

CURRICULUM VITAE**DAVID M. VOCK****IDENTIFYING INFORMATION****Academic Rank**

Assistant Professor, Division of Biostatistics, School of Public Health, University of Minnesota

Education

Degree	Institution	Date Granted	Cumulative GPA
B.A.	St. Olaf College, Northfield, MN Mathematics and Chemistry	May 2007	3.99/4.00
M.Stat.	North Carolina State University, Raleigh, NC Statistics	May 2009	4.00/4.00
Ph.D.	North Carolina State University, Raleigh, NC Statistics Advisors: Marie Davidian & Anastasios A. Tsiatis	August 2012	4.00/4.00

Positions/Employment

Assistant Professor, Division of Biostatistics University of Minnesota, Twin Cities	August 2012 – present
Research Assistant, Department of Statistics North Carolina State University	January 2011 - July 2012 & August 2008 - August 2010
Intern, Statistics Operations Duke Clinical Research Institute	August 2008 - July 2012
Teaching Assistant, Department of Statistics North Carolina State University	August 2010 - December 2010
Graduate Industrial Trainee Gilead Sciences	March 2008 - August 2008

Current Membership in Professional Organizations

American Statistical Association
 International Biometric Society (Eastern North American Region)
 American Association for the Advancement of Science

HONORS AND AWARDS FOR RESEARCH/CREATIVE WORK, TEACHING, PUBLIC ENGAGEMENT, AND SERVICE

Internal Sources

Elected to Delta Omega National Public Health Honor Society, 2018

External Sources

Invited participant, NSF INNOVATIONS Lab, Statistical and Applied Mathematical Sciences Institute, 2015

Thomas R. Ten Have Award, Atlantic Causal Inference Conference, 2012

Best Student Poster Award for Applications in Biometry, ENAR spring meeting, 2012

Best Student Paper Award, American Statistical Association Biopharmaceutical Section, 2011

Gertrude M. Cox Outstanding Ph.D. Candidate, Top student on written preliminary exam

Department of Statistics, North Carolina State University, 2010

Gertrude M. Cox Outstanding Ph.D. Qualifier, Top student on qualifying exam

Department of Statistics, North Carolina State University, 2009

Elected to Mu Sigma Rho Statistics Honor Society, 2009

Elected to Phi Kappa Phi National Honor Society, 2008

Vertical Integration of Research and Education Fellowship

Department of Statistics, North Carolina State University, 2007

Provost Fellowship, North Carolina State University, 2007

Student Research Award, North Central Council of Latin Americanists, 2007

Undergraduate Term Paper Contest First Prize, Minnesota Economic Association, 2007

Graduated *Summa Cum Laude* with Distinction in Statistics, St. Olaf College, 2007

Elected to Phi Lambda Upsilon Chemistry Honor Society, 2007

Henry H. & Anna Tosdal Scholarship, Given to top two ranking students in senior class,

St. Olaf College, 2007

Elected to Phi Beta Kappa National Honor Society, 2006

David Bly Scholarship, Given to top two ranking students in junior class, St. Olaf College, 2006

Eli Lilly and Company Undergraduate Research Fellowship, 2006

St. Olaf College Dean's List, 2003-2007 (all semesters)

Regents Scholarship, Highest merit scholarship awarded, St. Olaf College, 2003-2007

Robert C. Byrd Scholarship, 2003-2007

National Merit Commended, 2002

RESEARCH, SCHOLARSHIP, AND CREATIVE WORK**Grants and Contracts****Received at the University of Minnesota***Grants Currently Funded**External Sources: Federal/National*

1. Role: **Principal Investigator**
(multi-PI with Joseph Koopmeiners, SPH UMN)
Source: National Institute on Drug Abuse /Food and Drug Administration
Type: **R01**
Title: Innovative Statistical Methods for Estimating the Impact of Tobacco Product Standards
Dates: 08/01/2018 – 07/31/2021
Effort: 20%
Direct cost: \$837,918

2. Role: Co-Investigator (PI: Bruce Blazar, Medicine UMN)
Source: National Center for Advancing Translational Sciences
Type: **UL1**
Title: University of Minnesota Clinical and Translational Science Institute (UMN CTSI)
Dates: 03/30/2018 – 02/28/2023
Effort: 8%
Direct Cost: \$27.1 million

3. Role: Co-Investigator (PI: Ezra Golberstein, SPH UMN)
Source: National Institute on Drug Abuse
Type: **R21/R33**
Title: PRrescribing INterventions for Chronic pain via the Electronic medical record (PRINCE)
Dates: 10/01/2017 – 09/30/2022
Effort: 3%
Direct Cost: \$310,000

4. Role: Co-Investigator (PI: Fang Yu, Nursing UMN)
Source: National Institute of Aging
Type: **R01**
Title: Efficacy and Mechanism of Combined Aerobic Exercise and Cognitive Training in MCI (The ACT Trial)
Dates: 09/01/2017 – 08/31/2022
Effort: 5%
Direct Cost: \$3.0 million

5. Role: Co-Investigator (PI: Meredith Gunlicks-Stoessel, Medicine UMN)
Source: National Institute of Mental Health
Type: **R01**
Title: An Adaptive Algorithm-Based Approach to Treatment for Adolescent Depression
Dates: 07/01/2017 – 06/30/2022
Effort: 10%
Direct Cost: \$1.9 million

6. Role: **Principal Investigator**
(multi-PI with Guadalupe Canahuate, University of Iowa; C. David Fuller, MD Anderson Cancer Center; G. Elisabeta Marai, University of Illinois at Chicago)
Source: National Cancer Institute
Type: **R01**
Title: Precision E-Radiomics: Dynamic Radiotherapy Methodology for Big Head & Neck Cancer Data
Dates: 05/16/2017 – 05/15/2020
Effort: 12%
Direct Cost: \$680,000

7. Role: **Principal Investigator**
(multi-PI with Guadalupe Canahuate, University of Iowa; C. David Fuller, MD Anderson Cancer Center; G. Elisabeta Marai, University of Illinois at Chicago)
Source: National Cancer Institute
Type: **R01**
Title: SMART-ACT: Spatial Methodological Approaches for Risk Assessment and Therapeutic Adaption in Cancer Treatment
Dates: 03/01/2017 – 03/31/2020
Effort: 20%
Direct Cost: \$1.0 million

8. Role: Co-Investigator (PIs: Lauren Keith, Imbio and Harry Lando, SPH UMN)
Source: National Cancer Institute
Type: **R44**
Title: Personalized Smoking Cessation Tool Based on Patient Lung CT Image
Dates: 09/21/2016 – 08/31/2019
Effort: Year 2: 5%; Year 3: 10%
Direct Cost: \$1.1 million

9. Role: Co-Investigator (PI: Alptekin Aksan, College of Science and Engineering UMN)
 Source: National Cancer Institute
 Type: **R33**
 Title: Validation of a Room-Temperature Storage Technique for Plasma/Serum Biospecimens
 Dates: 07/01/2016 – 06/30/2019
 Effort: 4%
 Direct Cost: \$740,000

10. Role: Co-Investigator (PI: Michele Allen, Medicine UMN)
 Source: National Institute of Mental Health
 Type: **U01**
 Title: Participatory Trial of a Health Promoting School Approach to Positive Youth Development and Wellness
 Dates: 04/08/2016 – 03/31/2021
 Effort: Years 1-2: 5%, Years 3-5: 10%
 Direct Cost: \$1.6 million

11. Role: **Principal Investigator**
 (multi-PI with Joseph Koopmeiners, SPH UMN)
 Source: National Institute on Drug Abuse/Food and Drug Administration
 Type: **R03**
 Title: Innovative Statistical Methods for Detecting and Accounting for Non-Compliance in Randomized Clinical Trials of Very Low Nicotine Content Cigarettes
 Dates: 04/01/2016 – 03/31/2019
 Effort: 10%
 Direct Cost: \$150,000

12. Role: Co-Investigator (PI: Adam Kuchnia, College of Food, Agricultural and Natural Resource Sciences UMN)
 Source: ASPEN Rhoads Research Foundation
 Title: Determination of Protein Requirements Using a Stable Isotope Multi-Step Feeding Protocol and Evaluation of an Innovative Ultrasound Device and Other Bedside Technologies for Lean Tissue Assessment in Individuals with Head and Neck Cancer
 Dates: 01/01/2016 – 12/31/2018
 Effort: 1%
 Direct Cost: \$50,000

13. Role: Co-Investigator (PI: Anne Joseph, Medicine UMN)
 Source: National Cancer Institute
 Type: **R01**
 Title: Adaptive Interventions for Smoking Cessation in Lung Cancer Screening Programs
 Dates: 09/29/2015 – 09/28/2020
 Effort: Year 1: 10%, Years 2-4: 5%, Year 5: 20%
 Direct Cost: \$2.1 million

14. Role: Co-Investigator (PI: Danni Li, Medicine UMN)
 Source: Alzheimer's Association
 Title: Vascular Biomarkers to Predict Response to Exercise in Alzheimer's Disease
 Dates: 09/01/2015 – 08/31/2018
 Effort: Year 1: 3%, Year 2: 5%
 Direct Cost: \$91,000

15. Role: Co-Investigator (PI: Peter Scal, Medicine UMN)
 Source: Centers for Disease Control and Prevention
 Title: Youth, Epilepsy and Successful Self-Management
 Dates: 09/30/2014 – 09/29/2019
 Effort: Year 1: 2%, Year 2, 4, 5: 5%, Year 3: 6%
 Direct Cost: \$4.8 million

16. Role: Co-Investigator (PI: James Neaton, SPH UMN)
 Source: Leidos/National Cancer Institute/National Institute of Allergy and Infectious Diseases
 Title: Anti-Influenza Hyperimmune Intravenous Immunoglobulin Clinical Outcome Study
 Dates: 10/23/2013 – 09/30/2018
 Effort: 10%
 Direct Cost: \$19.7 million

17. Role: Co-Investigator (PI: Fang Yu, Nursing UMN)
 Source: National Institute of Aging
 Type: **R01**
 Title: Aerobic Exercise in AD: Cognition and Hippocampal Volume Effect
 Dates: 08/01/2013 – 04/30/2019
 Effort: Years 1-4: 4%, Year 5: 10%
 Direct Cost: \$2.2 million

Grants Currently Funded

Internal Sources: University of Minnesota

1. Role: Co-Investigator (PI: Kamakshi Lakshminarayan, SPH UMN)
 Source: Academic Health Center Faculty Research Development Grant
 Title: Formative Research toward a Mobile Technology Facilitated Chronic Care Model: mGlide Infrastructure Development
 Dates: 09/01/2016 – 08/31/2018
 Effort: 0% (fund support staff)
 Direct Cost: \$180,000

