

Gustavo Guimarães de Castro Amorim

Revised date: July 7, 2025

Office: Department of Biostatistics
Vanderbilt University Medical Center
2525 West End Avenue, Suite 1100
Nashville, Tennessee 37232-2158
Email: gustavo.g.amorim@vumc.org
Phone: (615) 875-1066

EDUCATION

Federal University of Minas Gerais, Belo Horizonte, MG, Brazil *2004 - 2007*
B.Sc, Physics
Topic: *Isotopic Dipole Moments of Water Clusters*
Advisor: Jose Rachid Mohallem, Ph.D

Federal University of Minas Gerais, Belo Horizonte, MG, Brazil *2008 - 2010*
M.Sc, Statistics
Thesis: *Wasserstein Distance: Properties and Applications*
Advisors: Aniura Milanes Barrientos, Ph.D and Adrian Pablo Hinojosa Luna, Ph.D

University of Auckland, Auckland, New Zealand *2010 - 2014*
Ph.D., Statistics
Department of Statistics
Thesis: *Semiparametric methods for multiphase response-selective samples*
Advisors: Chris Wild, Ph.D and Alastair Scott, Ph.D and Alan Lee, Ph.D

Ghent University, Ghent, Belgium *January 2015 - July 2017*
Postdoctoral Research Fellow, Statistics

Janssen Pharmaceutica, Beerse, Belgium *August 2017 - July 2018*
Postdoctoral Research Fellow, Statistics

ACADEMIC APPOINTMENTS

Vanderbilt University Medical Center, Nashville, TN, USA *December 2018 - June 2023*
Research Assistant Professor
Department of Biostatistics

Vanderbilt University Medical Center, Nashville, TN, USA *July 2023 - Present*
Assistant Professor
Department of Biostatistics

AFFILIATE APPOINTMENTS

Vanderbilt Tuberculosis Center *2020 - Present*

PROFESSIONAL ACTIVITIES

Member of the Observational Safety and Monitoring Board:

- Trace Ultra Result iNsignt in TB screening (TURN-TB), PI: Emily Kendall, MD, PhD.

Member of examination committee

- **Ph.D. thesis:**

- Karl Mertens, Marginal Structural and Structural Nested Models for Causal Inference in Hospital Epidemiology, Ghent University, 2016

- **M.Sc. thesis:**

- Roel Vandersmissen, Baseline covariate adjustment in randomized follow-up studies, Ghent University, 2015
- Natalia Kacperek, Is a high occupancy rate associated with driver test outcomes?, Ghent University, 2016

Ad-hoc reviewer

- Biometrics, BMC Medicine, BMJ Open, Communication in Statistics - Simulation and Computation, Frontiers in Medicine, International Journal of Environmental Research and Public Health, Pharmacogenetics and Genomics, PLOS One, The International Journal of Tuberculosis and Lung Diseases.

Associate editor

- The International Journal of Tuberculosis and Lung Disease (2023-present)

Conference sessions

- Session Chair: Recent Developments in Semiparametric Transformation Models, ENAR, Nashville, TN, 2020
- Session Chair: Modern Statistical Challenges of Electronic Health Records Data, ENAR, New Orleans, LA, 2025
- Session Chair: From reactive to proactive medicine: Statisticians' evolving roles in the learning health system, JSM, Nashville, 2025

Awards

- Undergraduate Research Assistant from CNPq, Federal University of Minas Gerais, UFMG, 2005-2007
- Summer Scholarship, Campinas State University, UNICAMP, 2007
- Summer Scholarship, Institute of Applied and Pure Mathematics, IMPA, 2008
- M.Sc. Scholarship from CAPES, Federal University of Minas Gerais, UFMG, 2008-2010
- Scholarship from Marsden Fund, University of Auckland, 2010-2014
- Best Phd Talk Award, University of Auckland, Department of Statistics, 2011
- Doctoral Completion Award, University of Auckland, Department of Statistics, 2014
- Best Oral Presentation Award, IBS Channel Network Conference, Hasselt, 2017
- Methods Publication Awards, VUMC, 2022

TEACHING ACTIVITIES - FULL COURSES

Probability I and Intro to Statistics

Bachelor level course

Federal University of Minas Gerais

Belo Horizonte, MG, Brazil

Aug 2008 to Dec 2009

Graduate Assistant

Tutor for first- and second year students enrolled in the University of Auckland,

The University of Auckland

Auckland, New Zealand

Feb 2011 to Dec 2013

Statistical Topics in Food Technology

Course given for second year masters students graduating in Food Technology,
Ghent University
Ghent, Belgium

Aug 2016 to Dec 2017

BIOS6311 - Principles of Modern Biostatistics

Course given for first-year graduate students,
Vanderbilt University
Nashville, TN, USA

