Curriculum Vitae

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Kevin Martinez-Folgar, MD, PhD.

kmfolgar@umich.edu

Contact Details

- Affiliation:
 - Center for Global Health Equity, Medical School, University of Michigan.
- · Office:
 - North Campus Research Complex
 - 2800 Plymouth Road Building 100
 - Ann Arbor, MI 48105 USA
- ORCiD: 0000-0001-9262-298X
- GitHub: kmfolgar Twitter: @kmfolgar
- URL: https://kmartinez.com

Other affiliations:

- Associated Researcher, Unit of Chronic Diseases and Nutrition, Institute of Nutrition of Central America and Panama.
- Affiliated Research Professor, School of Medical Sciences, University of San Carlos of Guatemala.

Education

• (2019 - 2023) PhD in Epidemiology.

Dornsife School of Public Health, Drexel University, Philadelphia, PA. USA.

Dissertation Tittle: *Urban environments and disparities in Chronic Liver Disease*Dissertation Committee: *Usama Bilal (chair), Mariana Lazo, , Harrison Quick, Steven Solga, Ana Diez-Roux.*

• (2010 - 2016) **Medical Doctor**. School of Medical Sciences, University of San Carlos of Guatemala, Guatemala.

Other Significant Training

- 2022 Public Health Disparities Geocoding Project 2.0, Harvard T.H. Chan School of Public Health Harvard University
- 2022 Student Dissertation Workshop.
 Society for Epidemiologic Research (SER)
- 2022 Multilevel Models for Urban Health Research. Urban Health Summer Institute
 Drexel University.
- 2019 Introduction to Multilevel Modeling .
 Drexel University and Universidade Federal de Minas Gerais, Belo Horizonte, Brazil.
- 2018 Physical Activity and Public Health (Advanced course), National Institute of Public Health. Cuernavaca, México.
- 2016 NIH Clinical Research Training Course, National Institutes of Health.
- 2016 Nutritional Research for Chronic Disease Epidemiology
 Institute of Nutrition of Central America and Panama and School of Public Health, University of Michigan.
- 2009 Internet Services. Galileo University, Guatemala.

Professional Experience

October 2023 – to date Postdoctoral Fellow (Impact Scholar), Center for Global Health Equity, University of Michigan.

September 2019 — September 2023 Graduate Research Fellow in the Urban Health Collaborative, Dornsife School of Public Health, Drexel University.

January 2017 – August 2019 Researcher in the INCAP Research Center for the Prevention of Chronic Diseases –CIIPEC–, Institute of Nutrition of Central América and Panamá –INCAP–

- December 2018 August 2019 National Consultant, The Economic and Social Cost of the Double Burden of malnutrition in Central America (Guatemala, Dominican Republic, El Salvador and Honduras), in partnership with the World Food Program (WFP) and the Economic Commmission for Latin American and the Caribbean (ECLAC), United Nations.
- June 2018 October 2018 Hy-TREC Project, in partnership with Tulane University School of Public Health and Tropical Medicine; Colorado School of Public Health, UC-Denver; INCAP, Guatemala.
- April 2017 August 2019 Data Analyst of the Central American hub for the "Salud Urbana en América Latina" project, in partnership with Dornsife School of Public Health, Drexel University. INCAP, Guatemala
- January March 2017 Data Analyst for Guatemala in the Child Health and Nutrition Impact Study (ChNIS) in partnership with Bloomberg School of Public Health, Johns Hopkins University.

June - December 2016 Research Fellow in the INCAP Research Center for the Prevention of Chronic Diseases (CIIPEC).

• Field coordinator. Child Health and Nutrition Impact Study (ChNIS) in partnership with Bloomberg School of Public Health, Johns Hopkins University. INCAP, Guatemala

Teaching Experience

Drexel University, Department of Epidemiology & Biostatistics, Philadelphia, PA, USA

- Instructor, PBHL 101: Introduction to Public Health (2022)
 - Developed and delivered lectures to undergraduate students on public health fundamentals.
 - Engaged in interactive learning sessions and managed student assessments.
- Teaching Assistant, Intermediate Epidemiology (2021)
 - Assisted in course design and provided support in complex epidemiological concepts.
 - Facilitated group discussions and graded assignments.
- Teaching Assistant, Data Visualization for Urban Health, Urban Health Collaborative Summer Institute (2020)
 - Supported course in teaching data visualization techniques specific to urban health studies.
 - Guided students in practical sessions using R (ggplot2) statistical software.