Contracts Currently Funded

External Source: Federal/National

1. Role: Co-Investigator (PI: Nathan Shippee, SPH UMN)
 Source: Parkland Center for Clinical Information
 Title: Evaluation of Dallas IEP
 Dates: 04/01/17 – 06/30/20
 Effort: 8%

Internal Source: University of Minnesota

1. Role: Senior statistician
 Source: Division of Transplant Surgery, Department of Surgery
 Title: Biostatistical Support for Transplant Outcomes Research
 Dates: 10/08/2015 - present
 Effort: 20%

Grants Previously Funded and Concluded

External Source: Federal/National

1. Role: **Principal Investigator**
 (multi-PI with Guadalupe Canahuate, University of Iowa; C. David Fuller, MD Anderson Cancer Center; G. Elisabeta Marai)
 Source: National Science Foundation
 Title: QUBBD: Collaborative Research SMART: Spatial-Nonspatial Multidimensional Adaptive Radiotherapy Treatment
 Dates: 09/16/2015 – 08/31/2016
 Effort: 8%
2. Role: **Principal Investigator**
 Source: Subcontract from University of Pennsylvania (prime: National Institute of Diabetes and Digestive and Kidney Diseases)
 Title: Overcoming Challenges Associated with Artificial Censoring in Structural Nested Failure Time Models
 Dates: 04/01/2013 – 07/31/2015
 Effort: 7.5%
3. Role: Co-Investigator (PI: Carrie Earthman, College of Food, Agricultural and Natural Resource Sciences UMN)
 Source: Nutricia Research Foundation
 Title: Determination of Protein Requirements Using a Stable Isotope Multi-Step Feeding Protocol and Evaluation of an Innovative Ultrasound Device and Other Bedside Technologies for Lean Tissue Assessment in Individuals with Head and Neck Cancer
 Dates: 01/01/2016 – 08/31/2017
 Effort: 1%
4. Role: Biostatistician (PI: Dorothy Hatsukami, Medicine UMN)
 Source: National Cancer Institute
 Title: Models for Tobacco Products Evaluation
 Dates: 09/20/2012 – 09/19/2017
 Effort: 10% (from February 1, 2013 – November 1, 2015)
5. Role: Member, Biostatistics Design and Analysis Center (core PI: John Connett, SPH UMN)
 Source: National Center for Advancing Translational Sciences
 Title: University of Minnesota Clinical and Translational Science Institute
 Dates: 06/01/2011 – 05/31/2016
 Effort: 20% (7/1/15 – 10/7/2015), 5% (10/8/2015 – 05/31/16)

Grants Previously Funded and Concluded
Internal Source: University of Minnesota

1. Role: **Co-Principal Investigator**
 (Co-PI Julian Wolfson)
 Source: Clinical Translational Research Services (CTRS) Research Services Pilot Award
 Title: A Causal Inference-Based Software Tool for Determining the Effects of Treatment on the Risk of Cardiovascular Events Among Patients with Type 2 Diabetes
 Dates: 10/01/2013 – 09 /30/2014
 Effort: 0% (funds CTSI services)

2. Role: **Principal Investigator**
 Source: Office of the Vice President for Research Grant in Aid of Research, Artistry & Scholarship
 Title: Biostatistical Methods to Develop Personalized Treatment Strategies for Patients Awaiting Organ Transplant
 Dates: 07/01/2013 – 01/15/2015
 Effort: 0% (funds graduate student)

Contracts Previously Funded and Concluded
Internal Source: University of Minnesota

1. Role: Senior statistician
 Source: Academic Health Center
 Title: University of Minnesota Clinical and Translational Science Institute Bridge Funding
 Dates: 06/01/2016 – 03/29/2018
 Effort: 2%

2. Role: Senior statistician
 Source: Department of Pediatrics
 Title: Biostatistical Support for Pediatric Infectious Disease Research and Mentorship of Students
 Dates: 12/01/2015 – 09/01/2017
 Effort: 5%

Grants Submitted and Under Review (Decision Pending)
External Source: Federal/National

1. Role: Co-Investigator (PI: Kamakshi Lakshminarayan, SPH UMN)
 Source: National Institutes of Health
 Type: **R01**
 Title: mGlide RCT: A Multi-Level mHealth Intervention to Improve Hypertension Management
 Dates: 09/01/2018 – 08/31/2023 (resubmission)
 07/01/2017 – 06/30/2022 (original submission)
 Status: **Recommended for funding**
 Effort: 5%

2. Role: Co-Investigator (PI: Gerald August, College of Education and Human Development UMN)
 Source: National Institutes of Health
 Title: Center for Precision Care (CPC) in the Treatment of Youth Depression
 Dates: 03/01/2019 – 02/28/2023
 Status: Under Review
 Effort: 15%

3. Role: Biostatistician (PI: Claudia Fox, Medicine UMN)
 Source: National Institutes of Health
 Title: SMART Use of Medication for the Treatment of Adolescent Severe Obesity
 Dates: 12/01/2018 – 11/30/2023
 Status: Under Review
 Effort: 20%

Publications

(Student and post-doctoral trainee authors are underlined; students for which Dr. Vock was the primary or co-primary mentor are indicated by †.)

Refereed/Peer-Reviewed Journal Articles

1. Serrano OK, Bangdiwala AS, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Kandaswamy R, Pruett TL, Matas AJ, Chavers B. (2018+) Incidence of post-transplant cardiovascular disease after pediatric kidney transplantation: risk factor analysis of 1058 pediatric kidney transplants at the University of Minnesota. *Pediatric Transplantation* (In press).
2. Elhalawani H, Lin TA, Volpe S, Mohamed ASR, White AL, Zafereo J, Wong A, Berends JE, Abohashem S, Williams B, Aymard JM, Kanwar A, Perni S, Rock CD, Cooksey L, Campbell S, Yang P, Nguyen K, Ger R, Cardenas CE, Fave X, Sansone C, Piantadosi G, Marrone S, Liu R, Huang C, Yu K, Li T, Yu Y, Zhang Y, Zhu H, Morris JS, Baladandayuthapani V, Shumway JW, Ghosh A, Pöhlmann A, Phoulady HA, Goyal V, Canahuate G, Marai GE, **Vock D**, Lai SY, Mackin DS, Court LE, Freymann J, Farahani K, Kalpathy-Cramer J, Fuller CD. (2018+) Machine learning applications in head and neck radiation oncology: lessons from open-source radiomics challenges. *Frontiers in Oncology* (In press).
3. Serrano OK, Sengupta B, Bangdiwala A, **Vock DM**, Dunn TB, Finger EB, Pruett TL, Matas AJ, Kandaswamy R. (2018+) Implications of excess weight on kidney donation: long-term consequences of donor nephrectomy in obese donors. *Surgery* (In press).
4. †Boatman JA, **Vock DM**, Koopmeiners JS. (2018+) Efficiency and robustness of causal effect estimators when noncompliance is measured with error. *Statistics in Medicine* (In press).
5. Yadav K, **Vock DM**, Matas AJ, Robiner WN, Nevins TE. (2018+) Posttransplant medication adherence comes at a cost: increased risk of cancer. *Nephrology Dialysis Transplantation* (In press).
6. Serrano OK, **Vock DM**, Dunn TB, Kandasawmy R, Finger EB. (2018+) Maximizing utilization in pancreas transplantation: phenotypic characteristics differentiating aggressive from nonaggressive transplant centers. *Transplantation* (In press). doi: 10.1097/TP.0000000000002334 PMID: 29944617
7. †Boatman JA, **Vock DM**. (2018+) Estimating the causal effect of treatment regimes for organ transplantation. *Biometrics* (In press). doi: 10.1111/biom.12921 PMID: 29992533
8. Larson DB, Wiseman JF, **Vock DM**, Berglund DM, Roman AM, Ibrahim HN, Matas AJ. (2018+) Financial burden associated with time to return to work after living kidney donation. *American Journal of Transplantation* (In press). doi: 10.1111/ajt.14949 PMID: 29799662
9. Serrano OK, Yadav K, Bangdiwala A, **Vock DM**, Dunn TB, Finger EB, Pruett TL, Matas AJ, Kandaswamy R. (2018+) Age alone is not a contraindication to kidney donation: outcomes of donor nephrectomy in the elderly. *Clinical Transplantation* (In press). doi: 10.1111/ctr.13287 PMID: 29923234

10. Gunlicks-Stoessel M, Mufson L, Bernstein G, Westervelt A, Reigstad K, Klimes-Dougan B, Cullen K, Murray A, **Vock D**. (2018+) Critical decision points for augmenting interpersonal psychotherapy for depressed adolescents: a pilot SMART. *Journal of the American Academy of Child & Adolescent Psychiatry* (In press).
11. Serrano OK, **Vock DM**, Chinnakotla S, Dunn TB, Kandaswamy R, Pruett TL, Feldman R, Matas AJ, Finger EB. (2018+) The relationships between cold ischemia time, kidney transplant length of stay, and transplant-related costs. *Transplantation* (In press). doi: 10.1097/TP.0000000000002309 PMID: 29863580
12. Marai GE, Ma C, Burks A, Pellolio F, Canahuate GM, **Vock DM**, Mohamed ASR, Fuller CD. (2018+) Precision risk analysis of cancer therapy with interactive nomograms and survival plots. *IEEE Transactions on Visualization and Computer Graphics* (In press). doi: 10.1109/TVCG.2018.2817557
13. Mulcahy CF, Mohamed ASR, Kanwar A, Hutcheson K, Ghosh A, **Vock D**, Weber RS, Lai SY, Gunn GB, Zafereo M, Morrison WH, Ferrarotto R, Garden AS, Rosenthal DI, Fuller CD. (2018+) Age-adjusted comorbidity and survival in locally advanced laryngeal cancer. *Head & Neck* (In press). doi: 10.1002/hed.25200 PMID: 29756307
14. Vickery KD, Shippee ND, Menk JS, Owen R, **Vock DM**, Bodurtha P, Soderlund D, Hayward RA, Davis MM, Connett J, Linzer M. (2018+) Integrated, accountable care for Medicaid expansion enrollees: A comparative evaluation of Hennepin Health. *Medical Care Research & Review* (In press). doi: 10.1177/1077558718769481 PMID: 29749302
15. Leither MD, Murphy DP, Bicknese L, Reule S, **Vock DM**, Ishani A, Foley RN, Drawz P. (2018+) The impact of outpatient acute kidney injury on mortality and chronic kidney disease: a retrospective cohort study. *Nephrology Dialysis Transplantation* (In press). doi: 10.1093/ndt/gfy036 PMID: 29579290
16. Kehm RD, Osypuk, TL, Poynter JN, **Vock DM**, Altekruise S, Spector LG. (2018+) Does socioeconomic status account for racial and ethnic disparities in childhood cancer survival? *Cancer* (In press).
17. Teigen LM, Kuchnia AJ, Deuth C, Nagel E, **Vock DM**, Mulasi U, Earthman CP. (2018) The impact of software selection and ImageJ corrigendum on skeletal muscle measures at the third lumbar vertebrae of computerized tomography scans in clinical populations. *Journal of Parenteral and Enteral Nutrition* **42**(5):933-941. doi: 10.1002/jpen.1036
18. Mulasi U, **Vock DM**, Kuchnia AJ, Jha G, Fujioka N, Rudrapatna V, Patel MR, Teigen L, Earthman CP. (2018+) Malnutrition identified by the Academy of Nutrition and Dietetics and American Society for Parenteral and Enteral Nutrition Consensus Criteria and other bedside tools is highly prevalent throughout treatment course in head and neck cancer. *Journal of Parenteral and Enteral Nutrition* **42**(1):139-147. doi:10.1177/0148607116672264 PMID: 27875280

