

David Contreras Loya

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Metepec, México

EXPERIENCE

Tecnológico de Monterrey	2022 - present
Research Professor, School of Government and Public Transformation / Institute for Obesity Research	Mexico City, Mexico
World Bank Group	2018 - 2021
External Consultant, Equitable Growth, Finance, and Institutions	Remote
University of California, Berkeley	2016 - 2018
Graduate Research Assistant, Haas School of Business	Berkeley, California
Instituto Nacional de Salud Pública	2012 - 2016
Research Assistant, Health Economics Unit	Cuernavaca, Mexico

RESEARCH PROJECTS

Economic Evaluation of the National Telemedicine Program in El Salvador	2025 -
Banco de Desarrollo de América Latina y el Caribe	
Evaluating Domestic Violence Services in Mexico City	2025 -
NIHR Global Health Research Group on Violence Against Women and Violence Against Children	
A Value-Based Model for Diabetes Management via Digital Therapy and Data Analytics	2024 -
In Partnership with SocialDiabetes (Spain)	
Population Dietary Surveillance with National Surveys and Language Processing	2024 -
In collaboration with Data Science Center, Tec de Monterrey School of Government	
Economic Evaluation of Sacituzumab Govitecan for Triple Negative Breast Cancer	2024 -
Commissioned by Gilead Sciences (Mexico)	
An Integral Strategy to Prevent Childhood Obesity and Promote Healthy Behaviors	2023 -
In Partnership with Educación para Compartir (Mexico)	
Economic Evaluation of Capillary Blood Glucose to Detect Gestational Diabetes	2023 -
Commissioned by Fundación Carlos Slim de la Salud (Mexico)	

GRANTS

An Integral Strategy to Prevent Childhood Obesity and Promote Healthy Behaviors	US\$ 390,000
Principal Investigator, Challenge Based Grants 2023 - Tec de Monterrey	
Integrated and Cost-effective Technologies for Early Detection of Gestational Diabetes	US\$ 60,000
Co-Principal Investigator, Challenge Based Grants 2025 - Tec de Monterrey	

PUBLICATIONS

- [1] Campos-Rivera PA, Alfaro-Ponce B, Ramírez-Pérez M, Bernal-Serrano D, **Contreras-Loya D**, Wirtz VJ. Quality of information and social norms in Spanish-speaking TikTok videos as levers of commercial practices: The case of semaglutide. *Social Science & Medicine*. 2025 Feb 1;366:117646.
- [2] Serván-Mori E, Meneses-Navarro S, García-Díaz R, Cereceros-García D, **Contreras-Loya D**, Gómez-Dantés O, Castro A. Ethnic and racial discrimination in maternal health care in Mexico: a neglected challenge in the search for universal health coverage. *International Journal for Equity in Health*. 2025 Jan 12;24(1):10.
- [3] Hémono R, Gatare E, Kayitesi L, Hunter LA, Packel L, Ippoliti N, Cereceros-García D, **Contreras-Loya D**, Gadsden P, Bautista-Arredondo S, Sayinzoga F. Effect of a digital school-based intervention on adolescent family planning and reproductive health in Rwanda: a cluster-randomized trial. *Nature Medicine*. 2024 Nov;30(11):3121-8.
- [4] Arreola-Ornelas H, Merino-Juárez GA, **Contreras-Loya D**, Méndez-Carniado O, Morales-Juárez L, Bernal-Serrano D, Arizmendi-Barrera KA, Vargas-Martínez C, Razo C, Knaul FM, Gakidou E. La carga del sobrepeso y la obesidad en México de 1990 a 2021. *Gaceta médica de México*. 2023 Dec;159(6):560-73.
- [5] **Contreras-Loya D**, Morales-Juárez L, Vargas-Martínez C, Arizmendi-Barrera K, Merino-Juárez GA, Arreola-Ornelas H. Confronting Inequality in Health: Tackling Diabetes and Hypertension in Mexico's Landscape of Socioeconomic Disparities. *Intervention in Obesity & Diabetes*. 2023;6(3):IOD.000639.

