ANDREA JOSEFINA LUVIANO GARCÍA

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Education

Sep 2021-present — **HARVARD UNIVERSITY** — **Cambridge, MA**
Ph.D. Candidate in Health Policy in the Decision Science track

Sep 2018 - May 2019 — **HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH** — **Boston, MA**
Master of Public Health in Health Policy (GPA:3.52) – Awarded in May 2019

January 2016 — Harvard T.H. Chan School of Public Health Winter Session course "The Mexican Health System: Reform, implementation and monitoring/evaluation."

Aug 2007 - Jun 2013 — **INSTITUTO TECNOLÓGICO Y DE ESTUDIOS SUPERIORES DE MONTERREY (ITESM)** **Monterrey, Nuevo León, Mexico**
Physician and Surgeon (GPA: 90.95/100) – Awarded in August 2014
Adjunct Coordinator of the Society of Medical Students

Honors

- Recipient of Academic Success Scholarship from ITESM, August 2007 - June 2013
- Awarded First Place in the poster category of the 10th Ethics and Citizenship Training Congress of ITESM, September 2012
- Dionisio Garza Medina Family Harvard University Graduate Fellowship for Mexico, September 2018 - May 2019
- Dr. Roberto Kretschmer Scholarship from Fundación México en Harvard, September 2018 - May 2019
- CISNET's JUnior Investigator Career Enhancement program (JUICE) Research Award, 2023

Employment

Jan 2023 – Apr 2026 — **BOSTON CHILDREN'S HOSPITAL** — **Boston, MA**
Research Assistant to Jennifer Ye Ph.D., Associate Scientific Researcher in the Division of General Pediatrics
- Performed a literature review on health disparities among individuals with gastric cancer and prevention strategies.

Jan 2022 – May 2022 — **HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH** — **Boston, MA**
Research Assistant to Ankur Pandya Ph.D., Department of Health Policy and Management
- Performed a literature review on modelling and cost-effectiveness analysis methods for multi-disease models of stroke, dementia, and hypertension.

Jun 2019 – Jul 2021 — **CENTER FOR RESEARCH AND TEACHING IN ECONOMICS (CIDE)** — **Aguascalientes, México**
Research Assistant to Fernando Alarid-Escudero Ph.D., Division of Public Administration
- Analyzed national and state-level data on COVID-19 in Mexico used as input for the Stanford-CIDE Coronavirus Simulation Model (SC-COSMO).
- Constructed a multi-state model of COVID-19 patients through the hospital healthcare system.
- Conducted calibrations and projections using the SC-COSMO model and created reports for health authorities in Hidalgo, Mexico.
- Analyzed national mortality databases, focusing on trends in specific causes of death such as homicides, cardiovascular diseases, diabetes mellitus, cancer, and accidents.
- Collected and analyzed epidemiological and demographical data and costs related to the prevention and treatment of colorectal cancer to adapt a microsimulation model (SimCRC) of the Cancer Intervention and Surveillance Modeling Network (CISNET).
- Coordinated multidisciplinary teams in Mexico, the United States of America, and Canada to work on research projects related to COVID-19, homicides, and colorectal cancer.
- Audited an applied mathematics grad-level course where we covered multivariable calculus and optimization in fall 2019.
- Attended a decision modeling in R workshop of the Decision Analysis in R for Technologies in Health (DARTH) Workgroup in July 2020.

Jan 2019 – May 2019 — **HARVARD T.H. CHAN SCHOOL OF PUBLIC HEALTH** — **Boston, MA**
Part-time Research Assistant to Ankur Pandya Ph.D., Department of Health Policy and Management
- Reviewed 14 American College of Cardiology/American Heart Association (ACC/AHA) clinical guidelines of seven cardiovascular disease sub-conditions before and after 2014 looking for value- or cost-effectiveness analysis (CEA)-related terms.
- Compiled the value- and CEA-related terms in a database and analyzed this information to assess the impact of a policy statement of the ACC/AHA in 2014, arguing for the inclusion of CEA and value assessments in clinical practice guidelines.