19. Sidebottom AC, Sillah A, **Vock DM**, Miedema MD, Pereira R, Benson G, Lindberg R, Boucher JL, Knickelbine T, VanWormer J. (2018) Assessing the effect of the Heart of New Ulm Project: a population-based program to reduce cardiovascular disease. *Preventative Medicine* **112**:216-221. doi: 10.1016/j.ypmed.2018.04.016 PMID: 29634974
20. **Vock DM**, Boehm Vock LF. (2018) Estimating the effect of plate discipline using a causal inference framework: an application of the G-computation algorithm. *Journal of Quantitative Analysis in Sports* **14**(2):37-56. doi:10.1515/jqas-2016-0029
21. Matas AJ, Berglund DM, **Vock DM**, Ibrahim HN. (2018) Causes and timing of end-stage renal disease after living kidney donation. *American Journal of Transplantation* **18**(5):1140-1150. doi: 10.1111/ajt.14671 PMID: 29369517
22. Teigen LM, DiCecco SR, **Vock DM**, Hurley DL. (2018) Use of both quantitative and qualitative methods to improve assessment of resting energy expenditure equation performance in hospitalized adults. *Clinical Nutrition ESPEN* **24**:120-126. doi: 10.1016/j.clnesp.2018.01.001 PMID: 29576349
23. †McKernan SB, Wolfson J, **Vock DM**, Vazquez-Benitez G, O'Connor PJ. (2018) Performance of the net reclassification improvement for non-nested models and a novel percentile-based alternative. *American Journal of Epidemiology* **187**(6):1327-1335. doi: 10.1093/aje/kwx374 PMID: 29304237 PMCID: PMC5982725
24. Kehm RD, Osypuk TL, Poynter JN, **Vock DM**, Spector LG. (2018) Do pregnancy characteristics contribute to rising childhood cancer incidence rates in the United States? *Pediatric Blood & Cancer* **65**(3). doi: 10.1002/pbc.26888 PMID: 29160610 PMCID: PMC5766387
25. Joseph AM, Rothman A, Almirall A, Begnaud A, Chiles C, Cincirpini P, Fu SS, Graham A, Lindgren BS, Melzer A, Ostroff J, Seaman E, Taylor K, Toll B, Zeliadt S, **Vock DM**. (2018) Lung cancer screening and smoking cessation clinical trials: SCALE collaboration. *American Journal of Respiratory and Critical Care Medicine* **197**(2):172-182. doi: 10.1164/rccm.201705-0909CI PMID: 28977754 PMCID: PMC5768904
26. Elhalawani H, Kanwar A, Mohamed ASR, White A, Zafereo J, Wong A, Berends J, Abohashem S, Kamal M, Williams B, Aymard JM, Perni S, Yang P, Meheissen M, Elgohari B, Ger R, Cardenas C, Fave X, Zhang L, Mackin D, Marai GE, **Vock DM**, Canahuate GM, Lai SY, Gunn GB, Garden AS, Rosenthal DI, Court L, Fuller CD. (2018) Investigation of radiomic signatures for local recurrence using primary tumor texture analysis in oropharyngeal head and neck cancer patients. *Nature Scientific Reports* **8**(Article Number 1524):1-13. doi: 10.1038/s41598-017-14687-0 PMID: 29367653 PMCID: PMC5784146
27. Matas AJ, **Vock DM**, Ibrahim HN. (2018) GFR \leq 25 years postdonation in living kidney donors with (vs. without) a first-degree relative with ESRD. *American Journal of Transplantation* **18**(3):625-631. doi: 10.1111/ajt.14525 PMID: 28980397 PMCID: PMC5820146

28. Kehm RD, Spector L, Poynter J, **Vock DM**, Osypuk TL. (2018) Socioeconomic status and childhood cancer incidence: a population-based multilevel analysis. *American Journal of Epidemiology* **187**(5):982-991. doi: 10.1093/aje/kwx322 PMID: 29036606 PMCID: PMC5928452
29. Yu F, **Vock DM**, Barclay TR. (2018) Executive function: responses to aerobic exercise in Alzheimer's disease. *Geriatric Nursing* **39**(2):219-224. doi: 10.1016/j.gerinurse.2017.09.005 PMID: 29031520 PMCID: PMC5897173
30. †Koch B, **Vock DM**, Wolfson J. (2018) Covariate selection with group lasso and doubly robust estimation of causal effects. *Biometrics* **74**(1):8-17. doi: 10.1111/biom.12736 PMID: 28636276 PMCID: PMC5740021
31. †Boatman JA, **Vock DM**, Koopmeiners JS, Donny EC. (2018) Estimating causal effects from a randomized clinical trial when noncompliance is measured with error. *Biostatistics* **19**(1):103-118. doi: 10.1093/biostatistics/kxx029 PMID: 28605411
32. Fu S, Rothman A, **Vock DM**, Begnaud A, Melzer A, Lindgren B, Rice K, Almira D, Schertz K, Glaeser S, Joseph AM. (2017) Interventions for smoking cessation in lung cancer screening programs: study protocol of a sequential, multiple assignment, randomized trial. *Contemporary Clinical Trials* **60**:86-95. doi: 10.1016/j.cct.2017.07.002 PMID: 28687349 PMCID: PMC5558455
33. Ibrahim HN, Berglund DM, Jackson S, **Vock DM**, Foley RN, Matas AJ. (2017) Renal consequences of diabetes after kidney donation. *American Journal of Transplantation* **17**(12):3141-3148. doi: 10.1111/ajt.14416 PMID: 28681494 PMCID: PMC5693658
34. Serrano OK, Bangdiwala AS, **Vock DM**, Chinnakotla S, Dunn TB, Finger EB, Kandaswamy R, Pruett TL, Najarian JS, Matas AJ, Chavers BM. (2017) Post-transplant malignancy after pediatric kidney transplantation: retrospective analysis of incidence and risk factors in 884 patients transplanted between 1963 and 2015 at the University of Minnesota. *Journal of the American College of Surgeons* **225**(2):181-193. doi: 10.1016/j.jamcollsurg.2017.04.012 PMID: 28445794
35. Elhalawani H, Mohamed ASR, White AL, Zafereo J, Wong AJ, Berends JE, AboHashem S, Williams B, Aymard J, Kanwar A, Perni S, Rock CD, Cooksey L, Campbell S, Ding Y, Lai SY, Marai GE, **Vock D**, Canahuate GM, Freymann J, Farahani K, Kalpathy-Cramer J, Fuller CD. (2017) Matched computed tomography segmentation and demographic data for oropharyngeal cancer radiomics challenges. *Nature Scientific Data* **4**(Article Number 170077):1-14. doi: 10.1038/sdata.2017.77 PMID: 28675381 PMCID: PMC5497772
36. Wolfson J, **Vock DM**, Bandyopadhyay S, Vazquez-Benitez G, Johnson PE, Adomavicius G, O'Connor PJ. (2017) Use and customization of risk scores for predicting cardiovascular events using electronic health record data. *Journal of the American Heart Association* **6**(4):1-11. doi: 10.1161/JAHA.116.003670 PMID: 28438733 PMCID: PMC5532984

37. †Peterson RL, **Vock DM**, Powers JH, Emery S, Fernandez Cruz E, Hunsberger S, Jain MK, Pett S, Neaton JD. (2017) Analysis of an ordinal endpoint for use in evaluating treatments for severe influenza requiring hospitalization. *Clinical Trials* **14**(3):264-276. doi: 10.1177/1740774517697919 PMID: 28397569 PMCID: PMC5528156
38. Serrano OK, Bangdiwala AS, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Pruett TL, Matas AJ, Kandaswamy R. (2017) Defining the tipping point in surgical performance for laparoscopic donor nephrectomy among transplant surgery fellows: a risk-adjusted cumulative summation learning curve analysis. *American Journal of Transplantation* **17**(7):1868-1878. doi: 10.1111/ajt.14187 PMID: 28029219
39. Sheu T, **Vock DM**, Mohamed A, Gross N, Mulcahy C, Zafereo M, Gunn G, Sevak P, Phan J, Lewin J, Frank S, Beadle B, Morrison W, Lai S, Hutcheson K, Marai GE, Canahuate G, Kies M, El-Naggar A, Weber R, Rosenthal D, Fuller CD. (2017) Conditional survival analysis of patients with locally advanced laryngeal cancer: construction of a dynamic risk model and clinical nomogram. *Nature Scientific Reports* **7**(Article Number 43928):1-10. doi: 10.1038/srep43928 PMID: 28276466 PMCID: PMC5343446.
40. **Vock DM**, Durheim MT, Tsuang WM, Finlen Copeland CA, Tsiatis AA, Davidian M, Lederer DJ, Neely M, Palmer SM. (2017) The survival benefit of lung transplantation in the modern era of lung allocation. *Annals of the American Thoracic Society* **14**(2):172-181. DOI: 10.1513/AnnalsATS.201606-507OC PMID: 27779905 PMCID: PMC5427730
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**** Drs. Tsuang and Vock contributed equally to the work**
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Book Chapters

1. **Vock DM**, Almirall DA. (2018+) Sequential Multiple Assignment Randomized Trials (SMART). In *Wiley StatsRef: Statistics Reference Online*. Balakrishnan N, Brandimarte P, Davidian M, Everitt B, Molenberghs G, Ruggeri F, Piegorsch W, editors. Wiley; New York (In press).
2. **Vock DM**. (2013) Challenges of Observational Designs. In *Understanding Clinical Research*. Lopes RD and Harrington RA, editors, McGraw-Hill; New York. 179-188.

Journal Articles in Revision

1. Mulasi U, **Vock DM**, Jager-Wittenaar H, Kuchnia AJ, Jha G, Fujioka N, Rudrapatna V, Patel MR, Earthman CP. (2018+) Malnutrition and its role in quality of life and coping self-efficacy among individuals with advanced head and neck cancer. (In revision to *Nutrition in Clinical Practice*).