Fall 2024

TEACHING ACTIVITIES - SHORT COURSES

Workshop on Biostatistics

3-day introductory course for MSc and PhD students from different backgrounds,
Universidade Eduardo Mondlane
Maputo, Mozambique

Jun, 2019

Introduction to Biostatistics using R

Introductory course for PhD students from Medicine,
Universidade Eduardo Mondlane
Maputo, Mozambique (virtual)

Jun - Jul, 2021

4-day Introductory course to the statistical software R
Universidade Eduardo Mondlane
Maputo, Mozambique (virtual)

March, 2022

R Bootcamp

4-day Introductory course to the statistical software R
Universidade Eduardo Mondlane
Maputo, Mozambique (virtual)

August, 2022

VIRDE

Vanderbilt Institute for Research Development and Ethics
Vanderbilt Institute for Global Health
Nashville, TN, USA

October, 2022

CQS Summer Institute

Center for Quantitative Sciences
Vanderbilt University Medical Center
Nashville, TN, USA

July, 2023

VIRDE

Vanderbilt Institute for Research Development and Ethics
Vanderbilt Institute for Global Health
Nashville, TN, USA

October, 2023

CQS Summer Institute

Center for Quantitative Sciences
Vanderbilt University Medical Center
Nashville, TN, USA

July, 2024

Summer Internship

Department of Biostatistics
Vanderbilt University Medical Center
Nashville, TN, USA

May, 2025

CQS Summer Institute

Center for Quantitative Sciences
Vanderbilt University Medical Center
Nashville, TN, USA

July, 2025

STUDENT SUPERVISION

- Terrence Smith: co-supervisor, Summer internship, Department of Biostatistics, VUMC, 2023
- Maria Arriaga, co-supervisor, Postdoctoral researcher, Vanderbilt Tuberculosis Center, VUMC, 2022-2023
- Naij Taylor: co-supervisor, Summer internship, Department of Biostatistics, VUMC, 2024
- Felipe Ridolfi, co-supervisor, Postdoctoral researcher, Vanderbilt Tuberculosis Center, VUMC, 2024-2025
- Ranik Jelinek: supervisor, Summer internship, Department of Biostatistics, VUMC, 2025

RESEARCH PROGRAM

Current/Active grants:

5R37AI131771-07 PI: Shepherd, Bryan E 01/25/2018 - 01/31/2028
Statistical methods and designs for correlated outcome and covariate errors in studies of HIV/AIDS
Role: Co-Investigator

5R01AI158605-04 PI: van der Heijden, Yuri F, 04/04/2021 - 03/31/2027
Poor Treatment Response and Outcomes in Bedaquiline-Based Treatment Regimens for Drug-Resistant Tuberculosis in South Africa
Role: Biostatistician

5U01AI172064-02 PI: Castilho, Jessica L 07/01/2021 - 04/30/2026
Caribbean, Central and South America Network for HIV Epidemiology Year 20
Role: Co-Investigator

6NU2GGH002367-04-10 PI: Wester, William C 09/30/2021 - 09/29/2026
Avante: Towards epidemic control
Role: Biostatistician

5U01AI172064-02 PI: Sterling, Timothy R 01/02/2023 - 12/31/2027
Regional Prospective Observational Research in Tuberculosis (RePORT) – Brazil Network
Role: Co-Investigator

2U2RTW011248 PI: Moon, Troy D 05/01/2024 - 04/30/2029
Partnership for Research in Emerging Viral Infections-Sierra Leone (PREVSL)
Role: Co-Investigator

5R01HL094786-10 PI: Schildcrout, Jonathan 05/01/2024 - 04/30/2027
Outcome Dependent Sampling of Longitudinal Data: Design and Analysis
Role: Biostatistician

202403-71942 PI: Sterling, Timothy R 07/01/2024 - 06/30/2026
Prevalence, Incidence, and Biomarkers of Subclinical Tuberculosis (TB) in Close TB Contacts in the RePORT International Consortium
Role: Co-Investigator

U01CA294674 PI: Moon/Sacarlal/Salcedo 09/01/2024 - 08/31/2029
Hybrid type III effectiveness-implementation, pragmatic intervention trial for cervical cancer screen and treat in Mozambique
Role: Biostatistician

Past/Inactive grants:

