

# RACHAEL K. ROSS, PhD, MPH

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## EDUCATION AND TRAINING

<b>Postdoctoral Research Scientist</b>	2023-
Department of Epidemiology, Columbia University	
Advisors: Kara Rudolph (Columbia) and Elizabeth Stuart (Johns Hopkins University)	
<b>PhD in Epidemiology (Minor in Biostatistics)</b>	2023
University of North Carolina at Chapel Hill	
Advisor: Stephen R. Cole	
Dissertation: Missing Data and Measurement Error: Analytic Approaches for Observational Studies with Examples from Pregnancy Outcomes Research	
<b>MPH in Epidemiology and Global Health</b>	2011
Emory University	
<b>BA in Biological Basis of Behavior</b>	2006
University of Pennsylvania	

## PROFESSIONAL POSITIONS

<b>Pharmacoepidemiology Summer Intern</b>	2021
RTI International, Durham, NC	
<b>Summer Research Fellow</b>	2020
NoviSci Inc., Durham, NC	
<b>Epidemiology Research Associate</b>	2011-2018
Center for Pediatric Clinical Effectiveness, Division of Infectious Diseases	
Children's Hospital of Philadelphia, Philadelphia, PA	

## DISTINCTIONS AND FELLOWSHIPS

<b>Substance Abuse Epidemiology Training Program Affiliate Fellow</b> Columbia University	2023-
<b>Delta Omega Honorary Society</b> University of North Carolina at Chapel Hill	2023
<b>Royster Society of Fellows</b> University of North Carolina at Chapel Hill	2022-2023
<b>The Lovick P. Corn Dissertation Fellowship</b> University of North Carolina at Chapel Hill	2022-2023
<b>T32 Predoctoral Fellow</b> University of North Carolina at Chapel Hill	2020-2022
<b>Student/Postdoc Abstract Award</b> International Conference on Pharmacoepidemiology and Therapeutic Risk Management	2020
<b>Antimicrobial Stewardship Program Fellowship Award</b> Pediatric Infectious Diseases Society	2019-2020
<b>Predoctoral Fellow in Pharmacoepidemiology</b> Center for Pharmacoepidemiology, University of North Carolina at Chapel Hill	2019-2020
<b>Conference Student Travel Award</b> International Society for Pharmacoepidemiology	2019-2022
<b>Graduate Merit Assistantship</b> University of North Carolina at Chapel Hill	2018-2019
<b>Certificate for Exceptional Global Health Thesis</b> Emory University	2011
<b>Outstanding Practicum Experience Award</b> Emory University	2011
<b>Delta Omega Honorary Society</b> Emory University	2010
<b>Summa Cum Laude</b> University of Pennsylvania	2006

## PUBLICATIONS

### Published, peer-reviewed

47. **Ross RK**, Zivich PN, Stringer JSAS, Cole SR. M-estimation: introduction and applied examples. *International Journal of Epidemiology* (in press)
46. Webster-Clark M, **Ross RK**, Keil AP, Platt R. Variable Selection When Estimating Effects in External Target Populations. *American Journal of Epidemiology* (in press)
45. **Ross RK**, Cole SR, Edwards JK, Zivich P, Westreich D, Daniels J, Price J, Stringer JSA. Leveraging external validation data: the challenges of transporting measurement error parameters. *Epidemiology*. 2024 Mar 1;35(2):196-207. doi: 10.1097/EDE.0000000000001701. PMID: 38079241.
44. Lemasters K, **Ross RK**, Edwards JK, Hedwig L, Robinson WR, Brinkley-Rubinstein L, Delamater PL, Pence BW. Mass probation: Effects of Sentencing Severity on Mental Health for Black and

