

October 26, 2017

CURRICULUM VITAE

Elizabeth Colantuoni (Maiden: Johnson)

PERSONAL DATA

Department of Biostatistics
Bloomberg School of Public Health
615 N Wolfe Street, E3539
Baltimore, MD 21205
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EDUCATION AND TRAINING

- 8/02-10/07 PhD, Biostatistics
 Department of Biostatistics
 Johns Hopkins Bloomberg School of Public Health
 Thesis Title: Estimating Causal Targets in Public Health Research
 Advisor: Scott Zeger
- 8/97-5/99 Master of Science, Statistics
 North Carolina State University
 Raleigh, North Carolina
- 8/93-5/97 B.S., Statistics with double major in Mathematics
 Virginia Tech
 Blacksburg, Virginia

PROFESSIONAL EXPERIENCE

Director of Master's Degree Programs, 8/15 – present, Department of Biostatistics,
Bloomberg School of Public Health, Johns Hopkins University

Associate Scientist, 6/14-present, Department of Biostatistics, Bloomberg School of
Public Health, Johns Hopkins University

Assistant Scientist, 2/10-6/14, Department of Biostatistics, Bloomberg School of Public
Health, Johns Hopkins University

Assistant Professor, 9/08-2/10, Department of Anesthesiology & Critical Care Medicine,
Quality & Safety Research Group, Johns Hopkins University School of Medicine

Assistant Scientist, 3/08-8/08, Department of Biostatistics, Johns Hopkins University,
Bloomberg School of Public Health

Research Associate, 8/99-3/08, Department of Biostatistics, Bloomberg School of Public Health, Johns Hopkins University

Teaching Assistant, 8/97-5/99, North Carolina State University, Raleigh, NC

PROFESSIONAL ACTIVITIES

Member of the American Statistical Association

Member of the International Biometrics Society, Eastern North American Region

EDITORIAL ACTIVITIES

Peer review: *Statistics in Medicine*, *PLOS One*, *Alzheimer's and Dementia*, *BMC Infectious Diseases*, *Critical Care Nurse*, *BMJ Open*, *American Journal of Infection Control*, *Thorax*

HONORS AND AWARDS

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| 2004 | June B Culley award for outstanding achievement on the department's 2nd year oral exam; awarded by Department of Biostatistics, JHSPH |
| 2005 | Teaching assistant recognition award; awarded by Student Assembly, JHSPH. |
| 2014 | International Biometrics Society, Eastern North American Region Annual Meeting 2014 Poster Award |
| 2015 | School Wide Teaching Recognition Award: cited for outstanding course evaluations for 140.656 Multilevel Models |

PUBLICATIONS

Journal Articles (more than 125 peer reviewed articles)

Colantuoni E, Scharfstein DO, Wang C, Hashem MD, Leroux A, Needham DM, Girard TD. Statistical methods to compare functional outcomes in RCTs with high mortality. *British Medical Journal*. In Press.

Qian, T, **Colantuoni, E**, Fisher, A, Rosenblum, M. Sensitivity of Trial Performance to Delay Outcomes, Accrual Rates, and Prognostic Variables Based on a Simulated Randomized Trial with Adaptive Enrichment. *Contemporary Clinical Trials Communications*. In Press

Mroz TM, Meadow A, **Colantuoni E**, Leff B, Wolff JL. Home health agency characteristics and quality outcomes for Medicare beneficiaries with rehabilitation-sensitive conditions. *Archives of Physical Medicine*. **2017**. In Press

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*. **2017** Jul 29. pii: thoraxjnl-2017-210234. doi: 10.1136/thoraxjnl-2017-210234. [Epub ahead of print]

Kamdar BB, Sepulveda KA, Chong A, Lord RK, Dinglas VD, Mendez-Tellez PA, Shanholz C, **Colantuoni E**, von Wachter TM, Pronovost PJ, Needham DM. Return to Work and Lost Earnings after Acute Respiratory Distress Syndrome: A 5-Year Prospective, Longitudinal Study of Long-Term Survivors. *Thorax*. **2017** Sep 16. [Epub ahead of print]

Wong MS, Jones-Smith J, **Colantuoni E**, Bleich SN, Thorpe RJ & Chan KS. (2017) The longitudinal association between early childhood obesity and fathers' involvement in childcare and decision-making. *Obesity*. 2017 Oct;25(10):1754-1761. doi: 10.1002/oby.21902. Epub 2017 Jun 21. PMID: 28634995

Schreiber MP, **Colantuoni E**, Neufeld KJ, Needham DM. Comparing analyses of corticosteroids and transition to delirium in critically ill patients. *Intensive Care Med*. 2017; DOI 10.1007/s00134-017-4926-6.