2. **Zdilar L, Vock DM**, Marai GE, Fuller CD, Mohamed ASR, **Elhalawani H, Elgohari B**, Tirasd C, Miller A, Canahuate G. (2018+) Evaluating the effect of right-censored endpoint transformation for radiomic feature selection of oropharyngeal cancer patient data. (In revision to *JCO Clinical Cancer Informatics*)
3. Valgimigli M, Garcia HG, Pieper K, **Vock DM**, Zhang M, Vrijens B, Vranckx P, McFadden E, Costa F, Van Es GA, Tricoci P, Baber U, Steg G, Montalescot G, Angiolillo DJ, Serruys PW, Senatore FF, Windecker S, Kastrati A, Colombo A, Feres F, Jueni P, Stone G, Bhatt DL, Mehran R, Tijssen JGP. (2018+) Standardized classification and framework for reporting, interpreting and analyzing medication non-adherence in cardiovascular clinical trials: a consensus report from the Non-adherence Academic Research Consortium (NARC). (In revision to *European Heart Journal*).

Journal Articles Under Review/Submitted

1. †**Koch B, Vock DM**, Wolfson J, Boehm Vock LF. (2018+) Variable selection and estimation in causal inference using Bayesian spike and slab priors. (Submitted to *Stat*).
2. †**Ssenkusu JM, Vock DM**. (2018+) Mediation analysis for longitudinal data using regression calibration when the mediator is measured with error. (Submitted to *Statistical Methods for Medical Research*).
3. †**Ssenkusu JM, Hodges JS, Vock DM**. (2018+) Missing data and mediation analysis in longitudinal studies. (Submitted to *BMC Medical Research Methodology*).
4. **Vock DM**, Matas AJ. (2018+) Prednisone-free maintenance immunosuppression in kidney transplant recipients from at-risk subgroups: an OPTN/SRTR analysis. (Submitted to *Journal of the American Society of Nephrology*).
5. **Ng SP**, Dyer BA, Kalpathy-Cramer J, Mohamed ASR, Awan MJ, Gunn GB, Phan J, Zafereo M, Debnam JM, Lewis CM, Colen RR, Kupferman ME, Guha-Thakurta N, Canahuate G, Marai GE, **Vock D**, Hamilton B, Holland J, Cardenas CE, Lai S, Rosenthal D, Fuller CD. (2018+) A prospective in silico analysis of interdisciplinary and interobserver spatial variability in post-operative target delineation of high-risk oral cavity cancers: does physician specialty matter? (Submitted to *Clinical and Translational Radiation Oncology*).
6. **Serrano OK, Vock DM**, Kandaswamy R, Matas AJ, Pruett T, Finger EF. (2018+) The effect of the procurement surgeon on transplanted abdominal organ outcomes: an OPTN/SRTR analysis to evaluate regional organ procurement collaboration. (Submitted to *American Journal of Transplantation*)
7. **Serrano OK**, Monjan SM, Berglund DM, Goduguchinta V, Menk J, **Vock DM**, Kirchner V, Kandaswamy R, Pruett TL, Chinnakotla S. (2018+) Clinical utility of postoperative phosphate recovery profiles to predict liver insufficiency after living donor hepatectomy. (Submitted to *Surgery*).
8. Yu F, Lin FV, Salisbury DL, Shah KN, Chow L, **Vock D**, Nelson NW, Porsteinsson AP, Jack C. (2018+) Efficacy and mechanisms of combined aerobic exercise and cognitive training in mild cognitive impairment: study protocol of the ACT trial. (Submitted to *Trials*).

9. Gross AC, Kaizer AM, Vock DM, Siddiqui S, Fox CK. (2018+) Cognitive, emotional, and behavioral contributors to early childhood weight status. (Submitted to *Childhood Obesity*).
10. Hosfield C, **Vock DM**, Earthman C, Harindhanavudhi T, Puchalla J, Beckman T, Billington C, Sibley S. (2018+) Obesity and food insecurity in an academic weight management clinic. (Submitted to *Clinical Obesity*).

Journal Articles in Process/Preparation

1. †Kotalik A, **Vock DM**, Wolfson J, O'Connor PJ. (2018+) Using inverse probability of censoring weighted bagging to adapt machine learning techniques to censored data.
2. †Bandyopadhyay S, Wolfson J, **Vock DM**, Adomavicius G, Vazquez-Benitez G, O'Connor PJ, Johnson PE. (2018+) A dynamic Bayesian network for modeling legacy and treatment effects on risk of cardiovascular events.
3. †Peterson RL, **Vock DM**, Wentworth D, Hunsberger S, Powers J, Neaton JD. (2018+) Comparison of an ordinal endpoint to time-to-event, longitudinal, and binary endpoints for use in evaluating treatments for severe influenza requiring hospitalization.
4. **Vock DM**, Ibrahim HM, Matas AJ. (2018+) Impact of pre-donation eGFR on long-term post-donation eGFR in younger living kidney donors.
5. Redfield R, **Vock DM**, Hays R, Grodstein E, Matas A. (2018+) Examining the impact of prolonged cold ischemia time in kidney paired donation: an analysis of the United States experience.
6. Koopmeiners JS, **Vock DM**, Boatman JA, Luo X, Hatsukami D, Benowitz N, Donny EC. (2018+) Limitations of an intention-to-treat analysis for evaluating regulatory product standards for tobacco.
7. Casty K, Boatman JA, Koopmeiners JS, **Vock DM**, Hatsukami D, Benowitz N, Donny EC. (2018+) Estimating the classification accuracy of biomarkers of compliance in studies of very low nicotine content cigarettes.
8. †Deng C, **Vock DM**, Koopmeiners JS, Hatsukami D, Benowitz N, Donny EC. (2018+) Treatment effect heterogeneity in randomized, regulatory tobacco trials.
9. †Peterson RL, **Vock DM**, Koopmeiners JS, Donny EC. (2018+) Estimating noncompliance in randomized clinical trials from longitudinal measures of biomarkers of compliance.
10. †Koch B, Wolfson J, **Vock DM**. (2018+) A matching-based approach to assessing treatment effect heterogeneity using conditional inference trees.
11. Zdilar L, **Vock DM**, Marai GE, Fuller CD, Mohamed ASR, Elhalawani H, Elgohari B, Tiras C, Miller A, Canahuate G. (2018+) Cluster analysis of oropharyngeal cancer patients using random forest based-learning over high-dimensional radiomic features.

12. Tosado J, Zdilar L, **Vock DM**, Marai GE, Fuller CD, Mohamed ASR, Elhalawani H, Elgohari B, Canahuate G. (2018+) Clustering of largely right-censored oropharyngeal head and neck cancer patients for discriminative groupings to improve outcome prediction.
13. †McKearnan SB, **Vock DM**, Wolfson J, Canahuate G, Marai GE, Mohamed ASR, Elhalawani H, Elgohari B, Fuller CD. (2018+) Use of genetic algorithm for feature selection in support vector regression.
14. †Park JY, **Vock DM**, Canahuate G, Marai GE, Mohamed ASR, Elhalawani H, Elgohari B, Fuller CD. (2018+) Adapting machine learning techniques to censored time-to-event health record data by modeling the discrete-time hazard.
15. Luciani T, Canahuate G, **Vock DM**, Mohamed ASR, Elhalawani H, Elgohari B, Fuller CD, Marai GE. (2018+) Development of a spatial similarity metric for clustering patients based on infected lymph node patterns.
16. **Vock DM**, Alimiral DA, Rothman A, Fu S, Lindgren B, Begnaud A, Melzer A, Rice K, Almiral D, Schertz K, Glaeser S, Joseph AM. (2018+) Considerations for designing a sequential multiple assignment randomized trial in smoking cessation.
17. **Vock DM**. (2018+) Estimating cross-sectional effects from a longitudinal study using joint models of longitudinal and survival data.
18. **Vock DM**. (2018+) Using pseudo-observations to estimate dynamic marginal structural models with right censored responses.
19. King JC, Beigel JH, Ison MG, Rothman RE, Uyeki TM, Neaton JD, Tegeris JS, Zhou JA, Armstrong KL, Carter W, Miele P, Willis MS, Dugas AF, Tracy LA, **Vock DM**, Bright RA. (2018+) Clinical development of novel therapeutic agents for hospitalized patients with influenza: challenges and innovations.
20. Benson G, Sidebottom AC, Sillah A, **Vock DM**, Vacquier MC, Miedema MD, VanWormer JJ. (2018+) Population-level changes in lifestyle risk factors for cardiovascular disease in the Heart of New Ulm Project.

Software Development

1. *SSCE* (Spike and Slab Causal Estimator) and *BSSCE* (Bilevel Spike and Slab Causal Estimator)
 †Koch B, **Vock DM**, Wolfson J, Boehm Vock LF. (2018)
 R functions for estimating causal effects that simultaneously consider models for both outcome and treatment using a Bayesian formulation with spike and slab priors on each covariate coefficient.
 Available from: <https://github.com/drbkoch/SSCE>
2. *A-CURE* (Augmented Compliance Unsure Reweighted Estimator)
 †Boatman JA, **Vock DM**, Koopmeiners JS. (2018)
 An R function to estimate the causal effect of an intervention/treatment when compliance is measured with error using an augmented inverse probability of compliance weighted framework. Available from: <https://github.com/jeffrey-boatman/efficiency-robustness>

3. *GLiDeR* (Group Lasso, Doubly Robust)
 †[Koch B](#), [Vock DM](#), Wolfson J. (2018)
 An R function which implements a variable selection technique for identifying confounders and predictors of outcome using an adaptive group lasso approach that simultaneously performs coefficient selection, regularization, and estimation across the treatment and outcome models. The selected variables and corresponding coefficient estimates are used in a standard doubly robust ACE estimator.
 Available from:
<https://onlinelibrary.wiley.com/action/downloadSupplement?doi=10.1111%2Fbiom.12736&file=biom12736-sup-0002-SuppDataCode.zip>
4. *CURE* (Compliance Unsure Reweighted Estimator)
 †[Boatman JA](#), [Vock DM](#), Koopmeiners JS. (2017)
 An R function to estimate the causal effect of an intervention/treatment when compliance is measured with error using an inverse probability of compliance weighted framework.
 Available from: <https://github.com/jeffrey-boatman/cure-estimator>
5. *SNP_NLMM* (*Semi-NonParametric random effects for Nonlinear Mixed Effects Models*)
[Vock DM](#), Davidian M, Tsiatis AA. (2013)
 A SAS macro to implement a flexible random effects density for generalized linear and nonlinear mixed models.
 Available from <https://www.jstatsoft.org/article/view/v056c02/0>

Presentations, Posters, and Exhibits

Invited Presentations at Professional Meetings, Conferences, etc.