- White Individuals. *Epidemiology*. 2024 Jan 1. 35(1): 74-83. doi: 10.1097/EDE.0000000000001678. PMID: 38032802
43. **Ross RK**, Cole SR, Edwards JK, Westreich D, Daniels J, Stringer JSA. Accounting for nonmonotone missing data using inverse probability weighting. *Statistics in Medicine*. 2023 Oct 15. 42(23):4282-4298. doi: 10.1002/sim.9860. PMID: 37525436.
  42. Wattier RL, Bucayu RFT, Boge CLK, **Ross RK**, et al. Adjunctive Diagnostic Studies Completed Following Detection of Candidemia in Children: Secondary Analysis of Observed Practice from a Multicenter Cohort Study Conducted by the Pediatric Fungal Network. *Journal of Pediatric Infectious Diseases Society*. 2023 Sep 27; 12(9):487-495. doi: 10.1093/jpids/piad057. PMID: 37589394.
  41. **Ross RK**, Cole SR, Westreich D, Edwards JK, Musonda P, Vwalika B, Kasaro M, Price JT, Stringer JSA. Different effects for different questions: an illustration using short cervix and the risk of preterm birth. *International Journal of Gynecology and Obstetrics*. 2023 Mar; 160(3):842-849. doi: 10.1002/ijgo.14372. PMID: 35899762
  40. **Ross RK**, Keil AP, Cole SR, Edwards JK, Stringer JSA. A Warning About Using Predicted Values for Estimating Descriptive Measures. *American Journal of Epidemiology*. 2023 Jan 27;kwad020. doi: 10.1093/aje/kwad020. PMID: 36708231
  39. Cole SR, Zivich PN, Edwards JK, **Ross RK**, Shook-Sa BE, Price JT, Stringer JSA. Missing Outcome Data in Epidemiologic Studies. *American Journal of Epidemiology*. 2023 Jan 6;192(1):6-10. doi: 10.1093/aje/kwac179. PMID: 36222655
  38. **Ross RK**, Su I, Webster-Clark M, Jonsson Funk M. Nondifferential treatment misclassification biases toward the null? Not a safe bet for active comparator studies. *American Journal of Epidemiology*. 2022 Oct 20; 191(11):1917-1925. doi:10.1093/aje/kwac131. PMID: 35882378
  37. **Ross RK**, Breskin A, Breger TL, Westreich D. Reflection on modern methods: combining weights for confounding and missing data. *International Journal of Epidemiology*. 2022 May 9;dyab205. doi: 10.1093/ije/dyab205. PMID: 34536004
  36. Chiotos K, D'Arinzo L, Kitt E, **Ross RK**, Gerber JS. Quantifying Empiric Antibiotic Use in US Children's Hospitals. *Hospital Pediatrics*. 2021 Dec 1;hpeds.2021-005950. doi: 10.1542/hpeds.2021-005950. PMID: 34807987
  35. **Ross RK**, Cole SR, Richardson DB. Decreased susceptibility of marginal odds ratios to finite sample bias. *Epidemiology*. 2021 Sep 1;32(5):648-652. doi: 10.1097/EDE.0000000000001370. PMID: 34001751
  34. Fisher BT, Zaoutis TE, Xiao R, Wattier RL, Castagnola E, Pana ZD, Fullenkamp A, Boge CLK, **Ross RK**, et al. Comparative Effectiveness of Echinocandins vs Triazoles or Amphotericin B Formulations as Initial Directed Therapy for Invasive Candidiasis in Children and Adolescents. *Journal of Pediatric Infectious Diseases Society*. 2021 Aug 10;piab024. doi: 10.1093/jpids/piab024. PMID: 34374424
  33. Webster-Clark M, **Ross RK**, Lund JL. Initiator Types and the Causal Question of the Prevalent New User Design. *American Journal of Epidemiology*. 2021 Jul 1;190(7):1341-1348. doi: 10.1093/aje/kwaa283. PMID: 33350433
  32. **Ross RK**, Kinlaw AC, Herzog MM, Jonsson-Funk M, Gerber JS. Fluoroquinolone Antibiotics and Tendon Injury in Adolescents. *Pediatrics*. 2021 Jun;147(6): e2020033316. doi: 10.1542/peds.2020-033316. PMID: 33990459
  31. **Ross RK**, Gerber JS, Willis ZI, Hersh A, Kinlaw AC. Outpatient fluoroquinolone use in children, 2000-2018. *Journal of Pediatric Infectious Diseases Society*. 2021 May 28;10(5):576-585. doi: 10.1093/jpids/piaa156. PMID: 33377490

