

Enrique Acosta, Ph.D.

Curriculum vitae

February 2022

I am a demographer, currently working as a Research Scientist at the *Max Planck Institute for Demographic Research (MPIDR)* in Rostock, Germany. I specialize in the analysis of mortality trends, epidemic and pandemic mortality; cohort (generational) influences on mortality; and the drivers of behaviourally-driven causes of death. Methodologically, I have developed new techniques to study Age, Period, and Cohort (APC) effects on mortality; and am an expert in the measurement of excess mortality.

Personal Information	acosta@demogr.mpg.de and kikepaila@gmail.com Google Scholar ; Research Gate ; MPIDR personal page ; OSF ; GitHub . ORCID ID: 0000-0001-6250-4018
Current Position	Research Scientist <i>Max Planck Institute for Demographic Research (MPIDR)</i> , Rostock, Germany Research Group: Population Health. Research Group Leader: Mikko Myrskylä, Ph.D.
Education	Ph.D. in Demography (2019) * <i>Université de Montréal</i> , Canada Advisors: Alain Gagnon, Ph.D. and Nadine Ouellette, Ph.D. M.Sc. in Demography (2013) *** <i>Université de Montréal</i> , Canada B.A. (Hons) in Sociology (2008) ** <i>Universidad Nacional de Colombia</i> , Colombia B.Eng. (Hons) in Industrial Engineering (2007) * <i>Universidad Distrital de Bogotá</i> , Colombia * with the highest distinction ** with distinction *** accelerated in the doctoral program
Research Interests	Mortality trends; Age-Period-Cohort effects; Epidemics and Pandemics (COVID-19, influenza, substance abuse); Behavioral causes of death; Extrinsic mortality; Excess mortality; Demography of violence.
Peer-reviewed publications	2022 Acosta, Enrique, Neil Mehta, Mikko Myrskylä, and Marcus Ebeling. " Cardiovascular Mortality Gap between the United States and other High Life Expectancy Countries during the Period 2000-2016. " <i>Journal of Gerontology – Social Sciences</i> , [Forthcoming]. 2021 Riffe Tim*, Enrique Acosta*, and the COVerAGE-DB Team. " COVerAGE-DB: A Global Database of Age-structured COVID-19 Cases and Deaths. " <i>International Journal of Epidemiology</i> 50(2). * [Riffe and Acosta contributed equally] 2021 Pifarré i Arolas, Héctor, Enrique Acosta, and Mikko Myrskylä. " Optimal vaccination age varies across countries. " <i>Proceedings of the National Academy of Sciences (PNAS)</i> 118 (29). 2021 Pifarré i Arolas, Héctor, Enrique Acosta, Guillem López Casanovas, Adeline Lo, Catia Nicodemo, Tim Riffe, and Mikko Myrskylä. " Global Years of Life Lost to COVID-19. " <i>Scientific Reports</i> 11(3504). 2021 Morwinsky, Saskia, Natalie Nitsche, Enrique Acosta. " COVID-19 fatality in Germany: Demographic determinants of variation in case-fatality rates across and within German federal states during the first and second waves. " <i>Demographic Research</i> , 45 (45).

Enrique Acosta, Ph.D.

