

CURRICULUM VITAE

1) Personal Data

Diane Uschner, Ph.D.
Citizenship: German
Visa: H-1B, Sponsor: GWU
Home: 12018 Chase Crossing Circle, North Bethesda MD 20852,
Office: 6110 Executive Blvd., Suite 750, Rockville, MD 20852
Phone: 301-881-9260, Fax: 301-881-3767,
Email: duschner@bsc.gwu.edu

2) Education and Training

2013, Diploma, Mathematics, Karlsruhe Institute of Technology, Karlsruhe, Germany

2018, PhD, Medical Statistics, RWTH Aachen University, Aachen, Germany
Dissertation: The Assessment of Bias in Randomized Controlled Clinical Trials
Advisor: Ralf-Dieter Hilgers

3) Professional Employment

- February 2019 – Present, Assistant Research Professor, Department of Epidemiology and Biostatistics, The George Washington University, Rockville, Maryland, Responsibilities: Function as a co-investigator at the coordinating center for multi-center collaborative research trials and studies, involving design and development of protocols and data collection instruments, day-to-day management of operations, communicating with study group members, participating on committees, overseeing the quality and integrity of the central database, training in procedures, planning and conducting statistical analyses, preparing reports for monitoring and publication, and interpreting results.
- April 2018 – February 2019, Biostatistician, The George Washington University Biostatistics Center, Rockville, MD, Responsibilities: Function as a biostatistician at the coordinating center for multi-center collaborative research trials and studies, communicating with study group members, planning and conducting statistical analyses, preparing reports for monitoring and publication, and interpreting results.
- August 2017 – May 2018, Adjunct Faculty, Statistics Department at the Volgenau School of Engineering, George Mason University, Fairfax, VA, Responsibilities: Complete responsibility for teaching and grading of STAT560: Biostatistical methods, PhD co-advisor and PhD committee member of Yanying Wang.
- August 2017 – December 2017, Adjunct Faculty, Department of Global and Community Health, George Mason University, Responsibilities: Teaching and grading of GH601: Introduction to biostatistics.

- July 2017 – April 2018, Biostatistician, Department of Nephrology and Clinical Immunology, Uniklinik RWTH Aachen, Germany, Responsibilities: Development of a risk score for bleeding in the AROii cohort of 10,728 patients with end stage renal disease, based on a LASSO regression model, validation of the risk score in an external validation cohort.
- October 2013 – July 2017, Biostatistician, Department for Medical Statistics, Uniklinik RWTH Aachen, Germany, Responsibilities: Research on randomized small population group trials as part of the IDEAl FP7 Project to investigate the effect of bias in randomized clinical trials, publication in peer-reviewed journals, research on the design of clinical trials, presentation of results at international conferences, implementation of new methods, development of an R package for the evaluation of randomization procedures, teaching statistics classes to medical students, supervisor of Master theses and student workers, disseminating research via the IDEAl project website.
- August 2012 – August 2013, SAP AG, Walldorf, Germany – Software Developer, Responsibilities: Implemented statistical and algebraic methods for text mining in HANA DB, implemented, unit tests using Python, working in an interdisciplinary team of software engineers, physicist, and mathematicians.

4) Honors and Awards

- 2019, Friedrich-Wilhelm Outstanding Ph.D. Thesis Award, RWTH Aachen University, Aachen, Germany.
- 2019, Borchers Badge of the RWTH University, for graduating from the Ph.D. with distinction summa cum laude, Aachen Germany.
- 2019, Selected to participate through a competitive process in the New Researchers Conference of the Institute of Mathematical Statistics, hosted by the Colorado State University, Fort Collins, Colorado, U.S.A.
- 2019, Dissertation Award of the RWTH School of Medicine, Aachen, Germany
- 2017, Poster Award of the Conference of the International Society of Clinical Biostatistics, in Vigo, Spain, 2017.
- 2009-2010, Selected in a competitive process to participate in the Baden-Württemberg student exchange program and to receive the Baden-Württemberg Scholarship.

5) Grants Awarded or Pending

Long-Term Post-Intervention Follow-Up Phase of the Treatment Options for Type 2 Diabetes in Adolescents and Youth (TODAY 2 Phase 2)

Coordinating Center

Funding Agency: NIDDK, Dates of Award: May 2016 – April 2020

Direct Total Costs of Award: \$29,800,000

Role: Co-Investigator, % Effort: 70-100%

Main Objective: Treatment Options for type 2 Diabetes in Adolescents and Youth (TODAY) was a collaborative multi-center study designed to evaluate designed to evaluate the safety and efficacy of three treatment regimens for T2DM in children and youth based on glycemic control. TODAY2 began in 2011 with a first phase where the clinics continued to follow and treat participants through early 2014 and at that time TODAY2 switched to long term follow-up of the participants. Duties for this study include: providing day to day oversight of coordinating center activities; analyzing and reporting study findings as a member of multiple writing groups; chairing the ancillary study committee, overseeing procedures to archive and transfer study data and stored blood samples to the appropriate NIDDK repositories at end of TODAY2.