Ruhl AP*, Huang M*, **Colantuoni E**, Karmarkar T, Dinglas VD, Hopkins RO, Needham DM. Healthcare Utilization and Costs in ARDS Survivors: A 1-Year Longitudinal National U.S. Multicenter Study. *Intensive Care Med*. **2017**; 43(7): 980-91. doi: 10.1007/s00134-017-4827-8. *Contributed equally to the manuscript as co-first authors

Palta P, Carlson MC, Crum RM, **Colantuoni E**, Sharrett AR, Yasar S, Nahin R, DeKosky ST, Snitz B, Lopez O, Williamson JD, Furberg CD, Rapp SR, Golden SH. Diabetes and Cognitive Decline in Older Adults: The Ginkgo Evaluation of Memory Study. *Journal of Gerontology: Medical Sciences*. **2017** May 16. doi: 10.1093/gerona/glx076

Kamdar BB, Huang M, Dinglas VD, **Colantuoni E**, von Wachter TM, Hopkins RO, Needham DM, with the National Heart, Lung, and Blood Institute Acute Respiratory Distress Syndrome Network. Joblessness and Lost Earnings After ARDS in a 1-Year National Multicenter Study. *American Journal of Respiratory and Critical Care Medicine*. **2017** Apr 27. doi: 10.1164/rccm.201611-2327OC

Dinglas VD, Friedman LA, **Colantuoni E**, Mendez-Tellez PA, Shanholtz CB, Ciesla ND, Pronovost PJ, Needham DM. Muscle weakness and 5-year survival in acute respiratory distress syndrome survivors. *Critical Care Medicine*. **2017**; 45(3):446-453.

Brodsky MB, Huang M, Shanholtz C, Mendez-Tellez PA, Palmer JB, **Colantuoni E**, Needham DM. Recovery from dysphagia symptoms after oral endotracheal intubation in acute respiratory distress syndrome survivors. A 5-year longitudinal study. *Ann Am Thorac Soc.* **2017**;14(3):376-383.

Ruhl AP, Huang M, **Colantuoni E**, Lord RK, Dinglas VD, Chong A, Sepulveda KA, Mendez-Tellez PA, Shanholtz CB, Steinwachs DM, Pronovost PJ, Needham DM. Healthcare Resource Use and Costs in Long-Term Survivors of Acute Respiratory Distress Syndrome: A 5-Year Longitudinal Cohort Study. *Crit Care Med.* **2017** Feb;45(2):196-204. doi: 10.1097/CCM.0000000000002088. PMID: 27748659

Patil, P., **Colantuoni, E.**, Leek, J. T., Rosenblum, M. Genomic and clinical predictors for improving estimator precision in randomized trials of breast cancer treatments. *Contemporary Clinical Trials Communications.* **2016**; 3: 48-54.

Woods-Hill CZ, Fackler J, McMillan KN, Ascenzi J, Martinez DA, Toerper MF, Voskertchian A, **Colantuoni E**, Klaus SA, Levin S, Milstone AM. Reducing unnecessary blood culture use in critically ill children: towards microbiologic stewardship in a pediatric intensive care unit. *JAMA Pediatr.* **2016** Dec 12. doi: 10.1001/jamapediatrics.2016.3153. [Epub ahead of print]

Dinglas VD, **Colantuoni E**, Ely EW, Hough CL, Morris PE, Mendez-Tellez PA, Wozniak AW, Hopkins RO, Needham DM. Authors' Response to Commentaries on Rosuvastatin for Delirium and Cognitive Impairment in Sepsis-Associated Acute Respiratory Distress Syndrome. *Journal of Thoracic Disease.* **2016**;8:E1534-E1536.

Lashoher A, Schneider EB, Juillard C, Stevens K, **Colantuoni E**, Berry WR, Bloem C, Chadbunchachai W, Dharap S, Dy SM, Dziekan G, Gruen RL, Henry JA, Huwer C, Joshipura M, Kelley E, Krug E, Kumar V, Kyamanywa P, Mefire AC, Musafir M, Nathens AB, Ngendahayo E, Nguyen TS, Roy N, Pronovost PJ, Khan IQ, Razzak JA, Rubiano AM, Turner JA, Varghese M, Zakirova R, Mock, C. Implementation of the World Health Organization Trauma Care Checklist Program in 11 Centers Across Multiple Economic Strata: Effect on Care Process Measures. *World J Surg.* **2016** DOI 10.1007/s00268-016-3759-8

Pfoh ER*, Wozniak AW*, **Colantuoni E**, Dinglas VD, Mendez-Tellez PA, Shanholtz C, Ciesla ND, Pronovost PJ, Needham DM. Physical declines occurring after hospital discharge in ARDS survivors: a 5-year longitudinal study. *Intensive Care Medicine.* **2016**;42:1557-1566. *Contributed equally to the manuscript as co-first authors

Wang C, Scharfstein DO, **Colantuoni E**, Girard TD, and Yan Y. Inference in Randomized Trials with Death and Missingness. *Biometrics.* **2016** Oct 17. doi: 10.1111/biom.12594. [Epub ahead of print]

Kamdar BB, Combs MP, **Colantuoni E**, King LM, Niessen T, Neufeld KJ, Collop NA, Needham DM. The association of sleep quality, delirium, and sedation with participation in physical therapy in the ICU. *Critical Care*. **2016**; 20:261. **DOI:** 10.1186/s13054-016-1433-z

Colantuoni E, Dinglas VD, Ely EW, Hopkins RO, Needham DM. Statistical approaches for evaluating interventions to reduce delirium in the ICU. *The Lancet Respiratory Medicine* **2016**; 4(7):534-6.

