

## **Darwin Del Castillo Fernandez, M.D.**

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### **Education**

Sep 2023 – June 2025	<b>Master in Public Health, Global Health (MPH)</b> <b>University of Washington, Seattle (USA)</b> <i>Thesis:</i> “Cost-effectiveness analysis of a household salt substitute intervention on reducing community-wide blood pressure in Northern Peru”
Mar 2013 – Dec 2020	<b>Medical Doctor (MD)</b> <b>Universidad Nacional Mayor de San Marcos, Lima (Peru)</b> <i>Thesis:</i> “Childhood Obesity and Its Effect on Academic Achievement: An Analysis of the Young Lives Study between 2009 and 2016”

### **Additional Education**

Nov 2023 – June 2025	<b>Certificate in Global Health on Maternal and Child Health</b> <b>University of Washington, Seattle (USA)</b>
Sep 2021 – Apr 2022	<b>Certificate - Clinical Research</b> <b>Universidad Peruana Cayetano Heredia, Lima (Peru)</b>

### **Licensure and certification**

2021	Peruvian College of Physicians, Membership No. 94534
2024	National Registry of Investigators, RENACYT-CONCYTEC, Investigator Level VII (P0160977)

### **Professional Experience**

Jul 2024 - Nov 2024	<b>Research Intern</b>
Dec 2024 - Present	<b>Graduate Research Assistant</b> <b>Clinical Informatics Team, Institute for Health Metrics and Evaluation</b> <b>University of Washington, Seattle (USA)</b> <ul style="list-style-type: none"><li>• Meta-analyzing data from 1107 studies to produce estimates of the incidence of lower respiratory tract infections and subsequent clinical outcomes due to human metapneumovirus globally across all ages, sexes, and locations modeled in the GBD from 2010-2023.</li><li>• Estimated population attributable fractions and standardized mortality ratios for socially excluded groups, i.e., people experiencing imprisonment, homelessness, and substance use disorders, in high-income countries.</li><li>• Analyzed data from public sources and a previously published systematic review using Bayesian methods and Monte Carlo simulation to estimate the overlap proportion between socially excluded groups in high-income countries.</li></ul>
Nov 2024 - Present	<b>Research Assistant</b> <b>David Watkins’ Research Group, Department of Global Health</b> <b>University of Washington, Seattle (USA)</b> <ul style="list-style-type: none"><li>• Designing a scoping review protocol and performing evidence synthesis for mapping potential indicators for the implementation of mental health policy in data-limited settings.</li><li>• Coordinating a expert group panel for developing a set list of indicators based in structured expert elicitation.</li><li>• Engaging with stakeholders for the implementation of the future list of proposed indicators in a later phase of the project.</li></ul>

<b>Jun 2024 - Sep 2024</b>	<b>Research Assistant</b> <b>OPTICC Center, Department of Global Health</b> <b>University of Washington, Seattle (USA)</b> <ul style="list-style-type: none"> <li>• Led the design of a mixed-method study to assess the effectiveness of implementation strategies for pediatric burn care in a Peruvian healthcare setting.</li> <li>• Collaborated with multidisciplinary teams at Seattle Children's Hospital and the Peruvian National Hospital for Children to align study objectives and methodologies.</li> <li>• Coordinated cross-cultural research efforts to ensure the study's relevance and applicability to both U.S. and Peruvian healthcare environments.</li> </ul>
<b>Sep 2024 - Dec 2024</b>	<b>Research Assistant</b> <b>Health Population Research Center, Department of Health Systems and Population Health</b> <b>University of Washington, Seattle (USA)</b> <ul style="list-style-type: none"> <li>• Conducted on-phone interviews for the second post-survey assessment of the ReOpening Schools Safely and Educating Youth Study (ROSSEY Study).</li> <li>• Supported submission of materials in Spanish for the IRB for the ADRC Clinical Core Study project.</li> <li>• Conducted preliminary analyses for the Outreach, Engagement, and Recruitment module of the ADRC Clinical Core Study project.</li> </ul>
<b>Jun 2023 - Aug 2023</b>	<b>Research Assistant</b> <b>CRONICAS Center of Excellence in Chronic Diseases</b> <b>Universidad Peruana Cayetano Heredia, Lima (Peru)</b> <ul style="list-style-type: none"> <li>• Conducted semi-structured qualitative interviews for the NIHR-UK-supported IMPACT-DEMENTIA project, collaborating with researchers from Universidad Peruana Cayetano Heredia, Imperial College, and the University of Oxford.</li> <li>• Facilitated collaboration and communication between international research teams and local stakeholders to ensure effective project implementation.</li> <li>• Coordinated fieldwork with community health workers across diverse Lima, Iquitos, and Huancayo locations.</li> </ul>
<b>Jan 2023 - Jan 2024</b>	<b>Research Consultant (Comparative Health Outcomes Research)</b> <b>Health Technology Assessment Direction, Health Technology Assessment and Research Institute</b> <b>Social Security Health System, Lima (Peru)</b> <ul style="list-style-type: none"> <li>• Assessed the benefits and drawbacks of purchasing pharmaceutical products for Peru's social health insurance through a systematic evaluation of the effectiveness and economic impact.</li> <li>• Conducted systematic reviews of anti-cancerous and immunosuppressant drugs regarding efficacy and economic impact.</li> <li>• Evaluated the budget impact of introducing new pharmacological products in the Social Security System.</li> </ul>
<b>Mar 2022 - Mar 2023</b>	<b>Clinical Sub-investigator</b> <b>Clinical Research Unit</b> <b>Via Libre Association, Lima (Peru)</b> <ul style="list-style-type: none"> <li>• Via Libre is a Clinical Research Site for studies in STI and HIV prevention and treatment in queer population.</li> <li>• Performed clinical procedures and assessed clinical trial participants from the HVTN and the HPTN networks.</li> <li>• Participated and organized activities for community outreach and participant retention crafted for the queer community.</li> </ul>

