johns Hopkins University, Baltimore, MD (Current Position – Assistant Professor of Medicine, Johns Hopkins University)
Co-authored articles: OR 18, 27, RA 5
- 2015 – 2020 Sandy Zaeh, MD, MS, Current Pulmonary and Critical Care Fellow, Johns Hopkins University, Baltimore, MD
Co-authored articles: GL 1, OR 34, 39
- 2016 – 2017 Melissa Teply, MD, Palliative Care Fellow, Johns Hopkins University, Baltimore, MD (Current Position – Assistant Professor of Internal Medicine, University of Nebraska)
Co-authored articles: OR 35, 38
- 2016 – 2017 Arun Singh, MD, Palliative Care Fellow, Johns Hopkins University, Baltimore, MD (Current Position – Medical Director and Attending Physician in Supportive Care, PRISMA Health)
Co-authored articles: OR 35, 38
- 2017 – 2020 Scott Vasher, MD, Former position: Hospitalist at Bayview Medical Center, Baltimore, MD, (Current position: Pulmonary and Critical Care Fellow at University of North Carolina, Chapel Hill, NC)
Co-authored articles: OR 34, 37
- 2018 – 2021 Ian Oppenheim, MD, Current Pulmonary and Critical Care Fellow, Johns Hopkins University, Baltimore, MD
Co-authored articles: OR 36, 37, RA 7, GL 3
- 2019 – present Amanda Moale, MD, Current Osler Medicine Resident, Johns Hopkins University, Baltimore, MD
Co-authored articles: OR 35

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments

- 2011 – present Member, Johns Hopkins University, Outcomes After Critical Illness & Surgery (OACIS) Research Group
- 2015 – present Member, Johns Hopkins Hospital, Hospital Ethics Committee
- 2018 – 2019 Member, Working Group, Johns Hopkins Hospital, Standardization of Protocol for withdrawing ventilator support
- 2012 – 2015 Guest, Johns Hopkins Hospital, Hospital Ethics Committee
- 2012 – 2016 Inpatient Working Group, Johns Hopkins Hospital, Maryland Medical Orders for Life-Sustaining Treatment (MOLST)
- 2012 – 2016 Research Collaborator, Johns Hopkins University Armstrong Institute, Gordon & Betty Moore Foundation, Libretto project
- 2013 – 2016 Research Collaborator, Johns Hopkins University Armstrong Institute, Emerge Project

Editorial Activities

Editorial Board appointments

- 2018 – present *Annals of the American Thoracic Society* – Editorial Board Member
- 2019 – present *Lancet Respiratory Medicine* – Editorial Board Advisor
- 2020 – present *American Journal of Critical Care* – Editorial Board Member

Journal peer review activities

- 2012 *Intensive Care Medicine* – reviewer
- 2017 – present *Annals of the American Thoracic Society*
- 2018 *Critical Care Medicine*

Advisory Committees, Review Groups/Study Sections

Grant Review – *ad hoc*

2016	Review of Project Application for the Chief Medical Officer Directorate, Health Improvement, Protection & Services Research Committee, Scotland
2019	New Investigator Award, Physicians' Services Incorporated (PSI) Foundation, Canada
2020	Early Career Reviewer for the Nursing and Related Clinical Sciences study section within the National Institute of Health (NRCS/NINR/NIH) March 2-3, 2020, Washington, DC, USA

Professional Societies

2012 – 2014	Society for Medical Decision Making
2014 – present	Alpha Chapter of the Delta Omega Public Health Honor Society
2014 – present	American Thoracic Society
2017 – present	Member, Behavioral Science and Health Services Research Assembly Programming committee, American Thoracic Society
2019 – present	Member, Ethics and Conflict of Interest Committee, American Thoracic Society
2017 – present	Society for Critical Care Medicine
2019 – present	International Society for Quality of Life Research

Conference Session Chair

JHMI/Regional

5/2017	Poster Discussion Session Chair, International Conference of the American Thoracic Society: "Health Services Highlights in Critical Care", Washington, DC
5/2017	Thematic Poster Session Facilitator, International Conference of the American Thoracic Society: "Critical Care: Getting Stronger – Measuring and Improving Function in ICU Survivors", Washington, DC