Needham DM, Dinglas VD, Hough CL, **Colantuoni E**, Hopkins RO. Improved risk stratification for clinical trials of delirium – authors' reply. *The Lancet Respiratory Medicine*.**2016**; 20(16); 4:e18.

Huang M, Parker AM, Bienvenu OJ, Dinglas VD, **Colantuoni E**, Hopkins RO, Needham DM, ARDSNet NIH/NHLBI. Psychiatric symptoms in acute respiratory distress syndrome survivors: a 1-year national multi-center study. *Crit Care Med*. **2016** May;44(5):954-65.

Kovacich, A., Tamma P. D., MD, Advani S., Popoola V. O., **Colantuoni E.**, Gosey L., Milstone A. M. Peripherally Inserted Central Venous Catheter Complications in Children Receiving Outpatient Parenteral Antibiotic Therapy (OPAT). *Infection Control and Hospital Epidemiology*. *Infect Control Hosp Epidemiol*. **2016** Apr;37(4):420-4.

Colligan EM, Pines JM, **Colantuoni E**, Wolff JL. Factors associated with frequent emergency department use in the Medicare population. *Med Care Res Rev*. **2016** Mar 29. pii: 1077558716641826.

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Dinglas VD, Hopkins RO, Wozniak AW, Hough CL, Morris PE, Jackson JC, Mendez-Tellez PA, Bienvenu OJ, Ely EW, **Colantuoni E**, Needham DM. One-year outcomes of rosuvastatin vs. placebo in sepsis-associated acute respiratory distress syndrome: prospective follow-up of SAILS randomized trial. *Thorax*. **2016**. 71: 401-410.

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Hoyer EH, Friedman M, Lavezza A, Wagner-Kosmakos K, Lewis-Cherry R, Skolnik JL, Byers SP, Atanelov, L, **Colantuoni E**, Brotman DJ, Needham DM. Promoting mobility and reducing length of stay in hospitalized general medicine patients: A quality improvement project. *Journal of Hospital Medicine*. **2016**. Feb 5. doi: 10.1002/jhm.2546.

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Rinke ML, Driscoll A, Mikat-Stevens N, Healy J, **Colantuoni E**, Elias AF, Pletcher BA, Gubernick RS, Larson I, Chung WK, Tarini BA,. A quality improvement collaborative to improve pediatric primary care genetic services. *Pediatrics*. **2016** Feb;137(2):e20143874. doi: 10.1542/peds.2014-3874.

Popoola, V.O., **Colantuoni, E.**, Suwantararat, N., Pierce, R., Carroll, K.C., Aucott, S.W., Milstone, A.M. “Active Surveillance Cultures and Decolonization to Reduce *Staphylococcus aureus* Infections in the NICU” *Infect Control Hosp Epidemiol*. January 2016, pp 1 – 5.DOI: 10.1017/ice.2015.317, Published online: 12 January **2016**

Díaz, I., **Colantuoni, E.** and Rosenblum, M. Enhanced precision in the analysis of randomized trials with ordinal outcomes. *Biometrics*. **2015** doi: 10.1111/biom.12450

Heyland DK, Stapleton RD, Mourtzakis M, Hough CL, Morris P, Deutz NE, **Colantuoni E**, Day A, Prado CM, Needham DM. Combining nutrition and exercise to optimize survival and recovery from critical illness: Conceptual and methodological issues. *Clin Nutr*. **2015** Jul 16. pii: S0261-5614(15)00177-6. doi: 10.1016/j.clnu.2015.07.003. [Epub ahead of print]

Truong AD, Kho ME, Brower RG, Feldman DR, **Colantuoni E**, Needham DM. Effects of neuromuscular electrical stimulation on cytokines in peripheral blood for healthy participants: a prospective, single-blinded Study. *Clin Physiol Funct Imaging*. **2015** Oct 16. doi: 10.1111/cpf.12290. [Epub ahead of print] PubMed PMID: 26475418.

Milstone AM, Koontz DW, Voskertchian A, Popoola V, Harrelson K, Ross T, Aucott SW, Gilmore MM, Carroll KC, **Colantuoni E**. Treating Parents to Reduce NICU Transmission of *Staphylococcus aureus* (TREAT PARENTS) trial: protocol of a multisite randomised, double-blind, placebo-controlled trial. *BMJ Open* **2015**;Sep 9;5(9):e009274. doi: 10.1136/bmjopen-2015-009274.

