

# Angela Liu

## CONTACT INFORMATION

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Department of Health Policy and Management  
Johns Hopkins Bloomberg School of Public Health  
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## DATE OF PREPARATION

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August 2023

## EDUCATION

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### Johns Hopkins Bloomberg School of Public Health

Doctor of Philosophy (Candidate), Health Services Research and Policy  
Department of Health Policy and Management

Dissertation: Can Medicare “step” into savings?: Evidence from macular degeneration drugs

2020 – 2024  
(expected)  
Baltimore, MD

### References:

Gerard Anderson, PhD (*primary*)  
Professor of Health Policy and Management  
Johns Hopkins University  
[ganderson@jh.edu](mailto:ganderson@jh.edu)

Daniel Polsky, PhD  
Bloomberg Distinguished Professor of  
Health Economics  
Johns Hopkins University  
[polsky@jh.edu](mailto:polsky@jh.edu)

Kelly E. Anderson, PhD  
Assistant Professor  
University of Colorado  
[Kelly.e.anderson@cuanschutz.edu](mailto:Kelly.e.anderson@cuanschutz.edu)

### University of Washington

Master of Public Health, Health Metrics and Evaluation

Thesis: Measuring Emergency Department Medical Care Spending in the US by Health  
Condition, Age, Sex, and Payer, 1996-2016

2016 - 2019  
Seattle, WA

### University of Virginia

Bachelor of Science *with highest distinction*

Biomedical Engineering

*School of Engineering and Applied Science Outstanding Student of the Year*

2012 - 2016  
Charlottesville,  
VA

## PROFESSIONAL EXPERIENCE

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### Academic Research Positions

#### Affiliate Trainee, Johns Hopkins Business of Health Initiative

Conducting research on Medicare Advantage and the impact of provider networks to  
exclude low-value providers or reduce low-value care under the mentorship of Dr.  
Daniel Polsky

2021 – current  
Baltimore, MD

#### Research Assistant, Johns Hopkins Drug Access and Affordability Initiative

2020 – current  
Baltimore, MD

Examining alternative pricing models for Medicare Part B drugs and leading research on the uptake of biosimilar drugs between Traditional Medicare and Medicare Advantage under the mentorship of Dr. Gerard Anderson and Dr. Kelly Anderson.

**Research Assistant, Johns Hopkins Center for Population Health Information Technology**

2020 – 2021  
Baltimore, MD

Assisted with large-scale Covid-19 project examining trends for in-person and telehealth outpatient visits before and during Covid-19 pandemic under the mentorship of Dr. Jonathan Weiner.

Professional Positions

**Researcher and Post-Bachelor Fellow, Institute for Health Metrics and Evaluation**

2016-2020  
Seattle, WA

Modeled US healthcare spending, assessed drivers of heterogeneous state-level health outcomes, and modeled global death and disability for select diseases for the Global Burden of Disease project, under the mentorship of Dr. Joseph Dieleman and Dr. Christopher Murray.

**Summer Fellow, Massachusetts Health Policy Commission, Research and Cost Trends Department**

2021  
Boston, MA

Pioneered project examining demographic and racial trends in health care utilization leveraging Massachusetts All Payer Claims Data, hospital discharge data, and the American Community Survey, under the mentorship of Mr. Lyden Marcellot and Dr. David Auerbach.

**Summer Intern, The Woodrow Wilson International Center for Scholars, Science and Technology Innovation Program**

2016  
Washington, DC

Examined discrepancy between press coverage and disease burden for select health conditions over a 20-year time period.