1. **Vock DM.** “Estimating Causal Effects and Optimal Treatment Regimes from a Randomized Clinical Trial when Noncompliance Is Measured with Error.” SAMSI Precision Medicine Opening Workshop; Raleigh, NC; August 2018.
2. **Vock DM.** “Getting SMART About Developing Adaptive Intervention Strategies.” American Statistical Association Connecticut Chapter Annual Conference; Groton, CT; April 2018.
3. **Vock DM.** “Getting SMART About Developing Adaptive Intervention Strategies.” University of Alabama Birmingham Nutrition and Obesity Research Center & Department of Nutrition Sciences Seminar; Birmingham, AL; March 2018.
4. **Vock DM.** “Estimating Individual-Level and Population-Level Causal Effects of Organ Transplantation Treatment Regimes.” Innovative Statistics and Machine Learning for Precision Medicine Workshop; Minneapolis, MN; September 2017.
5. **Vock DM.** “Adapting Trees and Other Machine Learning Techniques to Censored Time-to-Event Health Record Data.” Conference on Lifetime Data Science; Storrs, CT; May 2017.

6. **Vock DM.** “Power and Potential of Using Electronic Health Data in Clinical Research: Perspectives from a Statistician.” Gustavus Adolphus College Mathematics, Computer Science, & Statistics Colloquium; St. Peter, MN; November 2016.
7. **Vock DM, Boehm Vock LF.** “The Promises of Electronic (mostly) Health Data.” North Carolina State University Department of Statistics 75th Anniversary Symposium; Raleigh, NC; October 2016.
8. **Vock DM.** “Getting the Right Intervention to the Right Person at the Right Time: How to Further Personalize After a SMART Design.” Center for Personalized Prevention Research Colloquium; Minneapolis, MN; June 2016.
9. **Vock DM, Koch B, Wolfson J.** “GLiDeR: Doubly Robust Estimation of Causal Treatment Effects with the Group Lasso.” University of Minnesota School of Statistics; Minneapolis, MN; April 2016.
10. **Vock DM, Wolfson J, Bandyopadhyay S, Adomavicius G, Johnson PE, Vazquez-Benitez G, O'Connor PJ.** “Extending Bayesian Networks to Estimate Conditional Survival Probability Using Electronic Health Data.” ENAR Spring Meeting of the International Biometric Society; Miami, FL; March 2015.
11. **Vock DM.** “Overcoming Challenges Associated with Artificial Censoring in Structural Nested Failure Time Models.” ENAR Spring Meeting of the International Biometric Society; Baltimore, MD; March 2014.
12. **Vock DM, Tsiatis AA, Davidian M, Laber EB, Tsuang WM, Finlen Copeland CA, Palmer SM.** “Assessing the Effect of Organ Transplantation on the Distribution of Residual Lifetime.” Joint Statistical Meetings; Montreal, QC; August 2013.
13. **Vock DM.** “Using Pseudo-Observations to Estimate Dynamic Marginal Structural Models with Right Censored Responses.” Atlantic Causal Inference Conference; Boston, MA; May 2013.
14. **Vock DM.** “Do Lung Transplants Save Lives?” St. Olaf College Mathematics, Statistics, and Computer Science Research Colloquium; Northfield, MN; April 2013.
15. **Vock DM, Tsiatis AA, Davidian M, Laber EB, Tsuang WM, Finlen Copeland CA, Palmer SM.** “Assessing the Effect of Organ Transplantation on the Distribution of Residual Lifetime.” Cleveland Clinic Foundation, Department of Quantitative Health Sciences; Cleveland, OH; March 2012.
16. **Ibid.** University of Pennsylvania, Department of Biostatistics and Epidemiology; Philadelphia, PA; February 2012.
17. **Ibid.** Johns Hopkins University, Department of Biostatistics; Baltimore, MD; February 2012.
18. **Ibid.** Duke University, Department of Biostatistics and Bioinformatics; Durham, NC; February 2012.

19. Ibid. Rutgers University, Department of Statistics and Biostatistics; Piscataway, NJ; February 2012.
20. Ibid. University of South Carolina, Department of Epidemiology and Biostatistics; Columbia, SC; February 2012.
21. Ibid. National Institute of Allergy and Infectious Diseases, Biostatistics Research Branch; Bethesda, MD; February 2012.
22. Ibid. University of Wisconsin, Department of Biostatistics and Medical Informatics; Madison, WI; February 2012.
23. Ibid. University of Minnesota, Division of Biostatistics; Minneapolis, MN; January 2012.
24. Ibid. University of Pittsburgh, Department of Biostatistics; Pittsburgh, PA; January 2012.
25. Ibid. Yale University, Department of Biostatistics; New Haven, CT; January 2012.
26. Ibid. Iowa State University, Department of Statistics; Ames, IA; January 2012.
27. **Vock DM**. “Statistical Methods for Correlated Data in Biomedical Applications.” Palmer Research Group at Duke University School of Medicine; Durham, NC; July 2010.
28. **Vock DM**. “Exact Confidence Intervals for Differences in Binomial Proportions.” Gilead Sciences; Durham, NC; July 2008.
29. **Vock DM**. “The Effect of School Inputs on Dropout Rates in Minnesota School Districts.” St. Olaf College Mathematics Research Colloquium; Northfield, MN; October 2007.
30. **Vock DM**, Boehm LF, Novak N. “U.S. Farm Subsidies and Developing Countries.” St. Olaf Department of Economics Research Colloquium; Northfield, MN; April 2007.
31. **Vock DM**, Atchison EA, Legler JM, McClure DRJ, Carlyle JC, Jeavons EN, and Burton AH. “The Model Dependency on the Estimate of Global Childhood Rotavirus Deaths.” St. Olaf Mathematics, Statistics, and Computer Science Colloquium; Northfield, MN; February 2007.

Contributed Papers/Abstracts Presented at Professional Meetings

(Type of presentation given in parentheses. First author listed was the presenter. Student and post-doctoral trainee authors are underlined; students for which Dr. Vock was the primary or co-primary mentor are indicated by †.)

1. **Vock DM**, Boatman JA. “Estimating Causal Effects of Organ Transplantation Treatment Regimes.” Joint Statistical Meetings; Vancouver BC; August 2018 (topic contributed oral presentation).
2. Koopmeiners JS, Kotalik A, **Vock DM**. “Adaptively Incorporating Supplemental Information in Clinical Trials in the Presence of Population Heterogeneity.” Joint Statistical Meetings; Vancouver BC; August 2018 (poster presentation).

3. **Vock D**, Matas A. “Impact of Rapid Discontinuation of Prednisone on Kidney Transplant Outcomes in At-Risk Subpopulations: An OPTN/SRTR Analysis.” American Transplant Congress; Seattle, WA; June 2018 (oral presentation).
4. Serrano O, Mongin S, Berglund D, **Vock D**, Chinnakotla S, Dunn T, Finger E, Kandaswamy R, Pruett T, Matas A. “Impact of Antecedent Malignancy on Kidney Transplant Outcomes: Patient, Graft, and Cancer-Free Survival.” American Transplant Congress; Seattle, WA; June 2018 (poster presentation).
5. Serrano OK, **Vock DM**, Dunn, TB, Kandaswamy R, Finger EB. “Maximizing Utilization in Pancreas Transplantation: Phenotypic Characteristics Differentiating Aggressive from Nonaggressive Transplant Centers.” American Transplant Congress; Seattle, WA; June 2018 (poster presentation).
6. Serrano O, Peterson K, **Vock D**, Berglund D, Kandaswamy R, Lake J, Pruett T, Chinnakotla S. “Clinical Impact of Antecedent Bariatric Surgery on Liver Transplant Outcomes: A Retrospective Matched Case-Control Study.” American Transplant Congress; Seattle, WA; June 2018 (poster presentation).
7. Riad S, Keys D, **Vock D**, Jackson S, Berglund D, Vakil V, Matas A, Ibrahim H. “Impact of Glomerular Filtration Rate Normalization to Body Surface Area on Donor Selection and Outcome in over 4000 Living Kidney Donors.” American Transplant Congress; Seattle, WA; June 2018 (poster presentation).
8. Peterson K, Serrano O, Odegard M, Mongin S, Berglund D, **Vock D**, Chinnakotla S, Dunn T, Finger E, Kandaswamy R, Pruett T, Matas A. “Challenges in Cultural and Linguistic Discordance in Caring for Somali Kidney Transplant Recipients at a Large-Volume Transplant Center.” American Transplant Congress; Seattle, WA; June 2018 (poster presentation).
9. Odegard M, Serrano O, Peterson K, Mongin S, Berglund D, **Vock D**, Chinnakotla S, Dunn T, Finger E, Kandaswamy R, Pruett T, Matas A. “Delivery of Culturally-Competent Transplant Care Among Hmong Kidney Transplant Recipients: Outcomes from a Single Institution.” American Transplant Congress; Seattle, WA; June 2018 (poster presentation).
10. **Vock DM**, Boatman JA, Koopmeiners JS. “Estimating Causal Effects from Using Augmented Inverse Probability Weighted Estimators When Noncompliance Is Measured with Error.” Joint Statistical Meetings; Baltimore, MD; August 2017 (speed and poster presentation).
11. †Koch B, Wolfson J, **Vock DM**. “Variable Selection and Estimation in Causal Inference Using a Bayesian Group Lasso Approach.” Joint Statistical Meetings; Baltimore, MD; August 2017 (contributed oral presentation).
12. †Boatman JA, **Vock DM**, Koopmeiners JS, Donny EC. “Estimating Causal Effects from a Randomized Clinical Trial When Noncompliance Is Measured with Error.” Joint Statistical Meetings; Baltimore, MD; August 2017 (topic contributed oral presentation).