Curriculum vitae

February 2022

- 2021 Ghio, Daniela, **Enrique Acosta**, David Fisman, Andrew Noymer, Nikolaos I. Stilianakis, and Simona Bignami. "[Population Health and COVID-19 in Canada: a Demographic Comparative Perspective](#)." *Canadian Studies in Population*.
- 2021 Sempé, Lucas, Peter Lloyd-Sherlock, Ramón Martínez, Shah Ebrahim, Martin McKee, **Enrique Acosta**. "[Estimation of all-cause excess mortality by age-specific mortality patterns for countries with incomplete vital statistics: a population-based study of the case of Peru during the first wave of the COVID-19 pandemic](#)." *The Lancet Regional Health – Americas* 100039.
- 2021 Garcia-Calavaro , Christian, Angel Paternina-Cacedo, Adrian D. Smith, Lee H. Harrison, Fernando De la Hoz-Restrepo, **Enrique Acosta**, and Tim Riffe. "[COVID-19 mortality needs age adjusting for international comparisons](#)." *Journal of Medical Virology* 93.
- 2020 Nepomuceno, Marília R.*, **Enrique Acosta***, Diego Alburez-Gutierrez, José Manuel Aburto, Alain Gagnon, and Cássio M. Turra. "[Besides Population Age Structure, Health and Other Demographic Factors can Contribute to Understanding the COVID-19 Burden](#)." *Proceedings of the National Academy of Sciences (PNAS)* 117(25).
- * [Nepomuceno and Acosta contributed equally]
- 2020 Dudel, Christian, Tim Riffe, **Enrique Acosta**, Alyson A. van Raalte, Cosmo Strozza, and Mikko Myrskylä. "[Monitoring Trends and Differences in COVID-19 Case Fatality Rates Using Decomposition Methods: Contributions of Age Structure and Age-Specific Fatality](#)." *PLOS ONE*, 15(9): e0238904.
- 2020 Gagnon, Alain, **Enrique Acosta**, and M.S. Miller. "[Age-specific incidence of influenza A responds to change in virus subtype dominance](#)." *Clinical Infectious Diseases*, (c1aa075).
- 2019 **Acosta, Enrique**, S.A. Hallman, N. Ouellette, R. Bourbeau, D.A. Herring, K. Inwood, L. Dillon, D.J. Earn, J. Madrenas, M.S. Miller, A. Gagnon. "[Determinants of Influenza Mortality Trends. Age-Period-Cohort Analysis of Influenza Mortality in the United States 1959-2016](#)." *Demography*, 56 (5).
- 2019 **Acosta, Enrique**, Alyson van Raalte. "[APC-Curvature Plots: Displaying Nonlinear Age-Period-Cohort Patterns on Lexis Plots](#)." *Demographic Research*, 41 (42).
- 2018 Gagnon, Alain, **Enrique Acosta**, S. Hallman, R.R. Bourbeau, L. Dillon, D.J. Earn, D.A. Herring, K. Inwood, J. Madrenas, and M.S. Miller. "[Pandemic paradox: Early life pandemic influenza infection enhanced susceptibility to death during the 2009 H1N1 pandemic](#)." *mBio*, 9 (1).
- * [Gagnon, Acosta, and Miller contributed equally]
- 2018 Gagnon, Alain, **Enrique Acosta**, and M.S. Miller. "[Reporting and evaluating influenza virus surveillance data: An argument for incidence by single year of age](#)." *Vaccine* 36 (42).
- 2015 Gagnon, Alain, **Enrique Acosta**, J. Madrenas and M.S. Miller. "[Is Antigenic Sin always "original?": Re-examining the evidence regarding the circulation of a human H1 influenza virus immediately prior to the 1918 Spanish Flu](#)." *PLOS Pathogens* 11(3).
- Book chapters** 2022 **Acosta, Enrique**. "La surmortalité des baby-boomers au Canada et aux États-Unis," in "[L'éclairage de la démographie : Mesurer pour mieux comprendre les enjeux sociaux](#)". Edited by Victor Piché, Céline Le Bourdais, Richard Marcoux, and Nadine Ouellette. Les Presses de l'Université de Montréal. ISBN 9782760644830.
- Articles under review** **Acosta, Enrique**, Alain Gagnon, Nadine Ouellette, Robert Bourbeau, Marília Nepomuceno, and Alyson van Raalte. "[The boomer penalty: excess mortality among](#)

Enrique Acosta, Ph.D.

Curriculum vitae

February 2022

[baby boomers in Canada and the United States.](#)” *MPIDR Working Paper Series WP-2020-003.*

- Pifarré i Arolas, Héctor, **Enrique Acosta**, Christian Dudel, Jo Mhairi Hale, and Mikko Myrskylä. “[Exposure-adjusted racial/ethnic disparities in mortality in the U.S.](#)”
- Ebeling, Marcus, **Enrique Acosta**, Hal Caswell, and Modig Karin. “Life expectancy and YLL by care status in Sweden”
- Bohk-Ewald, Christina, **Enrique Acosta**, Tim Riffe, Christian Dudel, and Mikko Myrskylä. “[Magnitude, global variation, and temporal development of the COVID-19 infection fatality burden.](#)”