Drexel University and INCAP, Guatemala, CA

- Instructor, Introduction to Data Analysis with R (Course in Spanish, 2023)
 - Led a comprehensive course in R programming for data analysis in public health.
 - Tailored course content to a Spanish-speaking audience, enhancing accessibility.
- Teaching Assistant, Introduction to Regression Modeling (Course in Spanish, 2022)
 - Assisted in teaching regression modeling, providing support in statistical analysis concepts.

INCAP and University of San Carlos of Guatemala

- Instructor, Introduction to Statistical Programming with Python (2017)
 - Conducted a course focusing on Python programming for statistical analysis.
 - Included practical applications relevant to public health research.
- Instructor, Use of Bibliographic Managers: Mendeley (2016)
 - Provided training on efficient use of Mendeley for academic research and writing.

Faculty of Medical Science, University of San Carlos of Guatemala

- Course Director and Instructor, Introduction to Cell Biology, Pre-University Course (2011, 2012)
 - Directed and taught foundational cell biology concepts to prospective medical students.
- Tutor, Hospital Tutoring Program and Student Tutoring Program (2012, 2014)
 - Offered academic support and mentorship to medical students in clinical subjects.

Seminars and Guest Lectures

Guest Speaking Engagements

- COVID-19 in Guatemala: Epidemiology (2020)
 - Guest Speaker at Faculty of Medical Sciences, University of San Carlos, Guatemala
 - Delivered insights on the epidemiological aspects of COVID-19 in Guatemala.
- COVID-19 in Guatemala: Trends and Simulation Models (2020)
 - Guest Speaker at Guatemalan Society of Infectious Diseases (AGEI)
 - Discussed the latest trends and model simulations related to COVID-19 in Guatemala.

Guest Lectures in Academic Courses

- Introduction to the Use of Scientific Evidence and Correct Citation (2018)
 - Faculty of Nutrition Sciences, University Del Valle of Guatemala
 - Conducted lectures on the importance and methodology of scientific evidence and citation practices in public health research.
- Urban Health (2018)
 - Urban Health Forum, Faculty of Agricultural Sciences, Rafael Landivar University, Guatemala
 - Presented on urban health challenges and strategies, emphasizing public health perspectives.
- Career in Research (2017)
 - SOCIG Seminar, Faculty of Medical Sciences, University of San Carlos, Guatemala
 - Provided insights into research career pathways and opportunities in the field of epidemiology and public health.

Institutional Honors Position

2021-2023 Doctoral Student Representative

Curriculum and Assessment Committee,

Dornsife School of Public Health, Drexel University.

2021-2023 Vice-president

Institutional Ethics Committee.

Institute of Nutrition of Central America and Panamá, Guatemala.

2020-2023 Doctoral Student Representative

Steering Committee,

Urban Health Collaborative, Dornsife School of Public Health, Drexel University.

2018-2020 Vice-president

Institutional Ethics Committee

Institute of Nutrition of Central America and Panamá, Guatemala.

2013 President

National Medical Student Association "Gustavo Adolfo Hernandez" Guatemala.

2013 Guatemala Titular Council Member

Higher University Council of Central America -CSUCA-.

2013 Vice-President and Founder member Scientific Society of Guatemala.

2013 National Delegate of Guatemala

General Assembly of the Latin American Federation of Scientific Societies of Medical Students.

2012 First Substitute of General Secretary

National Medical Student Association "Gustavo Adolfo Hernandez".

Awards and Fellowships

2023 Department of Epidemiology & Biostatistics Graduate Travel Award Department of Epidemiology & Biostatistics, School of Public Health, Drexel University.