Colantuoni E, Rosenblum M. Leveraging Prognostic Baseline Variables to Gain Precision in Randomized Trials. *Statistics in Medicine*. **2015**. 34(18): 2602-2617. doi: 10.1002/sim.6507.

Rinke ML, Chen AR, Milstone AM, Hebert L, Bundy DG, **Colantuoni E**, Fratino L, Herpst C, Kokoszka M, Miller MR. Bringing central line-associated bloodstream infection prevention home: Catheter maintenance practices and beliefs of pediatric oncology patients and families. *The Joint Commission Journal on Quality and Patient Safety*. **2015**. 41:177-185.

Gellar JE, **Colantuoni E**, Needham DM, and Crainiceanu CM. Cox Regression Models with Functional Covariates for Survival Data. *Statistical Modeling*. **2015** Jun 1;15(3):256-278. Epub 2015 Jan 9.

Ruhl AP, Lord RK, Panek JA, **Colantuoni E**, Sepulveda KA, Chong A, Dinglas VD, Shanoltz CB, Pronovost PJ, Steinwachs DM, Needham DM. Healthcare Resource Utilization and Costs of 2-Year Survivors of Acute Lung Injury: An Observational Cohort Study. *Ann Am Thorac Soc*. **2015** Mar;12(3):392-401. doi: 10.1513/AnnalsATS.201409-422OC.

Bienvenu OJ, **Colantuoni E**, Mendez-Tellez PA, Shanholtz C, Dennison-Himmelfarb CR, Pronovost PJ, Needham DM. Co-occurrence of and remission from general anxiety, depression, and posttraumatic stress disorder symptoms. *Crit Care Med*. **2015** Mar;43(3):642-53.

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Dinglas VD, Huang M, Sepulveda KA, Pinedo M, Hopkins RO, **Colantuoni E**, Needham DM. Personalized contact strategies and predictors of time to survey completion: analysis of two sequential randomized trials. *BMC Med Res Methodol* **2015**; 15:5.

Kamdar BB, Niessen T, **Colantuoni E**, King LM, Neufeld KJ, Bienvenu OJ, Rowden AM, Collop NA, Needham DM. Delirium transitions in the medical ICU: exploring the role of sleep quality and other factors. *Critical Care Medicine*. **2015**, Jan;43(1):135-41. doi: 10.1097/CCM.0000000000000610.

Rinke ML, Bundy DG, Abdullah F, **Colantuoni E**, Zhang Y, Miller MR. State-Mandated Hospital Infection Reporting Is Not Associated With Decreased Pediatric Healthcare-Associated Infections. *The Journal of Patient Safety*. **2015** Sep;11(3):123-34. doi: 10.1097/PTS.0000000000000056.

Needham DM, Wozniak AW, Hough CL, Morris PE, Dinglas VD, Jackson JC, Mendez-Tellez PA, Shanholtz C, Ely EW, **Colantuoni E**, Hopkins RO, and with the NIH NHLBI ARDS Network. Risk Factors for Physical Impairment after Acute Lung Injury in a National, Multi-Center Study. *AJRCCM*. **2015** Jan 15;191(2):177-85. doi: 10.1164/rccm.201409-1598OC.

Bundy DG, Gaur AH, Billett AL, He B, **Colantuoni E**, Miller MR. Preventing CLABSIs among pediatric hematology/oncology inpatients: National collaborative results. *Pediatrics*. **2014** Dec;134(6):e1678-85. doi: 10.1542/peds.2014-0582. Epub 2014 Nov 17.

Wozniak AW, **Colantuoni E**, Schreiber M, Neufeld KJ, Needham DM. Corticosteroids and Transition to Delirium in Acute Lung Injury: Multinomial Logistic Regression Analysis Accounting for Multiple States. *Critical Care Medicine* **2014**, 43(1), p e23-e24,

doi: 10.1097/CCM.0000000000000641

Gellar JE, **Colantuoni E**, Needham DM, Crainiceanu CM. Variable- Domain Functional Regression for Modeling ICU Data. *Journal of the American Statistical Association*, **2014**, 109:508, 1425-1439, DOI: [10.1080/01621459.2014.940044](https://doi.org/10.1080/01621459.2014.940044)

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 patients with acute lung injury. *Annals of the American Thoracic Society* **2014**, 11(8): 1230-8.

Brodsky MB, Gellar JE, Dinglas VD, **Colantuoni E**, Mendez-Tellez PA, Shanholtz C, Palmer JB, Needham DM. Duration of oral endotracheal intubation is associated with dysphagia symptoms in acute lung injury patients. *J Crit Care*. Aug **2014**;29(4):574-579.

Hatef E, Hanout M, Moradi A, **Colantuoni E**, Bittencourt M, Liu H, Sepah YJ, Ibrahim M, Do DV, Guyton DL, Nguyen QD. Longitudinal comparison of visual acuity as measured by the ETDRS chart and by the potential acuity meter in eyes with macular edema, and its relationship with retinal thickness and sensitivity. *Eye (Lond)*. 2014 Oct;28(10):1239-45. doi: 10.1038/eye.2014.182. Epub **2014** Aug 8.