- [6] Bernal-Serrano D, **Contreras-Loya D**, Choperena-Aguilar D, Arreola-Ornelas H, Merino-Juárez GA. The effect of public policy on high BMI trends of Mexican children: an interrupted time series analysis. *The Lancet Global Health*. 2023;11:S21.
- [7] Pineda-Antunez C, **Contreras-Loya D**, Rodriguez-Aristain A, et al. Characterizing health care provider knowledge: evidence from HIV services in Kenya, Rwanda, South Africa, and Zambia. *PloS one*. 2021 Nov.
- [8] Sosa-Rubí SG, Bautista-Arredondo S, Chivardi-Moreno C, et al. Efficiency, quality, and management practices in health facilities providing outpatient HIV services in Kenya, Nigeria, Rwanda, South Africa and Zambia. *Health Care Manag Sc*. 2021;1-14.
- [9] Sosa-Rubí SG, **Contreras-Loya D**, Pedraza-Arizmendi D, et al. Cost-effectiveness analysis of a multidisciplinary health-care model for patients with type-2 diabetes implemented in the public sector in Mexico: A quasi-experimental, retrospective evaluation. *Diabetes Res Clin Pr*. 2020;167:108336.
- [10] Bautista-Arredondo S, Sosa-Rubi SG, Opuni M, **Contreras-Loya D**, et al. Influence of supply-side factors on voluntary medical male circumcision costs in Kenya, Rwanda, South Africa, and Zambia. *PloS one*. 2018;13(9):e0203121.
- [11] Bautista-Arredondo S, La Hera-Fuentes G, **Contreras-Loya D**, et al. Efficiency of HIV services in Nigeria: Determinants of unit cost variation of HIV counseling and testing and prevention of mother-to-child transmission interventions. *PloS one*. 2018;13(9):e0201706.
- [12] Rodríguez-Franco R, Serván-Mori E, Gómez-Dantés O, et al. Old principles, persisting challenges: Maternal health care market alignment in Mexico in the search for UHC. *PloS one*. 2018;13(7):e0199543.
- [13] Bautista-Arredondo S, Colchero MA, Amanze OO, La Hera-Fuentes G, et al. Explaining the heterogeneity in average costs per HIV/AIDS patient in Nigeria: The role of supply-side and service delivery characteristics. *PloS one*. 2018;13(5):e0194305.
- [14] Galárraga O, Wamai RG, Sosa-Rubí SG, Mugo MG, et al. HIV prevention costs and their predictors: evidence from the ORPHEA Project in Kenya. *Health Policy Plann*. 2017;32(10):1407-16.
- [15] Serván-Mori E, **Contreras-Loya D**, Gomez-Dantés O, et al. Use of performance metrics for the measurement of universal coverage for maternal care in Mexico. *Health Policy Plann*. 2017;32(5):625-33.
- [16] Bautista-Arredondo S, Sosa-Rubí SG, Opuni M, et al. Costs along the service cascades for HIV testing and counselling and prevention of mother-to-child transmission. *AIDS*. 2016;30(16):2495.
- [17] Bautista-Arredondo S, Serván-Mori E, Silverman-Retana O, et al. AIDS mortality in Mexico: an exploration of the role of supply constraints, management practices, training and experience. *Salud Publica Mexico*. 2015.
- [18] Cahuana-Hurtado L, Chilian-Herrera O, Bautista-Arredondo S, et al. Correction of misclassification of deaths from AIDS in Mexico. Retrospective analysis of 1983-2012. *Salud Publica Mexico*. 2015.
- [19] Colchero MA, **Contreras-Loya D**, López-Gatell H, et al. The costs of inadequate breastfeeding in Mexico. *Am J Clin Nutr*. 2015;101(3):579-86.
- [20] **Contreras-Loya D**, Gómez-Dantés O, Puentes-Rosas E, et al. Waiting times for surgical and diagnostic procedures in public hospitals in Mexico. *Salud Publica Mexico*. 2015;57(1):29-37.
- [21] **Contreras-Loya D**, Reding-Bernal A, Gómez-Dantés O, et al. Supply of essential drugs in units specialized in the treatment of chronic diseases in Mexico in 2012. *Salud Publica Mexico*. 2014;55(6):618-26.
- [22] Saturno PJ, Gutiérrez JP, et al. Quality in primary care of State Health Services. Strategic diagnosis of the current situation. Cuernavaca, México: INSP; 2014.

EDUCATION

- **University of California, Berkeley** 2016-2022
Berkeley, USA
PhD Health Policy
- **Instituto Nacional de Salud Pública** 2010-2013
Cuernavaca, Mexico
MSc Health Economics
- **Tecnológico de Monterrey** 2000-2005
Chihuahua, Mexico
BSc Industrial Engineering

TEACHING & MENTORSHIP

- **Tecnológico de Monterrey** *July 2022 - present*
 - Graduate-level courses: Health Economics, Causal Inference, and Statistics for Public Policy.
 - Foundations in Statistics: Intensive summer bootcamp for incoming MPP students, designed and taught annually.
 - Statistics for Public Policy (Master's Program in Public Policy, El Salvador, 2025-26).
 - Mentorship: Over 10 Master's theses and 3 Doctoral dissertations supervised to completion.
- **UC Berkeley Haas School of Business** 2021-2022

- Data Analytics for Prof. Jon Kolstad and Prof. Paul Gertler
- Big Data, Better Decisions Prof. Jon Kolstad and Prof. Paul Gertler
- **National Institute of Public Health**
 - Mathematical Statistics for Dr. Fernando Alarid.
 - Health Economics Seminar for Dr. Sandra Sosa-Rubí.

2013-2015

SKILLS

- **Statistical & Programming Languages:** Python, R, Stata, L^AT_EX, Git
- **Data Science & Machine Learning:** Generalized Random Forests, Double Debiased Machine Learning (DML), Causal forests, Topic modeling, Retrieval-Augmented Generation (RAG), LangChain
- **Applied Econometrics & Evaluation:** Causal inference, Structural and semi-parametric models, Longitudinal and survival analysis, Cost-effectiveness analysis
- **Health Economics & Policy Tools:** Cost modeling, Cost-utility analysis, Budget impact models, Health equity weights, Priority-setting frameworks
- **Mathematical & Statistical Tools:** Optimization, Inference under model misspecification, High-dimensional statistics, Nonparametric methods, Simulation-based estimation, Partitioned survival models

FELLOWSHIPS AND AWARDS

- **Early Career Researcher** 2025
Universitas 21
- **Doctoral Fellowship for Mexican Students** 2016-2021
UC MEXUS - CONACYT (National Council for Science and Technology)
- **National Excellence Programs for Graduate Education** 2010-2012
CONACYT
- **Third nationally in the exit exam of Industrial Engineering** *May, 2000*
National Center for Educational Evaluation (CENEVAL)

PROFESSIONAL MEMBERSHIPS

- **Consortio de Investigación en Salud**, Secretary of the Ethics Committee 2020 - present
Cuernavaca, Mexico

ADDITIONAL INFORMATION

Languages: English (Professional level), Spanish (Native speaker)