2023 Teck-Kah Lim Graduate Student Domestic Travel Subsidy Award Graduate College, Drexel University.

2022 Society for Epidemiologic Research Student Dissertation Workshop Travel Award

2021 Society for Epidemiologic Research 2020 Tyroler Student Prize Paper Award Finalist

2020 American Public Health Association 2020 Trong D. Nguyen Memorial Award Finalist

2020 Society for Epidemiologic Research Travel Award

2018 Fogarty Scholarship Physical Activity and Public Health (Advanced course), National Institute of Public Health. Cuernavaca, México.

Affiliated Organizations and Societies

- Society for Epidemiologic Research SER-
- Interdisciplinary Association for Population Health Science IAPHS -
- College of Physicians and Surgeons of Guatemala
- College of Physicians of Philadelphia, Public Health Section.
- Urban Health Network for Latin America and the Caribbean, Drexel University.

Medical License

Medical registry No. 21,113 College of Physicians & Surgeons of Guatemala.

Scientific publications

- Ramírez Varela A, Hallal PC, Mejía Grueso J, Pedišić Ž, Salvo D, ..., Martinez-Folgar K,..., Pratt M. Status and Trends of Physical Activity Surveillance, Policy, and Research in 164 Countries: Findings From the Global Observatory for Physical Activity-GoPA! 2015 and 2020 Surveys. J Phys Act Health. 2022 Dec 19;20(2):112-128. https://doi.org/10.1123/jpah.2022-0464
- 2. Alfaro T, Martinez-Folgar K, Vives A, Bilal U. Excess Mortality during the COVID-19 Pandemic in Cities of Chile: Magnitude, Inequalities, and Urban Determinants. Journal of Urban Health, Issue 99, pages 922–935 (2022), https://doi.org/10.1007/s11524-022-00658-y

- Mullachery P, Rodriguez DA, Miranda JJ, López-Olmedo N, Martinez-Folgar K, Barreto ML, Diez-Roux AV, Bilal U. Mortality amenable to healthcare in Latin American cities: a cross-sectional study examining between-country variation in amenable mortality and the role of urban metrics. International Journal of Epidemiology, Volume 51, Issue 1, February 2022, Pages 303–313, https://doi.org/10.1093/ije/dyab137
- 4. Bilal U, Caio P de Castro, Alfaro T, Barrientos-Gutierrez T, Barreto M, Leveau C, Martinez-Folgar K, Miranda JJ, Montes F, Mullachery P, Pina MF, Rodriguez DA, Dos Santos GF, Andrade RFS, Diez-Roux AV. Scaling of mortality in 742 metropolitan areas of the Americas Science advances, 7(50), eabl6325. https://doi.org/10.1126/sciadv.abl6325
- Lima EEC, Vilela EA, Peralta A, Rocha M, Queiroz BL, Gonzaga MR, Piscoya-Diaz M, Martinez-Folgar K, Garcia-Guerrero VM, Freire FHMA. Investigating regional excess mortality during 2020 COVID-19 pandemic in selected Latin American countries. Genus 77, 30 (2021). https://doi.org/10.1186/s41118-021-00139-1
- Martinez-Folgar K, Alburez D, Paniagua-Avila A, Ramirez-Zea M, Bilal U. Excess Mortality During the COVID-19 Pandemic in Guatemala. American Journal of Public Health 111, 1839-1846, https://doi.org/10.2105/AJPH.2021.306452
- Gouveia N, Kephart JL, Dronova I, McClure L, Granados JT, Betancourt RM, O'Ryan AC, Texcalac-Sangrador JL, Martinez-Folgar K, Rodriguez D, Diez-Roux AV. Ambient fine particulate matter in Latin American cities: Levels, population exposure, and associated urban factors.. Science of The Total Environment. 2021 Jun 10;772:145035. https://doi.org/10.1016/j.scitotenv.2021.145035 PMID: 33581538; PMCID: PMC8024944.
- 8. Bilal U, Diez-Roux AV, Rodriguez D, Alazraqui M, Vives A, Martinez-Folgar K, Miranda JJ, Lopez Olmedo N, Caiaffa W. Inequalities in life expectancy in six large Latin American cities from the SALURBAL study: an ecological analysis. The Lancet Planetary health.3 (12), e503-e510 Available at: https://doi.org/10.1016/S2542-5196(19)30235-9
- 9. Henson RM, Ortigoza A, Martinez-Folgar K, Baeza F, Caiaffa W, Vives Vergara A, Diez Roux AV, Lovasi G. Evaluating the health effects of place-based slum upgrading physical environment interventions: A systematic review (2012–2018) Social Sciences and Medicine. (261)2020, Available at https://doi.org/10.1016/j.socscimed.2020.113102
- 10. Fort M, Paniagua-Avila A, Beratarrechea A, Cardona S, Figueroa JC, Martinez-Folgar K, Moyano D, Barrios E, Mazariegos BE, Palacios E, Irazola V, Ramirez-Zea M. Stakeholder Engagement in the Translation of a Hypertension Control Program to Guatemala's Public Primary Health Care System: Lessons Learned, Challenges, and Opportunities Global heart 14(2). Available at https://doi.org/10.1016/j.gheart.2019.05.005
- 11. Edward A, Bowles C, Ramirez-Zea M, Sanchez JF, Brown A, Martinez-Folgar K, Ghee AE. Careseeking patterns for common pediatric illnesses: A mixed methods study in rural Guatemala. Science Publishing Group Journal 2018:1(2), Available at: https://spg.ltd/wp-content/uploads/2018/09/002-SPG.pdf

