

Darwin Del Castillo, MD, MPH

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 [ddelcastillof](#)

EDUCATION

Master of Public Health (MPH)
UNIVERSITY OF WASHINGTON

Sep 2023 – Jun 2025
SEATTLE - USA

Medical Doctor (MD)
UNIVERSIDAD NACIONAL MAYOR DE SAN MARCOS

Mar 2014 – Dec 2020
LIMA - PERU

SKILLS

Health data scientist and epidemiologist specializing in the health data lifecycle. Experienced in data management, querying, wrangling, analysis, and visualization.

- **Programming:** SQL (MySQL), Python, R, Stata
- **Cloud Computing:** HPC (Slurm), Linux environments (bash)
- **Tools:** VS Code, Jupyter, Quarto, Markdown, L^AT_EX, Shiny (R), REDCap
- **Version control:** Git (GitHub, Bitbucket)
- **Libraries and packages:** tidyverse, ggplot2, lme4, survival, geepack, gam, lavaan, sf, rJAGS, rstan, meta/metafor, Pandas, NumPy, Matplotlib, MR-BRT (GBD Study estimation)
- Fluency in English & Spanish
- Teamwork & collaboration
- 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 outcomes of lower-respiratory-tract infections across 80 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.
- Executed a Gibbs sampler with data-driven priors to estimate the overlap among inclusion health populations in 22 high-income countries to compute population-attributable fractions and standardized mortality ratios.

Graduate Research Assistant
DEPARTMENT OF GLOBAL HEALTH – UNIVERSITY OF WASHINGTON

Jun 2024 – Mar 2025
SEATTLE - USA

- Designed the study protocol and coordinated a mixed-methods evaluation of implementation strategies for pediatric burn care across >10 low-resource Peruvian hospitals.
- Co-developed communication strategies with 2 stakeholder organizations to translate complex findings for healthcare policymakers.
- Conducted a systematic review to assess mental health policy implementation indicators in low-and middle-income countries as part of a consultancy for an international NGO.

Graduate Research Assistant
HEALTH POPULATION RESEARCH CENTER – UNIVERSITY OF WASHINGTON

Sep 2023 – Mar 2024
SEATTLE - USA

- Maintained and stored sociodemographic and utilization 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.
- Summarized engagement and outreach data into visualization tools and descriptive tables, enabling program managers to make adjustments to recruitment strategies.

Real-World Evidence Consultant
HEALTH TECHNOLOGY ASSESSMENT AND RESEARCH INSTITUTE

Jan 2023 – Jan 2024
LIMA – PERU

- Integrated surveillance and clinical data from 80 Peruvian hospitals into statistical burden models to support national health technology assessment and prioritization processes.
- Conducted budget impact and cost-effectiveness models that prioritized oncological interventions worth \$1 M+.
- Synthesized findings into executive reports aimed at policymakers and partners, guiding reimbursement policy for Peru's Social Security System.

- Coordinated 2 workshops per site with community health workers in 3 Peruvian regions to co-design a mobile application for early detection of cognitive impairment and dementia.
- Analyzed longitudinal data to support research grant proposals in noncommunicable disease epidemiology by conducting preliminary data analysis on clinical, demographic, and biological biomarkers.
- Co-authored 5 scientific manuscripts, which included longitudinal data analyses and machine learning models.

ADDITIONAL EDUCATION

Professional Certificate in Clinical Research
UNIVERSIDAD PERUANA CAYETANO HEREDIA

Sep 2021 – Apr 2022
LIMA - PERU

TEACHING PROFESSIONAL ACTIVITIES

Teaching

Lecturer **Mar 2025 – Current**
SCHOOL OF MEDICINE – UNIVERSIDAD CIENTÍFICA DEL SUR LIMA – PERU
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.

Teaching Assistant **Mar 2024 – Jun 2024**
COLLEGE OF ARTS & SCIENCES – UNIVERSITY OF WASHINGTON SEATTLE – USA
INTRODUCTION TO MOLECULAR AND CELLULAR BIOLOGY: 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

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
- 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