Kozlowski LJ, Kost-Byerly S, **Colantuoni E**, Thompson CB, Vasquez KJ, Rothman SK, Billett C, White ED, Yaster M, Monitto CL. Pain prevalence, intensity, assessment and management in a hospitalized pediatric population. *Pain Manag Nurs*. **2014** Mar;15(1):22-35. doi: 10.1016/j.pmn.2012.04.003. Epub 2012 Jun 8.

Lee-Kwan SH, Bleich SN, Kim H, **Colantuoni E**, Gittelsohn J. Environmental Intervention in Carryout Restaurants Increases Sales of Healthy Menu Items in a Low-Income Urban Setting. *Am J Health Promot*. **2014** Jun 26.

Schreiber MP, **Colantuoni E**, Bienvenu OJ, Neufeld KJ, Chen KF, Shanholtz C, Mendez-Tellez PA, Needham DM. Corticosteroids and Transition to Delirium in Patients with Acute Lung Injury. *Crit Care Med*. **2014** Jun;42(6):1480-6. doi: 10.1097/CCM.0000000000000247.

Brown CH 4th, Savage WJ, Masear CG, Walston JD, Tian J, **Colantuoni E**, Hogue CW, Frank SM. Odds of transfusion for older adults compared to younger adults undergoing surgery. *Anesth Analg*. **2014** Jan 9. [Epub ahead of print]

Fan E, Dowdy DW, **Colantuoni E**, Mendez-Tellez PA, Sevransky JE, Shanholtz C, Himmelfarb CRD, Desai SV, Ciesla N, Herridge MS, Pronovost PJ, Needham DM. Physical complications in acute lung injury survivors: a 2-year longitudinal prospective study. *Crit Care Med* **2014** Apr;42(4):849-59. doi: 10.1097/CCM.0000000000000040.

Mendez-Tellez PA, Dinglas VD, **Colantuoni E**, Ciesla N, Sevransky JE, Shanholtz C,

Pronovost PJ, Needham DM. Factors Associated with Timing of Initiation of Physical Therapy in Acute lung Injury Patients. *J Crit Care*. **2013** Dec;28(6):980-4. doi: 10.1016/j.jcrc.2013.06.001. Epub 2013 Jul 9.

Netzer G, Dowdy DW, Harrington T, Chandolu S, Dinglas VD, Shah NG, **Colantuoni E**, Mendez-Tellez PA, Shanholtz C, Hasday JD, Needham DM. Fever is associated with delayed ventilation liberation in acute lung injury. *Ann Am Thorac Soc*. **2013** Dec;10(6):608-15. doi: 10.1513/AnnalsATS.201303-052OC.

Akshintala V.S., Hutfless S.M., **Colantuoni E**, Kim K.J., Khashab M.A., Li T., Elmunzer B.J., Puhan M.A., Sinha A., Kamal A., Lennon, A.M., Okolo P.I., Palakurthy M.K., Kalloo A.N., Singh V.K. Systematic review with network meta-analysis: pharmacological prophylaxis against post-ERCP pancreatitis. *Alimentary Pharmacology and Therapeutics*. **2013**, Dec;38(11-12):1325-37. doi: 10.1111/apt.12534. Epub 2013 Oct 20.

Bienvenu OJ, Gellar J, Althouse BM, **Colantuoni E**, Sricharoenchai T, Mendez-Tellez PA, Shanholtz C, Dennison CR, Pronovost PJ, Needham DM. Post-traumatic stress disorder symptoms after acute lung injury: a 2-year prospective longitudinal study. *Psychological Medicine*. **2013**; 43 (12): 2657-2671.

Park S, Choi BY, Wang Y, Colantuoni E, Gittelsohn J. School and neighborhood nutrition environment and their association with students' nutrition behaviors and weight status in seoul, South Korea. *J Adolesc Health*. 2013 Nov;53(5):655-662.e12.

Rinke ML, Bundy DG, Chen AR, Milstone AM, **Colantuoni E**, Pehar M, Herpst C, Fratino L, Miller MR. Central Line Maintenance Bundles and CLABSIs in Ambulatory Oncology Patients. *Pediatrics*. 2013, Nov;132(5):e1403-12. doi: 10.1542/peds.2013-0302. Epub 2013 Oct 7.

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Stevenson JE, **Colantuoni E**, Bienvenu OJ, Sricharoenchai T, Wozniak A, Shanholtz C, Mendez-Tellez PA, Needham DM. General anxiety symptoms after acute lung injury: Predictors and correlates. *Journal of Psychosomatic Research*.2013; doi 10.1016/j.jpsychores.2013.06.002.