5D43TW009745	PI: Moon, Troy D	06/24/2015 - 01/31/2026
UEM Partnership for Research in Implementation Science Mozambique (PRISM)		
Role: Biostatistician		
6NU2GGH001943-05-02	PI: Wester, William C	09/30/2016 - 09/29/2021
Avante: Towards epidemic control		
Role: Biostatistician		
5R01AI120790-04	PI: Sterling, Timothy R	08/12/2016 - 07/31/2023
Predictors of treatment toxicity, failure, and relapse in HIV-related tuberculosis		
Role: Biostatistician		
R-1609-36207	PI: Shepherd, Bryan E	12/01/2017 - 06/30/2022
Statistical methods and designs for addressing correlated errors in outcomes and covariates in studies using electronic health records data		
Role: Biostatistician		
5U01AI06992	PI: Sterling, Timothy R	01/01/2019 - 06/30/2021
Regional Prospective Observational Research in Tuberculosis (RePORT) – Brazil Network		
Role: Biostatistician		
R01AI147765-05	PI: Sterling, Timothy R	06/01/2019 - 05/31/2025
Immunogenetic predictors of active and incipient TB in HIV-negative and -positive close TB contacts		
Role: Co-Investigator		
5G11TW011529-03	PI: Moon, Troy D	09/08/2020 - 05/31/2023
UEM-Vanderbilt Academic Partnership for Enhancements in Research (APER) Role: Biostatistician		
R-202208-69014	PI: Sterling, Timothy R	09/01/2022 - 04/30/2023
Brazil Bridge Funding - Preparation for Phase 2		
Role: Biostatistician		
5G11TW011529-03	PI: Moon, Troy D	01/02/2023 - 12/31/2027
UEM-Vanderbilt Academic Partnership for Enhancements in Research (APER) Role: Biostatistician		
G-202105-67822-01	PI: Sterling, Timothy R	10/01/2022 - 09/30/2024
Associative BRICS Research in COVID-19 and Tuberculosis (ABRICOT)		
Role: Biostatistician		
U01AI174268	PI: Ellner, Jerrold	04/01/2023 - 03/31/2028
TB RICC 3.0		
Role: Co-Investigator		

PUBLICATIONS

Articles published/accepted in peer-reviewed journals:

1. Mohallem JR, de O. Coura T, Diniz LG, **Amorim G**, Assafrao D, Heine T. Adiabatic Corrections to Density Functional Theory Energies and Wave Functions. *Journal of Physical Chemistry. A, Molecules, Spectroscopy, Kinetics, Environment, & General Theory*, 112, 8896-8901, 2008, doi:10.1021/jp800732a
2. Breslow N, **Amorim G**, Pettinger MB and Rossouw, J. Using the whole cohort in the analysis of case-control data: Application to the Women's Health Initiative. *Statistics in Biosciences*, 5, 2, 232-249, 2013, doi:10.1007/s12561-013-9080-2