National

5/2016	ATS postgraduate course, Panel discussant: "Ask the Experts: A Multidisciplinary Discussion of the Policy Statement on Responding to Requests for Potentially Inappropriate Treatment". International Conference of the American Thoracic Society, San Francisco, CA
5/2018	Mini-Symposium Chair, International Conference of the American Thoracic Society: "Addressing Palliative and Psychosocial Needs Among Patients at End of Life, Their Families, and the Chronically Ill", San Diego, CA
5/2019	RAPiD Poster Discussion Session Chair, International Conference of the American Thoracic Society: "Facilitating Palliative and End-of-Life Care", Dallas, TX
4/2020	Panelist for Webinar, Society of Critical Care Medicine: "Family-Centered Care in the Age of Visitor Restrictions." Online.

RECOGNITION

Awards, Honors

2002	Magna Cum Laude, Carleton College
2002	Awarded Honors for Academic Excellence in Biology and Senior Thesis, Carleton College
2004 – 2005	The Agnes Varis Scholarship for students of public health, Tufts School of Veterinary Medicine
2008	Robert Dyar Memorial Award, Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health
2010	Doctoral Seminar Award for Scholarship, Creativity, and Conversational Courage, Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health
2010 – 2013	Johns Hopkins Sommer Scholar, Johns Hopkins Bloomberg School of Public Health
2012 – 2013	Dean's Teaching Fellowship for developing and teaching the undergraduate seminar <i>Math, Money, and the Mind: Current Controversies in Medical Decision Making</i> , Johns Hopkins Univ
2014	Selected for the Alpha Chapter of the Delta Omega Public Health Honor Society

2014 Am Thoracic Society International Conference Abstract Scholarship, Assembly on Critical Care
2019 Annals of the American Thoracic Society 2019 Top Reviewer Award

Invited Talks

JHMI/Regional

4/16/14 Presenter, *Family Participation in Treatment Decisions for our Sickest Patients*, Johns Hopkins Hospital Department of Social Work Grand Rounds, Johns Hopkins Hospital, Baltimore, MD

12/2/15 Presenter, *The Unbefriended Patient*, Johns Hopkins Hospital, Division of Pulmonary and Critical Care Medicine Grand Rounds, Baltimore, MD

1/19/17 Presenter, *Helping Prepare ICU Families to Make Decisions: A Phase I study*, Johns Hopkins Division of Pulmonary and Critical Care Medicine Lung Research Conference, Baltimore, MD

12/14/17 Presenter, *Responsible Peer Reviewing of RCTs*, Division of Pulmonary and Critical Care Medicine Grand Rounds, Johns Hopkins School of Medicine, Baltimore, MD

1/23/18 Invited Speaker, *Surrogates, Agents, and Guardians: The Roles and Rights of Families in the Hospital*, MedStar Health, Baltimore, MD

5/31/18 Invited Speaker, *The Right Thing Measured Poorly: An Epidemiologist's View of Patient-Family Engagement in the ICU*. Multi-Departmental Critical Care Core Curriculum Series, University of Maryland Medical Center, Baltimore, MD

6/15/18 Presenter, *Shared Decision Making in the ICU: When Most of the Options are Bad*. Patient-Provider Collaboration Conference, Johns Hopkins University, Baltimore, MD

3/11/19 Invited Speaker, *What Do ICU Families Know, and When Do They Know It? : Trialing Interventions to Help Families Ask, and Doctors Tell*. Monthly Palliative Care Discussion Series, School of Nursing, Johns Hopkins University, Baltimore, MD

4/11/19 Presenter, *You Can't Choose Wisely in the ICU if You Don't Know There's a Choice*. Weekly Research Rounds, Center for Child and Community Health Research, Johns Hopkins University

11/20/19 Presenter, *You Can't Choose Wisely if you Don't Know There's a Choice: A decade of research on communicating with ICU families*. Palliative Care Interest Group, Johns Hopkins University

National

3/13/14 Presenter, *Solving Research Problems in Palliative Medicine: Official Resources and Creative Partnerships*, Am Academy of Hospice and Palliative Medicine Annual Assembly, San Diego, CA – Speaker panel, improving palliative care research through cross-disciplinary collaboration

11/4/16 Presenter, *Improving Long-Term Outcomes Research For Acute Respiratory Failure*. The United States Critical Illness and Injury Trials Group (USCIITG) annual meeting, Bethesda, MD, USA – Invited to present to all USCIITG's members on developing a core outcomes set for research on the long-term outcomes of critical illness.