30. Richardson DB, Cole SR, **Ross RK**, Poole C, Chu H, Keil AP. Meta-analysis Reduces Sampling Error but not Sparse Data Bias. *American Journal of Epidemiology*. 2021 Feb 1;190(2):336-340. doi: 10.1093/aje/kwaa205. PMID: 32975277
29. **Ross RK**, Kuo TM, Jonsson-Funk M, Lund JL. Validation of a 5-year mortality prediction model among US Medicare beneficiaries. *Journal of American Geriatrics Society*. 2020 Dec;68(12):2898-2902. doi: 10.1111/jgs.16816. PMID: 32889756
28. **Ross RK**, Breskin A, Westreich D. When is a complete case approach to missing data valid? The importance of effect measure modification. *American Journal of Epidemiology*. 2020 Dec 1;189(12):1583-1589. doi: 10.1093/aje/kwaa124. PMID: 32601706
27. Gerber JS, **Ross RK**, Xiao R, Localio AR, Grundmeier RW, Rettig SL, Teszner E, Szymczak JE, Canning D, Coffin SE. Infections after pediatric ambulatory surgery: incidence and risk factors. *Infection Control and Hospital Epidemiology*. 2019 Feb; 40(2):150-157. PMID: 30698133
26. Tribble AC, **Ross RK**, Gerber JS. Comparison of Antibiotic Prescribing for Pediatric Community-Acquired Pneumonia in Children's and Non-Children's Hospitals. *JAMA Pediatrics*. 2019 Feb 1;173(2):190-192. PMID: 30534969
25. Karavite DJ, Miller MW, Ramos MJ, Rettig SL, **Ross RK**, Xiao R, Muthu N, Localio AR, Gerber JS, Grundmeier RW, Coffin SE. User testing an information foraging tool for ambulatory surgical site infection surveillance. *Applied Clinical Informatics*. 2018 Oct;9(4):791-802. PMID: 30357777
24. Grundmeier RW, Xiao R, **Ross RK**, Ramos MJ, Karavite DJ, Michel J, Gerber JS, Coffin SE. Identifying surgical site infections in electronic health data using predictive models. *Journal of the American Medical Informatics Association*. 2018 Sep 1;29(9):1160-1166. PMID: 29982511
23. Flannery DD, **Ross RK**, Mukhopadhyay S, Tribble AC, Puopolo KM, Gerber JS. Temporal trends and center variation in early antibiotic use among premature infants. *JAMA Network Open*. 2018;1(1):e180164. doi:10.1001/jamanetworkopen.2018.0164. PMID: 30646054
22. **Ross RK**, Keele L, Kubis S, Lautz AJ, Dziorny AC, Denson AR, O'Connor KA, Chilutti MR, Weiss SL, Gerber JS. Effect of the Procalcitonin Assay on Antibiotic Utilization in Critically Ill Children. *Journal of Pediatric Infectious Diseases Society*. 2018 Feb 08 <https://doi.org/10.1093/jpids/piy004>. PMID: 29529219
21. Gerber JS, **Ross RK**, Bryan M, Localio AR, Szymczak JE, Wasserman R, Barkman D, Odeniyi F, Conaboy K, Bell L, Zaoutis TE, Fiks AG. Association of broad- vs narrow-spectrum antibiotics with treatment failure, adverse effects, and quality of life in children with acute respiratory tract infections. *JAMA*. 2017;318(23):2325-2336. PMID: 29260224
20. Vaughan AM, **Ross RK**, Gilman MM, Satchell L, Ditaranto S, Reilly AF, Kersun LS, Shanahan A, Coffin SE, Sammons JS. Mucosal Barrier Injury Central-Line-Associated Bloodstream Infections: What is the Impact of Standard Prevention Bundles? *Infection Control and Hospital Epidemiology*. 2017 Sep 6:1-2 [Epub ahead of print]. PMID: 28874212
19. Gerber JS, Hersh AL, Kronman ML, Newland JG, **Ross RK**, Metjian TA. Development and Application of an Antibiotic Spectrum Index for Benchmarking Antibiotic Selection Patterns Across Hospitals. *Infection Control and Hospital Epidemiology*. 2017 Aug;38(8):993-997. PMID: 28560946
18. Goldman JL, **Ross RK**, Lee BR, Newland JG, Hersh AL, Kronman MP, Gerber JS. Variability in Antifungal and Antiviral Use in Hospitalized Children. *Infection Control and Hospital Epidemiology*. 2017 Jun;38(6):743-746. PMID: 28294077
17. Chiotos K, **Ross RK**, Han JH, Miller M, Gerber JS. Use of Carbapenems, Polymyxins, and Tigecycline in United States Children's Hospitals, 2010-2014. *Open Forum Infectious Diseases*. 2017 Jun;38(6):743-746. PMID: 28470018