13. **Vock DM, Boatman JA, Koopmeiners JS, Donny EC.** “Estimating Causal Effects from a Randomized Clinical Trial When Noncompliance Is Measured with Error.” Atlantic Causal Inference Conference; Chapel Hill, NC; May 2017 (poster presentation).
14. **Vock D, Ibrahim H, Matas A.** “Impact of Pre-Donation eGFR on Long-Term Post-Donation eGFR in Younger Living Kidney Donors.” American Transplant Congress; Chicago, IL; April 2017 (poster presentation).
15. Redfield R, **Vock D, Hayes R, Matas A.** “Impact of Cold Ischemia Time on Outcomes in Kidney Paired Donation (KPD).” American Transplant Congress; Chicago, IL; April 2017 (oral presentation).
16. Larson D, Berglund D, **Vock D, Roman A, Wiseman J, Ibrahim H, Matas A.** “Financial Burden and Time to Returning to Work Among Living Kidney Donors.” American Transplant Congress; Chicago, IL; April 2017 (oral presentation).
17. Serrano O, Vock D, Kandaswamy R, Pruett T, Matas A, Finger E. “The Effect of the Procurement Surgeon on Transplanted Abdominal Organ Outcomes: An OPTN/SRTR Analysis to Evaluate Regional Organ Procurement Collaboration.” American Transplant Congress; Chicago, IL; April 2017 (oral presentation).
18. Kirchner V, Bandgdiwala A, **Vock D, Hassan M, Kandaswamy R, Lake J, Lim N, Mahgoub A, Minja E, Pugalenth A, Sengupta B, Serrano O, Thompson J, Payne W, Pruett T, Chinnakotla S.** “Early Acute Cellular Rejection(eACR) as a Marker of Immunologic Competency Following Liver Transplantation(LT).” American Transplant Congress; Chicago, IL; April 2017 (oral presentation).
19. Serrano O, Berglund D, Goduguchinta V, Reddy A, Menk J, Vock D, Kirchner V, Kandaswamy R, Matas A, Pruett T, Chinnakotla S. “Recovery from Hypophosphatemia as a Predictor of Post-Operative Morbidity in Live Donor Hepatectomy.” American Transplant Congress; Chicago, IL; April 2017 (poster presentation).
20. Kirchner V, Bagdiwala A, **Vock D, Bellin M, Beilman G, Berry L, Chinnakotla S, Dunn T, Freeman M, Sutherland D, Pruett T.** “Patterns and Associated Risk Factors for Early Readmissions Post Total Pancreatectomy and Islet Auto-Transplantation (TP-IAT).” American Transplant Congress; Chicago, IL; April 2017 (poster presentation).
21. †Boatman JA, Vock DM, Koopmeiners JS, Donny EC. “Estimating Causal Effects from a Randomized Clinical Trial When Noncompliance Is Measured with Error.” ENAR Spring Meeting of the International Biometric Society; Washington, DC; March 2017 (contributed oral presentation).
22. †Kotalik A, Vock DM, Wolfson J, O’Connor P. “Using Inverse Probability of Censoring Weighted Bagging to Adapt Machine Learning Techniques to Censored Data.” American Heart Association Epi Lifestyle Annual Meeting; Portland, OR; March 2017 (poster presentation).

23. Sidebottom AC, Sillah A, **Vock DM**, Miedema MD, Pereira R, Benson G, Lindberg R, Boucher JL, Knickelbine T, VanWormer JJ. "Assessing the Effect of the Heart of New Ulm Project: A Population-Based Program to Reduce Cardiovascular Disease." American Heart Association Epi Lifestyle Annual Meeting; Portland, OR; March 2017 (poster presentation).
24. Nelson NW, Yu F, **Vock DM**. "Relative Predictive Values of the MMSE and ADAS-Cog for Dementia Stage and Daily Function in Alzheimer's Disease." 45th Annual Meeting of the International Neuropsychological Society; New Orleans, LA; February 2017 (poster presentation).
25. Hosfield C, Vock D, Harindhanavudhi T, Beckman TR, Billington C, Sibley SD. "Food Insecurity and Obesity: Experience from an Academic Weight Management Clinic." ObesityWeek 2016; Washington DC, October 2016 (poster presentation).
26. Kanwar A, Mohamed ASR, Court LE, Zhang L, Marai GE, Canahuate G, Lee JS, Perni S, Messer JA, Pham BH, Youssef B, Vock D, Rao A, Kalpathy-Cramer J, Gunn GB, Rosenthal DI, Fuller CD. "Development of a Predictive Quantitative Contrast Computed Tomography-Based Feature (Radiomics) Profile for Local Recurrence in Oropharyngeal Cancers." American Society for Radiation Oncology Annual Meeting; Boston, MA; September 2016 (poster presentation)
27. Serrano OK, Bangdiwala AS, **Vock DM**, Kirchner V, Berglund D, Dunn TB, Finger EB, Pruett TL, Matas AJ, Kandaswamy R. "Delineating Optimal Surgical Performance in Laparoscopic Donor Nephrectomy Among Transplant Surgery Fellows: A Learning Curve Analysis." American College of Surgeons Clinical Congress; Washington, DC; October 2016.
28. Serrano OK, Bangdiwala AS, **Vock DM**, Dunn TB, Chinnakotla S, Finger EB, Kandaswamy R, Pruett TL, Matas AJ, Chavers B. "Risk Factors for Developing Adult Cardiovascular Disease in Children Who Received a Kidney Transplant: Analysis of 1,055 Kidney Transplants between 1963-2015 at a Single Institution." American College of Surgeons Clinical Congress; Washington, DC; October 2016.
29. Serrano OK, Bangdiwala AS, **Vock DM**, Dunn TB, Chinnakotla S, Finger EB, Kandaswamy R, Pruett TL, Matas AJ, Chavers B. "Risk Factors for Developing Post-Transplant Malignancy in Children Who Receive a Kidney Transplant: Analysis of 1,055 Kidney Transplants between 1963 and 2015 at a Single Institution." American College of Surgeons Clinical Congress; Washington, DC; October 2016.
30. Serrano OK, Bangdiwala AS, **Vock DM**, Kirchner V, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Pruett TL, Matas AJ, Kandaswamy R. "Delineating Optimal Surgical Performance in Laparoscopic Donor Nephrectomy Among Transplant Surgery Fellows: A Learning Curve Analysis." American College of Surgeons Clinical Congress; Washington, DC; October 2016.
31. Serrano OK, Bangdiwala AS, **Vock DM**, Kirchner V, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Pruett TL, Matas AJ, Kandaswamy R. "Defining the Tipping Point in Surgical Performance in Laparoscopic Donor Nephrectomy During Abdominal Transplant Surgery Fellowship: A Learning Curve Analysis." The Transplantation Society Congress; Hong Kong; August 2016.

32. Serrano OK, Kirchner V, Bangdiwala AS, **Vock DM**, Dunn TB, Finger EB, Payne WD, Pruett TL, Sutherland DER, Najarian JS, Matas AJ, Kandaswamy R. “Evolution of Living Donor Nephrectomy at a Single Center: Long-Term Outcomes with 4 Different Techniques in > 4,000 Donors for Over Half-Century.” The Transplantation Society Congress; Hong Kong; August 2016.
33. Serrano OK, **Vock DM**, Dunn TB, Chinnakotla S, Kandaswamy R, Pruett TL, Matas AJ, Payne WE, Feldman R, Finger EB. “Financial Cost of Cold Ischemia Time in Kidney Transplantation.” The Transplantation Society Congress; Hong Kong; August 2016.
34. Serrano OK, Bangdiwala AS, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Kandaswamy R, Pruett TL, Matas AJ, Chavers B. “Incidence of Cardiovascular Disease After Pediatric Kidney Transplantation.” The Transplantation Society Congress; Hong Kong; August 2016.
35. Serrano OK, Bangdiwala AS, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Kandaswamy R, Pruett TL, Matas AJ, Chavers B. “Incidence of Post-Transplant Malignancy After Pediatric Kidney Transplantation.” The Transplantation Society Congress; Hong Kong; August 2016.
36. **Vock DM**, Canahuate G, Marai GE, Fuller CD. “SMART: Spatial-nonspatial Multidimensional Adaptive Radiotherapy Treatment.” Joint Statistical Meetings; Chicago, IL; August 2016 (topic contributed oral presentation).
37. †Boatman JA, **Vock DM**, Koopmeiners JS. “Adjusting for Noncompliance in Randomized Clinical Trials when Noncompliance Must Be Estimated from a Biomarker.” Joint Statistical Meetings; Chicago, IL; August 2016 (contributed oral presentation).
38. †Kotalik A, **Vock DM**, Wolfson JW, Adomavicius G, Bandyopadhyay S. “Using Inverse Probability of Censoring Weighted Bagging to Adapt Machine Learning Techniques to Censored Data.” Joint Statistical Meetings; Chicago, IL; August 2016 (contributed oral presentation).
39. †Ssenkusu J, **Vock DM**, John CC, Hodges JS. “Mediation Analysis for Longitudinal Data using a Semiparametric Calibration Model When the Mediator Is Measured with Error.” Joint Statistical Meetings; Chicago, IL; August 2016 (contributed oral presentation).
40. †Koch B, **Vock DM**, Wolfson J. “GLiDeR: Doubly Robust Estimation of Causal Treatment Effects with the Group Lasso.” Joint Statistical Meetings; Chicago, IL; August 2016 (contributed oral presentation).
41. Matas AJ, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Kandaswamy R, Pruett TL. “Impact of Kidney Donor-Recipient Relationship on Development of CKD.” American Transplant Congress; Boston, MA; June 2016 (oral presentation).
42. Sarumi H, **Vock DM**, Chinnakotla S, Kandaswamy R, Pruett TL. “Thymoglobulin Dosing Efficacy: The Role of Dose Adjustments on Infection and Rejection.” American Transplant Congress; Boston, MA; June 2016 (poster presentation).

43. Serrano OK, Bangdiwala AS, **Vock DM**, Yadav K, Kirchner V, Pugalendhi A, Minja E, Dunn TB, Finger EB, Matas AJ, Kandaswamy R, Payne W, Pruett TL, Chinnakotla S. “Clinical Significance of Solitary Pulmonary Nodules in Liver Transplant Recipients with Hepatocellular Carcinoma.” American Transplant Congress; Boston, MA; June 2016 (poster presentation).
44. Serrano OK, Bangdiwala AS, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Sutherland DER, Najarian JS, Pruett TL, Matas AJ, Kandaswamy R. “Evolution of Donor Nephrectomy: Long-Term Outcomes with Four Different Techniques Between 1963 and 2014 at a Single Institution.” American Transplant Congress; Boston, MA; June 2016 (poster presentation).
45. Serrano OK, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Kandaswamy R, Pruett TL, Matas AJ, Feldman R, Finger EB. “Financial Cost of Cold Ischemia Time in Kidney Transplantation.” American Transplant Congress; Boston, MA; June 2016 (oral presentation).
46. Serrano OK, Bangdiwala AS, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Kandaswamy R, Pruett TL, Matas AJ, Chavers B. “Incidence of Post-Transplant Cardiovascular Disease After Pediatric Kidney Transplantation.” American Transplant Congress; Boston, MA; June 2016 (poster presentation).
47. Serrano OK, Bangdiwala AS, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Kandaswamy R, Pruett TL, Matas AJ, Chavers B. “Incidence of Post-Transplant Malignancy Disease After Pediatric Kidney Transplantation.” American Transplant Congress; Boston, MA; June 2016 (poster presentation).
48. Serrano OK, Bangdiwala AS, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Pruett TL, Matas AJ, Kandaswamy R. “Learning Curve of Laparoscopic Donor Nephrectomy for Abdominal Transplant Surgery Fellows.” American Transplant Congress; Boston, MA; June 2016 (oral presentation).
49. Serrano OK, **Vock DM**, Finger EB, Kandaswamy K, Sutherland DER, Dunn TB. “Antibody-Mediated Rejection in Pancreas Transplantation.” American Transplant Congress; Boston, MA; June 2016 (oral presentation).
50. Serrano OK, Bangdiwala AS, Adamusiak A, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Pruett TL, Matas AJ, Kandaswamy R. “Outcomes of Donor Nephrectomy in the Elderly.” American Transplant Congress; Boston, MA; June 2016 (poster presentation).
51. Serrano OK, Bangdiwala AS, **Vock DM**, Payne WD, Dunn TB, Chinnakotla S, Finger EB, Pruett TL, Matas AJ, Kandaswamy R. “Outcomes of Donor Nephrectomy in the Obese.” American Transplant Congress; Boston, MA; June 2016 (poster presentation).
52. Yadav K, Nevins T, **Vock DM**, Thomas W, Robiner WN, Matas A. “Does Post-transplant Adherence Come at a Cost?” American Transplant Congress; Boston, MA; June 2016 (oral presentation).

