

# Darwin Del Castillo Fernandez, MD

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## Education

Sep 2023 – May 2025

**Master in Public Health (MPH)**

**University of Washington, Seattle - USA**

*Thesis:* “Cost-effectiveness analysis of a household salt substitute intervention on reducing community-wide blood pressure in Northern Peru”

Mar 2013 – Dec 2020

**Medical Doctor (MD)**

**Universidad Nacional Mayor de San Marcos, Lima - Peru**

*Thesis:* “Childhood Obesity and Its Effect on Academic Achievement: An Analysis of the Young Lives Study between 2009 and 2016”

## Additional Education

Sep 2021 – Apr 2022

**Professional Certificate in Clinical Research**

**Universidad Peruana Cayetano Heredia, Lima - Peru**

## Professional Experience

Jul 2024 - Current

**Graduate Research Assistant**

**Institute for Health Metrics and Evaluation**

**University of Washington, Seattle - USA**

- Pooling epidemiological data of lower respiratory tract infections due to human metapneumovirus from 2010 to 2023 using the package meta in R and Python functions.
- Estimated population-attributable fractions and standardized mortality ratios for socially excluded groups in high-income countries using R.
- 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.

Jun 2024 - Mar 2025

**Graduate Research Assistant**

**Department of Global Health**

**University of Washington, Seattle - USA**

- Designing a scoping review protocol and performing 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.

Sep 2023 - Dec 2023

**Graduate Research Assistant**

**Department of Health Systems and Population Health**

**University of Washington, Seattle - USA**

- Carried out on-phone interviews for the ReOpening Schools Safely and Educating Youth Study post-survey assessments.
- Facilitated the submission of materials in Spanish to the IRB for Alzheimer’s Disease Research Center (ADRC).
- Conducted preliminary analyses for the Outreach, Engagement, and Recruitment module of the ADRC Clinical Core Study project.

Jan 2023 - Jan 2024

**Research Consultant**

**Health Technology Assessment and Research Institute**

**Social Security Health System, Lima - Peru**

- Elaborated policy documents of new pharmaceutical products for Peru’s social health insurance.
- Conducted systematic reviews of anti-cancerous and immunosuppressant drugs regarding efficacy and economic impact.
- Evaluated the budget impact of introducing new pharmacological products in Peruvian social health insurance.

Mar 2019 - Aug 2023

Research Assistant  
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.

## 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

## Skills

### Computer and programming skills:

- **Programming languages:** R, Python, bash
- **Statistical software:** Stata, SPSS, SAS, G\*Power
- **Data visualization and reporting:** Shiny, ArcGIS, L<sup>A</sup>T<sub>E</sub>X, Markdown
- **Data management and wrangling:** SQL, REDCap
- **Project management:** Jira, Asana, Trello
- **Development tools:** Git, GitHub, Docker, VSCode, Confluence, Bitbucket
- **Computing environments:** Linux/Unix, Windows, ssh

### Languages:

English: Fluent

Spanish: Native

Portuguese: Working proficiency

## Publications

[Google Scholar Profile](#)

ORCID: [0000-0002-8609-0312](#)

Google Scholar Stats: Citations: 55 | h-index: 2 | i10-index: 1

### Peer-Reviewed Publications

1. 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](#)
2. 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](#)
3. 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](#)
4. **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](#)

## Policy Statements, White Papers, Reports

1. **Del Castillo-Fernández D.** (2023) “Efficacy and safety of liraglutide in the management of patients older than 18 years with moderate obesity without comorbidities and mild obesity associated with comorbidities. Health Technology Assessment – Preliminary Version” IETSI – EsSalud.
2. **Del Castillo-Fernández D.** (2023) “Efficacy and safety of ceftazidime-avibactam for treating adult patients with bacteremia due to surgical wound infection by carbapenemase-producing Enterobacteriaceae. Health Technology Assessment – Preliminary Version.” IETSI – EsSalud.
3. **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.

## Theses

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

## Teaching Experience

### Courses taught at the college level

#### Courses taught at Universidad Nacional Mayor de San Marcos, Peru

Semester	Course	Role	Level
Summer 2014	Embryology and Genetics	TA	UGrad
Fall 2014	Embryology and Genetics	TA	UGrad
Fall 2020	Biostatistics and Demography	TA	UGrad

#### Courses taught at Universidad Científica del Sur, Peru

Semester	Course	Role	Level
Summer 2025	Introduction to Epidemiology	Lecturer	UGrad

#### Courses taught at University of Washington, USA

Semester	Course	Role	Level
Spring 2024	Introduction to Biology	TA	UGrad

## Other teaching experience

### Seminars

1. “Introduction to Stata for Biomedical Researchers”. General Office of Research and Technologic Transference, Peruvian National Institute of Health. Lima, Peru. Aug 09, 2021.
2. “Analysis of Categorical Data”. General Office of Research and Technologic Transference, Peruvian National Institute of Health. Lima, Peru. Aug 06, 2021.

## 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)

## Leadership, Volunteer, and Community Activities

Jan 2025 - current	<b>Trainee Advisory Committee Member</b> <b>Consortium of Universities for Global Health, USA</b> Collaborating with international co-trainees to address global health challenges and provide student perspectives on global health issues such as COVID-19, racial disparities, climate change, and research involvement of global health students.
Mar 2014 - current	<b>Emeritus member and External advisor</b> <b>Association for the Development of Student's Research in Health Sciences (ADIECS), Lima - Peru</b> Peruvian student association funded in 2008 by students from the Universidad Nacional Mayor de San Marcos to develop capacity of both hard (e.g., epidemiological study designs, data analysis) and soft skills (e.g., teamwork communication, problem-solving) for biomedical underserved students.
Jan 2019 - Feb 2019	<b>Medical volunteer</b> <b>Healing the Children Northeast, Ica - Peru</b> Medical translator during plastic surgery clinical rounds after surgery for cleft palate and cleft lip repairment in underserved populations.
Nov 2019 - Dec 2019	<b>Medical volunteer</b> <b>Healing the Children Rocky Mountains, Lima - Peru</b> Shadowed otorhinolaryngologist specialist before and after cochlear implant surgery in pediatric patients. Also helped as medical translator during clinical rounds.

## 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)