COVID-19 Community Research Partnership (CRP)

Coordinating Center

Funding Agency: Centers for Disease Control and Prevention

[Notice ID: 75D301-20-R-67897](#)

Dates of Contract: June 2020-May 2022

Total Direct Costs of Award: \$2,068,592

Role: PI, % Effort: 50%

Main Objective: The COVID-19 Community Research Partnership (CRP) is a large-scale population-based syndromic- and sero-surveillance program. The CRP is to be implemented in a sampling frame of ~12M people in the southeast U.S. with options to expand to additional regions including the Mid-Atlantic, Deep South, West Coast, or other areas of vital and strategic interest to the CDC and the nation.

COVID-19 North Carolina State Coalition

Coordinating Center

Funding Agency: State Government of North Carolina

Dates of Contract: June 2020-May 2022

Total Direct Costs of Award: \$831,460

Role: PI, % Effort: 45%

Main Objective: To implement a large-scale population-based syndromic- and sero-surveillance program in four clinical sites in North Carolina.

Hurricane Maria Mortality Investigation

Coordinating Center

Funding Agency: National Institutes for Standards and Technology

[Solicitation 1333ND20QNB730038](#)

Dates of Award: July 2020 – December 2021

Total Direct Costs of Contract: \$211,037

Role: PI, % Effort: 20%

Main Objective: In September 2017, Hurricane Maria devastated Puerto Rico and other Caribbean Islands. The objective of this research is to identify deaths directly and indirectly attributable to Hurricane María in the weeks immediately following the storm, and factors associated with such attribution, with a special focus on infrastructure failures.

Pending: COVID-19 Viral Testing Supplement

Coordinating Center

Funding Agency: under Review at NIAID

[Funding Opportunity Announcement Number: PA-18-591](#)

Dates of Contract: June 2020-May 2022 (anticipated)

Total Direct Costs of Award: \$344,991

Role: PI, % Effort: 10%

Main Objective: To add additional viral testing and specialized populations to the COVID-19 Community Research Partnership.

Pending: Diagnostic Stewardship for Ventilator Associated Pneumonia: A cluster-randomized crossover trial of a hybrid order-review laboratory reporting intervention

Biostatistics Coordinating Center

Funding Agency: under Review at CDC

[Opportunity Number: RFA-CK-20-004](#)

Dates of Award: Oct 2020 – Sept 2023 (anticipated).

Total Direct Costs of Award: \$169,511

Role: Co-PI, % Effort: 10%

Main Objective: Evaluate a diagnostic stewardship intervention for the reduction of unnecessary antibiotic use for ventilator-associated pneumonia and assess relevant healthcare outcomes.

6) Grants Concluded

None.

7) Publications

Refereed Journals

- Y. Wang, W. F. Rosenberger, **D. Uschner**. (2019) Randomization Tests for multi-armed randomized clinical trials. *Statistics in Medicine*. *Statistics in Medicine*. **39**(4): 494-509. <https://doi.org/10.1002/sim.8418>