FUNDING

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**Ongoing Research Support**

Predocorial Fellowship, AHRQ T32 National Research Service Award (T32HS000029)

Principal Investigator: Sydney Dy

Grant Objective: Doctoral Training

Amount: 100% salary support, tuition

Role: Trainee (100% Effort)

PUBLICATIONS

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\*denotes co-first authorship

Published

1. Anderson K\*, DiStefano M\*, **Liu A**, Mattingly J, Socal M, Anderson G. Incorporating added therapeutic benefit into Medicare payment for expensive Part B drugs. *Value in Health*. 2023. doi: 10.1016/j.jval.2023.05.018
2. Kang SY, **Liu A**, Anderson G, Alexander C. Patterns of Manufacturer Coupon Use for Prescription Drugs in the US, 2017-2019. *JAMA Network Open*. 2023;6(5):E2313578. doi: 10.1001/jamanetworkopen.2023.13578

3. Woody Scott K\*, **Liu A\***, Kaldjian A, Chen C, Chapin A, Sabbatini A, Duber C, Dieleman J. Estimating spending on emergency medical care in the United States by payer and health condition, 2006-2016. *PLoS ONE*. 2021. 16(10):e0258182. doi: 10.1371/journal.pone.0258182.
4. Scott KW,...**Liu A**,...Duber H. Assessing Catastrophic Health Expenditures Among Uninsured People Who Seek Care in US Hospital-Based Emergency Departments. *JAMA Health Forum*. 2021. 2(12):e214359. doi:10.1001/jamahealthforum.2021.4359
5. Dieleman J, ...**Liu A**,...Murray CJL. US Healthcare spending by race and ethnicity, 2002-2016. *JAMA*. 17 August 2021. 326(7): 649-659
6. Dieleman JL, Kaldjian AS, Sahu M, Chen C, **Liu A**, Chapin A, Scott KW, Aravkin A, Zheng P, Mokdad A, Murray CJ, Schulman K, Milstein A. Estimating health care delivery system value for each US state and testing key associations. *Health Serv Res*. 2022 Jun;57(3):557-567. doi: 10.1111/1475-6773.13676.
7. Weiner JP, Bandeian S, Hatef E, Lans D, **Liu A**, Lemke KW. In-Person and Telehealth Ambulatory Contacts and Costs in a Large US Insured Cohort Before and During the COVID-19 Pandemic. *JAMA Netw Open*. 2021;4(3):e212618. doi:10.1001/jamanetworkopen.2021.2618
8. Dieleman JL,...**Liu A**,...Murray CJL. US Health Care Spending by Payer and Health Condition, 1996-2016. *JAMA*. 2020;323(9):863–884. doi:10.1001/jama.2020.0734
9. Pedroza, P., Chakrabarti, S., Chapin, A., **Liu, A.**, Matyas, T. and Dieleman, J.L. (2019), 05-08-02: Costs of Alzheimer's disease and dementia in 188 countries. *Alzheimer's & Dementia*, 15: P1635-P1635. <https://doi.org/10.1016/j.jalz.2019.06.4877>
10. Olusanya B,...**Liu A**,...Kassebaum N. Developmental disabilities among children younger than 5 years in 195 countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet Glob Health*. 2018 Oct;6(10):e1100-e1121. doi: 10.1016/S2214-109X(18)30309-7.
11. Naghavi M, ...**Liu A**..., Lopez A, Murray CJL. Global, regional, and national age-sex specific mortality for 264 causes of death, 1980–2016: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet*. 14 Sept 2017: 390;1151–210.
12. Hay S,...**Liu A**..., Murray CJL. Global, regional, and national disability-adjusted life years (DALYs) for 333 diseases and injuries and healthy life expectancy (HALE) for 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet*. 14 Sept 2017: 390;1260-344.
13. Vos T,... **Liu A**..., Murray CJL. Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet*. 14 Sept 2017: 390; 1211–59.
14. **Liu A\***, Archer AM\*, Biggs MB, Papin JA. Growth-altering microbial interactions are responsive to chemical context. *PLoS ONE*. 20 March 2017;12(3): e0164919.

#### Articles, Editorials, and Other Publications

15. Wang Y, Wang Y, **Liu A**, Anderson G, Bai G. How to Analyze and Improve the Usability of Insurer Price Transparency Data? *Health Affairs Forefront*. 2023 May 25. doi: 10.1377/forefront.20230524.904150.
16. Socal MP, **Liu A**, Anderson GF. Measuring and Mitigating Gender-Based Disparities in Earning Potential in Academic Medicine. *JAMA Network Open*. 2022 Feb 1;5(2):e220074. doi: 10.1001/jamanetworkopen.2022.0074. PMID: 35179591.

