

Darwin Del Castillo, MD, MPH

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SCIENTIFIC EDUCATION

Master of Public Health (MPH)

UNIVERSITY OF WASHINGTON, SEATTLE - USA

Sep 2023 – Jun 2025

Doctor of Medicine (MD)

UNIVERSIDAD NACIONAL MAYOR DE SAN MARCOS, LIMA - PERU

Mar 2013 – Dec 2020

SKILLS

Programming: SQL (MySQL), R, Stata, Python

Cloud Computing: Slurm HPC, Docker, Linux environments (bash)

Tools: VS Code, Quarto, \LaTeX , Shiny (R), ArcGIS, Power BI, REDCap, Office 365 Suite, Git version control (GitHub, Bitbucket, GitLab)

Data Standards: HIPAA, ICH E6, HL7 FHIR, GDPR, UK GDPR, DPA 2018, ICD-10/ICD-9/SNOMED

Packages: tidyverse, ggplot2, lme4, survival, sf, spdep, cmprsk, mice, geepack, metafor, rstan, caret, Pandas, NumPy, Matplotlib, MR-BRT

Languages: English (fluent), Spanish (native)

Core Competencies: Data analysis, teamwork, problem solving, science communication, mentorship

PROFESSIONAL EXPERIENCE

Graduate Research Assistant

INSTITUTE FOR HEALTH METRICS AND EVALUATION

Jul 2024 – Jun 2025

SEATTLE - USA

- Developed hyperparameters for a Bayesian hierarchical meta-regression model to estimate prevalence, incidence, and clinical-outcome occurrence of lower-respiratory-tract infections across 80 countries.
- Executed an MCMC using data-driven priors and uncertainty propagation to estimate the probabilistic overlap between inclusion health groups in 22 high-income countries.
- Produced a global map of study locations using GBD 2023 georeference data to visualize geographic coverage and data gaps, informing meta-analysis data sources.

Graduate Research Assistant

DEPARTMENT OF GLOBAL HEALTH – UNIVERSITY OF WASHINGTON

Jun 2024 – Mar 2025

SEATTLE - USA

- Coordinated a pragmatic mixed-methods study to explore barriers and facilitators in >10 low-resource Peruvian hospitals.
- Designed and deployed the electronic CRF and wrote the data-management plan to manage input data from the mixed-methods study, solving 350+ data entry queries during project deployment.
- Co-developed communication strategies with stakeholders to disseminate complex findings among healthcare policymakers.

Graduate Research Assistant

HEALTH POPULATION RESEARCH CENTER – UNIVERSITY OF WASHINGTON

Sep 2023 – Mar 2024

SEATTLE - USA

- Maintained and stored sociodemographic and utilisation data as part of a clinical trial post-assessment survey using electronic data capture platforms.
- Translated IRB submission materials from Spanish to English for the Alzheimer's Disease Research Center.
- Analysed engagement and outreach data into visualisation tools and summary tables, enabling programme managers to make adjustments to recruitment strategies.

RWE Consultant

HEALTH TECHNOLOGY ASSESSMENT AND RESEARCH INSTITUTE

Jan 2023 – Jan 2024

LIMA – PERU

- Integrated surveillance and clinical data into statistical burden models to support national health technology assessment and prioritisation processes.
- Conducted budget impact and cost-effectiveness analysis to prioritise funding for high-impact health interventions under national budgets.
- Synthesised results from these models into evidence summaries to policymakers and health practitioners, supporting strategic purchasing decisions for the Peruvian Social Security System.