Working Papers

- Acosta, Enrique**, Alyson van Raalte, Alain Gagnon, Simona Bignami, Viorela Diaconu, and Rafael Silva-Ramírez. “COVID-19 in Canada: International and Subnational Comparative Analysis of the Pandemic during 2020.”
- Acosta, Enrique**, Catalina Torres, Rafael Silva-Ramírez, Robert Bourbeau. “Violence and External Mortality in Colombia: Analysis of Demographic Costs During the Period 1979-2016.”
- Castro, Andrés F., Nicolás Sacco, Ignacio Pardo, Beatriz Piedad Urdinola, **Enrique Acosta**. “Subnational Fertility and the Covid-19 Pandemic in Colombia and Brazil, 2010-2021.”
- Nepomuceno, Marília, Alyson van Raalte, and **Enrique Acosta**. “Rising midlife mortality among US Whites: A cohort survival comparison.”
- Hecker, Irwin, Didier Breton, **Enrique Acosta**, and Alain Gagnon. “Age-specific excess mortality among immigrants and French natives during the first and second waves of the Covid-19 pandemic.”
- Bignami, Simona, Pietro Violo, Tim Riffe, **Enrique Acosta**, and Daniela Ghio “Sex differences in COVID-19 mortality in the United States: a state-level analysis.”

Databases

- Riffe Tim*, **Acosta Enrique***, and the COVerAGE-DB team (2020) [COVerAGE-DB: A global demographic database of COVID-19.](#)
- * [Coordinated by Riffe and Acosta]

Invited Talks

- November 2021. *Keynote Speaker*. “Innovation in sources and methods for mortality analysis.” *Universidad Nacional de Córdoba*, Argentina. Postdoctoral program in demography.
- October 2021. Excess Mortality estimations among infants, children, and young. Technical Advisory Group on Excess Mortality Estimation. *World Health Organization (WHO-TAG)*.
- January 2021. Global trends in COVID-19 infections among young people. *WHO-UNICEF*. Global Transmission Discussion on SARS-COV-2 in children.
- January 2021. Indirect measures for adjusting COVID-19 demographic data. *Shanghai University - Asian Demographic Research Institute*.
- December 2020. Excess Mortality in Young and Children in High-Income Countries. *Technical Advisory Group of the United Nations Inter-agency Group for Child Mortality Estimation (UN IGME)*.
- October 2020. Age and COVID-19. *Université de Montréal*, Department of Demography.
- May 2020. Cohort effects on Influenza mortality during epidemics and pandemics. *Universidade Federal de Minas de Gerais, CEDEPLAR*, Brazil.
- May 2020. Impactos de las pandemias de Influenza y COVID-19 en América Latina. *Universidad de la República*. Programa de Población, Uruguay.

Enrique Acosta, Ph.D.

Curriculum vitae

February 2022

February 2020. *Keynote Speaker*. Age-Period-Cohort Analysis: Limitations and Possibilities. 11th Demographic Conference of Young Demographers. Faculty of Science, *Charles University*, Czech Republic.

Guest Editor Canadian Studies in Population, [Special Issue on Population Health and COVID-19](#) (2021)

Conference Presentations Full list is available on request. I have given oral and poster presentations at large international, European, and Northern American demography conferences, including the International Population Conference (IPC) of the International Union for the Scientific Study of Population (IUSSP), the Population Association of America Annual Meeting (PAA), the European Population Conference (EPC), the Congreso Internacional de la Asociación Latinoamericana de Población (ALAP), Réseau espérance de vie en santé (REVES), The Colloque de l'Association des démographes du Québec (ADQ), the Federation of Canadian Demographers Conference (FCD), and the Conference of the European Society of Historical Demography (ESHD).