## Under Review

1. **Liu A**, Xuan A, Socal M, Anderson G, Anderson K. Greater uptake of biosimilars in Medicare Advantage than Traditional Medicare. *Submitted*.
2. Xu F, Anderson K, **Liu A**, Miller B, Polsky D. Avoidable Hospital Stays in Medicare Advantage: The Role of Patient Steering. *Revise and resubmit*.

## In Progress

1. **Liu A**, Anderson K, Johnson T, Polsky D, Anderson G. One Hit Wonder: The Impact of Medicare Advantage Part B Step Therapy on Macular Degeneration Drug Administration Patterns
2. Anderson K, **Liu A**, Xu F, Polsky D. Can Medicare Advantage encounter data be used to assess Medicare Advantage plan performance? A case study examining Part B drug prescribing

## PRACTICE ACTIVITIES

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1. Presentation to Congressional Budget Office: Price Transparency Research Projects. Yang Wang, Mark Meiselbach, **Angela Liu**, Ge Bai. June 21, 2023
2. Presentation to House Labor and Workforce Committee Legislative Staff: Transparency in Coverage Final Rule Recommendations. Yang Wang, **Angela Liu**, Yuchen Wang, Ge Bai. June 16, 2023

## PODIUM AND PANEL PRESENTATIONS

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1. **Liu A**, Levy J, O'Hara N. Absent Transparency, what can we actually say about drug prices? The price of a single molecule from 2005-2022 using numerous publicly available data source in the US. July 2023. Panel presentation at the International Health Economics Association Bi-annual Congress. Cape Town, South Africa.
2. **Liu A**, Wang Y, Wang Y, Anderson G, Levy J. Examining price variation for Physician Administered Macular Degeneration Drugs among Commercial Health Plans, Evidence from 2023 Insurer Disclosed Price transparency Data. June 2023. Podium presentation at the AcademyHealth Annual Research Meeting. Seattle, WA.
3. **Liu A**, Anderson K, DiStefano M, Mattingly J, Socal M, Anderson G. Incorporating added therapeutic benefit into Medicare Payment for expensive Part B drugs. April 2023. Podium presentation at 29<sup>th</sup> annual AHRQ NRSA Trainees Research Conference. Virtual online.
4. Kang SY, **Liu A**, Anderson G, Alexander C. Patterns of Manufacturer-Sponsored Coupons for Prescription Drugs in the United States. June 2022. Podium presentation at the AcademyHealth Annual Research Meeting. Washington D.C.
5. Kang SY, **Liu A**, Anderson G, Alexander C. Timing and frequency of manufacturer coupon use for prescription drugs in the United States. June 2022. Panel at the American Society of Health Economists Annual Conference. Austin, TX.
6. **Liu A**, Scott K, Chapin A, Duber H, Dieleman J. Estimating spending on emergency medical care in the US by health condition and drivers, 1996-2015. July 2019. Long oral at the International Health Economics Association Bi-annual Congress. Basel, Switzerland.
7. Dieleman J, **Liu A**. Financing Global Health 2018: Past, present, and future of total and disease-specific health spending. April 2019. Presentation at Wilton Park Event #1666: Financing for health: the road ahead. Steyning, England.