Aug 2014 - — **MEXICAN SOCIAL SECURITY INSTITUTE (IMSS)** — **Mexico City, Mexico**
Head of a Division at the Strategic Planning Directorate

Jul 2018

- Directed the implementation and evaluation of two strategic programs of the Director General's Office.
  - Walk-in Patient Program: implemented in 449 primary care units, impacting a potential population of 46 million beneficiaries, reducing the average waiting time of walk-in patients from 180 to 60 minutes.
  - Patient Referral Program: implemented in 176 hospitals and 1,319 primary care units, impacting a potential population of 55.2 million beneficiaries, reducing the average waiting time to schedule an appointment from a primary care unit to a specialist from 7 days to 30 minutes.
- Designed the methodology and co-directed the implementation and evaluation of a strategic program to improve the hospital bed management, which was implemented in 179 hospitals, impacting a potential population of 55.2 million beneficiaries, reducing average idle bed time from 22 to 8 hours.
- Assessed the implementation and follow-up of a myocardial infarction program implemented in 115 hospitals and 55 primary care units, which impacted a potential population of 44.1 million beneficiaries, reducing myocardial infarction mortality rates by 58%.
- Co-designed the program methodology and roll out of a pilot study of a new preventive care model of chronic diseases in the state of Nuevo León.
- Represented the Director General in meetings for the follow-up of strategic programs with state delegates.
- Hired, trained, and coordinated a team of 23 people that coached medical and administrative personnel in primary care units and hospitals to carry out the strategic programs.
- Drafted and edited speeches of the Director General and several reports for the Mexican Congress and other key participants of the Mexican health sector.

Undergrad research experience
Aug 2013 - Jul 2014

NATIONAL INSTITUTE OF PUBLIC HEALTH OF MEXICO (INSP) **Mexico City, Mexico**
Intern of the Mexican Teacher´s Cohort. Advisor: Martin Lajous, MD, MS, DSc.

- Performed fieldwork to assess sub-clinical cardiovascular disease in 1,606 teachers in the states of Chiapas and Yucatán.
- Developed and edited six scientific protocols, six questionnaires for cohort participants, three grant proposals, and collaborated to obtain a grant of $598,480 Mexican pesos for the study.
- Designed a communication strategy for cohort participants.

Teaching Assistant experience

RDS 290 Experiential Learning and Applied Research in Decision Analysis
Harvard T.H. Chan School of Public Health, Boston, MA, Spring 2026

GHP 200 – Doing Health Reform Better
Harvard T.H. Chan School of Public Health, Boston, MA, Fall 2025

RDS 280 – Decision Analysis for Health and Medical Practices
Harvard T.H. Chan School of Public Health, Boston, MA, Fall 2024

GHP 200 – Doing Health Reform Better
Harvard T.H. Chan School of Public Health, Boston, MA, Fall 2024

GHP 544 – The Mexican Health System
Harvard T.H. Chan School of Public Health, Boston, MA, January 2024

GHP 200 – Doing Health Reform Better
Harvard T.H. Chan School of Public Health, Boston, MA, Fall 2023

GHP 544 – The Mexican Health System
Harvard T.H. Chan School of Public Health, Boston, MA, January 2023

RDS 286 – Decision Analysis in Clinical Research
Harvard T.H. Chan School of Public Health, Boston, MA, Summer 2022

RDS 280 – Decision Analysis for Health and Medical Practices
Harvard T.H. Chan School of Public Health, Boston, MA, Fall 2021

Decision Sciences Methods
Center for Research and Teaching in Economics, Aguascalientes, México, Fall 2020

Statistics
Center for Research and Teaching in Economics, Aguascalientes, México, Fall 2020

Peer-Reviewed Publications

Seguin CL, **Luviano A**, Kuntz KM, Lajous M, Meneses Medina MI, Huitzil Meléndez FD, et al. Cost-effectiveness of fecal immunochemical testing for colorectal cancer in Mexico City: A microsimulation modeling study. Journal of Medical Screening. 2026 May 7

Han J, **Luviano A**, Pandya A. Reanalyzing Value Assessments in American Heart Association Clinical Practice Guidelines Using Health Years in Total Instead of Quality-Adjusted Life-Years. Value in Health. 2026 Apr;29(4):600–4.

Pandya A, Zhu J, **Luviano A**, James LP, Goshua G. A Threshold Inequality Aversion Parameter Approach to Interpret Distributional Cost-Effectiveness Analysis Results. Value in Health [Internet]. 2025 Oct 13; Available from: https://www.sciencedirect.com/science/article/pii/S1098301525056219

Luviano A, Pandya A. Evolution of Value in American College of Cardiology/American Heart Association Clinical Practice Guidelines. Circ Cardiovasc Qual Outcomes. 2023 Nov;16(11):e010086. doi: 10.1161/CIRCOUTCOMES.123.010086. Epub 2023 Nov 3. PMID: 37920978; PMCID: PMC10842500.