Grants and Fellowships Postdoctoral Grant, *Fonds de Recherche de Québec – Société et Culture* (FRQSC) (2020-2022). * Amount: 110,000 CAD.
* First place. Merged with SSHRC postdoctoral Fellowship.
Postdoctoral Grant, *Social Sciences and Humanities Research Council (SSHRC) of Canada* (2020-2022). Amount: 90,000 CAD.
Doctoral Grant Joseph-Armand Bombardier, *Social Sciences and Humanities Research Council (SSHRC) of Canada* (2015-2018). Amount: 105,000 CAD.
Doctoral Fellowship, *Max Planck Institute for Demographic Research*, Laboratories Lifespan Inequalities and Population Health (2018-2019). Amount: 36,000 EUR.
Entrance Scholarship, *Quebec Inter-University Centre for Social Statistics (QICSS)*, (2017). Amount: 2,000 CAD.
Scholarships to attend International Advanced Studies in Demography at the *Max Planck Institute for Demographic Research* (2016-2017). Amount: 1,800 EUR.
Excellence admission scholarship, *Faculté des études supérieures, Université de Montréal*, (2014). Amount: 4,000 CAD.
Scholarship for transfer from Masters to Ph.D., *Université de Montréal* (2014-2015). Amount: 14,000 CAD.
Competitive travel grants for students, *Population Change and Life course Strategic Knowledge Cluster* (2014). Amount: 2,000 CAD.
Excellence Scholarship for full Master studies - *Universidad Distrital de Bogotá* (2009-2011). Amount: 15,000 USD.

Awards and Honors Excellence award for best doctoral student – Department of demography, *Université de Montréal* (2020).
Dean's list of honor - *Université de Montréal* (2020).
Doctoral thesis [selected](#) as the best within the Arts, human and social sciences category to represent the Université de Montréal for Canada's Distinguished Dissertation Awards ACES/UMI (2020).
Doctoral dissertation with the mention of “exceptional” – the highest distinction – Department of Demography, *Université de Montréal* (2019).
Top ten graduating Industrial Engineers in Colombia among 4,420 students (top 0.2% of Colombian graduates) - Distinction of the *National Government of Colombia* (2007).
Best graduating student from Industrial Engineering from the cohort - *Universidad Distrital de Bogotá* (2007).
Honours thesis in B.Eng. Industrial Engineering with the mention of “meritorious” – Distinction of the *Universidad Distrital de Bogotá* (2007).

Enrique Acosta, Ph.D.

Curriculum vitae

February 2022

Thesis in B.A. Sociology postulated by the jury upon the best memories of the Faculty of Humanities and Social Sciences - *Universidad Nacional de Colombia* - (2007-2008).

Research Experience

Ph.D. Research Fellow (2019)

Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany.

Research Group: Population Health.

Research Group Leader: Mikko Myrskylä, Ph.D

Ph.D. Research Fellow (2018 – 2019)

Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany

Project: Lifespan Inequalities: Why the age-at-death distribution varies between countries and socioeconomic groups - LIFEINEQ.

Research Group Leader: Alyson van Raalte, Ph.D.

Research Assistant (2016 – 2018)

Project: The lasting effects of influenza: Defining the causes and consequences of early life exposures on age-specific mortality later in life, 1890-2015.

Canadian Institutes of Health Research.

Research Group Leader: Alain Gagnon, Ph.D.

Research Assistant (2013 – 2016)

Project: Mortality risks in later life from exposure to pandemic influenza in early life: the 1890 and 1918 influenza pandemics in Canada.

Canadian Institutes of Health Research.

Research Group Leader: Alain Gagnon, Ph.D.

Teaching Experience

Lecturer

International Max Planck Research School for Population, Health and Data Science (IMPRS-PHDS)

- *Mortality Trends* – 2019 - 2021

Invited Lecturer

February 2022 – *Université de Montréal*, Department of demography, Montreal, Canada.

November 2021 – *Universidad Nacional de Córdoba*, Facultad de Ciencias Económicas, Postdoctoral Program in Demography, Córdoba, Argentina.

October 2021 – *Universidad de la República de Uruguay*, Programa de Población. Master in Demography, Montevideo, Uruguay.

April 2016 – *Departamento Administrativo Nacional de Estadística – DANE*, Equipo de Proyecciones de Población y Análisis Demográfico, Bogota, Colombia.

Substitute Lecturer

Université de Montréal - Department of Demography, Montreal, Canada

- Several sessions of the course *Statistical Methods for Demography* (DMO6371) – Fall 2017

Teaching Assistant

Université de Montréal - Department of Demography, Canada

- *Methods in Historical Demography* (DMO6330) – Winter 2017
Professor: Lisa Dillon, Ph.D.