2/28/18 Presenter, *Post-Discharge Outcomes and their Importance to Patients, Family Members, and Researchers*. 47th Critical Care Congress, San Antonio, TX – Part of a panel of four presenters discussing methodological advances in the measurement of long-term outcomes in ICU survivors.

5/11/18 Invited Speaker, *The Right Thing Measured Poorly: An Epidemiologist's View of Patient-Family Engagement in the ICU*. Division of Pulmonary, Critical Care, and Sleep Medicine Grand Rounds, Icahn School of Medicine at Mount Sinai, New York, NY – Invited to speak on the methodological challenges and barriers to conducting and interpreting trials of interventions to improve patient-family engagement in the ICU setting.

1/9/19 Invited Speaker, *The Right Thing Measured Poorly: An Epidemiologist's View of Goal-concordant Care*. Medicine Grand Rounds, DC Veteran's Affairs Medical Center, Washington, DC

9/19/19 Invited Speaker, *Words, words, words: Trials of Communication to Improve ICU Care*. Mayo Clinic, Critical Care Grand Rounds, Rochester, MN, USA – Invited to speak to the faculty and staff of the Mayo clinic's Critical Care Department on the methodological challenges to conducting and interpreting trials of interventions to improve communication between ICU clinicians and the families of their patients.

11/13/19 Invited Speaker, *The Education of an Angry Daughter*. NYU Langone, ICU Humanization Program, New York, NY, USA – Invited to present to both faculty and staff working in the hospital's medical ICU on the experiences of critically ill patients and their families.

- 11/13/19 Invited Speaker, *Communication Trials in American ICUs Past and Present*, NYU Langone, Division of Pulmonary, Critical Care, and Sleep Medicine, Grand Rounds, New York, NY, USA – Presented to the faculty and trainees of the critical care departments on major trials of interventions to improve communication and shared decision making between ICU clinicians and the families of ICU patients.
- International
- 5/21/14 Invited Speaker, *What Should be the Role of Primary Care Physicians in ICU Decision Making?* ATS International Conference, San Diego, CA–Invited to present at symposium addressing an international audience of critical care clinicians on shared decision making in the ICU setting
- 2/28/17 Invited Speaker, *Core Domains for Clinical Research in Acute Respiratory Failure Survivors*. International Forum for Acute Care Trialists (InFACT) annual meeting, Whistler, BC, Canada – Invited to InFACT’s annual member meeting to present on developing a core outcomes set for research on the long-term outcomes of critical illness.
- 5/24/17 Presenter, *Reaching International Consensus on Long-Term Outcomes Measures for Acute Respiratory Failure*. ATS International Conference, Washington, DC – Part of speaker panel introducing core outcome measures set for research on the long-term outcomes of critical illness.
- 11/16/18 Invited Speaker, *Reaching Agreement on HOW to measure*. 7th Meeting of the Core Outcome Measures in Effectiveness Trials (COMET) Initiative, Amsterdam, The Netherlands – Invited to present to a majority-European audience of methodological experts on the process of researching consensus on a core outcome measurement set.
- 5/23/19 Invited Speaker, *Pause Points, Rolling Stops, and Preference-Sensitive Decisions in the ICU*. ATS International Conference, Dallas, TX, USA – Invited to speak as part of a symposium addressing an international audience of critical care clinicians on how to incorporate my proposed definition of goal-concordant care into their practice.
- 2/27/2020 Invited Speaker, *Long-term Outcomes of Critical Illness*. 2nd Critical Care Clinical Trialists Workshop, French Embassy, USA – Invited to speak to an international audience assembled at the French Embassy for a “high-level think-tank” to foster dialog between academia, regulatory representatives, patients and industry on the challenges of clinical trials for critical care.
- 8/5/2020 Invited Speaker, *Prognostic Awareness in Chronic Respiratory Disease*. ATS International Conference, presented virtually due to COVID-19 – Invited to speak as part of a symposium addressing an international audience of pulmonary and critical care clinicians on the state of evidence regarding palliative care for people with chronic respiratory diseases.