3. Mbah C, De Ruyck, K, De Schrijver S, De Sutter C, Schiettecatte K, Montén C, Paelinck L, De Neve W, Thierens H, **Amorim G**, Thas O, West C, Veldeman L. A new approach for modeling patient overall radiosensitivity and predicting multiple toxicity endpoints for breast cancer patients. *Acta Oncologica*, 57(5), 604-612, 2018, doi:10.1080/0284186X.2017.1417633
4. **Amorim G**, Thas O, Vermeulen K, Vansteelandt S, De Neve J. Small sample inference for probabilistic index models. *Computational Statistics and Data Analysis*, 121, 137-148, 2018, doi:10.1016/j.csda.2017.11.005
5. **Amorim, G.**, Scott, A. and Wild, C.. Multiphase sampling. In Borgan, Ø., Breslow, N.E., Chatterjee, N., Gail, M.H., Scott, A., Wild, C.J. (eds). (2018). *Handbook of Statistical Methods for Case-Control Studies* (pp. 219-238), CRC Press, ISBN 9780367571375
6. **Amorim G**. Semiparametric estimator for a secondary analysis with correlated outcomes. *Communications in Statistics - Theory and Methods*, 48:19, 4703-4711, 2019, doi:10.1080/03610926.2016.1146768
7. Tao, R., Lotspeich, S., **Amorim, G.**, Shaw, P., Shepherd, B., Efficient semiparametric inference for two-phase studies with outcome and covariate measurement errors. *Statistics in Medicine*, 10;40(3):725-738, 2021, doi:10.1002/sim.8799
8. Arriaga, M., **Amorim, G.**, Queiroz, A., Rodrigues, M., Araújo-Pereira, M., Nogueira, B., Souza, A., Rocha, M., Benjamin, A., Moreira, A., de Oliveira, J., Figueiredo, M., Turner, M., Alves, K., Durovni, B., Silva, J., Kritski, A., Cavalcante, S., Rolla, V., Cordeiro-Santos, M., Timothy Sterling, T., Andrade, B., Novel Stepwise Approach to Assess Representativeness of a Large Multicenter Observational Cohort of Tuberculosis Patients: The Example of RePORT Brazil. *International Journal of Infectious Diseases*, 103:110-118, 2021, doi:10.1016/j.ijid.2020.11.140
9. †Silva, A., †**Amorim, G.**, †Melo, M., Silveira, A., Vargas, P., Moreira, A., Rocha, M., Souza, A., Arriaga, M., Araújo-Pereira, M., Figueiredo, M., Durovni, B., Lapa-e-Silva, J., Cavalcanti, S., Rolla, V., †Sterling, T., †Cordeiro-Santos, M., Andrade, B. †, †Silva, E., †Kritsk, A., and the RePORT Brazil consortium. Pre-treatment absolute neutrophil count as a predictor of antitubercular therapy outcomes: a multicenter prospective cohort study. *Frontiers in Immunology*, 2021, doi:10.3389/fimmu.2021.661934
10. Davis, E., **Amorim, G.**, Dahn, B., Moon, T. Perceived ability to comply with national COVID-19 mitigation strategies and their impact on household finances, food security, and mental well-being of medical and pharmacy students in Liberia. *PloS one*, 2021, 16(7), p.e0254446, doi:10.1371/journal.pone.0254446
11. Lotspeich, S., Shepherd, B., **Amorim, G.**, Shaw, P., Tao, R. Efficient odds ratio estimation under two-phase sampling using error-prone data from a multi-national HIV research cohort. *Biometrics*, 2021, doi:10.1111/biom.13512
12. Souza, A., Arriaga, M., **Amorim, G.**, Queiroz, A., Andrade, B., Spencer, R., Guimaraes, A., Duvoni, B., Cavalcanti, S., Kritski, A., Rolla, Figueiredo, M., Turner, M., V., Sterling, T., Cordeiro-Santos, M. Determinants of losses in the latent tuberculosis infection cascade of care in Brazil, 2021, *BMJ Global Health*, doi: 10.1136/bmjgh-2021-005969
13. **Amorim, G.**, Tao, R., Lotspeich, S., Shaw, P., Lumley, T., Shepherd, B. Two-Phase Sampling Designs for Data Validation in Settings with Covariate Measurement Error and Continuous Outcome. *Journal of the Royal Statistical Society: Series A*, 2021, doi:10.1111/rssa.12689
14. Patel, R., **Amorim, G.**, Jakait, B., Shepherd, B., Mocello, R., Musick, B., Bernard, C., Onono, M., Bukusi, E., Wools-Kaloustian, K., Cohen, C., Yiannoutsos, C., Pregnancies among women living with HIV using contraceptives and antiretroviral therapy in western Kenya: a retrospective, cohort study. *BMC Medicine*, 13;19(1):178, 2021, doi:10.1186/s12916-021-02043
15. Carlucci, J., De Schacht, C., Graves, E., González, P., Bravo, M., Yu, Z., **Amorim, G.**, Arinze, F., Silva, W., Tique, J., Alvim, M., Simone, B., Fernando A., Wester, W. CD4 Trends with Evolving Treatment Initiation Policies among Children Living with HIV in Zambézia Province, Mozambique, 2012-2018, 2022, *Journal of Acquired Immune Deficiency Syndromes*.
16. Carlucci, J., Yu, Z., González, P., Bravo, M., **Amorim, G.**, Cugara, C., Guambe, H., Mucanhenga, J., Silva, W., Tique, J., Alvim, M., Graves, E., De Schacht, C., Wester, W. The Effect of a Mentor Mothers Program on Prevention of Mother-To-Child Transmission of HIV Outcomes in Zambézia Province, Mozambique *Journal of the International AIDS Society*, 2022, 25(6), p.e25952.
17. Ridolf, F., Peetluk, L. S., **Amorim, G.**, Turner, M., Figueiredo, M. C., Cordeiro-Santos, M., Cavalcante, S., Kritski, A. L., Durovni, B., Andrade, B. B., Sterling, T. R., Rolla, V. C., and the Regional Prospective

Observational Research in Tuberculosis (RePORT)–Brazil Network. TB treatment outcomes in Brazil: different predictors for each type of unsuccessful outcome *Clinical Infectious Diseases*, 2022, pp.ciac541-ciac541.