- Y. Jiang, **D. Uschner** (2019). What romantic comedies can teach us about response adaptive randomization for clinical trials? *Chance*. **32**(4): 18-22.
<https://doi.org/10.1080/09332480.2019.1695436>
- Y. Wang, W. F. Rosenberger, **D. Uschner**. (2019). Randomization-based inference and the choice of randomization procedures. *Statistical papers*. **60**(2).
<https://doi.org/10.1007/s00362-018-01070-y> .
- A. Kroh, **D. Uschner**, T. Lodewick, R. M. Eickhoff, F. T. Ulmer, U. P. Neumann, M. Binnebösel (2019). Impact of body composition on survival and morbidity after liver resection in HCC patients. *Hepatobiliary and Pancreatic Diseases International*. **85**(1): 28-37. <https://doi.org/10.1016/j.hbpd.2018.07.008> .
- W. F. Rosenberger, **D. Uschner**, Y. Wang (2019). Rejoinder. *Statistics in Medicine*. **38**(1): 395–404. <https://doi.org/10.1002/sim.7901>.
- W. F. Rosenberger, **D. Uschner**, Y. Wang (2019). The fifteenth Armitage Lecture: Randomization: The forgotten component of the randomized clinical trial. *Statistics in Medicine*. **38**(1) <https://doi.org/10.1002/sim.7901>.
- D. Schindler, **D. Uschner**, R.-D. Hilgers and N. Heussen (2018). randomizeR: Randomization for Clinical Trials. R package version 1.4.
- D. Uschner**, D. Schindler, R.-D. Hilgers, N. Heussen (2018). randomizeR: An R Package for the Assessment and Implementation of Randomization in Clinical Trials. *Journal of Statistical Software*. **85**(8). <http://doi.org/10.18637/jss.v085.i08>.
- D. Uschner**, N. Heussen, R.-D. Hilgers (2018). The Impact of Selection Bias in Randomized Multi-Arm Parallel Group Clinical Trials. *PLOS ONE* **13**(1): e0192065. <https://doi.org/10.1371/journal.pone.0192065>.
- S. Bergrath, M. Müller, R. Rossaint, S. K. Beckers, **D. Uschner**, M. Czaplik, J. C. Brokmann (2018). Quality outcomes in acute coronary syndromes between telemedically supported paramedics and conventional on-scene physician care - a longitudinal pre-post intervention cohort study. *Health Informatics Journal*. <https://doi.org/10.1177/1460458218775157>.
- R.-D. Hilgers, **D. Uschner**, W. F. Rosenberger and N. Heussen (2017). A general framework to assess randomization procedures in the presence of selection and chronological bias. *BMC Medical Research Methodology*. **17**:159
<https://doi.org/10.1186/s12874-017-0428-z>.
- R. Gohmann, F. Heckner, **D. Uschner**, S. D. Reinartz (2017). Body pushers: Low-dose CT, always the best choice? A study of the diagnostic performance of CT scout view. *Open Journal of Radiology*. **7**(2) <http://doi.org/10.4236/ojrad.2017.72013>.

Chapters in Books

- D. Uschner**, W. F. Rosenberger. (2019). Bias Control and Precision. In: *Principles and Practice of Clinical Trials*. Volume 1. Steven Piantadosi, Curtis L. Meinert (eds). Springer, Cham. ISBN: 978-3-319-52677-5.
https://link.springer.com/referenceworkentry/10.1007/978-3-319-52677-5_219-1

Book Reviews

- D. Uschner.** Multivariate Statistical Methods: A Primer, Fourth Edition, by Bryan F.J. Manly and Jorge A. Navarro Alberto, CRC, 2017.

Manuscripts Submitted to Peer Reviewed Journals

- R. Gubitosi-Klug, B.H. Braffett, S. Hitt, V. Arends, **D. Uschner**, K. Jones, L. Diminick, A.B. Karger, A.D. Paterson, D. Roshandel, S. Marcovina, J.M. Lachin, M. Steffes, J.P. Palmer, and the DCCT/EDIC Research Group, Residual Beta Cell Function in Long-term Type 1 Diabetes. Submitted to Journal of Clinical Investigation.
- D. Uschner.** Randomization Based Inference in the Presence of Selection Bias. Under Review at Statistics in Medicine.

Manuscripts in Preparation

- J. Floege, **D. Uschner**, C. Lamina, M. Froissart, D. Wheeler, B. Fouqueray, K.-U. Eckardt, F. Kronenberg. Development and validation of a predictive bleeding risk score from a European hemodialysis cohort. To be submitted to Kidney International.
- D. Uschner**, T. Hamasaki, Q. Pan, W. Dai, M. Earley, S. Evans. Patient-centric outcomes in clinical trials: The Desirability of Outcome Ranking. In Preparation.
- R. Gubitosi-Klug, I. Libman, K. L. Drews, **D. Uschner**, B.A. Blodi, L. Laffel, L.L. Levitsky, M. Mititelu, S. M. Willi, P. Zeitler, for the TODAY Study Group. Development and Progression of Diabetic Retinopathy in Youth-onset Type 2 Diabetes: the TODAY cohort with up to 13 years of follow-up. To be submitted to Diabetes Care.
- R. Gubitosi-Klug, L. Levitsky, **D. Uschner**, B. Burke, M. Mititelu, R. Dhaliwal, S. Gidding, M. Haymond, S. Marcovina, R. Shah, for the TODAY Study Group. Association of Inflammatory Markers, Lipid Subclasses, and Distribution of Fat/Body Composition to the Progression of Retinopathy. In Preparation.
- Y. Wang, W.F. Rosenberger, **D. Uschner**: Inferring Causal Effects of Treatments from Randomization Tests in Randomized Clinical Trials. In Preparation.
- D. Uschner**, I. Bebu. Evaluation of Statistical Learning Methods to predict severe hypoglycemia in the DCCT/EDIC cohort. In Preparation.