53. O'Connor PJ, Wolfson J, **Vock D**, Bandyopadhyay S, Vazquez-Benitez G, Johnson P, Adomavicius G. "Use and Customization of Risk Scores for Predicting Cardiovascular Events Using Electronic Health Record Data." 22nd Annual Health Care Systems Research Network Conference; Atlanta, GA; April 2016.
54. †Koch B, **Vock DM**, Wolfson J. "GLiDeR: Doubly Robust Estimation of Causal Treatment Effects with the Group Lasso." ENAR Spring Meeting of the International Biometric Society; Austin, TX; March 2016 (poster presentation).
55. Mulasi U, **Vock D**, Jager-Wittenaar H, Kuchnia AJ, Jha G, Fujioka N, Patel M, Teigen L, Earthman CP. "Malnutrition Identified by the Academy of Nutrition and Dietetics and American Society for Parenteral and Enteral Nutrition Consensus Criteria and Other Bedside Tools is Highly Prevalent throughout Treatment Course in Head and Neck Cancer." American Society for Parenteral and Enteral Nutrition Clinical Nutrition Week; Austin, TX; January 2016.
56. Canahuate G, Fuller CD, Marai GE, **Vock DM**. "SMART: Spatial-nonspatial Multidimensional Adaptive Radiotherapy Treatment." Big Data to Knowledge All-Hands Meeting; Bethesda, MD; November, 2015 (poster presentation).
57. Yu F, **Vock DM**. "Factors Associated with Functional Decline in Alzheimer's Disease." Gerontological Society of America Annual Scientific Meeting; Orlando, FL; November 2015 (oral presentation).
58. Wolfson J, **Vock DM**, Bandyopadhyay S, Adomavicius G, O'Connor PJ, Vazquez-Benitez GX. "Use and Customization of Risk Scores for Predicting Cardiovascular Events Using Electronic Health Record Data." American Heart Association Scientific Sessions; Orlando, FL; November 2015 (poster presentation).
59. O'Connor PJ, Wolfson J, **Vock DM**, Bandyopadhyay S, Adomavicius G, Vazquez-Benitez GX. "Use and Customization of Risk Scores for Predicting Cardiovascular Events Using Electronic Health Record Data." 8th Annual Meeting of the Diabetes and Cardiovascular Disease EASD Study Group; Munich, Germany; October 2015 (poster presentation).
60. **Vock DM**. "Mitigating the Effect of Artificial Censoring in Structural Nested Failure-Time Models." Joint Statistical Meetings; Seattle WA; August 2015 (oral presentation).
61. Boehm Vock LF, **Vock DM**. "Estimating the Effect of Pitch Selection and Plate Discipline Using the G-Computation Algorithm." Joint Statistical Meetings; Seattle WA; August 2015 (oral presentation).
62. †Boatman JA, **Vock DM**. "Estimating the Causal Effect of Solid Organ Transplantation Treatment Regimes on Survival." Joint Statistical Meetings; Seattle WA; August 2015 (poster presentation).
63. Yu F, **Vock D**, Nelson NW. "Cognitive Responses to Exercise in Alzheimer's Disease." Alzheimer's Association International Conference; Washington DC; July 2015 (oral presentation).

64. †Boatman JA, **Vock DM**. “Dynamic Marginal Structural Models to Test the Benefit of Lung Transplantation Treatment Regimes.” ENAR Spring Meeting of the International Biometric Society; Miami, FL; March 2015 (poster presentation).
65. Sidebottom A, Sillah A, **Vock DM**, Miedema MD, Pereira R, Benson G, Boucher JL, Knickelbine T, VanWormer JJ. “Improvements in Cardiovascular Disease Risk Factors After Five Years of a Population-Based Intervention: The Heart of New Ulm Project.” American Heart Association Scientific Sessions; Chicago, IL; November 2014 (poster presentation).
66. †Lu Z, Ho Y-Y, **Vock DM**. “Generalized Non-Linear Mixed Models for Cigarette Purchase Survey.” Masonic Cancer Center Research Symposium; Minneapolis, MN; October 2014 (poster presentation).
67. **Vock DM**, Davidian M, Tsiatis AA. “Using Pseudo-Observations to Estimate Dynamic Marginal Structural Models with Right Censored Responses.” ENAR Spring Meeting of the International Biometric Society; Orlando, FL; March 2013 (oral presentation).
68. Tsuang WM, **Vock DM**, Finlen Copeland CA, Lederer DJ, Palmer SM. “Lung Allocation Score (LAS) Dynamics and Survival After Lung Transplantation.” American Thoracic Society Conference; San Francisco, CA; May 2012 (oral presentation).
69. **Vock DM**, Tsiatis AA, Davidian M, Laber EB, Tsuang WM, Finlen Copeland CA, Palmer SM. “Assessing the Effect of Organ Transplantation on the Distribution of Residual Lifetime.” Atlantic Causal Inference Conference; Baltimore, MD; May 2012 (poster presentation).
70. Ibid. ENAR Spring Meeting of the International Biometric Society; Washington, DC; March 2012 (poster presentation).
71. Denardo SJ, Carpinone PL, **Vock DM**, Batich CD, Pepine CJ. “Damage to Polymer Surface and Detachment of Polymer Fragments During Delivery Balloon Expansion of Drug Eluting Stents: A Previously Unrecognized Source for Adverse Outcomes.” American College of Cardiology; Chicago, IL; March 2012 (poster presentation).
72. **Vock DM**. “A Fast Computational Approach to Implement Flexible Random Effects Densities for Generalized Linear and Nonlinear Mixed Models.” 7th Annual UNCG Regional Mathematics and Statistics Conference; Greensboro, NC; November 2011 (oral presentation).
73. Clark PJ, Thompson AJ, Urban TJ, Patel K, **Vock DM**, Zhu Q, Jazwinski A, Naggie S, Tillmann HL, McKenzie A, Conjeevaram HS, Shianna K, Goldstein DB, Afdhal NH, Muir AJ. “PNPLA3 Genotype Rather than Race May Explain the Lower Prevalence of Hepatic Steatosis Despite Worse Metabolic Risk Factors in African American Patients with Chronic Hepatitis C.” The Liver Meeting; San Francisco, CA; November 2011 (oral presentation).

74. Thompson, AJ, Clark PJ, **Vock DM**, Pfeiffer R, Tillmann HL, Patel K, Naggie S, Poordad F, Nyberg LM, Noviello S, Pedicone LJ, Brass CA, Albrecht JK, Goldstein DB, McHutchison JG, O'Brien TR, Sulkowski MS, Muir AJ. "Predicting Peginterferon-Alpha and Ribavirin Treatment Response in Genotype 1 HCV Patients - Simple Nomograms to Support Clinicians." The Liver Meeting; San Francisco, CA; November 2011 (poster presentation).
75. Clark PJ, Thompson AJ, **Vock DM**, Kratz LE, Tolun AA, Zhang H, Muir AJ, Subramanian M, McHutchison JG, Millington DM, Kelley RI, Patel K. "Metabolomic Analysis Demonstrates Hepatitis C Virus Genotypes G2/3 Selectively Perturbs Distal Steps in Cholesterol Biosynthesis." The Liver Meeting; San Francisco, CA; November 2011 (poster presentation).
76. Denardo SJ, **Vock DM**, Schmalfuss CM, Young GD, Tchong JE, Echols MR, Pieper KS, O'Connor CM. "Baseline Hemodynamics with Cardiac Performance Response to Contrast Media During Diagnostic Cardiac Catheterization Enhances Prediction of Adverse Events in Heart Failure Patients." American Heart Association Scientific Sessions; Orlando, FL; November 2011 (poster presentation).
77. **Vock DM**, Davidian M, Tsiatis AA, Muir AJ. "Mixed Model Analysis of Censored Longitudinal Data with Flexible Random-Effects Density." Joint Statistical Meetings; Miami Beach, FL; August 2011 (oral presentation).
78. Finlen Copeland CA, **Vock DM**, Palmer SM. "The Quality of Life Benefit of Lung Transplantation: A Prospective Multi-Center Analysis." American Thoracic Society Conference; Denver, CO; May 2011 (oral presentation).
79. **Vock DM**, Davidian M, Tsiatis AA, Muir AJ. "A Flexible Random-Effects Distribution for Censored Longitudinal Data." ENAR Spring Meeting of the International Biometric Society; Miami, FL; March 2011 (oral presentation).
80. **Vock DM**, Boehm LF, Novak N. "U.S. Agricultural Subsidies and Developing Countries' Food Self-Sufficiency: A Case Study of Rice Subsidies and Costa Rica," North Central Council of Latin Americanists Conference; Eau Claire, WI; October 2007 (oral presentation).

TEACHING AND CURRICULUM DEVELOPMENT

Courses Taught

University of Minnesota

1. PUBH 7485/8485 Methods for Causal Inference (3 credits)
Fall 2018
2. PUBH 7401 Fundamental of Biostatistical Inference (3 credits)
Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017
3. PUBH 7406 Advanced Regression and Design (4 credits)
Spring 2016
4. PUBH 8412 Advanced Statistical Inference (3 credits)
Spring 2014, Spring 2015
5. PUBH 8462 Advanced Survival Analysis (3 credits)
Spring 2013

North Carolina State University

1. STAT 311 Introduction to Statistics (3 credits), Fall 2010

Curriculum Development

1. PUBH 8412 Advanced Statistical Inference (3 credits)
Core theory course in statistical inference for the Ph.D. in biostatistics. Topics include convergence theorems, maximum likelihood theory, large sample asymptotics, influence functions, robust estimation and sandwich variances (M-estimators), the bootstrap, and the jackknife.
2. PUBH 7485/8485 Methods for Causal Inference (3 credits)
Elective course for Ph.D. students in biostatistics (8485), Ph.D. students in public health (7485), and masters students in biostatistics (7485). Topics include propensity score, regression adjustment, and doubly robust estimators of causal effects; dynamic treatment regimes (DTR) and estimation of the optimal DTR.