18. Nguenha, D., Acacio, S., Murias-Closas, A., Ramanlal, N., Saavedra, B., Karajeane, E., Mudumane, B., Mambuque, E., Gomes, N., Losada, I., Oliveras, L., Naueia, E., Sterling, T., **Amorim, G.**, Moon, T., Menendez, C., Vaz, P., Lopez-Varela, E., Garcia-Basteiro, A. Prevalence and clinical characteristics of pulmonary tuberculosis among pregnant and post-partum women in Mozambique *The International Journal of Tuberculosis and Lung Disease*, 2022, 26(7), pp.641-649.
19. Stalter, R., **Amorim, G.**, Mocello, A., Jakait, B., Shepherd, B., Musick, B., Bernard, C., Onono, M., Bukusi, E., Wools-Kaloustian, K., Cohen, C., Yiannoutsos, C., Patel, R., behalf of the Implant/Efavirenz Study Group and the East Africa IeDEA regional consortium, Contraceptive implant use duration is not associated with breakthrough pregnancy among women living with HIV and using efavirenz: a retrospective, longitudinal analysis. *Journal of the International AIDS Society*, 2022, 25(9), p.e26001.
20. Bezerra AL, Moreira ADSR, Isidoro-Gonçalves L, Lara CFDS, **Amorim G**, Silva EC, Kritski AL, Carvalho ACC. Clinical, laboratory, and radiographic aspects of patients with pulmonary tuberculosis and dysglycemia and tuberculosis treatment outcomes. *J Bras Pneumol*. 2022 Nov 28;48(6):e20210505. doi: 10.36416/1806-3756/e20210505. PMID: 36449815; PMCID: PMC9747138.
21. Ridolfi F, Peetluk L, **Amorim G**, Turner M, Figueiredo M, Cordeiro-Santos M, Cavalcante S, Kritski A, Durovni B, Andrade B, Sterling TR, Rolla V; Regional Prospective Observational Research in Tuberculosis (RePORT)–Brazil Consortium. Tuberculosis Treatment Outcomes in Brazil: Different Predictors for Each Type of Unsuccessful Outcome. *Clin Infect Dis*. 2023 Feb 8;76(3):e930-e937. doi: 10.1093/cid/ciac541. PMID: 35788646; PMCID: PMC10169436.
22. De Schacht, C., Nhacule, E., Bhatt, N., Pimentel, E., Young, P., Muquingue, H., Muteerwa, A., Bila, D., Ali, O., Madede, T., **Amorim, G.**, Viegas, E., on behalf of the COVIV Study Collaborative Group. Measuring the burden of SARS-CoV-2 infection among persons living with HIV and healthcare workers and its impact on service delivery in Mozambique: protocol of a prospective cohort study. *BMJ Open*. 2023 Jun 6;13(6):e068988. doi: 10.1136/bmjopen-2022-068988. PMID: 37280029; PMCID: PMC10254687.
23. Licona, G., Ballot, D., Moon, T., Banerjee, R., **Amorim, G.**, Agthe, A., Weitkamp, J.. Multi-Drug Resistant Bacterial Infections Among Very Low Birthweight Infants with Late-Onset Sepsis in Johannesburg, South Africa, *Open Forum Infect Dis*. 2023 Jul 12;10(8):ofad362
24. Moon TD, Sumah I, **Amorim G**, Alhasan F, Howard LM, Myers H, Green AF, Grant DS, Schieffelin JS, Samuels RJ. Antibiotic prescribing practices for acute respiratory illness in children less than 24 months of age in Kenema, Sierra Leone: is it time to move beyond algorithm driven decision making? *BMC Infect Dis*. 2023 Sep 25;23(1):626. doi: 10.1186/s12879-023-08606-0. PMID: 37749485; PMCID: PMC10519098.
25. De Schacht, C., **Amorim, G.**, Van Rompaey, S., Melo, M., Verissimo, C., Naftal, A., Graves, E., Bilhete, F., Tique, J. and Wester, C.W.. Favorable Impact of Community Adherence Support Groups on Retention in Care and Viral Suppression Rates Among Persons with HIV Receiving Antiretroviral Therapy in Mozambique, 2023, *AIDS Research and Human Retroviruses*.
26. Samuels RJ, Sumah I, Alhasan F, McHenry R, Short L, Chappell JD, Haddadin Z, Halasa NB, Valério ID, **Amorim G**, Grant DS, Schieffelin JS, Moon TD. Respiratory virus surveillance in hospitalized children less than two-years of age in Kenema, Sierra Leone during the COVID-19 pandemic (October 2020- October 2021). *PLoS One*. 2023 Oct 10;18(10):e0292652. doi: 10.1371/journal.pone.0292652. PMID: 37816008; PMCID: PMC10564235.
27. Vermeulen, K., De Neve, J. **Amorim, G.**, Thas, O., Vansteelandt, S. Semiparametric estimation of probabilistic index models: efficiency and bias, *Statistica Sinica*, 2021, doi: 10.5705/ss.202021.0070
28. **Amorim, G.**, Tao, R., Lotspeich, S., Shaw, P., Lumley, T., Patel, R., Shepherd, B. Three-phase generalized raking and multiple imputation estimators to address error-prone data. *Statistics in Medicine*. 2024; 43(2): 379-394. doi: 10.1002/sim.9967
29. Ridolfi F, **Amorim G**, Peetluk LS, Haas DW, Staats C, Araújo-Pereira M, Cordeiro-Santos M, Kritski AL, Figueiredo MC, Andrade BB, Rolla VC, Sterling TR; Regional Prospective Observational Research in Tuberculosis (RePORT)–Brazil Consortium. Prediction Models for Adverse Drug Reactions During Tuberculosis Treatment in Brazil. *J Infect Dis*. 2024 Mar 14;229(3):813-823. doi: 10.1093/infdis/jiae025. PMID: 38262629; PMCID: PMC10938211.

