

# Darwin Del Castillo, MD, MPH

 [darwin-del-castillo](#)

 [ddelcastillo.f@gmail.com](mailto:ddelcastillo.f@gmail.com)

 [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

---

Health data science and epidemiology: data wrangling, querying, analysis, visualization & management

- SQL (MySQL), Python, R, Stata
- HPC (Slurm), Linux environments (bash)
- VS Code, Jupyter Notebook, Quarto, Markdown,  $\text{\LaTeX}$ , Shiny (R), GIS tools
- 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
- Team work & 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.
- Identified performance constraints in electronic health record pipelines and redesigned modular Python functions, reducing processing time by over 40% in high-performance computing environments.

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

**Jan 2023 – Jan 2024**

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

**Mar 2019 – Aug 2023**

- 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**  
UNIVERSIDAD PERUANA CAYETANO HEREDIA, LIMA - PERU

**Sep 2021 – Apr 2022**

**OTHER 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 mental health screening at family planning centers from low-and-middle income countries”, Universidad Científica del Sur, Peru (2024 to Present).

**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)

**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