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Tin A, **Colantuoni E**, Boerwinkle E, Kottgen A, Franceschini N, Astor BC, Coresh J, Kao WH. Using multiple measures for quantitative trait association analyses: application to estimated glomerular filtration rate. *J Hum Genet*. 2013 Jul;58(7):461-6. doi: 10.1038/jhg.2013.23. Epub 2013 Mar 28.

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Dinglas VD, **Colantuoni E**, Ciesla N, Mendez-Tellez PA, Shanholtz C, Needham DM. Occupational Therapy for Acute Lung Injury Patients: Factors Associated with Time to First Intervention in the Intensive Care Unit. *American Journal of Occupational Therapy*. **2013**. Jan;41(1):9-14.

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TEACHING EXPERIENCE

Advisees

- 2011 Jonathan Gellar, ScM Biostatistics, transferred to PhD program
Jeff Schoenborn, MPH
- 2012 Mark Turner, iMPH
- 2015 So Yung Choi, ScM Biostatistics
Mary Kate Quinn, MPH
- 2016 Matthew Cole, ScM Biostatistics
- 2017 Emily Scott, ScM Biostatistics

Advisees in Progress

Su Jin Lim, ScM Biostatistics

Preliminary Oral Participation

2017

- 2016** Keri Calkins (EPI), Susannah Gibbs (HBS), Htet Ooh (IH), Samantha Boscotti (EPI), Suzanne Bell (EPI), Rosa Vazin (EPI), Amy Margolies (IH), Josh Colton (IH)
- 2015** Xiaoge Julia Zhang (IH), Sahnah Lim (HBS), Michelle Wong (HPM)
- 2014** Poojitha Balakrishnan (Epi)
- 2013** Jonathan Gellar (Biostats), Francis Abreau (Biostats), Matthew Goldshore (HBS), Ian Craig (IH)
- 2012** Kyun Hee Lee (HPM), Daniel Doyle (HPM)
- 2011** Andrea Christman (EPI), Adrienne Tin (EPI), Melania Bembea (GTPCI), Elliott Haut (GTPCI), Muzi Na (IH)
- 2010** Carol Strong (HBS), Gwenyth Lee (IH), Tracy Mroz (HPM), Sarah Godby (alternate, HBS), Angela Lashoher (HPM)
- 2009** Eddy Fan (GTPCI)

Final Oral Participation

- 2017** Susannah Gibbs (HBS)
- 2016** Francis Abreau (PhD, Biostat), Katherine Moon (EPI), Sahnah Lim (PFRH), Julia Zhang (IH), Jocelyn Kelly (PFRH), Michelle Wong (HPM)
- 2015** Jonathan Gellar (PhD, Biostat), Ian Craig (PhD, IH), Yunhee Kang (PhD, IH)
- 2014** Muzi Na (PhD, IH)
- 2013** Eddy Fan (PhD, GTPCI), Tracy Mroz (PhD, HPM), Jessica Seidman (PhD, IH), Anna Ettinger (PhD, HBS), Roger Johns (PhD, HPM), Erin Murphy (PhD, HPM)
- 2012** Sohyun Park (PhD IH), Lori Grover (PhD, HPM), Angela LaShorer (Dr.PH, HPM), Brian Weir (PhD, HBS)
- 2011** Samar Khoury (DrPH EHS)

Capstone Advisor

- 2015 Sybil Klaus (*Pediatric Hospitalist Surgical Co-Management: A Patient Safety Intervention Program Evaluation*)
- 2012 Mark Turner

ScM/MHS Thesis Reader

- 2016 Julia Zhang (MHS Biostats)
- 2015 Andrew Leroux (Biostats), Dell Simmons (GTPCI)
- 2013 Rowan (Biostats), Detian Dang (Biostats)
- 2011 Xiaowei Zhou (Biostats)

Classroom Instruction

| <u>Year</u> | <u>Course/Description</u> | <u>Enrollment</u> |
|--------------------|---|--------------------------|
| 2016 | Longitudinal Data Analysis Health Policy and Management Fall Institute | 20 |
| 2010-present | Longitudinal Data Analysis Bloomberg School of Public Health Johns Hopkins University | 80-100 |
| 2010-present | Multilevel Models Bloomberg School of Public Health Johns Hopkins University | 50-70 |
| 2005-2007 | Biostatistics for Public Health | 100-130 |

Public Health Studies
Krieger School of Arts and Sciences
Johns Hopkins University

| | | |
|-----------|---|-------|
| 2006-2013 | Multilevel Models Summer Institute Department of Biostatistics Bloomberg School of Public Health | 30 |
| 2002-2004 | Methods in Biostatistics PhD level methods sequence Department of Biostatistics Bloomberg School of Public Health Lead Teaching Assistant | 30-60 |
| 2002-2004 | Regression Analysis for Public Health Summer Institute Department of Biostatistics Bloomberg School of Public Health | 20-30 |