Collaborative Efforts and Activities

Guest Lectures

University of Minnesota School of Nursing
NURS 8121 Health Behaviors and Illness Responses
“Structural Equation Modeling” - October 2015

University of Minnesota School of Public Health
PUBH 8403 Research Skills in Biostatistics
“Understanding the Science in Collaborative Research” October 2012, 2013, 2014, & 2015
“The Anil Potti Scandal: A Technical Perspective” October 2016
“Simulation Studies & Reproducibility” September 2017

University of Minnesota School of Public Health
Summer Institute in Biostatistics (SIBS)
“Dynamic Treatment Regimes” July 2013, 2014, 2015, 2016
“Sequential Multiple Assignment Randomized Trial (SMART)” July 2017, June 2018

Faculty Development Activities Regarding Teaching

- Attended workshop on active learning sponsored by the Division of Biostatistics, October 2016
- Attended workshop on student mentoring sponsored by the School of Public Health and Graduate School October 2013

ADVISING AND MENTORING

University of Minnesota Graduate Student Activities

Doctoral Dissertations Advised

1. Ross Peterson, Ph.D., Biostatistics, Expected 2020 (joint with Dr. Joseph Koopmeiners)
2. Ales Kotalik Ph.D., Biostatistics, Expected 2020 (joint with Dr. Joseph Koopmeiners)
3. John Ssenkusu, Ph.D., Biostatistics, Summer 2018
Title: *Mediation Analysis in Longitudinal Studies in the Presence of Measurement Error and Missing Data*
4. Brandon Koch, Ph.D., Biostatistics, Summer 2018 (joint with Dr. Julian Wolfson)
Title: *Statistical Methods for Variable Selection in Causal Inference*
5. Jeffrey Boatman, Ph.D., Biostatistics, Summer 2017 (Dr. Joseph Koopmeiners, senior advisor)
Title: *Causal Estimators for Non-Standard Scenarios: Individual Versus Population-Level Causal Effects in Transplantation Treatment Regimes, and Clinical Trials where Compliance Is Measured with Error*

Doctoral Committees Served on

Note: Dr. Vock served on both the Preliminary Oral Committee and Final Defense Committee for all students listed

1. Levi Teigen, Ph.D., Nutrition, Summer 2018
2. Yu Zhou, Ph.D., Statistics, Spring 2018
3. Ali Alhadab, Ph.D., Pharmacology, Fall 2017
4. Logan Cowan, Ph.D., Epidemiology, Summer 2017
5. Rebecca Kehm, Ph.D., Epidemiology, Summer 2017
6. Adam Kuchnia, Ph.D., Nutrition, Summer 2017
7. Sunayan Bandyopadhyay, Ph.D., Computer Science, Summer 2016
8. Clemma Muller, Ph.D., Epidemiology, Fall 2015
9. Urvashi Mulasi, Ph.D., Nutrition, Summer 2015
10. Abigail Cole, Ph.D., Nutrition, Spring 2015
11. Andrew Wey, Ph.D., Biostatistics, Summer 2014

Master's Projects Advised

1. Karin Sather, M.S., Biostatistics, Summer 2017
Title: *Strategies for Analysis of Watershed Data: Applications of Sparse Principal Components Analysis and Mixed Models*
2. Nora Forbes, M.S., Biostatistics, Summer 2017
Title: *Comparison of Semi-parametric and Non-parametric Survival Methods: Risk Prediction of Primary Mastoidectomy Surgical Failure*
3. Katelyn Tessier, M.S., Biostatistics, Spring 2017
Title: *Evaluation of Adaptive Experimental Design in Sequential, Multiple Assignment, Randomized Trials (SMARTs): A Simulation Study*

4. Andrew St. Martin, M.S., Biostatistics, Fall 2016
Title: *A Comparison of Approaches to Adjusted Survival Curves in the Setting of Single versus Bilateral Lung Transplantation* and Academic Advisor
5. Zeqing Lu, M.S., Biostatistics, Summer 2014 (joint with Dr. Yen-Yi Ho)
Title: *Generalized Non-linear Mixed Model for Cigarette Purchase Survey*
6. Nicole Bettes, M.P.H., Biostatistics, Summer 2014
Title: *Using Pseudo Observations to Estimate the Optimal Lung Transplant Type: Single or Bilateral*
7. Heather Jerry, M.S., Biostatistics, Summer 2013
Title: *Sequential Stratification Methods Applied to the Women's Health Initiative Observational Study Data*

Master's Student Advisees and Committees Served On

1. Hui Li, M.S., Biostatistics, Summer 2018 - Academic Advisor and Master's Project Committee
2. Michael Shyne, M.S., Biostatistics, Summer 2018 - Academic Advisor and Master's Project Committee
3. Andrew Timmons, M.S., Biostatistics, Fall 2016 - Academic Advisor and Master's Project Committee
4. Peter Boersma, M.P.H., Epidemiology, Summer 2018 -Culminating Experience Committee
5. Maxwell Leither, M.S., Clinical Research, Spring 2017 - Thesis Committee
6. Cassandra Hosfield, M.S., Nutrition, Summer 2017 - Master's Project Committee
7. Katherine Casty, M.S., Biostatistics, Summer 2017 - Master's Project Committee
8. Winston Doom, M.S., Statistics, Spring 2016 - Master's Project Committee
9. Hannah Volkman, M.P.H., Environmental Health, Fall 2016 - Culminating Experience Committee
10. Camaren Sorenson, M.S., Biostatistics, Summer 2015 - Master's Project Committee
11. Ashwini Venkatasubramaniam, M.S., Biostatistics, Summer 2014 - Master's Project Committee
12. Wen Fan, M.S., Statistics, Summer 2014 - Master's Project Committee
13. Craig Meyer, M.S., Biostatistics, Summer 2013 - Master's Project Committee

Post-doctoral fellows supervised

1. Jeffrey Verdoliva Boatman, 2018-present

Other Mentoring Activities

Jun Yung Park, 2018-present – Supervisor for research assistantship under NCI grant
Shannon McKearnan, 2018-present – Supervisor for research assistantship under NCI grant
Chuyu Deng, 2017-present – Supervisor for research assistantship under NCI grant
Ross Peterson, 2017-present – Mentor for T32 training grant
Ales Kotalik, 2017-present – Mentor for T32 training grant
Jeffrey Boatman, 2016-2017 – Supervisor for research assistantship under NIDA grant
Shannon McKearnan, 2016-2017 – Supervisor for research assistantship under Biostatistics Research Fellowship
Erica Schorr, 2016-2017 – Biostatistics Mentor for pre-K grant
Ross Peterson, 2015-2017 – Supervisor for research assistantship under NIAID grant
Ales Kotalik, 2015-2017 – Supervisor for research assistantship under Biostatistics Research Fellowship

Sunayan Bandyopadhyay, 2013-2017 – Supervisor for research assistantship under NHLBI grant
Brandon Koch, 2013-2015 – Supervisor for research assistantship under Biostatistics
Research Fellowship
Jeffrey Boatman, 2013-2014 – Supervisor for research assistantship under Office of the Vice
President for Research Grant in Aid of Research, Artistry & Scholarship

SERVICE AND PUBLIC OUTREACH

Service To The Discipline/Profession/Interdisciplinary Area(s)

Journal Reviewer Experience

(number of articles reviewed)

- American Heart Journal, 2010-present (6)
- American Journal of Epidemiology 2013-present (1)
- Annals of Statistics, 2015-present (1)
- Biometrics, 2012-present (4)
- Biostatistics, 2014-present (4)
- BMC Medical Research Methodology, 2016-present (1)
- Communications in Statistics, 2012-present (1)
- Epidemiologic Methods, 2012-present (1)
- Journal of Agricultural, Biological, and Environmental Statistics, 2012-present (2)
- Journal of the American Statistical Association: Applications and Case Studies, 2014-present (2)
- Journal of Causal Inference, 2014-present (1)
- Journal of Statistical Software, 2014-present (1)
- Stat, 2012-present (1)
- Statistics in Medicine, 2015-present (3)
- Statistical Methods in Medical Research, 2013-present (1)
- Transplantation, 2017-present (1)

Editorships

(number of articles reviewed)

- *Editorial board member and reviewer for:*
Neurosurgery, 2012-present (17)
- *Deputy Statistical Editor:*
Journal of Thoracic and Cardiovascular Surgery, 2015-present (8)
- *Associate Editor and reviewer:*
International Journal of Biostatistics, 2013-present (7)

Committee memberships

- Organizing committee, ENAR Junior Researchers Workshop, 2018-present

Review panels for external funding agencies, foundations, etc.

- Rehabilitation and Reintegration Merit Review Panel, Department of Veterans Affairs, Ad Hoc Reviewer, August 2015
- Institute of Education Sciences, Department of Education, Ad Hoc Reviewer, February 2018

External Consulting

- Allina Health Division of Applied Research, causal inference methodology and matching, 2013-present
- Department of Behavioral Sciences and Health Education, Emory University, SMART design for tobacco cessation tools, 2016

Service To The University/College/Department

University of Minnesota

University-wide Service

- Biostatistics Design and Analysis Center Member, Academic Health Center, 2015 - present
- Data and Safety Monitoring Board Committee Member
 - 1) “Enhancing Smoking Cessation in Homeless Populations” 5R01HL081522-07, Kola Okuyemi, Principal Investigator. 2016 – present
 - 2) “Phosphate Binders in Children with Chronic Kidney Disease-Mineral Bone Disorder” U34DK104619A1, Isidro Salusky. National Institute of Digestive and Diabetes and Kidney Diseases external DSMB. 2016 – present
 - 3) “Effectiveness of Screening and Decolonization of *S. aureus* in Surgery Outpatients.” AHRQ R03 HS022912-01, Susan Kline Principal Investigator. 2015 – 2016
- Institute for Mathematics and its Application Continuation Workshop on Innovative Statistics in Precision Medicine organizer, 2018
- Institute for Mathematics and its Application Workshop on Innovative Statistics and Machine Learning in Precision Medicine organizer, 2017
- Center for Personalized Prevention Research Symposium Planning Committee, 2015 – 2016
- Cancer Protocol Review Committee, Masonic Cancer Center, 2014 – 2016
- Biostatistics and Bioinformatics Core Member, Masonic Cancer Center, 2014 – 2016
- Academic Health Center CTRS Pilot Funding Ad Hoc Reviewer, 2014

Collegiate Service (School of Public Health)

- Coordinator of Junior Faculty Luncheon Seminars, 2014-2015
- Doctoral Dissertation Fellowship Review Committee, 2013 – 2015
- Research Day Judge, 2013, 2015

Department Service (Division of Biostatistics)

- Masters Exam Committee, 2013-present (Chair, 2014)
- Ph.D. Exam Committee, 2013-present
- Seminar Committee, 2013-2016 (Chair, 2014-2016)