Scientific publications (Work in progress)

- 1. Martinez-Folgar K, Lazo M, Bilal U. Racial/ethnic disparities in hepatic steatosis, inflammation, and fibrosis in the U.S. Population (NHANES 2017-2020 March)
- 2. Martinez-Folgar K, Lazo M, Bilal U. Racial/Ethnic disparities between Hispanics and non-Hispanic whites in liver cancer mortality: a spatiotemporal study from 53 US cities
- 3. Martinez-Folgar K, Ramirez-Zea M, Bilal U. The spatial distribution of excess mortality in Guatemalan cities during the COVID-19 pandemic.

- 4. Alfaro T, Martinez-Folgar K, Vives A, Bilal U. Variability and predictors of cancer mortality in 366 Latin-American Cities
- 5. Martinez-Folgar K, Lazo M, Bilal U. Neighborhood-level disparities in Chronic Liver Disease mortality in Philadelphia from 2011 to 2015
- 6. Martinez-Folgar K, Lazo M, Bilal U. Racial/ethnic disparities in Chronic Liver Disease mortality in US Cities from 2009 to 2019
- 7. Martinez-Folgar K, Lazo M, Bilal U. Spatial heterogeneity and trends in Chronic Liver Disease Mortality across Latin American cities and Hispanics in US Cities.

Letters, Commentaries and Editorials

- 1. Lazo M, Martinez-Folgar K, Bilal U. Racial/ethnic disparities in hepatocellular carcinoma: the role of neighborhood socioeconomic deprivation. Cancer Epidemiology, Biomarkers & Prevention. Accepted for publication
- 2. Martinez-Folgar K, Salomon V. Student scientific publication: a look at the Guatemalan reality. Educacion medica. 2017;18(1): 79. http://dx.doi.org/10.1016/j.edumed.2016.08.003
- 3. Martínez-Folgar K. Aplicaciones móviles para uso del médico: ¿están basadas en evidencia?. Rev Hisp Cienc Salud. 2016;2(2): 192-193.
- 4. Martinez-Folgar K. Diagnostic methods: Utopia in Guatemala's rural public service?. Rev Calid Asist. 2016. PMID 27575404. http://dx.doi.org/10.1016/j.cali.2016.06.008
- 5. Martinez-Folgar K . Educación médica basada en competencias: la nueva torre de babel. Inv Ed Med. 2016. http://dx.doi.org/10.1016/j.riem.2016.06.001

Presentations at Scientific Meetings (Oral Presentations)

