

Michael L Williams

Phd Candidate, Department of Biostatistics
Vanderbilt University, Nashville TN USA

✉ michael.l.williams@vanderbilt.edu 🌐 [michaelleewilliams.github.io](https://github.com/michaelleewilliams)

Education

Vanderbilt University, PhD Biostatistics, *Nashville TN* ongoing
University of Michigan, B.S. Biomedical Engineering, *Ann Arbor MI* 2011

Employment

Massachusetts Institute of Technology, Research Assistant, *Cambridge, MA* 2015-2017
United States Peace Corp, Math Teacher Secondary Education, *Sierra Leone* 2012-2014
University of Michigan, Research Technician *Ann Arbor, MI* 2008-2012

Journal Articles

Williams, Michael L, Hannah L. Weeks, Cole Beck, Kelly A. Birdwell, Sara L. Van Driest, and Leena Choi. "Sensitivity of Estimated Tacrolimus Population Pharmacokinetic Profile to Assumed Dose Timing and Absorption in Real World Data and Simulated Data." *British Journal of Clinical Pharmacology* (January 7, 2022).doi:10.1111/bcp.15218

Williams, Michael L, Prince J. Kannankeril, Joseph H. Breeyear, Todd L. Edwards, Sara L. Van Driest, Leena Choi." Effect of CYP3A5 and CYP3A4 Genetic Variants on Fentanyl Pharmacokinetics in a Pediatric Population." *Clinical Pharmacology & Therapeutics* (December 7, 2021).doi:10.1002/cpt.2506

Choi, Leena, Cole Beck, Elizabeth McNeer, Hannah L. Weeks, **Michael L Williams**, Nathan T. James, Xinnan Niu, et al. "Development of a System for Postmarketing Population Pharmacokinetic and Pharmacodynamic Studies Using Real-World Data From Electronic Health Records." *Clinical Pharmacology & Therapeutics* 107, no. 4 (December 17, 2020): 934-43.

McNeer, Elizabeth, Cole Beck, Hannah L Weeks, **Michael L Williams**, Nathan T James, Cosmin A Bejan, and Leena Choi. "Building Longitudinal Medication Dose Data Using Medication Information Extracted from Clinical Notes in Electronic Health Records." *Journal of the American Medical Informatics Association* 28, no. 4 (March 18, 2021): 782-90.

Weeks, Hannah L, Cole Beck, Elizabeth McNeer, **Michael L Williams**, Cosmin A Bejan, Joshua C Denny, and Leena Choi. "MedExtractR: A Targeted, Customizable Approach to Medication Extraction from Electronic Health Records." *Journal of the American Medical Informatics Association* 27, no. 3 (March 1, 2020): 407-18.

McNeer, Elizabeth, Cole Beck, Hannah L. Weeks, **Michael L. Williams**, Nathan T. James, and Leena Choi. "A Post-Processing Algorithm for Building Longitudinal Medication Dose Data from Extracted Medication Information Using Natural Language Processing from Electronic Health Records." *BioRxiv*, September 19, 2019.

Bichot, Narcisse P, Rui Xu, Azriel Ghadooshahy, **Michael L Williams**, and Robert Desimone. "The Role of Prefrontal Cortex in the Control of Feature Attention in Area V4." *Nature Communications* 10, no. 1 (December 2019): 5727.

VanDusen, Keith W., Brian C. Syverud, **Michael L Williams**, Jonah D. Lee, and Lisa M. Larkin. "Engineered Skeletal Muscle Units for Repair of Volumetric Muscle Loss in the Tibialis Anterior Muscle of a Rat." *Tissue Engineering. Part A* 20, no. 21-22 (November 2014): 2920-30.

Williams, Michael L, Tatiana Y Kostrominova, Ellen M. Arruda, and Lisa M. Larkin. "Effect of Implantation on Engineered Skeletal Muscle Constructs." *Journal of Tissue Engineering and Regenerative Medicine* 7, no. 6 (June 2013): 434-42.

Presentations

Williams, Michael L. Nonlinear Mixed Effects Models in Pharmacokinetics Research. Guest Lecture in BIOS 7346 Vanderbilt University Department of Biostatistics, February 17, 2022.

Williams, Michael L and Leena Choi. Leveraging Medication Data from the Electronic Health Record: Opportunities, Challenges, and the EHR2PKPD Toolset. Oral Presentation at the ASCPT Translational Informatics Network Community Experience, January 11, 2022.

Williams, Michael L, Prince J. Kannankeril, Sara L Van Driest, and Leena Choi. "Effect of CYP3A5 and CYP3A4 Genetic Variants on Fentanyl Pharmacokinetics in a Pediatric Population." Poster Presentation presented at the American Society of Human Genetics - Pharmacogenomics Global Research Network 2021, October 18, 2020.

Williams, Michael L "A Population Pharmacokinetic Analysis Using Real-World Data Extracted from Electronic Health Records: Last-Dosing Times and Other Modeling Considerations." Oral Presentation presented at the Vanderbilt University Department of Biostatistics Seminar Series, March 10, 2020.

Williams, Michael L, Laura M Sampson, Matthew J Ferrari, and Christopher Fonnesbeck. "A Diagnostic Tool for Discrimination of Malarial and Bacterial Causes of Neurological Symptoms." Poster Presentation presented at the Translational Science 2019, Washington DC, February 2019.

Teaching Assistantships

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| BIOS 6306. Introduction to Study Design | Fall 2019 |
| BIOS 6321. Clinical Trials and Experimental Design | Spring 2020 |
| BIOS 6311. Principles of Modern Biostatistics | Fall 2020 |
| BIOS 6301. Introduction to Statistical Computing | Fall 2021 |

Relevant Coursework

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| BIOS 6321. Clinical Trials and Experimental Design | Spring 2018 |
| BIOS 7346. Advanced Regression Analysis II (General Linear Models & Longitudinal Data Analysis) | Spring 2018 |
| BIOS 7362. Advanced Statistical Inference and Statistical Learning | Fall 2018 |
| BIOS 8372. Bayesian Methods | Fall 2019 |

Awards

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| Vanderbilt University Department of Biostatistics IT Innovation Award | 2021 |
| Association for Clinical and Translational Science TL1 Research Fellow | 2018-2020 |