8) Scholarly Presentations

Regional Presentations

- March 2019, GWU Biostatistics Center Seminar Series, Rockville, Maryland, USA.
Diane Uschner: The influence of bias in randomized controlled trials. A tutorial for the randomizeR R package.
- September 2019, George Mason Seminar Series, Fairfax, Virginia, USA. Diane Uschner: Bias in randomized controlled clinical trials.
- March 2019, GWU Biostatistics Center Seminar Series, Rockville, Maryland, USA.
Diane Uschner: Dealing with missing values in cohort studies. A tutorial using the AROii data.

October 2015, George Mason Seminar Series, Fairfax, Virginia, USA. Diane Uschner, David Schindler: How to use randomizeR to investigate randomization tests in the presence of selection bias.

October 2015, NIH Rockville, Maryland, USA. Diane Uschner, David Schindler, Ralf-Dieter Hilgers: Choosing a suitable randomization procedure with randomizeR.

National Presentations

December 2020, Seventy Sixth (76th) Annual Deming Conference on Applied Statistics Atlantic City, New Jersey, USA. Diane Uschner: Randomization and Inference in Clinical Trials. Invited Workshop.

July 2019, Joint Statistical Meetings, Denver, Colorado, USA. Diane Uschner: The validity of randomization tests in randomized controlled clinical trials. Contributed poster.

July 2019, IMS NRC Fort Collins, Colorado, USA. Diane Uschner, Ralf-Dieter Hilgers: The assessment of bias in multi-arm clinical trials. Invited poster.

International Presentations

August 2020. Conference of the International Society for Clinical Biostatistics, Krakow, Poland. Diane Uschner, Toshi Hamasaki, Qing Pan, Weixiao Dai, Michelle Earley, Scott Evans: Patient-centric Outcomes in Clinical Trials: The Desirability of Outcomes Ranking. Contributed Poster.

July 2019. Conference of the International Society for Clinical Biostatistics, Leuven, Belgium. Diane Uschner, Ralf-Dieter Hilgers: The assessment of bias in multi-arm clinical trials. Contributed poster.

July 2018, Joint Statistical Meetings, Vancouver, Canada. Yanying Wang, Diane Uschner, William F. Rosenberger: Randomization tests in randomized clinical trials: Beyond Population. Contributed poster.

November 2017, Workshop on Recent and Future Trends in Biostatistics, University of Cambridge, UK. Diane Uschner: Interactive Workshop: Choosing a randomization procedure with randomizeR. Invited workshop.

July 2017, Conference of the International Society for Clinical Biostatistics, 2017 Vigo, Spain. Diane Uschner, Ralf-Dieter Hilgers, Nicole Heussen: The choice of a randomization procedure for randomized controlled clinical trials. Contributed poster.

March 2017, European Medicines Agency, London, UK. Ralf-Dieter Hilgers, Nicole Heussen, Diane Uschner: Does the level of evidence depend on randomization? Invited talk.

August 2016, Conference of the International Society for Clinical Biostatistics, Birmingham, UK. Diane Uschner, Ralf-Dieter Hilgers, William F. Rosenberger, Nicole Heussen: Randomization tests in the presence of selection bias. Contributed talk.

- September 2015, International workshop on simulation, Vienna, Austria. Diane Uschner, David Schindler, Ralf-Dieter Hilgers: A software tool for the design and analysis of small population group trials. Contributed talk.
- August 2015, Conference of the International Society for Clinical Biostatistics, Utrecht, The Netherlands. Ralf-Dieter Hilgers, Armin Koch, Diane Uschner, David Schindler: Randomisation and Stratification in Clinical Trials. Invited pre-conference workshop.
- August 2015, Conference of the International Society for Clinical Biostatistics, Utrecht, The Netherlands. Diane Uschner, Ralf-Dieter Hilgers: Randomization tests in the presence of selection bias. Contributed talk.
- August 2014, Conference of the International Society for Clinical Biostatistics, 2014 Vienna, Austria. David Schindler, Diane Uschner, Miriam Tamm, Nicole Heussen, Ralf-Dieter Hilgers: Comparison of allocation procedures in clinical trials in small population groups with respect to accidental and selection bias. (Contributed poster)
- June 2014, Rare Disease Symposium Vienna, Austria. Ralf-Dieter Hilgers, Armin Koch, Diane Uschner, David Schindler: Workshop on Randomisation and Stratification in Clinical Trials. Invited talk.