Jun 2021 - Aug 2021	<b>Research Consultant (Data Management)</b> <b>Healthcare Research Direction, Health Technology Assessment and Research Institute</b> <b>Social Security Health System, Lima (Peru)</b> <ul style="list-style-type: none"> <li>Managed and validated all data inputs using REDCap from two clinical studies related to COVID-19 vaccinations.</li> <li>Contributed to a randomized controlled trial assessing the efficacy and safety of convalescent plasma therapy in COVID-19-infected patients.</li> <li>Conducted data analysis from an observational study on vaccination hesitancy among healthcare workers using Stata and R statistical packages.</li> </ul>
Mar 2019 - Jun 2021	<b>Research Fellow</b> <b>CRONICAS Center of Excellence in Chronic Diseases</b> <b>Universidad Peruana Cayetano Heredia, Lima (Peru)</b> <ul style="list-style-type: none"> <li>Conducted a systematic review with the COSMOS initiative to develop a core set of outcomes for designing multimorbidity clinical trials.</li> <li>Participated in the data handling and the writing phase of a research manuscript to understand the impact of preterm birth on the development of hypertension in offspring at age 22.</li> <li>Collaborated in the study design and manuscript preparation of other research interim products, including peer-reviewed research articles.</li> </ul>

## 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:** Advanced proficiency in R and STATA for statistical analysis, machine learning in healthcare, data visualization, decision-making analyses, causal inference, and genetic epidemiology. Working proficiency in Python and SQL for genomic data science, epidemiological data analysis, and data wrangling. Competencies in Microsoft Office Suite (Word, PowerPoint, Excel), G\*Power, and REDCap.

**Languages:** Spanish (native), English (fluent), Portuguese (intermediate)

## Publications

[Google Scholar Profile](#)

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

Google Scholar Stats: Citations: 42 | h-index: 2 | 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](#)
- Vidyasagaran, AL., Ayesha, R., Boehnke, JR., Kirkham, J., Rose, L., Hurst, JR., Miranda, JJ., Rana, RZ., Vedanthan, R., Faisal, MR., Afaq, S., Agarwal, G., Aguilar-Salinas, CA., Akinroye, K., Akinyemi, RO., Ali, SR., Aman, R., Anza-Ramirez, C., Appuhamy, KK., Baldew, S., Barbui, C., Batista, SRR., Caamaño, MC., Chowdhury, AH., Teixeira de Siqueira-Filha, NT., **Del Castillo Fernández, D.**, Downey, L., Flores-Flores, O., García, OP., García-Ulloa, AC., Holt, RIG., Huque, R., Kabukye,

- JK., Kanan, S., Khalid, H., Koly, KN., Kwashie, JS., Levitt, NS., Lopez-Jaramillo, P., Mohan, S., Muliya, KP., Naz, Q., Odili, AN., Oyeemi, AL., Pacheco-Barrios, NV., Praveen, D., Purgato, M., Ronquillo, D., Siddiqi, K., Singh, R., Tran, PB., Tufail, P., Uphoff, EP., van Olmen, J., Verhey, R., Wright, JM., Zafra-Tanaka, JH., 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)
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**. 52(6):1870-1877. Available at: [10.1093/ije/dyad084](https://doi.org/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](https://doi.org/10.15381/anales.v81i4.18798)

## Pre-prints

1. Moscoso, MG., Villarreal-Zegarra, D., **Del Castillo, D.**, Zavaleta E., Miranda JJ. (2022) “Personality profiles and engagement with the augmented reality game Pokémon GO: a cross-sectional study [version 1; peer review: 1 approved with reservations]” **Wellcome Open Res**. 7:264. Available at: [10.12688/wellcomeopenres.18397.1](https://doi.org/10.12688/wellcomeopenres.18397.1)

## 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.

## Databases

Pokémon GO Study [Cross-sectional study: Exploratory factorial analysis database](#)

## Teaching Experience

### Courses taught at the college level

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

Sem.	Course	Role	Level
Sum14	MH0416: Embryology and Genetics	TA	UGrad
Aut14	MH0416: Embryology and Genetics	TA	UGrad
Aut20	MO009: Biostatistics and Demography	TA	UGrad

#### Courses taught at University of Washington

Sem.	Course	Role	Level
Spr24	BIOL200: 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).

## Leadership, Volunteer, and Community Activities

<b>Dec 2024 - current</b>	<b>Trainee Advisory Committee Member</b> <b>Consortium of Universities for Global Health (CUGH), 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.
<b>Mar 2014 - current</b>	<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 with the aim of developing capacity of both hard (e.g., epidemiological study designs, data analysis) and soft skills (e.g., teamwork communication, problem-solving) for biomedical underserved students.
<b>Jan 2019</b>	<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 undeserved populations.
<b>Nov 2019</b>	<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)