30. De Schacht, C., **Amorim, G.**, Calvo, L., Paulo, P., Ntasis, E., Van Rompaey, S., Matsimbe, J., Martinho, S., Graves, E., Esmael, R., Alvim, M., Kassim, H., Carlos, I., Wester, W., Audet, C. Time spent at health facility is a key driver of patient satisfaction, but did not influence retention to HIV care: A serial cross-sectional study in Mozambique. *PLoS One*. 2024 Apr 18;19(4):e0299282. doi: 10.1371/journal.pone.0299282. PMID: 38635537; PMCID: PMC11025808.
31. Lotspeich, S.C., **Amorim, G.G.C.**, Shaw, P.A., Tao, R. and Shepherd, B.E., Optimal multiwave validation of secondary use data with outcome and exposure misclassification. *Can J Stat*. 2024 Jun;52(2):532-554. doi: 10.1002/cjs.11772. Epub 2023 Mar 31. PMID: 39629097; PMCID: PMC11610482.
32. Villalva-Serra, K., Barreto Duarte, B., Miguez-Pinto, J.P., Queiroz, A.T., Rodrigues, M., Rebeiro, P.F., **Amorim, G.**, Cordeiro-Santos, M., Sterling, T.R., Araújo-Pereira, M. and Andrade, B.B., Public Health Impact of the Genexpert MTB/RIF Implementation in Tuberculosis Control in Brazil: A Nationwide Intervention Time-Series Analysis (2011-2022), *Lancet Reg Health Am*. 2024 Jun 5;36:100804. doi: 10.1016/j.lana.2024.100804. PMID: 38912329; PMCID: PMC11192787.
33. Kenga, D., Sacarlal, J., Sidat, M., **Amorim, G.**, Myers H., Chicamba, V., Kampa, K., Moon, T. Evaluating empiric antibiotic prescribing for hospitalized children in Mozambique through the introduction of a quarterly syndromic antibiogram: an implementation science protocol. *PLoS One*. 2024 Aug 9;19(8):e0306511. doi: 10.1371/journal.pone.0306511. PMID: 39121076; PMCID: PMC11315278.
34. Myers H., Chongo B., Zifodya J., Zacaria I., Machava E., Simango A., Amorim G., Mavume-Mangunyane E., Chiau R., Kampa K., Madede T., Sidat M., Moon T., Implementation of spirometry screening for post-tuberculosis lung disease (PTLD) among adolescents and adults enrolled within the National Tuberculosis Control Program of Carmelo Hospital in Chókwè District, Mozambique: A hybrid type III effectiveness-implementation study protocol. *BMC Pulm Med* 24, 502 (2024). <https://doi.org/10.1186/s12890-024-03329-7>
35. **Amorim, G.**, Jaworski, J., Rolla, V., Acosta, E., Hachey, B., Cordeiro-Santos, M., Kritski, A., Figueiredo, M., Linhares, L., Turner, M., Andrade, B., Edwards, D., Sterling, T., Haas, D., and the Regional Prospective Observational Research in Tuberculosis (RePORT)-Brazil network. Pharmacogenetics of tuberculosis treatment toxicity and effectiveness in a large Brazilian cohort, *Pharmacogenet Genomics*. 2025 Feb 1;35(2):55-64. doi: 10.1097/ PMID: 39470346; PMCID: PMC11695165.
36. Arriaga, M., **Amorim, G.**, Figueiredo, M., Staats, C., Kritski, A., Cordeiro-Santos, M., Rolla, V., Andrade, B., and Sterling, T. Effect of Smoking on Longitudinal Interferon- γ Release Assay Results among Close Contacts of People with Pulmonary Tuberculosis, *J Infect Dis*. 2025 Feb 4;231(1):103-108. doi: 10.1093/infdis/jiae285. PMID: 38820119; PMCID: PMC11793032.
37. Akuamoah-Boateng G., Moon T., **Amorim G.**, Bandini R., Ballot D., Intraventricular hemorrhage among very low birth weight infants in a South African cohort: a retrospective study of trends and short-term outcomes. *BMC Pediatr* 25, 138 (2025). <https://doi.org/10.1186/s12887-025-05426-w>
38. **Amorim, G.**, Tao, R., Lumley, T., Shaw, P. A., and Shepherd, B. E. Ascertainment Conditional Maximum Likelihood for continuous outcome under two-phase response-selective design (accepted, *Statistics in Medicine*)
39. Turay, F., Samuels, R., **Amorim G.**, Grant, D., Halasa, N., Schieffelin, J., and Moon, T. Respiratory syncytial virus epidemiology and clinical characteristics among young children hospitalized in Sierra Leone (accepted, *American Journal of Tropical Medicine & Hygiene*)
40. Ferreira, I.B., Menezes, R.C., Araújo-Pereira, M., Rolla, V.C., Kritski, A.L., Cordeiro-Santos, M., Sterling, T.R., Staats, C., **Amorim, G.**, Trajman, A. and Andrade, B.B., 2025. Effects of missed anti-tuberculosis therapy doses on treatment outcome: a multi-center cohort study. *The Lancet Regional Health–Americas*, 48.
41. Were MC, Tique JA, Savai S, De Schacht C, Graves E, Van Rompaey S, Ynusse M, Lucas C, Cumaio F, Lopes D, **Amorim G**, Mokaya B, Ntasis T, Jose E, Torres I, Nancico A, Wester CW. Evaluation of mHealth Usage Logs for Health Provider Performance in HIV Care in Zambézia Province, Mozambique. *Stud Health Technol Inform*. 2025 Jun 26;328:360-364. doi: 10.3233/SHTI250738. PMID: 40588945.