RESEARCH GRANT PARTICIPATION

- 09/01/12 – 08/31/17 Improving Long-Term Outcomes Clinical Research for Acute Respiratory Failure. NIH/NHLBI . R24HL111895-01A1 (Needham) This grant aims to build national infrastructure to improve the design and conduct of clinical research for acute respiratory failure patients, focusing specifically on evaluating long-term patient outcomes, including physical, cognitive and mental health outcomes. My role includes reviewing statistical methods accounting for patient mortality in assessing differences in long-term patient outcomes across treatment groups and developing software to aid researchers in conducting appropriate analyses for these types of data.
- 04/01/14 – 03/31/18 Decreasing Neonatal *Staphylococcus aureus* Disease Through Parental Intervention. AHRQ. 1R01HS022872-01 (Milestone, Aaron M.) The major goal of this study is to identify reservoirs from which neonates acquire *S. aureus* and testing a novel intervention to prevent the transmission. My role included consultation on the study design, sample size, statistical analysis plan, statistical software for implementing the analysis and reporting of the results.

- 09/08/14 – 03/31/16 New Design and Analysis Tools for Randomized Trials, with Clinical Applications in Stroke, Cardiac Resynchronization Therapy. FDA. HHSF223201400113C (Rosenblum)
We will demonstrate the practical advantages and limitations of new adaptive trial designs across a variety of clinical settings including the following: new surgical interventions for stroke, new medical devices for cardiac resynchronization therapy, treatments to slow the progression of Alzheimer's disease, and pre-exposure prophylaxis for preventing HIV infection. My role includes writing code to simulate studies replicating key features of the observed trials.
- 10/04/16 – 12/31/16 On the Design and Analysis of Observational Databases for Comparative Effectiveness Research: The Prospective Perspective (Scharfstein) The specific learning objectives of the workshop include: Formulating causal research hypothesis, identifying observational database to answer research question, defining exposure and outcomes, understanding biases that arise in observational data, and Causal Inference methods for estimating treatment effects.
- 09/15/15 – 05/30/20 Phase II/III trial for Slowing Progression in Mild Cognitive Impairment. NIA. R01AG048349 (Gallagher) Phase II/III trial for Slowing Progression in Mild Cognitive Impairment. Our application seeks partial support for a multi-center, randomized, placebo-controlled trial in amnesic mild cognitive impairment (aMCI). Both with respect to the treatment modality and stage of disease, the proposed trial will complement other trials using amyloid therapies in asymptomatic patients, thus adding a novel treatment approach in a symptomatic stage of disease. The proposed clinical trial will be the first Phase IIB study to target the condition of hyperactivity, which characterizes the clinical stage of aMCI. My role will be biostatistician on the trial, playing a role in the design, sample size, statistical analysis plan, statistical software for implementing the analysis and reporting of the results.

- 09/30/15 – 09/29/18 NIH/CDC. 1U54CK000447-01 (Pronovost)
The purpose of this proposal is to translate basic, epidemiologic, and technologic discoveries into new strategies to prevent healthcare-associated transmission of Ebola and other high-consequence pathogens. Healthcare-associated transmission of high-consequence pathogens such as the Ebola virus, SARS coronavirus, MERS coronavirus, novel respiratory pathogens, multidrug resistant bacteria, and Clostridium difficile poses a significant risk to patients, families, and healthcare workers (HCWs), leading to morbidity and mortality and dramatically increased healthcare costs.
- 09/11/09 – 08/31/14 Five Year Outcomes from Acute Lung Injury, NIH/NHLBI, 1K24HL088551 (Pronovost) The major goal of this study is to mentor trainees in researching existing ICU therapies that could improve recovery and reduce long-term physical and mental health morbidities from ALI.
- 09/30/08 – 06/30/14 Improving Long Term Physical and Mental Health after Acute Lung Injury, NIH/ NHLBI, 1R01HL088045 (Pronovost) The overall goal of this study is to improve outcomes for patients with ALI.
- 09/20/10 – 09/19/14 Partnership in Applied Comparative Effectiveness Science (PACES), FDA, HHSF223201000072C (Segal) The major goal of this project is to improve health outcomes by developing and disseminating evidence-based information and a patient-centered outcomes research (PCOR) scientific framework to patients, clinicians, and other decision makers, responding to their expressed needs, about which interventions are the most effective for patients under specific circumstances.