16. Weiss SL, Keele L, Balamuth F, Vendetti N, **Ross RK**, Fitzgerald JC, Gerber JS. Crystalloid Fluid Choice and Clinical Outcomes in Pediatric Sepsis: A Matched Retrospective Cohort Study. *Journal of Pediatrics*. 2017 Mar;182:304-310. PMID: 28063688
15. Fisher BT, **Ross RK**, Roilides E, Palazzi DL, Abzug MJ, Hoffman JA, Berman DM, Prasad PA, Localio AR, Steinbach WJ, Vogiatzi L, Dutta A, Zaoutis TE. Failure to Validate a Multivariable Clinical Prediction Model to Identify Pediatric Intensive Care Unit Patients at High Risk for Candidemia. *Journal of Pediatric Infectious Diseases Society*. 2016 Dec;5(4):458-461. PMID: 26407259
14. Larru B, Sulieman SE, Localio AR, **Ross RK**, Sharland M, Zaoutis TE, Gerber JS. Frontline clinician knowledge of antimicrobial prescribing in an academic tertiary children's hospital: a point prevalence study. *Journal of Pediatric Infectious Diseases Society*. 2016 Dec;5(4):462-464. PMID: 26407260
13. Lautz AJ, Dziorny AC, Denson AR, O'Connor KA, Chilutti MR, **Ross RK**, Gerber JS, Weiss SL. Value of Procalcitonin measurements for early evidence of severe bacterial infections in the pediatric intensive care unit. *Journal of Pediatrics*. 2016 Dec;179:74-81. PMID: 27587074
12. **Ross RK**, Beus JM, Metjian TA, Localio AR, Shelov ED, Desai BR, O'Neill SP, Zaoutis TE, Gerber JS. Safety of automatic end dates for antimicrobial orders to facilitate stewardship. *Infection Control and Hospital Epidemiology*. 2016 Aug;37(8):974-8. PMID: 27174362
11. Miller MW, **Ross RK**, Voight C, Brouwer H, Karavite DJ, Gerber JS, Grundmeier RW, Coffin SE. Patient-generated digital images after pediatric ambulatory surgery. *Applied Clinical Informatics*. 2016 Jul 6;7(3):646-52. PMID: 27452477
10. Kronman MP, Oron AP, **Ross RK**, Hersh AL, Newland JG, Goldin A, Rangel SJ, Weissman SJ, Zerr DM, Gerber JS. Extended versus narrower-spectrum antibiotics for appendicitis. *Pediatrics*. 2016 Jul;138(1). PMID: 27354453
9. Gerber JS, Bryan M, **Ross RK**, Daymont C, Parks EP, Localio AR, Grundmeier RW, Stallings VA, Zaoutis TE. Antibiotic Exposure during the First 6 Months of Life and Weight Gain during Childhood. *JAMA*. 2016;315(12):1258-126. PMID: 27002447
8. Kronman MP, Hersh AL, Gerber JS, **Ross RK**, Newland JG, Goldin A, Rangel SJ, Oron AP, Zerr DM. Identifying Antimicrobial Stewardship Targets for Pediatric Surgical Patients. *Journal of Pediatric Infectious Diseases Society*. 2015 Dec;4(4):e100-8. PMID: 26407258
7. **Ross RK**, Hersh AL, Kronman MP, Newland JG, Gerber JS. Cost of antimicrobial therapy across US children's hospitals. *Infection Control and Hospital Epidemiology*. 2015 Oct;36(10):1242-4. PMID: 26166408
6. Milder EA, Rizzi MD, Morales KH, **Ross RK**, Lautenbach E, Gerber JS. Impact of a new practice guideline on antibiotic use with pediatric tonsillectomy. *JAMA Otolaryngology-Head & Neck Surgery*. 2015 May 1;141(5):410-6. PMID: 25719954
5. **Ross RK**, Hersh AL, Kronman MP, Newland JG, Metjian TA, Localio AR, Zaoutis TE, Gerber JS. Impact of Infectious Diseases Society of America/Pediatric Infectious Diseases Society guidelines on treatment of community-acquired pneumonia in hospitalized children. *Clinical Infectious Diseases*. 2014 Mar;58(6):834-8. PMID: 24399088
4. Fisher BT, **Ross RK**, Localio AR, Prasad PA, Zaoutis TE. Decreasing rates of invasive candidiasis in pediatrics hospitals across the United States. *Clinical Infectious Diseases*. 2014 Jan;58(1):74-7. PMID: 24114736
3. Gerber JS, Kronman MP, **Ross RK**, Hersh AL, Newland JG, Metjian TA, Zaoutis TE. Identifying targets for antimicrobial stewardship in children's hospitals. *Infection Control and Hospital Epidemiology*. 2013 Dec;34(12):1252-8. PMID: 24225609

