

Emily K. Johnson

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SUMMARY

Graduate student and population health researcher with over 7 years of experience with administrative data, health metrics measurement, and data science and biostatistical methods. Published author in prominent health policy journals with substantive experience with big data and health systems knowledge. Seeking opportunities to contribute to the body of health policy research.

EDUCATION

University of Southern Denmark	Odense, DK,
<i>Doctor of Philosophy in Health Economics</i>	Expected 2026
• Affiliations: Danish Center for Health Economics, Danish Institute for Advanced Study	
• Supervised by Angela Chang, DSc, Liza Sopina, PhD, and Harsh Parikh, PhD	
Johns Hopkins University	Baltimore, MD, USA,
<i>Visiting Graduate Student</i>	May 2025 – March 2026
London School of Economics	London, UK, Level: Distinction
<i>Master of Science in Health Data Science</i>	July 2023
• Prize for Excellence in MSc Health Data Science – Highest Average 2022/23	
• Program Representative, Student Staff Liaison Committee	
University of Edinburgh	Edinburgh, UK,
<i>Postgraduate Certificate in Epidemiology</i>	September 2023
University of Washington	Seattle, WA, USA,
<i>Non-matriculated postgraduate student during full-time employment</i>	2019-2022
Rice University	Houston, TX, USA, GPA: 3.52
<i>Bachelor of Arts in Statistics, Minor in Global Health Technologies</i>	May 2017

PUBLICATIONS

Peer reviewed publications

All authors listed from first to last

Johnson EK, Parikh H, Ettman CK, Ge G, Sopina L, Chang AY. Lasting Income Costs of Mental and Physical Illness. *JAMA Health Forum*. 2026.

Johnson EK, Parikh H, Olsen KR, Chang AY, Sopina L. Breast Cancer and Income Loss in Denmark: Heterogeneous Outcomes and Longitudinal Effects. *Nature Communications*. 2025.

Chang AY, **Johnson EK**, Bolongaita S, Buse K, Hawkes SJ, Karlsson O, Knaul FM, Kruk ME, Norheim OF, Ogbuoji O, Watkins D, Jamison DT. From Sex Differences to Sex Inequalities in Life Expectancy: A Cross-Country Observational Benchmarking Analysis. *PLoS medicine*. 2025.

Works in progress

Johnson EK, Parikh H, Ettman C, Ge G, Sopina L, Chang AY. Hospital Diagnosed Disease and Family Formation: Evidence from Danish Register Data. In preparation.

Johnson EK, Lindberg A, Marin AO, Riumano Herl C, Baravelli CM, Chang AY, Emmanuel E. Who dies early? Predicting and Describing Premature Mortality using Danish Register Data. In preparation.

Other Media

Chang AY, **Johnson EK**. Confronting the Systematic Invisibility of Women's Health. *The Lancet Obstetrics, Gynaecology, & Women's Health* (commentary). 2025.

RESEARCH EXPERIENCE

University of Southern Denmark, Danish Center for Health Economics Odense, DK

Graduate student – Experienced Burden of Disease Project 2023 - Present

- Measuring the economic, social, and health loss attributable to breast cancer, stroke, alcohol use disorder and depression over an 18-year period in Denmark using administrative health, education, and economic data.

Graduate student – Predicting Early Mortality Project 2023 – Present

- Identifying and describing individuals who dies early in Denmark using machine learning and decomposition methods and over 2000 individual-level health, economic, demographic and social characteristics.

Contributor – International Network on Comparative Resource Use 2024 – Present

- Comparing hospital resource use by disease, age, sex, and comorbidity status in Denmark to 16 other high-income countries globally in collaboration with the University of Oxford and Institute of Health Metrics and Evaluation.

University of Washington, Institute for Health Metrics and Evaluation Seattle, WA

Research Scientist I – US Disease Expenditure Project 2021 - 2023

- Estimated US county and state-level disease-specific health expenditure by payer and type of care from 2000-2019, using billions of rows of administrative data and econometric and small area estimation methods.

Research Scientist I – Global Burden of Disease (GBD), Clinical Informatics 2019-2021

- Estimated incidence and prevalence of disease through Bayesian mixed effects modeling for 85 diseases and injuries using hospital administrative data from over 30 countries. Modeled outputs are a key input to Global Burden of Disease morbidity modeling.

CONFERENCE PRESENTATIONS

Johnson EK, Parikh H, Ettman C, Ge G, Sopina L, Chang AY. *Lasting Income Costs of Illness: a Danish Register Study of Mental and Physical Disorders*.

- Årsmøde i Dansk Selskabe i Sundhedsøkonomi, Odense DK. September 2025. Oral presentation.
- European Health Economics PhD Conference, Brussels BE. September 2025. Oral presentation.
- Nordic Health Economics Study Group, Oslo NO. August 2025. Oral presentation.
- International Health Economics Association Congress, Bali ID. July 2025. Oral presentation.

Johnson EK, Parikh H, Sopina L, Olsen KR, Chang AY. *Economic Burden of Breast Cancer in Denmark: Longitudinal Estimates and Heterogeneous Effects*.

- International Health Economics Association Congress, Bali ID. July 2025. Oral presentation.
- Nordic Epidemiology Conference, Copenhagen DK. May 2025. Oral presentation.

Johnson EK, Wojtosta M, Crosby SW, Duber HC, Jun E, Lescinsky H, Nguyen P, Sahu M, Thomson A, Tsakalos G, Weil MS, Haakenstad A, Mokdad A, Murray CJL, Dieleman JL. *Variation in US State Health Spending Grows and Is Associated with Income, Health System Capacity, Insurance Coverage and Market Concentration*.

- American Society of Health Economists Conference, Austin US. June 2022. Oral presentation.

TEACHING EXPERIENCE

University of Southern Denmark

Esbjerg, DK

Lecturer, examiner, and course administrator – Global Health Policy Graduate Course

Spring 2024

MSc. thesis supervision – MSc. Data Science, 4 students

Spring 2024, 2025

Rice University

Houston, TX

Teaching assistant – Global Health Technology Undergraduate Course

Spring 2017

Teaching assistant – Probability and Statistics Undergraduate Course

Fall 2016

OTHER PROFESSIONAL EXPERIENCE

Epic Systems Corporation

Madison, WI

Technical Services Manager

2018 – 2019

Technical Services Analyst

2017 – 2018

SKILLS

- 8 years experience in R (data.table, dplyr, arrow, ggplot, plotly), 6 in Python (pandas, seaborn, matplotlib, arrow), and 3 in SQL.
- Experienced with Github, repository management, and version control.
- Experienced with parquet, Spark, Arrow, distributed and cluster-based computation, and management of big data on the scale of billions of rows and tens of terabytes of memory.
- Conversant in French, Spanish and Danish.