9) University Service

Committee Service:

- 2019 – Present, Co-Chair, Ancillary Studies Committee, TODAY2 Study, George Washington University
- 2019 – Present, Co-Chair, Funding Opportunities Committee, Biostatistics Center, George Washington University
- 2019 – Present, Member, Steering Committee, Biostatistics Center, George Washington University
- 2019 – Present, Member, Faculty Issues Committee, Biostatistics Center, George Washington University
- 2019 – Present, Member, IDEA Working Group, Biostatistics Center, George Washington University
- 2019 – Present, Member, Curriculum Committee, Department of Biostatistics and Bioinformatics, George Washington University
- 2019 – Present, Co-Chair, Data Library Working Group, Department of Biostatistics and Bioinformatics, George Washington University
- 2019 – Present, Member, PhD Program Working Group, Department of Biostatistics and Bioinformatics, George Washington University

10) Professional Society Membership and Leadership

- 2021 – 2032, Committee on International Relations in Statistics, American Statistical Association, Member
- 2019 – Present, American Statistical Association, Member

2019 – Present, Caucus for Women in Statistics, Member
2014 – Present, International Society of Clinical Biostatistics, Member, Active
Member of the Early Career Subcommittee.

11) Editorial Peer Review Activities

2020 – Present, Editor, Chance
2020, Reviewer, Biometrics
2020, Reviewer, Journal of Statistical Planning
2019 – Present, Reviewer, Chance
2019 – Present, Reviewer, National Institute of Aging
2019, Reviewer, Journal of Clinical Endocrinology & Metabolism
2019 – Present, Reviewer, Biostatistics & Epidemiology
2018 – Present, Reviewer, German Medical Science, Journal of Medical Informatics,
Biometry, and Epidemiology (GMS MIBE)
2017 – Present, Reviewer, Journal of Statistical Software,
2017 – Present, Reviewer, BMC Biomedical Research Methodology
2016 – Present, Reviewer, Statistics in Medicine

12) External Activities/Partnerships

August 2017 – May 2018, Affiliate Faculty, Statistics Department at the Volgenau
School of Engineering, George Mason University, Fairfax, VA.
September 2015 - October 2015, Visiting Researcher, Statistics Department at the
Volgenau School of Engineering, George Mason University, Fairfax, VA.
September 2014, Visiting Researcher, Luxembourg Institute of Health, Luxemburg.

13) Teaching/Learning Portfolio

Courses Taught:

Fall 2020: Department of Biostatistics and Bioinformatics, Milken Institute School of
Public Health, George Washington University: Instructor consisting of 5 weeks
of teaching PUBH6852: Introduction to R Programming in Public Health and
Biomedical Research.
Spring 2018: Department of Statistics, Volgenau School of Engineering, George
Mason University, Fairfax, VA: Instructor consisting of 15 weeks of teaching
STAT560: Biostatistical methods, grading homework problems, grading
midterms and final exam.
Fall 2017: Department of Global and Community Health, College of Health and
Human Services, George Mason University, Fairfax, VA: Instructor consisting of
15 weeks of teaching GH601: Introduction to Biostatistics, grading homework
problems, grading midterms and final exam.
Fall 2013, Fall 2014, Fall 2015, Fall 2016: Department of Medical Statistics, School
of Medicine, RWTH Aachen University, Germany: Instructor of Clinical

Epidemiology teaching 3 credit hours intensive course, grading homework problems and grading exam.

Spring 2012: Department for Statistics and Probability Theory, School of Mathematics, Karlsruhe Institute of Technology, Germany: Teaching Assistant for third year Mathematical Statistics I, consisting of 15 weeks of R laboratory classes for 90 minutes per week and grading homework problems and grading exam.

Fall 2010-Spring 2012: Department for Algebra and Geometry, School of Mathematics, Karlsruhe Institute of Technology, Germany: Teaching Assistant for Linear Algebra I and II for first year Mathematics and Computer Science Students, consisting of teaching 15 weeks of exercise classes 90 minutes per week each semester and grading homework problems.

Graduate Student Mentoring:

2015 – 2017, Mentor, RWTH Aachen University, Aachen, Germany. (2 Masters, Mathematics and 1 Bachelor/Master, Computer Science)

Supervision of Students in Mentored Research:

2017 – 2019: Co-Advisor and Committee Member: George Mason University. (1 PhD, Biostatistics)

14) Public Health Practice Portfolio

None