†: These authors contributed equally to the work

Articles under review in peer-reviewed journals:

1. Arriaga, M., **Amorim, G.**, Figueiredo, M., Staats, C., Kritski, A., Cordeiro-Santos, M., Rolla, V., Andrade, B., Rebero, P., and Sterling, T. Prediction Models for Incident Tuberculosis in Contacts of People with Tuberculosis: A Brazilian Prospective Cohort (under review, Clinical Infectious Diseases)
2. Piekos, J., **Amorim, G.**, Ridolfi, F., Cordeiro-Santos, M., Kritski, A., Figueiredo, M., Andrade, B., Santos, A., Haas, D., Sterling, T., Rolla, V., Velez, D. Genetic ancestry proportion influences risk of adverse events from tuberculosis treatment in Brazil (under review, Journal of Infectious Disease)
3. **Amorim, G.**, Slone, J., Semeere, A., Diero, L., Otero, L., Crabtree-Ramirez, B., Tao, R., Duda, S., Musick, B., Yiannoutsos, C., Lumley, T., Shaw, P., and Shepherd, B. Data validation in multinational observational studies with error-prone data: applying an optimal validation sampling strategy in a study of Kaposi sarcoma and HIV (under review, American Journal of Epidemiology)
4. Slone, J., **Amorim, G.**, Semeere, A., Diero, L., Otero, L., Crabtree-Ramirez, B., Tao, R., Duda, S., Musick, B., Yiannoutsos, C., Lumley, T., Shaw, P., and Shepherd, B. Analysis approaches to combine error-prone data with a subset of validated data: an application to a multinational study of Kaposi sarcoma and HIV (under review, American Journal of Epidemiology)
5. Moon, T., Salcedo, M., Mavume-Mangunyane, E., Sidat, M., Lorenzoni, C., Baker, E., **Amorim, G.**, Paz-Soldán, V., Kampa, K., Condon, K., Myers, H., and Sacarlal, J. A hybrid type III effectiveness-implementation study designed to test implementation best practices of deploying a Screen-Triage-Treat approach to cervical cancer screening and management utilizing self-collected HPV DNA testing in Chokwe District, Mozambique (under review, Implementation Science)
6. Dill-McFarland, K., Andrade, B., Figueiredo, M., Andrade, A., Avendaño-Range, F., Cordeiro-Santos, M., Kritski, A., Rolla, V., Cubillos-Angulo, J., Kalams, S., Simmons, J., Oakes, J., Avila, J., Nakaya, H., Gangula, R., Rebeiro, P., **Amorim, G.**, Mallal, S., Regional Prospective Observational Research in Tuberculosis (RePORT)-Brazil Consortium, Sterling, T., and Hawn, T. Genome-wide association study in Brazil identifies risk factor-adjusted genetic susceptibility to pulmonary tuberculosis with cell-specific gene expression effects (under review, Nature Genetics)
7. Vandí, M., Moon, T., **Amorim, G.**, Schieffelin, J., and Samuels, R. Acute respiratory infection and associated factors among children less than 24 months of age presenting to Kenema Government Hospital in Sierra Leone from October 2020 - October 2021 (under review, Journal of Tropical Pediatrics)
8. Xiong, J., Lotspeich, S., Sherrill, J., **Amorim, G.**, Shepherd, B., and Tao, R. sleev: An R Package for Semiparametric Likelihood Estimation with Errors in Variables (under review, The Journal of Open Source Software)

Articles under preparation (with full drafts completed):