ACADEMIC SERVICE

Biostatistics Admissions Committee (2014-present)
Committee of Equity Diversity and Civility (2011-2013)
Faculty Senate (2015 – present)

PRESENTATIONS

Scientific Meetings

- 2017
- Accounting for baseline covariates and missing data in regulatory trials with longitudinal designs. Clinical Trials on Alzheimer's Disease. Poster.
- Utilizing Prognostic Baseline Covariates to Improve Precision to Estimate Treatment Effects in Randomized Controlled Trials. Northwestern University. Invited speaker.
- Johns Hopkins Statistics Symposium. Joint symposium sponsored by Biostatistics and Anesthesiology and Critical Care Medicine. Planning committee.
- Statistical Methods for Delirium Research: Existing and novel statistical methods that can improve your research. American Delirium Society. Organizer, chair, speaker.
- Accounting for baseline covariates and missing data in regulatory trials with longitudinal designs. American Statistical Association Joint Statistical Meeting. Contributed speed talk and electronic poster session.
- Improving Long-Term Outcomes Research for Acute Respiratory Failure. American Thoracic Society Meeting. Talk
- 2016
- Improving Precision and Power by Adjusting for Prognostic Baseline Variables in Alzheimer's Disease Clinical Trials. Clinical Trials of Alzheimer's Disease (CTAD). Poster Session
- Leveraging Prognostic Baseline Variables to Gain Precision in Randomized Trials. Conference for Statistical Practice. Poster Session.
- 2015
- A Study of Peer-Review Grading Within Graduate Courses in Biostatistics. American Statistical Association Joint Statistical Meeting; Topic Contributed Paper.
- Methods Accounting for Mortality and Missing Data in Randomized Trials with Longitudinal Outcomes. International Biometrics Society, Eastern Northern American Region annual meeting. Oral Poster Session.
- 2014
- Leveraging Prognostic Baseline Variables to Gain Precision in Randomized Trials. International Biometrics Society, Eastern

Norther American Region annual meeting. Poster session.

Leveraging Prognostic Baseline Variables to Gain Precision in Randomized Trials. Society for Clinical Trials. Contributed Talk.

- 2010 Treatment Strategies: An Evaluation of the Impact of Potential Preventative and Therapeutic Intervention on Costs of Alzheimer's Disease. International Conference for Alzheimer's and Dementia. Poster.
- Treatment Strategies: An Evaluation of the Impact of Potential Preventative and Therapeutic Intervention on Costs of Alzheimer's Disease. American Statistical Association Joint Statistical Meetings. Topic Contributed Paper.
- 2009 A web-based application to project the burden of Alzheimer's disease. International Conference for Alzheimer's and Dementia. Poster.
- 2008 Differences in ICU Exposures Comparing Obese and Non-Obese Patients with ARDS. Research Day: Department of Anesthesiology and Critical Care Medicine, Johns Hopkins School of Medicine. Poster.
- Estimation of Causal Effects in Longitudinal Data: A Case Study in Obstetrics. Eastern North American Region/International Biometric Society. Poster.
- 2007 Modeling survival in Alzheimer's disease: An alternative to proportional hazards (poster). Eastern North American Region/International Biometric Society
- Worldwide variation in the doubling time of Alzheimer's disease incidence rates. International conference on prevention of dementia, Alzheimer's Association.
- 2006 Bayesian design for a second clinical trial. Eastern North American Region/International Biometric Society
- 2003 Modeling approaches for estimating a treatment effect from count data in the presence of many zeros and over-dispersion. Joint Statistical Meetings, American Statistical Association
- 2001 Disease cases and their medical costs attributable to smoking: an analysis of the National Medical Expenditure Survey. Eastern

Invited Seminars

- 2017 Utilizing Prognostic Baseline Covariates to Improve Precision to Estimate Treatment Effects in Randomized Controlled Trials. Department of Preventive Medicine, Northwestern University Feinberg School of Medicine.
- 2016 Improving Long-Term Outcomes Research for Acute Respiratory Failure. Center for Health Services and Outcomes Research. Johns Hopkins University.
- Improving Long-Term Outcomes Research for Acute Respiratory Failure. Center for Health Services and Outcomes Research. The United States Critical Illness and Injury Trials Group.
- Rosuvastatin versus placebo for ICU delirium: an ancillary RCT with use of a joint survival model allowing for recurrent events. Johns Hopkins Delirium Consortium.
- Rosuvastatin versus placebo for ICU delirium: an ancillary RCT with use of a joint survival model allowing for recurrent events. Welch Center Grand Rounds, March 23, 2016
- 2015 Leveraging Prognostic Baseline Variables to Gain Precision in Randomized Trials. Johns Hopkins Delirium Consortium
- Leveraging Prognostic Baseline Variables to Gain Precision in Randomized Trials. Society for Clinical Trials Educational Webinar Series.
- 2014 Statistical approaches for incorporating mortality information in randomized trials in critical care medicine. Nutrition and Rehabilitation Investigators Consortium (NUTRIC).
- 2009 Identifying and mitigating errors: analysis of UK error reports. 2009 Biennial Program: Department of Anesthesiology and Critical Care Medicine, Johns Hopkins School of Medicine. Talk.
- 2008 Forecasting the Global Burden of Alzheimer's Disease. Center for Vaccine Development, University of Maryland Medical Center.

Forecasting the Global Burden of Alzheimer's Disease. Wyeth
Pharmaceuticals, Collegeville PA.

Estimation of Causal Effects in Longitudinal Data: A Case Study
in Obstetrics. Department of Epidemiology, Bloomberg School of
Public Health, Johns Hopkins University.