- 1. Martinez-Folgar K. (co-chair) Health Disparities Methods: From Biology to Society 2023 Annual Meeting, Society for Epidemiologic Research, United States, June 2023.
- 2. Martinez-Folgar K. Epidemiology at the south of the border: a Latin American perspective of disparities and equity; COVID-19 Pandemic in Guatemala 2023 Annual Meeting, Society for Epidemiologic Research, United States, June 2023.
- 3. Martinez-Folgar K. Spatial Heterogeneity in Excess Mortality During the COVID-19 Pandemic in Guatemala. 17th International Conference on Urban Health, International Society for Urban Health, United States. July 2021
- 4. Martinez-Folgar K. Mortality trends during the COVID-19 pandemic in Guatemala. 2020 SER Digital Meeting, Society for Epidemiologic Research, United States. November 2020
- 5. Goodman-Levy W, Martinez-Folgar K. Heat related mortality in 340 guatemalan municipalities. 2020 Annual Meeting, American Public Health Association, United States. November 2020
- Martinez-Folgar K, Lazo M, Bilal U. Liver cancer mortality disparities between Hispanics and Non-Hispanics Whites in US cities. 2020 Annual Meeting, Society for Epidemiologic Research, United States. December 2020
- 7. Martinez-Folgar K., Modeling a pandemic: COVID-19 in Guatemala. VI National Congress of Physics and Mathematics, USAC-UVG-UMG, Guatemala, September 2018
- 8. Martinez-Folgar K, Kroker-Lobos, MF. Geospatial Analysis of Mortality in Guatemala: Challenges and Opportunities. IX National Congress of Epidemiology, Ministry of Health of Guatemala. October 2018

Presentations at Scientific Meetings (Poster Presentations)

- 1. Martinez-Folgar K, Lazo M, Bilal U. Racial/ethnic disparities in hepatic steatosis, inflammation, and fibrosis in the U.S. Population (NHANES 2017-2018). Society for Epidemiologic Research Annual Meeting 2022
- 2. Martinez-Folgar K, Bilal U, Quick H, Alfaro T, Stern D, Barrientos T, Miranda JJ, Ramirez-Zea M, Diez-Roux A, Lazo M. Liver disease mortality across 366 Latin American cities: evidence from the SALURBAL study International Conference for Urban Health, 2021.
- 3. Martinez-Folgar K. Mortality trends during the COVID-19 Pandemic: What happened in Guatemala?. SERdigital Fall 2020

Scientific Reports and Policy Briefs

- 1. 2021 Dialogos Guatemala, Las disparidades del proceso de vacunacion contra la COVID-19
- 2. **2019** World Food Program, El costo de la doble carga de la malnutrición: Impacto social y económico (Guatemala)
- 3. **2019** World Food Program, El costo de la doble carga de la malnutrición: Impacto social y económico (El Salvador)
- 4. **2019** World Food Program, El costo de la doble carga de la malnutrición: Impacto social y económico (Honduras)
- 5. **2019** World Food Program, El costo de la doble carga de la malnutrición: Impacto social y económico (Republica Dominicana).

Software Skills

R (base, tidyverse, ggplot2, etc.), Python (pandas, numpy, matplotlib, etc.), Stata, SAS, QGIS, Markdown, LaTeX, SQL

Peer-review activities

Journal Reviewer

Geospatial Health
Diabetes Care
BMJ
The Lancet Regional Health - Americas
Heliyon

Review of Abstracts for Scientific Meetings

2023 Society for Epidemiologic Research Annual Meeting

2022 Society for Epidemiologic Research Annual Meeting

2021 International Population Conference

2021 Society for Epidemiologic Research Annual Meeting

2020 Society of Epidemiologic Research Fall Conference

2020 American Public Health Association - Epidemiology Section

Media/News Appearances

Television Appearances

2022

Guatevision

- Semáforo covid-19 vuelve a sumar tres municipios en alerta verde - Watch here

2020

Guatevision

- Noticiero Guatevision 6 pm, 11 de diciembre de 2020: Min 0:30 Watch here
- Noticiero Guatevision 1 pm, 11 de diciembre de 2020: Min 7:20 Watch here