1. **Amorim, G.**, Haas, D., Cordeiro-Santos, M., Kritski, A., Figueiredo, M., Linhares, L., Turner, M., Ridolfi, F., Andrade, B., Rolla, V., Sterling, T., and the Regional Prospective Observational Research in Tuberculosis (RePORT)-Brazil network. Estimating therapeutic drug ranges for anti-TB drugs using a large observational cohort.
2. Arriaga, M., Ridolfi, F., **Amorim, G.**, Walker, F., Staats, C., and Sterling, T. Prediction Models for Incident Tuberculosis in Contacts of People with Tuberculosis: A Systematic Review
3. Semeere, A., Slone, J., **Amorim, G.**, Diero, L., Otero, L., Crabtree-Ramirez, B., Tao, R., Duda, S., Musick, B., Yiannoutsos, C., Lumley, T., Shaw, P., and Shepherd, B. Epidemiology of Kaposi Sarcoma among adults living with HIV in East Africa and Latin America in the Treat-All Era
4. **Amorim, G.**, Taylor, N., Slone, J., Tao, R., Sterling, T., Lumley, T., Shaw, P., Shepherd, B. Improving the IPW estimator in two-phase designs
5. Faiela, C., Moon, T., **Amorim, G.**, Sidat, M., and Sevene, E. Effectiveness of a clinical decision support algorithm (CDSA) on reducing unnecessary antibiotic prescriptions for upper respiratory tract infections among ambulatory HIV-infected adults in Mozambique: a cluster randomized controlled trial
6. Sonya Krishnan, S., **Amorim, G.**, Vania, C., Gupte, N., Paradkar, M., Gupte, A., Figueiredo, M., Gaikwad, S., Padmapriyadarsini, C., Cordeiro-Santos, M., Kritski, A., Rolla, V., Sarkar, S., Viswanathan, V., Christopher, D., Mave, V., Golub, J., Ellner, J., Sterling, T., Andrade, B., Gupta, A., Robinson, M., Machine learning accurately predicts TB treatment outcomes using simple clinical and laboratory measures in a multinational cohort

PRESENTATIONS

Invited

- Federal University of Rio Grande do Norte, Natal, Brazil *February 2014*
Semiparametric Methods for Regression Under Two-Phase Sampling
- Federal University of Minas Gerais, Belo Horizonte, Brazil *February 2014*
Semiparametric Methods for Regression Under Two-Phase Sampling
- Ghent University, Ghent, Belgium *May 2015*
Semiparametric methods for multiphase response-selective samples
- Erasmus Medical Center, Rotterdam, Netherlands *December 2016*
An introduction to Probabilistic index models: efficiency and bias
- Vanderbilt University Medical Center, Nashville, TN, USA, *May 2018*
Probabilistic index models
- Direção Provincial de Saúde, Quelimane, Mozambique, *July 2019*
Statistical Aspects to Evaluate Public Health Interventions
- INS, Maputo, Mozambique, *July 2019*
Propensity Score models in Public Health
- ENAR, Nashville, TN, USA, *April 2020*
Two-Phase Sampling Designs for Data Validation in Settings with Covariate Measurement Error and Continuous Outcome
- JSM, Washington DC, USA, *August 2022*
Implementing an optimal multi-wave validation design in a multi-national HIV research cohort
- ENAR, Nashville TN, USA, *March 2023*
Optimal Multi-Wave Validation Design in a Multi-National HIV Research Cohort
- ENAR, Baltimore TN, USA, *March 2024*
Assessing the Association Between Type of TB Testing and Treatment Outcomes: Design and Analysis of a Two-phase Study using EHR Data from a Multinational HIV/TB Co-infection Cohort
- University of Auckland, Auckland, New Zealand (virtual) *May 2024*
Statistical Methods and Designs for Multi-Wave Validation Studies
- ENAR, New Orleans LA, USA, *March 2025*
Improving the IPW Estimator in Two-Phase Designs

Contributed

- Joint Statistical Meeting, San Diego, CA, USA *August 2012*
Semiparametric Methods for Regression Under Two-Phase Sampling
- ISNPS Meeting, Graz, Austria *July 2015*
Probabilistic index models: efficiency and bias
- International Biometric Conference, Victoria, BC, Canada *July 2016*
Semiparametric Methods for Regression Under Two-Phase Sampling
- IBS Channel Network Conference, Hasselt, Belgium *April 2017*
Small sample inference for probabilistic index models
- Workshop on Semiparametric Statistics, Gent, Belgium *Dec 2017*
Small sample inference for probabilistic index models
- ENAR, Philadelphia, PA, USA *April 2019*
MCP-Mod for Exposure-Response Information Error and Continuous Outcome
- JSM, Virtual, *August 2021*
Three-phase generalized raking and multiple imputation estimators to address error-prone routinely collected data

SOFTWARE

- Joris Meys, Jan De Neve, Nick Sabbe, and **Gustavo Amorim**. pim: Fit Probabilistic Index Models, 2017. URL <https://CRAN.R-project.org/package=pim>. R package version 2.0.1.