

# Enrique Acosta, Ph.D.

Curriculum vitae

October 2022

I am a demographer, currently working as a Research Scientist at the *Centre d'Estudis Demogràfics (CED)* in Barcelona, Spain, and as a Guest Researcher at the *Max Planck Institute for Demographic Research (MPIDR)* in Rostock, Germany. I specialize in analyzing mortality trends, epidemic and pandemic mortality, cohort and 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 I am an expert in measuring excess mortality.

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[Google Scholar](#); [Research Gate](#); [CED personal page](#); [MPIDR personal page](#); [OSF](#); [GitHub](#).  
ORCID ID: [0000-0001-6250-4018](https://orcid.org/0000-0001-6250-4018)

## Academic Positions

### **Ramón y Cajal Research Fellow (2023-2027)**

*Centre d'Estudis Demogràfics (CED)*, Barcelona, Spain  
Research Group: Health and Ageing

### **Research Scientist (2022)**

*Centre d'Estudis Demogràfics (CED)*, Barcelona, Spain  
Research Group: Health and Ageing

### **Guest Researcher (2022-2023)**

*Max Planck Institute for Demographic Research (MPIDR)*, Rostock, Germany  
Research Group: Population Health

### **Research Scientist (2019 - 2022)**

*Max Planck Institute for Demographic Research (MPIDR)*, Rostock, Germany  
Research Group: Population Health

### **Postdoctoral Fellow (2020 - 2021)**

*Social Sciences and Humanities Research Council (SSHRC) of Canada*  
*Fonds de Recherche de Québec – Société et Culture (FRQSC)*

### **Ph.D. Research Fellow (2018 – 2019)**

*Max Planck Institute for Demographic Research (MPIDR)*, Rostock, Germany  
Research Group: Lifespan Inequalities: Why the age-at-death distribution varies between countries and socioeconomic groups - LIFEINEQ.

### **Joseph-Armand Bombardier Fellow (2015 - 2018)**

*Social Sciences and Humanities Research Council (SSHRC) of Canada*

### **Research Assistant (2013 – 2018)**

*Université de Montréal*, Montreal, Canada

## Education

### **Ph.D. in Demography (2019) \***

*Université de Montréal*, Canada  
Advisors: Alain Gagnon, Ph.D., and Nadine Ouellette, Ph.D.

### **M.Sc. in Demography (2013) \*\*\***

*Université de Montréal*, Canada

### **B.A. (Hons) in Sociology (2008) \*\***

*Universidad Nacional de Colombia*, Colombia

### **B.Eng. (Hons) in Industrial Engineering (2007) \***

*Universidad Distrital de Bogotá*, Colombia

\* with the highest distinction

\*\* with distinction

\*\*\* accelerated in the doctoral program

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### 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.](#)" *Journal of Gerontology – Social Sciences*, 77(IS2).
- 2022 Ebeling, Marcus, Enrique Acosta, Anna Meyer, Hal Caswell, and Modig Karin. "[Years of life lost during the Covid-19 pandemic in Sweden considering variation in life expectancy by level of geriatric care.](#)" *European Journal of Epidemiology*
- 2021 Riffe Tim\*, Enrique Acosta\*, and the COVerAGE-DB Team. "[COVerAGE-DB: A Global Database of Age-structured COVID-19 Cases and Deaths.](#)" *International Journal of Epidemiology* 50(2).  
\* [Riffe and Acosta contributed equally]
- 2021 Pifarré i Arolas, Héctor, Enrique Acosta, and Mikko Myrskylä. "[Optimal vaccination age varies across countries.](#)" *Proceedings of the National Academy of Sciences (PNAS)* 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.](#)" *Scientific Reports* 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.](#)" *Demographic Research*, 45 (45).
- 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-Caicedo, 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 Stozza, 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).

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

Castro, Andrés F., Enrique Acosta, Ignacio Pardo, Nicolás Sacco, Beatriz Piedad Urdinola. "Subnational Fertility and the Covid-19 Pandemic in Colombia and Brazil, 2010-2021."