2. **Ross RK**, King JD, Damte M, Ayalew F, Gebre T, Cromwell EA, Teferi T, Emerson PM. An Evaluation of Household Latrine Coverage in Kewot District, Ethiopia Three Years After Implementing Interventions to Control Blinding Trachoma. *International Health*. 2011 Dec;3(4):251-8. PMID: 24038498
1. Pelletreau S, Nyaku M, Dembele M, Sarr B, Budge P, **Ross RK**, Mathieu E. The field-testing of a novel integrated mapping protocol for neglected tropical diseases. *PLoS Neglected Tropical Diseases*. 2011 Nov;5(11). PMID: 22102921

#### Under review

- Zivich P, **Ross RK**, Shook-Sa B, Cole SR, Edwards JK. Empirical sandwich variance estimator for iterated conditional expectation g-computation. *Statistics in Medicine*.  
<https://arxiv.org/abs/2306.10976>
- Ross RK**, Nunes EV, Olfson M, Shulman M, Krawczyk, Stuart EA, Rudolph KE. Comparative effectiveness of extended release naltrexone and sublingual buprenorphine for treatment of opioid use disorder among Medicaid patients. *Addiction*.  
<https://www.medrxiv.org/content/10.1101/2024.01.24.24301555v1>
- Ross RK**, Rudolph KE, Shover C. Availability and prescribing of extended release buprenorphine injection for Medicaid beneficiaries, 2018-2022. *Addiction*.  
<https://www.medrxiv.org/content/10.1101/2024.01.05.24300895v1>
- Parikh H, **Ross RK**, Stuart EA, Rudolph KE. Who Are We Missing? A Principled Approach to Characterizing the Underrepresented Population. *JASA*. <https://arxiv.org/abs/2401.14512>

#### In preparation

- Webster-Clark M, **Ross RK**. Validity of Complete Case Analysis Depends on the Target Population. Target: *American Journal of Epidemiology*; <https://arxiv.org/abs/2401.15514>
- Ross RK**, Inose S, Shulman M, Zalla L, Nunes E, Rudolph KE. Racial and ethnic differences in dose of opioid agonist treatment for opioid use disorder across pooled Clinical Trials Network trials. Target: *JAMA Psychiatry*

#### Letters

- Cole SR, Zivich PN, Edwards JK, **Ross RK**, Shook-Sa BE. Letter. *American Journal of Epidemiology*. 2023 Nov 8;. doi: 10.1093/aje/kwad216. [Epub ahead of print] PubMed PMID: 37946358.
- Zivich P, **Ross RK**. RE: "Using numerical methods to design simulations: revisiting the balancing intercept." *American Journal of Epidemiology*. 2022 Sep 28;191(10):1833-1834. PMID: 35513352
- Tribble AC, **Ross RK**, Gerber JS. Does a diagnosis of community-acquired pneumonia in a child always require antibiotics? *JAMA Pediatrics*. 2019 Aug 1;173(8):797-798. PMID: 31157897

## PRESENTATIONS

#### Invited

- Using external data to address measurement error: a transportability perspective. Extending Inferences to a New Target Population Conference, **The Institute for Computational Experimental Research in Mathematics**. November 17, 2023. Providence, RI

Ross RK. 2022. Using Predicted Values in Descriptive Epidemiology. **Royster Society of Fellows, University of North Carolina**. December 2022. Chapel Hill, NC

#### Recent oral abstracts (last 5 years)

Webster-Clark M, **Ross RK**, Edwards JK. Conditions for Unbiased Complete Case Analysis in External Control Arms: A Simulation Study. *International Conference on Pharmacoepidemiology and Therapeutic Risk Management*. August 2023. Halifax, Canada.

**Ross RK**, Cole SR, Edwards JK, Price J, Westreich D, Daniels J, Stringer JSA. Leveraging external validation data for measurement error: the issue of transportability. *Society for Epidemiologic Research*. June 2023. Portland, OR.

