

Darwin Del Castillo, MD, MPH

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 [ddelcastillof](#)

EDUCATION

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

Sep 2023 – Jun 2025

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

Mar 2013 – Dec 2020

ADDITIONAL EDUCATION

Professional Certificate in Clinical Research
UNIVERSIDAD PERUANA CAYETANO HEREDIA, LIMA - PERU

Sep 2021 – Apr 2022

PROFESSIONAL EXPERIENCE

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

Jul 2024 – Jun 2025

- 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.
- 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

- Conducted a scoping review protocol and performed evidence synthesis for mapping potential indicators for implementing mental health policy in data-limited settings.
- Designed 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.

Graduate Research Assistant
DEPARTMENT OF HEALTH SYSTEMS AND POPULATION HEALTH
UNIVERSITY OF WASHINGTON, SEATTLE - USA

Sep 2023 – Dec 2023

- 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.

Research Consultant
HEALTH TECHNOLOGY ASSESSMENT AND RESEARCH INSTITUTE
SOCIAL SECURITY HEALTH SYSTEM, LIMA - PERU

Jan 2023 – Jan 2024

- 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.

Research Assistant

Mar 2019 – Aug 2023

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

- 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

Young Lives Study Methodological Workshop Scholarship, GROUP FOR THE ANALYSIS OF DEVELOPMENT (GRADE) – Peru	Jun 2018
Medical School Graduation with Honors (<i>Cum Laude</i>) (Grade: 17/20), UNIVERSIDAD NACIONAL MAYOR DE SAN MARCOS SCHOOL OF MEDICINE – Peru	Aug 2021
Professional Certificate in Clinical Research Fogarty Scholarship, UNIVERSIDAD PERUANA CAYETANO HEREDIA SCHOOL OF PUBLIC HEALTH – Peru	Sep 2021
Department of Global Health Endowed Fellowship for Global Health Excellence, Equity and Impact, UNIVERSITY OF WASHINGTON DEPARTMENT OF GLOBAL HEALTH – USA	Feb 2024

RESEARCH AND TEACHING

Research Support

Concluded Research Support

Funder: National Institutes of Health (NIH), Fogarty International Center (FIC)
Project Code: D43TW001140
Title: Training in Infectious Diseases in Peru - Time for Implementation Research
Investigators: Garcia, HH., Gilman, RH., Gimbel, S.
Period: 09/2021 – 08/2022
Budget: \$294,960
Role: Fellow

Teaching and Lecturer Contributions

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.

Advising

Undergraduate Students

- 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 CIENTIFICA DEL SUR, Peru (2024 – Current).

PUBLICATIONS

ORCID: 0000-0002-8609-0312

Google Scholar Statistics:

Citations 62 | h-index 4 | 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.** (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

LICENSURE AND CERTIFICATION

Peruvian College of Physicians, Membership No. 94534	2021
CITI Program, Good Clinical Practice and ICH, Credential ID 65079238	2023
National Registry of Investigators (RENACYT-CONCYTEC), Investigator Level VII (P0160977)	2024

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)