- *Statistical Methods for Demography* (DMO6371) – Fall 2015
Professor: Thomas Legend, Ph.D.

- *Economy and Population* (DMO3450) – Fall 2015
Professor: Thomas Legend, Ph.D.

- *Statistical Methods for Demography* (DMO6371) – Fall 2014
Instructor: James Lachaud, Ph.D.

- *Survival Analysis* (DMO6405) – Winter 2014
Professor: Alain Gagnon, Ph.D.

Enrique Acosta, Ph.D.

Curriculum vitae

February 2022

Other Relevant Training	<p><i>Advances in Mortality Forecasting</i>. Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany. June 2021.</p> <p><i>Life Table and Decomposition Analysis for Population Health Research (using R)</i>. Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany. June 2018.</p> <p><i>Smoothing Demographic Data: Flexible Models in Population Studies</i>. Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany. June 2017.</p> <p><i>Statistical Analysis in the Lexis Diagram: Age-Period-Cohort Models</i>. Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany. May 2016.</p>
Press Coverage	<p>El País: “El coronavirus se ha llevado por delante 20,5 millones de años de vida” 2021.</p> <p>Fantástico: “500 mil muertos por Covid: de cada 425 brasileiros, um foi levado pela pandemia” 2021</p> <p>Liberation: “Le Covid tue-t-il «essentiellement des gens qui seraient morts dans l'année» ?” 2020.</p> <p>The Guardian: “More than 250 epidemiologists and public health experts have called for a drastic increase in Covid-19 testing in Latin America and the Caribbean to tackle the spread of the coronavirus.” 2020.</p> <p>Nature Medicine: “Low- and middle-income countries face up to COVID-19” May 2020.</p> <p>Les Echos: “L'impossible bilan comparatif des morts du Covid-19.” April 2020.</p> <p>Alternatives Économiques: “ENTRETIEN « En Amérique latine, l'ampleur de l'épidémie est largement sous-estimée” April 2020.</p> <p>El País: “¿Y si el coronavirus hubiese llegado a todos los países por igual?”, June 2020.</p> <p>El Espectador: “Expertos advierten la necesidad de ampliar la cobertura de pruebas COVID-19 en América Latina.” April 2020. https://bit.ly/321OtGx</p> <p>Nexo. “A importância de testar a população para enfrentar a covid-19.” April 2020.</p> <p>The New York Times. “Venezuela's Go-To Test for Fighting Virus Raising Questions” April 2020.</p> <p>Associated Press. “In Ecuador, Families Wait With Their Dead as Bodies Pile Up.” March 2020.</p>
Scientific Evaluation	<p><i>BRAIN-be 2.0 research program</i>, Belgian Science Policy Office (2020).</p>
Journals Reviewed for	<p>Demography, International Journal of Epidemiology, American Journal of Epidemiology, European Journal of Population, Health Affairs, Demographic Research, Genus, Epidemiology and Infection, BMJ Open, PLOS One, Canadian Studies in Population, PeerJ.</p>
Languages	<p>English (Fluent); French (Fluent); Spanish (Native)</p>
Software Skills	<p>R, STATA, Excel, and Visual Basic</p>
Other Experience	<p><i>UN-WHO</i> – Observer member of the Technical Advisory Group (TAG) Working Group I: Global Mortality Estimates Including COVID-19 (2021-2022).</p> <p><i>UN-UNICEF</i> – Leader of COVID-19 excess mortality analysis for children and youth in 2020 at the United Nations Inter-Agency Group for Child Mortality Estimation (UN-IGME) (2021-2022). “Levels & Trends in Child Mortality report 2021.”</p>

Enrique Acosta, Ph.D.

Curriculum vitae

February 2022

Institut de la statistique du Québec – Methodological design for the measurement of the excess mortality from all causes of death (2021).

Administrative National Department of Statistics of Colombia (DANE) – Demographic consultant team member for mortality estimation methodology. (2016). Under the direction of Robert Bourbeau, Ph.D. and Simona Bignami, Ph.D.

National University of Colombia – Management Process Reporting and Data Bases Coordinator (2010-2011).

Institute for Social Economy (IPES), City Hall of Bogota – Project Coordinator on empowerment of the vulnerable population for social and economic integration (2008-2010).

Academic References

Available upon request