Harvard Medical School Curriculum Vitae

Date Prepared: May 24, 2022

Name: Ashley L. O'Donoghue

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Education:

2015 BA Economics, Mathematics Assumption College

2017 MA Economics Clark University
2020 PhD Economics Clark University

(Advisor: Wayne Gray)

Postdoctoral Training:

2021 - Research Fellow in Department of Medicine Beth Israel Deaconess Medical

Medicine Center

Appointments at Hospitals/Affiliated Institutions:

2018 - 2020 Pre-Doctoral Research Center for Healthcare Beth Israel Deaconess Medical

Fellow Delivery Science Center

2020 - Economist Center for Healthcare Beth Israel Deaconess Medical

Delivery Science Center

Other Professional Positions:

2014 - 2015 Research Intern Worcester Regional

Research Bureau

2015 - 2019 Teaching Assistant Clark University

2016 - 2018 Summer Research Clark University

Assistant

2018 - 2019 Instructor Clark University

Committee Service:

National

2020 - Scientific Review Committee American Society of Health

Economists

Professional Societies:

| 2018 - 2019 | International Union for the Scientific Study of Population | Member |
|-------------|--------------------------------------------------------------------------------------------|--------|
| 2019 - 2020 | Midwest Economic Association | Member |
| 2019 - 2019 | Southern Economic Association | Member |
| 2019 - | American Society of Health Economists | Member |
| 2020 - | AcademyHealth | Member |
| 2020 - | American Economic Association | Member |
| 2020 - | International Health Economics Association | Member |
| 2020 - | International Health Economics Association Early Career Researchers Special Interest Group | Member |
| 2020 - | International Health Economics Association COVID-19 Research Group | Member |

Editorial Activities:

Ad hoc Reviewer

JAMA

JAMA Health Forum

JAMA Psychiatry

JAMA Network Open

BMC Medical Education

BMC Medical Informatics and Decision Making

BMC Pregnancy and Childbirth

Journal of Clinical Outcomes Management

npj Digital Medicine

Scientific Reports

Honors and Prizes:

| 2011 | Presidential scholarship | Assumption College | Merit-based |
|-------------|--------------------------------------|----------------------------------------------|----------------------------|
| 2011 - 2014 | Dean's List | Assumption College | |
| 2014 | Kappa Mu Epsilon | Assumption College | Mathematics honors society |
| 2014 | