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Dr. Rafael Meza

Correspondence language: English
Date of Birth: 4/23
Canadian Residency Status: Permanent Resident
Permanent Residency Start Date: 2024/01/13
Country of Citizenship: United States of America

Contact Information

The primary information is denoted by (*)

Address

Primary Affiliation (*)

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Dr. Rafael Meza

Language Skills

Language	Read	Write	Speak	Understand	Peer Review
English	Yes	Yes	Yes	Yes	Yes
Spanish; Castilian	Yes	Yes	Yes	Yes	

Degrees

2000/9 - 2006/6 Doctorate, Doctor of Philosophy, Applied Mathematics, University of Washington
Degree Status: Completed
Thesis Title: : *Some Extensions and Applications of MultistageCarcinogenesis Models*

1996/9 - 2000/6 Bachelor's, Bachelors of Science, Applied Mathematics, ITAM, Mexico
Degree Status: Completed

User Profile

Research Specialization Keywords: Cancer screening, Decision modeling, Disease Prevention, Lung Cancer, Tobacco control

Disciplines Trained In: Applied Mathematics

Research Disciplines: Applied Mathematics, Epidemiology and Biostatistics

Areas of Research: Community Health / Public Health, Lung Cancer, Modelization and Simulation, Smoking and Cancer

Fields of Application: Public Health

Employment

2023/2 Adjunct Professor
School of Population and Public Health, Faculty of Medicine, University of British Columbia
Professor

2022/9 Distinguished Scientist
Population Health Sciences, BC Cancer Research Institute, BC Cancer, part of the Provincial Health Services Authority
Department renamed from Integrative Oncology to Population Health Sciences in April 2025.

2021/9 - 2022/8 Professor
Department of Epidemiology, Public Health, University of Michigan, Ann Arbor
Full-time, Professor
Tenure Status: Tenure

2021/9 - 2022/8	Professor of Global Public Health Global Health, Global Health, University of Michigan, Ann Arbor Full-time, Professor Tenure Status: Tenure
2019/9 - 2021/8	Associate Chair Epidemiology, Public Health, University of Michigan, Ann Arbor Full-time
2018/1 - 2021/8	Associate Professor of Global Health Epidemiology, Public Health, University of Michigan, Ann Arbor Full-time, Associate Professor
2017/9 - 2021/8	Associate Professor Department of Epidemiology, Public Health, University of Michigan, Ann Arbor Full-time, Associate Professor Tenure Status: Tenure
2016/8 - 2021/8	Co-Leader, Cancer Control and Population Sciences Program Rogel Cancer Center Epidemiology, Rogel Research Centre, University of Michigan, Ann Arbor
2017/9 - 2017/8	Assistant Professor Department of Epidemiology, University of Michigan, University of Michigan, Ann Arbor Full-time
2008/5 - 2011/7	Post-Doctoral Fellow, Division of Mathematical Modeling Mathematical Modeling, Centre for Disease Control, University of British Columbia
2006/6 - 2008/4	Post-Doctoral Fellow, Biostatistics, Program in Biostatistics and Biomathematics,, Fred Hutchinson Cancer Research Center Full-time D
2002/9 - 2006/9	Research Associate Biostatistics, Fred Hutchinson Cancer Research Cent, Fred Hutchinson Cancer Research Center Full-time
1998/9 - 2000/6	Risk Analyst, Mexican Pension Funds Regulation Agency (CONSAR) Pension funds, Pension Funds Agency, Mexican Pension Funds Regulation Agency Full-time

Affiliations

The primary affiliation is denoted by (*)

(*) 2022/8	Distinguished Scientist, Population Health Sciences, BC Cancer, part of the Provincial Health Services Authority Department name renamed from Integrative Oncology to Population Health Sciences in April 2025.

Research Funding History

Awarded [n=1]

2023/9 - 2028/8 Principal Investigator	Center for the Assessment of the Public Health Impact of Tobacco Regulations U54CA229974 TCORS-III - Meza R, Mendez D & Levy DT (PIs) NIH/NIDA/NCI, Grant Project Description: The Center for the Assessment of Tobacco Regulations aims to provide evidence-based and expert-informed modeling of the behavioral and public health

impacts of FDA tobacco rules or other regulatory actions, focusing on Impact Analysis and Health Effects as Scientific Domains. The Center has four projects based on detailed analyses of current and historical tobacco use patterns in the US using four established tobacco simulation models, with different approaches to provide a range of diverse insights.

Funding Sources:

2020/9 - 2025/8   NCI
NIH
Total Funding - 20,000,000 (United States dollar)
Funding Competitive?: Yes

Student/Postdoctoral Supervision

Doctorate [n=3]

2023/9
Co-Supervisor

Rossana Torres-Alvarez, University of British Columbia
Thesis/Project Title: TBD
Present Position: Graduate Student

2020/9 - 2024/5
Principal Supervisor

Sarah Skolnick (Completed) , University of Michigan
Degree Name: Doctor of Philosophy
Specialization: Epidemiology
Thesis/Project Title: Lung CancerEpidemiology and Prevention in Black Americans:Insights from Computational Models
Present Position: Graduate Student

2019/9 - 2025/6
Co-Supervisor

Jiale Tan, University of Michigan
Degree Name: Doctor of Philosophy
Specialization: Epidemiology
Thesis/Project Title: Computational and Machine Learning Algorithms Development for Epidemic Forecasting and Tobacco Research
Present Position: Graduate Student

Presentations

1. (2025). Lung cancer screening eligibility, who should be screened?. International Cancer Screening Network (ICSN) Annual Meeting, Aarhus, Denmark
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No

2. (2025). The impact of tobacco control, screening and other prevention interventions on lung cancer in the US; perspectives from the CISNET lung modeling consortium. MUSC Hollings Cancer Center PACES Seminar Series, Charleston, United States of America
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No

3. (2025). Reducing the Impact of Tobacco Use on Overall and Lung Cancer Morbidity and Mortality: Perspectives from Epidemiological and Modeling Studies. Smokefree South Carolina Annual Summit, Columbia, United States of America
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No

4. (2024). E-cigarette use, cigarette smoking and chronic conditions. UBC & St. Paul's Hospital Centre for Heart Lung Innovation's Seminar, Vancouver, Canada
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No

5. (2024). Trends in cigarette and e-cigarette use and transitions: a tale of two (or more) populations. E-Cigarette Summit, United States of America
   Main Audience: Researcher
   Invited?: Yes, Keynote?: Yes

6. (2024). So what's up with vaping? Is it less, the same, or more risky than smoking?. Michigan MI-CARES Webinar, United States of America
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No

7. (2024). Modeling Lung Cancer Screening. 5th Annual Advances in Early Lung Cancer Detection Conference, United States of America
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No

8. (2024). Trends in cigarette and e-cigarette use and transitions: a tale of two (or more) populations. CASEL Tobacco Regulatory Science Webinar (Online), United States of America
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No

9. (2024). The use of simulation models to help reduce cancer disparities. Argentina Health Disparities Summit, Argentina
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No

10. (2023). The role of mathematical and computational modeling in lung cancer epidemiology and prevention; e-cigarettes, disparities and other new challenges 70 years after Doll and Hill. MD Anderson Cancer Prevention and Control Grand Rounds, Houston, United States of America
    Main Audience: Researcher
    Invited?: Yes, Keynote?: No

11. (2023). Experiences and Needs for Epidemiological Research – US/Mexico Collaborations Modeling of Chronic Diseases. Society for Epidemiologic Research (SER) Mid-year meeting, Mexico
    Main Audience: Researcher
    Invited?: Yes, Keynote?: No

12. (2023). The role of mathematical and computational modeling in lung cancer epidemiology and prevention; lung screening, e-cigarettes, disparities and other new challenges 70 years after Doll and Hill. Roswell Park Comprehensive Cancer Center Population Sciences Program Grand Rounds Seminar Series, United States of America
    Main Audience: Researcher
    Invited?: Yes, Keynote?: No

13. (2023). Modeling the Benefits of Screening to Better Include Women and the Underserved. World Conference on Lung Cancer, Singapore, Singapore
    Main Audience: Researcher
    Invited?: Yes, Keynote?: No

14. (2023). Lung cancer screening, where are we and where are we going next?. University of Florida Health Cancer Center Oncology Grand Rounds, United States of America
    Main Audience: Researcher
    Invited?: Yes, Keynote?: No

15. (2023). E-cigarette use, cigarette smoking and the incidence of COPD. UBC Respiratory Medicine Rounds, Vancouver, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No

16. (2023). Assessing the Impact of Increasing Lung Screening Eligibility by Relaxing the Maximum Years since Quit Threshold. A Simulation Modeling Study. World Conference on Lung Cancer, Singapore, Singapore
Main Audience: Researcher
Invited?: Yes, Keynote?: No

17. (2022). Birth-cohort patterns of e-cigarette use among adolescents in the US. E-cigarette Conference, French National Cancer Institute (INCa), France
Main Audience: Researcher
Invited?: Yes, Keynote?: No

18. (2022). Lung cancer screening, where are we and where are we going next?, February 2022. Rutgers Cancer Institute of New Jersey Grand Rounds, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: No

19. (2022). Lung cancer screening, where are we and where are we going next?. Norway Cancer Registry & Oslo University, Oslo, Norway
Main Audience: Researcher
Invited?: Yes, Keynote?: No

20. (2022). Electronic Nicotine Delivery Systems (ENDS) use during a five-year period is not associated with self-reported chronic obstructive pulmonary disease (COPD) after adjustment of cigarette smoking history: A longitudinal analysis of PATH data. E-cigarette Conference, French National Cancer Institute (INCa), France
Main Audience: Researcher
Invited?: Yes, Keynote?: No

21. (2021). The role of simulation modeling in shaping lung cancer screening and tobacco control policies in the US, April 2021. British Columbia Cancer Research Centre Grand Rounds, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No

22. (2021). Symposium: Tobacco use disparities and health outcomes through the lens of simulation modeling Talk: A simulation model of smoking, ENDS use, and health outcomes among US Blacks February 2021. Society for Research on Nicotine and Tobacco Annual Meeting,, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: No

23. (2021). Update on lung cancer screening with low-dose CT, September 2021. European Respiratory Society International Congress, Spain
Main Audience: Researcher
Invited?: Yes, Keynote?: No

24. (2020). Symposium: Can Taxes Alter Dietary Behaviors and Outcomes? Talk: Impact of Sugar Sweetened Beverage Taxes in Mexico: Empirical and Modeling Results July 2020. American Diabetes Association Scientific Sessions, United States of America
Main Audience: Researcher
Invited?: Yes, Keynote?: No

25. (2020). Trends in US cigarette smoking and ENDS use prevalence and product use transitions. Using Markov transition models, joinpoint regression and other quantitative approaches to inform simulation models of tobacco use behaviors, December 2020. University of Southern California TCORS Seminar Series, United States of America

26. (2020). Lung cancer screening in the US, where are we now and where are we going, February 2020. The Tisch Cancer Institute, The Mount Sinai Health System,

27. (2020). The role of simulation modeling in shaping tobacco and lung cancer screening policies in the US, August, 2020. Fred Hutchinson Cancer Research Center: Biostatistics Program Seminar, United States of America

28. (2019). The role of simulation modeling in shaping tobacco and lung cancer screening policies in the US and elsewhere, September 2019. World Conference on Lung Cancer, Barcelona, Spain

29. (2019). The role of simulation modeling in shaping tobacco and lung cancer screening policies in the US, April 2019. Feinstein Institute for Medical Research, Northwell Health, United States of America

30. (2019). The role of simulation and collaborative modeling in shaping cancer prevention strategies in the US, January 2019. Japan National Cancer Center Seminar, Symposium on Simulation Modeling in Cancer Control,

31. (2019). The role of simulation modeling in shaping tobacco and lung cancer screening policies in the US, January 2019. 29th Annual Meeting of the Japan Epidemiological Association,

32. (2018). Implementation of self-sampling for HPV screening in Indigenous populations in Guatemala: lessons learned, October 2018. World Cancer Congress, Kuala Lumpur Malaysia, Kuala Lumpur, Malaysia

33. (2018). HPV self-sampling for cervical cancer screening in indigenous and rural communities in Guatemala, March 2018. 9th Annual CUGH Global Health Conference,

34. (2018). The role of modeling in shaping lung cancer screening in the US, October 2018. World Cancer Congress, Kuala Lumpur Malaysia, Kuala Lumpur, Malaysia

35. (2018). The exciting world of tobacco simulation modeling. Emerging challenges and opportunities, November 2018. Center for the Study of Complex Systems Seminar, University of Michigan, United States of America

36. (2018). Lung cancer screening in the US: where are we and where should we go from here? Lessons from simulation modeling studies, December 2018. Georgetown Lombardi Cancer Center Oncology Grand Rounds, United States of America

37. (2017). The Exciting World of Tobacco Simulation Modeling. Emerging Challenges and Opportunities, January 2017. Epidemiology Seminar, Department of Epidemiology, University of Michigan, Michigan, United States of America

38. (2017). Modeling the Effects of E-cigarettes on Smoking Behavior Implications for Future Adult Smoking Prevalence, February 2017. Committee on the Review of the Health Effects of Electronic Nicotine Delivery Systems Workshop, Institute of Medicine, Washington DC, Washington, DC, United States of America

39. (2017). Modeling smoking trends and lung cancer screening to 2060 in the US; changes in screening eligibility and the potential impact of joint screening and cessation programs on smoking and lung cancer, October 2017. World Conference on Lung Cancer, Yokohama Japan, Yokohama, Japan

40. (2017). Mechanistic modeling of cancers with infectious diseases: From population data to mechanisms, February 2017. CSBC-PSON Mathematical Oncology 2017 Meeting, Mayo Clinic Arizona, United States of America

41. (2017). Modeling smoking trends and lung cancer screening: Changes in eligibility and the potential impact of joint screening/cessation programs on smoking and lung cancer, December 2017. 6th Annual Lung Cancer Screening and Continuum of Care,

42. (2017). Modeling smoking trends and lung cancer screening: Changes in eligibility and the potential impact of joint screening/cessation programs on smoking and lung cancer, April 2017. American Association for Cancer Research (AACR) Annual Meeting, United States of America

43. (2016). Applications of Stochastic Models of Carcinogenesis in Cancer Prevention, April 2016. Mathematical Biology Seminar, Department of Mathematics, Duke University, United States of America

44. (2016). Acceptability of HPV Self-Sampling for Cervical Cancer Screening in an Indigenous Community in Guatemala, June 2016. IARC Global Cancer Occurrence, Causes, and Avenues to Prevention,

45. (2016). Understanding the Epidemiology and Potential Effects of HPV Multisite Infections, July 2016. European Society for Mathematical and Theoretical Biology and the Society for Mathematical Biology,

46. (2015). Infectious Diseases and Cancer; Epidemiology and Mathematical Models, August 2015. Viral Dynamics and Cancer: Modeling Oncogenic and Oncolytic Viruses Workshop, BIRS-CMO, Oaxaca, Mexico, Oaxaco, Mexico

47. (2015). Recent Applications of Multistage Carcinogenesis Models, February 2015. Theoretical Biology Seminar, Department of Mathematics, Penn State University, Pennsylvania, United States of America

48. (2014). Extrapolating from the National Lung Screening Trial (NLST) to determine optimal lung cancer screening regimens – Using comparative modeling to inform cancer-screening guidelines, February 2014. Epidemiology Seminar, Department of Epidemiology, University of Michigan,

49. (2014). Modeling diabetes in Mexico: estimation of historical incidence rates and projection of the impact of a soft-drink tax on future rates, May 2014. Michigan Center for Diabetes Translational Research Annual Symposium,

50. (2014). Extrapolating from the National Lung Screening Trial (NLST) to determine optimal lung cancer screening regimens
- Using comparative modeling to inform cancer-screening guidelines, May 2014. Michigan Department of Community Health,

51. (2014). Extrapolating from the National Lung Screening Trial (NLST) to determine optimal lung cancer screening regimens, May 2014. Working Group on Modeling Health and Economic Outcomes (MHEO), University of Michigan,

52. (2014). Impact of a Sugary Drink Tax on Diabetes Rates in Mexico, September 2014. 60th Anniversary, Institute of Nutrition of Central America and Panama,

Publications

Journal Articles

1. Salgado MV , Cao P , Jeon J , Sanchez-Romero LM , Holford TR , Levy DT , Tam J , Mejia R , Meza R. (2025). Modeling the impact of smoking on mortality in Argentina from 2000 to 2100. A Maximum Potential Reduction in Premature Mortality analysis.Nicotine & tobacco research : official journal of the Society for Research on Nicotine and Tobacco. .: ..
In Press,

2. Brouwer AF , Jeon J , Jimenez-Mendoza E , Land SR , Holford TR , Friedman AS , Tam J , Mistry R , Levy DT , Meza R. (2024). Changing patterns of cigarette and ENDS transitions in the USA: a multistate transition analysis of adults in the PATH Study in 2017-2019 vs 2019-2021.Tobacco Control. NA: NA.
In Press,
Refereed?: Yes

3. Cummings KM , Roberson A , Levy DT , Meza R , Warner KE , Fong GT , Xu SS , Gravely S , Dhungel B , Borland R , O'Connor RJ , Goniewicz ML , Sweanor DT. (2024). Transformation of the tobacco product market in Japan, 2011-2023.Tobacco control.
Published,

4. Zavala-Arciniega L , Cook S , Hirschtick JL , Xie Y , Mukerjee R , Arenberg D , Barnes GD , Levy DT , Meza R , Fleischer NL. (2024). Longitudinal associations between exclusive, dual and polytobacco use and respiratory illness among youth.BMC public health. 24(1): 2159.
Published,

5. Meza R , Jeon J. (2022). Invited Commentary: Mechanistic and Biologically Based Models in Epidemiology-A Powerful Underutilized Tool.American journal of epidemiology. 191(10): 1776-1780.
    Published,

Book Chapters

1. National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Population Health and Public Health Practice; Committee on Patterns of Use and Health Effects of "Premium Cigars" and Priority Research. (2022). Premium Cigars: Patterns of Use, Marketing, and Health Effects. Steven M. Teutsch, Amy B. Geller, and Aimee M. Mead. NASEM (National Academies of Sciences, Engineering and Medicine).
    Published, The National Academies Press, United States of America

2. (2015). Public Health Implications of Raising the Minimum Age of Legal Access to Tobacco Products. IOM (Institute of Medicine).
    Published, The National Academies Press,

Reports

1. Office of the Surgeon General (US). (2024). Eliminating Tobacco-Related Disease and Death: Addressing Disparities: A Report of the Surgeon General (Contributing Author: Rafael Meza). 837. Office of the Surgeon General, U.S. Department of Health and Human Services.