

Darwin Del Castillo, MD, MPH

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EDUCATION

Sep 2023 – May 2025	Master in Public Health (MPH) University of Washington, USA
Mar 2013 – Dec 2020	Medical Doctor (MD) Universidad Nacional Mayor de San Marcos, Peru

ADDITIONAL EDUCATION

Sep 2021 – Apr 2022	Professional Certificate in Clinical Research Universidad Peruana Cayetano Heredia, Lima - Peru
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PROFESSIONAL EXPERIENCE

Jul 2024 – Jun 2025	Graduate Research Assistant Institute for Health Metrics and Evaluation University of Washington, Seattle - USA <ul style="list-style-type: none">Modeling epidemiological data of lower respiratory tract infections due to human metapneumovirus from 2010 to 2023 using meta-analysis information in R and Bayesian meta-regression suites (DisMod-MR).Analyzed data from public sources using Bayesian methods and Monte Carlo simulation to estimate the overlap proportion between socially excluded groups in high-income countries using the packages rJAGS and rstan.Improved analytic scripts for electronic health records data extraction, cleaning, and analysis by developing Python functions and pipeline tools that reduced processing time.
Jun 2024 – Mar 2025	Graduate Research Assistant Department of Global Health University of Washington, Seattle - USA <ul style="list-style-type: none">Conducted a scoping review protocol and performed evidence synthesis for mapping potential indicators for implementing mental health policy in data-limited settings.Designed of a mixed-method study protocol to assess the effectiveness of implementation strategies for pediatric burn care in a Peruvian healthcare setting.Crafted communication strategies with stakeholders to inform results from the mixed-methods study.
Sep 2023 – Dec 2023	Graduate Research Assistant Department of Health Systems and Population Health University of Washington, Seattle - USA <ul style="list-style-type: none">Gathered sociodemographic and utilization data as part of a clinical trial post-assessment survey through on-phone interviews.Translated IRB submissions 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.

Jan 2023 – Jan 2024	Research Consultant Health Technology Assessment and Research Institute Social Security Health System, Lima - Peru <ul style="list-style-type: none"> Structured and consolidated multi-source health data (surveillance data, clinical studies) to generate data for health technology assessments. Conducted budget impact and cost-effectiveness assessments 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.
Mar 2019 – Aug 2023	Research Assistant CRONICAS Center of Excellence in Chronic Diseases Universidad Peruana Cayetano Heredia, Lima - Peru <ul style="list-style-type: none"> Coordinated focus groups and on-field work across four Peruvian regions to co-design an intervention for patients with cognitive impairment and their caregivers. Contributed to research grant proposals in hypertension, diabetes, cancer, and multimorbidity projects by conducting systematic reviews and preliminary data analysis. Co-authored scientific manuscripts in the topics mentioned above which included longitudinal data analyses, meta-analyses, and unsupervised machine learning methods.

SKILLS

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

- SQL (MySQL), Python, R programming
- HPC (Slurm), Linux environments (bash)
- VS Code, Jupyter Lab, Quarto, Markdown, L^AT_EX, 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

ACADEMIC HONOURS AND AWARDS

Jun 2018	Scholarship for the Young Lives Study’s Methodological Workshop, GRADE Research Group. A workshop to receive advanced training in data wrangling and longitudinal data analysis applied to the Young Lives Study.
Jul 2021	Graduated with Honours (<i>Cum Laude</i>), School of Medicine, Universidad Nacional Mayor de San Marcos. Grade of 17/20
Sep 2021	Scholarship to study the Diplomate in Clinical Research at Universidad Peruana Cayetano Heredia. Funded by the training program NIH/FIC 2D43TW001140-21 “Training in Infectious Disease in Peru – Time for Implementation Research,” Universidad Peruana Cayetano Heredia
Feb 2024	Department of Global Health Endowed Fellowship for Global Health Excellence, Equity and Impact, University of Washington

PUBLICATIONS ORCID: 0000-0002-8609-0312

Google Scholar Statistics:

Citations 60 | h-index 3 | i10-index 1

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

Thesis and Dissertations

- **Del Castillo-Fernandez D.** (2021) “Childhood Obesity and Its Effect on Academic Achievement: An Analysis of the Young Lives Study Between 2009 and 2016” **Undergraduate Thesis** Universidad Nacional Mayor de San Marcos, Perú.
- **Del Castillo-Fernandez D.**, Sharma M., Nugent R. (2025) “Cost-effectiveness analysis of a household salt substitute intervention on reducing community-wide blood pressure in Northern Peru” **Master Thesis** University of Washington, USA.

White Papers

- **Del Castillo-Fernández D.** (2023) “Efficacy and safety of liraglutide for the treatment of patients older than 18 years with moderate obesity without comorbidities and mild obesity associated with comorbidities. Health Technology Assessment – Preliminary Version” IETSI – EsSalud. Lima, Peru
- **Del Castillo-Fernández D.** (2023) “Efficacy and safety of ceftazidime-avibactam for the treatment of adult patients with bacteremia due to surgical wound infection by carbapenemase-producing Enterobacteriaceae. Health Technology Assessment – Preliminary Version.” IETSI – EsSalud. Lima, Peru
- **Del Castillo-Fernández D.** (2023) “Efficacy and safety of cladribine for the treatment of adult patients with relapsing-remitting multiple sclerosis. Health Technology Assessment – Short Version.” IETSI – EsSalud. Lima, Peru

ADVISING

Undergraduate Students - Current

1. 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
2024	National Registry of Investigators, RENACYT-CONCYTEC, Investigator Level VII (P0160977)

OTHER ACTIVITIES

Jan 2025 – current	Lecturer: Introduction to Epidemiology. Universidad Científica del Sur. I’m teaching fourth-year medical students basic concepts of clinical epidemiology with a focus on basic study designs and identification of bias.
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MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

- International Epidemiological Association (2020 - Current)
- Peruvian College of Physicians (2021 - Current)
- Consortium of Universities for Global Health (2023 - Current)
- America’s Network for Chronic Disease Surveillance (2025 - Current)