**Ross RK**, Keil AP, Cole SR, Edwards JK, Stringer JSA. A Warning About Using Predicted Values for Estimating Descriptive Measures. *Society for Epidemiologic Research*. June 2023. Portland, OR.

Webster-Clark M, **Ross RK**, Keil AP, Platt R. Variable Selection for Transporting to External Target Populations. *Society for Epidemiologic Research*. June 2023. Portland, OR.

Lemasters K, **Ross RK**, Edwards JK, Robinson WR, Brinkley-Rubinstein L, Delamater PL, Pence BW. Mass probation: Effects of probation on mental health disparities. *Society for Epidemiologic Research*. June 2023. Portland, OR.

**Ross RK**, Cole SR, Edwards JK, Westreich D, Daniels J, Stringer JSA. Nonmonotone missing data: weighting or imputation? *International Conference on Pharmacoepidemiology and Therapeutic Risk Management*. August 2022. Copenhagen, Denmark.

**Ross RK**, Cole SR, Edwards JK, Westreich D, Daniels J, Stringer JSA. Nonmonotone missing data: weighting or imputation? *Society for Epidemiologic Research*. June 2022. Chicago, IL.

**Ross RK**, Su I, Jonsson Funk M. Nondifferential treatment misclassification biases toward the null? Not a safe bet. *International Conference on Pharmacoepidemiology and Therapeutic Risk Management*. August 2021. Virtual Meeting.

**Ross RK**, Su I, Jonsson Funk M. Nondifferential exposure misclassification in active comparator studies: drivers of bias away from the null. *Society for Epidemiologic Research*. June 2021. Virtual Meeting.

**Ross RK**, Cole SR, Westreich D, Edwards JK, Price J, Stringer JSAS. Exposure effects & intervention effects: an illustration examining high blood pressure and preterm birth. *Society for Pediatric and Perinatal Epidemiologic Research*. June 2021. Virtual Meeting.

**Ross RK**, Breskin A, Westreich D. Combining weights for missing data and confounding. *Society for Epidemiologic Research*. December 2020. Virtual Meeting.

**Ross RK**, Gerber JS, Herzog MM, Jonsson-Funk M, Kinlaw AC. Fluoroquinolone antibiotic exposure and risk of Achilles tendon injury in adolescents in the United States 2000-2018. *International Conference on Pharmacoepidemiology and Therapeutic Risk Management*. September 2020. Virtual Meeting.

Award: Third Best Abstract Submitted by a Student/Postdoc

**Ross RK**, Kuo TM, Jonsson-Funk M, Lund JL. Validation of a 5-year mortality prediction model among US Medicare beneficiaries. *International Conference on Pharmacoepidemiology and Therapeutic Risk Management*. August 2019. Philadelphia, PA.

#### Recent posters (last 5 years)

- Ross RK**, Cole SR, Edwards JK, Price J, Westreich D, Daniels J, Stringer JSA. Leveraging external validation data for measurement error: the issue of transportability. *International Conference on Pharmacoepidemiology and Therapeutic Risk Management*. August 2023. Halifax, Canada.
- Webster-Clark M, **Ross RK**, Keil AP, Platt R. Variable Selection for Transporting to Specific Target Populations. *International Conference on Pharmacoepidemiology and Therapeutic Risk Management*. August 2023. Halifax, Canada
- Webster-Clark M, **Ross RK**, Edwards JK. Validity of Covariate Complete Case Analysis Depends on the Target and Analytic Population. *Society for Epidemiologic Research*. June 2023. Portland, OR.
- Sadinski LM, **Ross RK**, Breskin A. Model specification for outcome predictors in inverse probability weighting. *Society for Epidemiologic Research*. June 2023. Portland, OR.
- Ross RK**, Cole SR, Price J, Stringer JSAS. High blood pressure and preterm birth: exposure effects or intervention effects? *Society for Epidemiologic Research*. June 2021. Virtual Meeting.
- Ross RK**, Cole SR, Richardson DB. Decreased susceptibility of marginal effect estimates to finite sample bias. *Society for Epidemiologic Research*. December 2020. Virtual Meeting.
- Webster-Clark M, **Ross RK**, Lund JL. Prevalent New Users: When Is Time Not Enough? *International Conference on Pharmacoepidemiology and Therapeutic Risk Management*. September 2020. Virtual Meeting.
- Strassle, PD, **Ross RK**, Marx AH, Willis ZI, Farel CE, Kinlaw AC. Differential missingness of antibiotic indication in claims data. *International Conference on Pharmacoepidemiology and Therapeutic Risk Management*. September 2020. Virtual Meeting.
- Ross RK**, Breskin A, Westreich D. Missing data in the presence of confounding. *Society for Epidemiologic Research*. June 2019. Minneapolis, MN.
- Gerber JS, **Ross RK**, Xiao R, Localio AR, Grundmeier RW, Rettig SL, Teszner E, Szymczak JE, Canning D, Coffin SE. Infections after Pediatric Ambulatory Surgery: Incidence and Risk Factors. *Infectious Diseases Society of America*. October 2018. San Francisco, CA.