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.](#)"

**Working Papers** Acosta, Enrique, Catalina Torres, Rafael Silva-Ramírez, Robert Bourbeau. "Violence and External Mortality in Colombia: Analysis of Demographic Costs During the Period 1979-2016."  
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."  
Violo, Pietro, Tim Riffe, Marielle Côté-Gendreau, Simona Bignami, Enrique Acosta, and Daniela Ghio "Sex differences in COVID-19 mortality in the United States: a state-level analysis."  
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.](#)"

**Databases** [COVerAGE-DB: A global demographic database of COVID-19.](#)

\* [Directed by Riffe, Acosta, and Schöley]

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- Invited Talks**
- May 2022. Global assessment of excess mortality in children and youth in 2020 and 2021. *Technical Advisory Group of the United Nations Inter-agency Group for Child Mortality Estimation (UN IGME)*.
  - 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.
  - 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 (ESHG).
- Grants and Fellowships**
- Postdoctoral Grant, **Ramón y Cajal** – *Agencia Estatal de Investigación del gobierno de España* (2023-2028). Amount: 236,650 EUR.
  - Postdoctoral Grant, **Beatriu de Pinós** – *Generalitat de Catalunya* (2023-2025)\*. Amount: 143,000 EUR.
  - \* Declined for *Ramón y Cajal* postdoctoral grant.
  - Postdoctoral Grant, **Fonds de Recherche de Québec – Société et Culture (FRQSC)** (2020-2022). \* Amount: 110,000 CAD.
  - \* First place. Merged with the 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.

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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 in 2007 (top 0.2%) - 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).

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).

## Teaching Experience

### Lecturer

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

- *Mortality Trends* – 2019 - 2022

*Universidad de la República de Uruguay (UDELAR) - Programa de población*

- *Demographic Analysis of Mortality* – 2022

*European Doctoral School of Demography (EDSD)*

- *Analysis of Mortality Disturbances* – 2023

### 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.

### Teaching Assistant

*Université de Montréal* - Department of Demography, Canada

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- *Methods in Historical Demography* (DMO6330); *Statistical Methods for Demography* (DMO6371), *Economy and Population* (DMO3450), *Statistical Methods for Demography* (DMO6371), *Survival Analysis* (DMO6405)

## Other Relevant Training

*Advances in Mortality Forecasting*. Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany. June 2021.  
*Life Table and Decomposition Analysis for Population Health Research (using R)*. Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany. June 2018.  
*Smoothing Demographic Data: Flexible Models in Population Studies*. Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany. June 2017.  
*Statistical Analysis in the Lexis Diagram: Age-Period-Cohort Models*. Max Planck Institute for Demographic Research (MPIDR), Rostock, Germany. May 2016.

## Press Coverage

**El País:** "[El coronavirus se ha llevado por delante 20,5 millones de años de vida](#)" 2021.  
**Fantástico:** "[500 mil muertos por Covid: de cada 425 brasileiros, um foi levado pela pandemia](#)" 2021  
**Liberation:** "[Le Covid tue-t-il «essentiellement des gens qui seraient morts dans l'année» ?](#)" 2020.  
**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.  
**Nature Medicine:** "[Low- and middle-income countries face up to COVID-19](#)" May 2020.  
**Les Echos:** "[L'impossible bilan comparatif des morts du Covid-19.](#)" April 2020.  
**Alternatives Économiques:** "[ENTRETIEN « En Amérique latine, l'ampleur de l'épidémie est largement sous-estimée](#)" April 2020.  
**El País:** "[¿Y si el coronavirus hubiese llegado a todos los países por igual?](#)", June 2020.  
**El Espectador:** "[Expertos advierten la necesidad de ampliar la cobertura de pruebas COVID-19 en América Latina.](#)" April 2020. <https://bit.ly/321OtGx>  
**Nexo.** "[A importância de testar a população para enfrentar a covid-19.](#)" April 2020.  
**The New York Times.** "[Venezuela's Go-To Test for Fighting Virus Raising Questions](#)" April 2020.  
**Associated Press.** "[In Ecuador, Families Wait With Their Dead as Bodies Pile Up.](#)" March 2020.

## Scientific Evaluation

*BRAIN-be 2.0 research program*, Belgian Science Policy Office (2020).

## Journals Reviewed for

Nature, 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, among others.

## Languages

English (Fluent); French (Fluent); Spanish (Native)

## Software Skills

R, STATA, Excel, and Visual Basic

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### Other Experience

*UN-WHO* – Observer member of the WHO [Technical Advisory Group \(TAG\) on COVID-19 Mortality Assessment](#) (2021-2022).

*UN-UNICEF* – 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.](#)”

*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