

Darwin Del Castillo, MD, MPH

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 [ddelcastillof](#)

SCIENTIFIC EDUCATION

Master of Public Health (MPH)
UNIVERSITY OF WASHINGTON, SEATTLE - USA

Sep 2023 – Jun 2025

Medical Doctor (MD)
UNIVERSIDAD NACIONAL MAYOR DE SAN MARCOS, LIMA - PERU

Mar 2013 – Dec 2020

SKILLS

Broad experience in the health data lifecycle: data collection, management, wrangling, querying, analysis, & visualization.

- SQL (MySQL), Python, R, Stata
- HPC (Slurm), Linux environments (bash)
- VS Code, Jupyter Notebook, Quarto, Markdown, \LaTeX , Shiny (R), GIS tools, REDCap
- Team-based projects on Github and Bitbucket repositories
- Packages: tidyverse, ggplot2, meta/metafor, lme4, survival, geepack, gam, lavaan, sf, rJAGS, rstan, Pandas, Matplotlib, NumPy, MR-BRT (GBD Study estimation), amongst other tools.
- Fluency in English & Spanish
- Teamwork & collaboration
- Problem solving
- Science communication
- Mentorship

PROFESSIONAL EXPERIENCE

Graduate Research Assistant
INSTITUTE FOR HEALTH METRICS AND EVALUATION
UNIVERSITY OF WASHINGTON, SEATTLE (USA)

Jul 2024 – Jun 2025

- Modeled epidemiological data on lower respiratory tract infections due to human metapneumovirus from 2010 to 2023 using meta-analysis information as priors and Bayesian meta-regression suites (DisMod-MR) in R.
- Analyzed data from public sources using Bayesian methods and Monte Carlo simulation to estimate the proportion of overlap between socially excluded groups in high-income countries with the rJAGS and rstan packages.
- Estimated population-attributable fractions and standardized mortality ratios for socially excluded groups in high-income countries.

Graduate Research Assistant
DEPARTMENT OF GLOBAL HEALTH
UNIVERSITY OF WASHINGTON, SEATTLE (USA)

Jun 2024 – Mar 2025

- Synthesized clinical and research evidence into a scoping review to support the creation of indicators to guide mental health policy.
- Designed and iterated a pragmatic mixed-methods protocol to address implementation challenges in pediatric burn care, overcoming data collection constraints in low-resource Peruvian hospitals.
- Co-developed communication strategies with stakeholders to distill complex findings into actionable insights for healthcare policymakers.

Graduate Research Assistant
HEALTH POPULATION RESEARCH CENTER
UNIVERSITY OF WASHINGTON, SEATTLE (USA)

Sep 2023 – Mar 2024

- Gathered sociodemographic and utilization data as part of a clinical trial post-assessment survey.
- Translated IRB submission materials from Spanish to English for the Alzheimer's Disease Research Center.
- Synthesized early engagement and outreach data into visualisation tools and summary tables, enabling program managers to make adjustments to recruitment strategies.

RWE Consultant**Jan 2023 – Jan 2024**

HEALTH TECHNOLOGY ASSESSMENT AND RESEARCH INSTITUTE
SOCIAL SECURITY HEALTH SYSTEM, LIMA (PERU)

- Integrated surveillance and clinical data into analytic frameworks to support national health technology assessment and prioritization processes.
- Conducted budget impact and cost-effectiveness analysis to prioritize funding for high-impact health interventions under national budgets.
- Presented data-driven recommendations and evidence summaries to policymakers and partners, supporting strategic purchasing decisions for the Social Security System.

Research Assistant**Mar 2019 – Aug 2023**

CRONICAS CENTER OF EXCELLENCE IN CHRONIC DISEASES
UNIVERSIDAD PERUANA CAYETANO HEREDIA, LIMA (PERU)

- Resolved harmonization challenges across 8+ years of longitudinal data using R, enabling consistent analytics and timely access for interdisciplinary research teams.
- Synthesized real-world evidence and conducted preliminary analyses that strengthened proposals targeting hypertension, diabetes, cancer, and multimorbidity.
- Co-authored peer-reviewed manuscripts as part of international collaborations, communicating complex analytical findings for academic and lay audiences.

ADDITIONAL EDUCATION

Professional Certificate in Clinical Research**Sep 2021 – Apr 2022**

UNIVERSIDAD PERUANA CAYETANO HEREDIA, LIMA - PERU

TEACHING PROFESSIONAL ACTIVITIES

Teaching**Mar 2025 – current**

Lecturer: Introduction to Epidemiology. UNIVERSIDAD CIENTÍFICA DEL SUR. 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 2024 – Jun 2024

Teaching Assistant: Introduction to Molecular and Cellular Biology. UNIVERSITY OF WASHINGTON. Led two laboratory practice sessions with ~ 25 undergraduate students each, covering fundamental molecular and cellular biology experiments.

Mentoring**Undergraduate thesis**

- 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

2021	Peruvian College of Physicians, Membership No. 94534
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
2024	National Registry of Investigators, RENACYT-CONCYTEC, Investigator Level VII (P0160977)

Peer-reviewed publications

- 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)
- 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)
- 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)
- **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.

Conference abstracts

- Valverde, N., Santivanez, 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