Documentary Appearances

2023

- "Salud y Ciudad" Resources from the Interamerican Development Bank
 - IDB Blog Read more
 - Drexel University Toolkit View toolkit
 - YouTube Video Watch documentary

Printed Media Appearances

2023

• Prensa Libre

- ¿Qué se sabe de las pruebas para detectar casos de dengue en Guatemala? - Read article

2022

• Prensa Libre

- ¿Está Guatemala preparada para enfrentar la viruela del mono? Read article
- Semáforo covid-19: continúa el dominio de la alerta roja en casi todo el país Read article
- $-\,$ Guatemala va hacia la quinta ola de covid-19 sin que aumente la cantidad de población vacunada
 - Read article
- Accidentes de tránsito: historias de víctimas, tras ese instante trágico que les cambia la vida -Read article
- Nuevo sistema del semáforo epidemiológico hace más difícil que un municipio esté en alerta roja
 Read article
- La expectativa de vida en Guatemala cayó 2 años debido a la pandemia Read article

2021

• Prensa Libre

- 74% de estudiantes aún no pueden vacunarse, son los niños que cursan primaria y preprimaria -Read article
- -; Hay dos
is suficientes para vacunar contra el covid-19 a los adolescentes en Guatema
la? - Read article
- Las vacunas contra el covid 19 están por agotarse en el país, la mayoría son para segundas dosis
 Read article
- 40% de guatemaltecos estaría fuera del plan de vacunación contra el covid-19, las desigualdades que persisten en el país son parte del problema Read article
- Mineduc pide suspender clases presenciales en municipios con alerta naranja y tendencia a rojo -Read article
- Coronavirus al ritmo de vacunacion actual, en 19 años guatemaltecos estarían vacunados Read article

• New York Times

- 723 Epidemiologists on When and How the U.S. Can Fully Return to Normal - Read article

Ojoconmipisto

- El poder local comunitario ya se tiene, el problema será la logística de la vacunación - Read article

2020

• Prensa Libre

- Coronavirus: municipios de Sacatepéquez, Chimaltenango, Quetzaltenango, San Marcos, Alta Verapaz, Petén y Chiquimula pasarán a rojo - Read article
- Verificamos por usted: ¿Los asintomáticos pueden convertirse en supercontagiadores del covid-19?
 Read article
- Exceso de mortalidad en el país durante la pandemia Read article

• EFE

- Guatemala admite que hubo 40 a 50 % de exceso de mortalidad a partir de junio - Read article

• Forbes Centroamerica

- Guatemala admite que hubo hasta 50% exceso de mortalidad desde junio - Read article

• Diario Libre

- Guatemala admite que hubo hasta 50% exceso de mortalidad desde junio - Read article

• elPeriodico

- "En Guatemala no se sabe si hay más muertos en la zona 1 o en la zona 10" - Read article

• Plaza Publica

- COVID19 se ensaña con la juventud guatemalteca Read article
- COVID19 En 5 gráficos: La mortalidad ha crecido en la capital pero no en el país con respecto a años anteriores - Read article
- VIDEO Epidemiólogo: "De momento se hace casi imposible hacer una comparación sin sesgo entre países" - Read article

• Nomada

- Epidemiólogo: "Temo un aumento brusco de casos que no podremos detectar" - Read article

- (Mapas y datos) Así está la pandemia al otro lado de las débiles fronteras de Guatemala Read $\,$ article
- (Mapas y Datos) ¿Qué departamentos corren más riesgo ante el COVID-19? Read article
- (Gráficas) Guatemala: el gran perdedor en pruebas de COVID-19 en América Latina - Read
article
- $-\,$ 6 Expertos y 6 razones por las que el acceso a datos es importante para enfrentar al COVID-19 Read article
- (Audios) La lucha contra el COVID-19: así es la vida en el hospital del Parque de la Industria Read article
- COVID-19: Cinco meses después no conocemos la magnitud real de la pandemia Read article