Wright DR, **Luviano A**, Skelton JA. Interpreting Cost-Effectiveness Analyses of Anti-Obesity Medications for the Treatment of Adolescent Obesity-Reading the Tea Leaves. JAMA Netw Open. 2023 Aug 1;6(8):e2329422. doi: 10.1001/jamanetworkopen.2023.29422. PMID: 37651147.

Luviano A, Pandya A, Wright DR. Current and Future Challenges Regarding Estimating Costs to Determine the Value of Interventions to Manage Unhealthy Weight. JAMA Pediatr. 2023 Aug 1;177(8):761-763. doi: 10.1001/jamapediatrics.2023.2018. PMID: 37399039.

Goshua G, Calhoun C, Ito S, James LP, **Luviano A**, Krishnamurti L, Pandya A. Distributional Cost-Effectiveness of Equity-Enhancing Gene Therapy in Sickle Cell Disease in the United States. Ann Intern Med. 2023 May 30. doi: 10.7326/M22-3272. Epub ahead of print. PMID: 37247420.

Alarid-Escudero F, Gracia V, **Luviano A**, Roa J, Peralta Y, Reitsma MB, et al. Dependence of COVID-19 Policies on End-of-Year Holiday Contacts in Mexico City Metropolitan Area: A Modeling Study. *MDM Policy Pract.* 2021;6(2):1–14.

Santos-Guzman J, Gonzalez-Salazar F, Martínez-Ozuna G, Jimenez V, **Luviano A,** Palazuelos D, et al. Epidemiologic impacts in acute infectious disease associated with catastrophic climate events related to global warming in the northeast of Mexico. *Int J Environ Res Public Health.* 2021;18(9).

Conference presentations

How to HYT?
Andrea Luviano, Ankur Pandya
47nd Annual Meeting of the Society for Medical Decision Making, 2025 (poster presentation in English).

Policy analysis of non-pharmaceutical interventions and re-opening in the state of Hidalgo, Mexico
Andrea Luviano, Yadira Peralta, Jeremy D. Goldhaber-Fiebert, Regina Isabel Medina Rosales, Hirvin Diaz, Natalia Kunst, Eduardo Bustos-Vazquez, Maria Dolores Osorio Piña, Ma. Concepción Carmona Ramos, José Luis Romo, Fernando Alarid- Escudero, on behalf of the SC-COSMO Modeling Group
42nd Annual Meeting of the Society for Medical Decision Making, 2020 (presentation in English).

Many views on value over time within and across ACC/AHA clinical guidelines
Andrea Luviano, Ankur Pandya
41st Annual Meeting of the Society for Medical Decision Making, 2019 (poster presentation in English).

Peripheral arterial disease and carotid atherosclerosis among middle-aged women living in Chiapas, Mexico: Preliminary results
Eduardo Ortiz-Panozo; Martin Lajous; Elsa Yunes-Díaz; Nataly Mercado; **Andrea Luviano**; Fernando Flores-Silva; Vidal Dircio-Delgado; Carlos Cantu-Brito; Andres Catzin-Kuhlmann; Ruy López-Ridaura.
Circulation. 2013; 127: AP112. American Heart Association EPI/NPAM Annual Conference, 2014 (poster presentation in English).

Seminars

Homicides in Mexico
Seminar of the Drug Policy Program from CIDE, November 2020 (*in Spanish)*

Workshops

Introduction to R
For Master's students in Social and Humanistic Research of the Universidad Autónoma de Aguascalientes, November, 2020

Invited talks

COVID-19: El gran contagio
Sociedad de Científicos Anónimos, October, 2020

Skills

Languages: Spanish (native speaker), fluent in English (TOEFL: 115), Italian (beginner) and French (beginner).
Computer skills: R, Java, Amua, TreeAge, STATA, Tableau, Microsoft Office, Windows, and macOS.

Advisors of the Ph.D program

Ankur Pandya, Ph.D.
Associate Professor
Harvard T.H. Chan School of Public Health
anpandya@hsph.harvard.edu

Nicholas Menzies, Ph.D.
Associate Professor
Harvard T.H. Chan School of Public Health
nick.menzies@gmail.com

References

Fernando Alarid-Escudero, Ph.D.
Assistant Professor
Center for Research and Teaching in Economics
fernando.alarid@cide.edu

Michael R. Reich, Ph.D.
Taro Takemi Research Professor of International Health Policy
Harvard T.H. Chan School of Public Health
reich@hsph.harvard.edu

Jeremy Goldhaber-Fiebert, Ph.D.
Associate Professor of Medicine
Stanford University
jeremygf@stanford.edu