## POSTER PRESENTATIONS

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1. **Liu A**, Anderson K, Johnson T, Polsky D, Anderson G. Impact of Medicare Advantage Part B Step Therapy on Drug Utilization: Evidence from Macular Degeneration Drugs. June 2023. Poster presented at the AcademyHealth Annual Research Meeting. Seattle, WA.
2. **Liu A**, Xu J, Miller, B, Anderson K, Polsky D. Avoidable Hospitalizations in Medicare Advantage and Traditional Medicare, and the Role of Provider Networks. June 2023. Poster presented at the AcademyHealth Annual Research Meeting. Seattle, WA.
3. **Liu A**, Xuan A, Socal M, Anderson G, Anderson K. Differential Uptake of Filgrastim and Infliximab Biosimilars in Traditional Medicare and Medicare Advantage, 2016-2018. June 2023. Poster presented at the AcademyHealth Annual Research Meeting. Seattle, WA.
4. **Liu A**, Cao J, Chapin A, Horst C, Li Z, Matyasz T, Dieleman J. US personal health care spending by health condition and payer, 1996-2015. June 2018. Poster presented at the AcademyHealth Annual Research Meeting. Seattle, WA.

## TEACHING EXPERIENCE

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### Teaching Positions

- Lead Teaching Assistant. Introduction to the U.S. Health Care System (300.651.810), Johns Hopkins Bloomberg School of Public Health, Fall 2022. Professors: Daniel Polsky, Mariana Socal, Craig Pollack (Teaching Assistant: Spring 2023, Spring 2022, Fall 2021, Spring 2021)
- Teaching Assistant. Public Health Policy (300.610.01), Johns Hopkins Bloomberg School of Public Health, Summer 2023. Professor: Joshua Sharfstein
- Teaching Assistant. Economic Evaluation II (313.602.01), Johns Hopkins Bloomberg School of Public Health, Fall 2022. Professor: Joseph Levy
- Teaching Assistant. Managed Care and Health Insurance (309.620.41), Johns Hopkins Bloomberg School of Public Health, Spring 2022. Professor: Jonathan Weiner
- Teaching Assistant. Social Policy for Vulnerable Populations in the U.S. (318.623.81), Johns Hopkins Bloomberg School of Public Health, Spring 2022. Professor: Beth McGinty
- Teaching Assistant. Economic Evaluation I (313.601.81), Johns Hopkins Bloomberg School of Public Health, Fall 2021. Professor: Jeromie Ballreich
- Teaching Assistant. Introduction to Health Economics (313.644.81), Johns Hopkins Bloomberg School of Public Health. Spring 2021. Professor: Douglas Hough

### Guest Lectures

- Johns Hopkins School of Public Health, Economic Evaluation II. Invited Guest Lecturer: Probabilistic Sensitivity Analysis. November 2022. Baltimore, Maryland
- University of Virginia, GNUR 5930: US Health Policy Course. Invited Guest Lecturer. September 2019. Charlottesville, Virginia

## SELECTED HONORS AND AWARDS

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- June Culley Doctoral Scholarship, Johns Hopkins Bloomberg School of Public Health, 2023  
Awarded to a Department of Health Policy and Management doctoral student whose research shows great potential in the field of health policy (\$7,500)
- Post Bachelor Fellow, Institute for Health Metrics and Evaluation  
Fully funded MPH at the University of Washington, 2016-2019
- Population Health Conference Travel Award, University of Washington, 2019
- School of Engineering and Applied Science Endowed Scholarship, University of Virginia, 2015
- Harrison Undergraduate Research Award, University of Virginia, 2015
- Center for Global Health Scholarship, University of Virginia, 2014
- Institute for Practical Ethics and Public Life Scholarship, University of Virginia, 2014
- Community Based Undergraduate Research Scholarship, University of Virginia, 2014
- *Tau Beta Pi*, Engineering Honor Society, University of Virginia, 2014
- National Science Foundation, Research Experience for Undergraduates (REU), University of Virginia, 2013

## ACADEMIC SERVICE

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- Doctoral student committee member, Department for Health Policy and Management faculty search committee, Johns Hopkins Bloomberg School of Public Health, 2022-2023
- AcademyHealth Annual Research Meeting, Medicare Abstract Reviewer, 2023
- AshEcon, Abstract Reviewer, 2022
- Student committee member, Jefferson Public Citizens Grant, University of Virginia, 2016

## PROFESSIONAL ORGANIZATIONS AND SOCIETIES

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- AcademyHealth
- American Society of Health Economics
- International Health Economics Association