## TEACHING

<b>Instructor</b> , “The ABCs of M-estimation” Preconference Workshop Society for Epidemiologic Research Annual Meeting Co-instructors: Dr. Paul N. Zivich and Dr. Stephen R. Cole	June 2023
<b>Invited Lecturer</b> , “Introduction to Epidemiologic Methods” Reproductive, Pediatric, and Perinatal Epidemiology (EPID 851) Department of Epidemiology, University of North Carolina Lead course instructor: Dr. Andrew Olshan	August 2022
<b>Invited Lecturer</b> , “Generalizability and Transportability” Advanced Epidemiology Methods (EPID 722) Department of Epidemiology, University of North Carolina Co-lecturer: Lauren Zalla Lead course instructors: Dr. Jessie K. Edwards and Dr. Stephen R. Cole	February 2022
<b>Teaching Assistant</b>	Spring 2021



Advanced Epidemiology Methods (EPID 722)  
 Department of Epidemiology, University of North Carolina  
 Lead course instructors: Dr. Stephen R. Cole and Dr. Jessie K. Edwards

## SERVICE

### Ad Hoc Reviewer

American Journal of Epidemiology, Epidemiology, International Journal of Epidemiology, Clinical Epidemiology, Statistics in Medicine, Annals of Epidemiology, JAMA Network Open, BMJ, Clinical Infectious Diseases, Research Synthesis Methods, Pediatrics, Journal of Pediatric Infectious Diseases Society, Scientific Reports

### Committees

#### **Society for Epidemiologic Research**

<i>Program Co-Chair</i> , Student and Post-Doc Committee	2021-2023
<i>Member</i> , Membership committee	2016-2019
<i>Session Chair/Co-Chair</i> at Annual Meeting	
Breakfast with the Experts	2022, 2023
Speed Mentor Networking	2022, 2023
Student and Post-Doc Committee Career Panel	2022, 2023
Career Pathways for Master's Level Epidemiologist Session	2019

#### **Department of Epidemiology, University of North Carolina**

<i>Student Representative</i> , Graduate Studies Committee	2019-2020
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#### **International Society for Pharmacoepidemiology**

UNC Student Chapter	
<i>Treasurer</i>	2019-2020
<i>Treasurer-elect</i>	2018-2019

#### **Delta Omega Honorary Society**

Rollins School of Public Health, Emory University	
<i>Treasurer</i>	2010-2011

### Society membership

Society for Epidemiologic Research	2016-
International Society for Pharmacoepidemiology	2018-
Society for Pediatric and Perinatal Epidemiologic Research	2020-2022

## GRANT FUNDING

### Active

R01 DA056407, NIDA (MPI: Rudolph and Stuart)	04/17/2023 –
Design and analysis advances to improve generalizability of clinical trials for treating opioid use disorder	

Role: *Postdoctoral Research Scientist*

Pending

K99/R00, NIDA (PI: Ross)

09/01/2024 – 08/31/2029

Building evidence to optimize extended-release buprenorphine treatment for opioid use disorder

Role: *Principal Investigator*

Completed

T32 HD52468, NICHD (PI: Daniels)

08/01/2020 – 07/31/2022

Training program in reproductive, perinatal and pediatric epidemiology

Role: *Predoctoral Fellow*

R01 AI121383, NIAID (PI: Gerber)

02/15/2016 – 01/31/2021

Early life antibiotics, gut microbiome development, and risk of childhood obesity

*Significantly contributed to preparation of grant application*

CE-1304-7279, PCORI (PI: Gerber)

10/01/2013 – 09/30/2016

Comparative Effectiveness of Broad vs. Narrow Spectrum Antibiotics for Acute Respiratory Tract

Infections in Children

*Significantly contributed to preparation of grant application*