Data Manager Via Libre Association Lima (Peru)		Mar 2022 - Mar 2023
<ul style="list-style-type: none"> Managed patient databases and tracked data collection across multiple clinical sites using REDCap and iMedidata systems. Resolved data queries and quality issues while monitoring protocol compliance and adverse event reporting. Created data cleaning reports and recruitment dashboards to support study monitoring and database finalization. 		
Research Assistant CRONICAS CENTER OF EXCELLENCE IN CHRONIC DISEASES		Mar 2019 – Aug 2023 LIMA – PERU
<ul style="list-style-type: none"> Resolved and stored harmonised datasets across 8+ years of longitudinal and clinical trial data using R and REDCap, enabling consistent analytics and timely access for interdisciplinary research teams. Analysed real-world evidence and conducted preliminary analyses that strengthened proposals targeting hypertension, diabetes, cancer, and multimorbidity, securing \$300 k in competitive funding. Co-authored 5 peer-reviewed manuscripts as part of international collaborations, communicating epidemiological findings for academic and lay audiences. 		
ADDITIONAL EDUCATION		
Professional Certificate in Clinical Research UNIVERSIDAD PERUANA CAYETANO HEREDIA		Sep 2021 – Apr 2022 LIMA - PERU
Non-Certificate Trainee in Demographic Methods CENTER FOR STUDIES IN DEMOGRAPHY AND ECOLOGY – UNIVERSITY OF WASHINGTON		Sep 2024 – Current SEATTLE – USA
TEACHING PROFESSIONAL ACTIVITIES		
Teaching		
Lecturer SCHOOL OF MEDICINE – UNIVERSIDAD CIENTÍFICA DEL SUR INTRODUCTION TO EPIDEMIOLOGY: I teach three sections of ~15 fourth-year medical students each, focusing on basic clinical epidemiology concepts, including study designs, bias identification, & basic epidemiological surveillance concepts.		Mar 2025 – Current LIMA – PERU
Teaching Assistant COLLEGE OF ARTS & SCIENCES – UNIVERSITY OF WASHINGTON INTRODUCTION TO MOLECULAR AND CELLULAR BIOLOGY: Led two laboratory practice sessions with ~25 undergraduate students each, covering fundamental molecular and cellular biology experiments.		Mar 2024 – Jun 2024 SEATTLE – USA
Mentoring		
Undergraduate thesis <ul style="list-style-type: none"> Fátima Sánchez Diaz and Nicole Ravines Layza, “Barriers and facilitators for the integrated provision of mental health and family planning services in patients with severe mental illness from low-and middle-income countries. A Rapid Review Assessment”, Universidad Científica del Sur (2024 to Current). 		
LICENSURE AND CERTIFICATION		
2024	National Registry of Investigators, RENACYT-CONCYTEC, Investigator Level VII (P0160977)	
2023	CITI Program, Good Clinical Practice and ICH, Credential ID 65079238	
2023	CITI Program, Human Subjects Learners, Credential ID 65079240	
2023	CITI Program, Biomedical Responsible Conduct of Research, Credential ID 65079239	
2021	Peruvian College of Physicians, Membership No. 94534	
PUBLICATIONS		ORCID: 0000-0002-8609-0312

Peer-reviewed publications

- **Del Castillo, D.**, Bernabe-Ortiz, A., Gilman, R.H., Sharma, M., Nugent, R., Miranda J.J. (2025) “Cost-effectiveness analysis of a household salt substitute intervention on reducing community-wide blood pressure in Northern Peru” **Lancet Reg Health Am.** Submitted under consideration
- Lupton, C., Wang, C., **Del Castillo, D.**, Lei, J., Suba, J., Gillespie, K., Maslova, K., Qiao, L., Fageras, M., Pasovic, M., Rafferty, Q., Ewald, S. (2025) “Global viral lower respiratory disease episodes, hospitalizations, and clinical manifestations by aetiology, 2010-2021” **Lancet Infect Dis.** Submitted under consideration
- Vidyasagaran, AL., Ayesha, R., Boehnke, JR., [...], **Del Castillo Fernández, D.**, [...], Zavala, GA., Zhao, YW., Siddiqi, N. (2024) “Core outcome sets for trials of interventions to prevent and to treat multimorbidity in adults in low and middle-income countries: the COSMOS study” **BMJ Glob Health.** 9(8):e015120. Available at: [10.1136/bmjgh-2024-015120](https://doi.org/10.1136/bmjgh-2024-015120)
- Bazo-Alvarez, J.C., **Del Castillo, D.**, Piza, L., Bernabe-Ortiz, A., Carrillo-Larco, R.M., Smeeth, L., Gilman, R.H., Checkley, W., Miranda, J.J. (2024) “Multimorbidity patterns, sociodemographic characteristics, and mortality: Data science insights from low-resource settings” **Am J Epidemiol.** kwae466: Online ahead of print. Available at: [10.1093/aje/kwae466](https://doi.org/10.1093/aje/kwae466)
- Lapidaire, W., Proaño, A., Blumenberg, C., Loret de Mola, C., Delgado, CA., **Del Castillo, D.**, Wehrmeister, FC., Gonçalves, H., Gilman, RH., Oberhelman, RA., Lewandowski, AJ., Wells, JCK., Miranda, JJ. (2023) “Effect of preterm birth on growth and blood pressure in adulthood in the Pelotas 1993 cohort” **Int J Epidemiol.** 25;52(6):1870-1877. Available at: [10.1093/ije/dyad084](https://doi.org/10.1093/ije/dyad084)
- **Del Castillo-Fernández, D.**, Brañez-Condorena, A., Villacorta-Landeo, P., Saavedra-García, L., Bernabé-Ortiz, A., Miranda, JJ. (2021) “[Advances in the investigation of chronic non-communicable diseases in Peru] (in Spanish)” **An Fac med.** 81(4): 444-452. Available at: [10.15381/anales.v81i4.18798](https://doi.org/10.15381/anales.v81i4.18798)

Conference abstracts

- Valverde, N., Santivañez, M., Tello, M., and **Del Castillo, D.** (2025) “[Beyond abortion: A mixed methods study on the factors that condition access and use of post-abortion contraceptives in Peruvian women] (in Spanish)” **VII International Conference on Family Planning** The William H. Gates Sr. Institute for Population and Reproductive Health., Bogota, Colombia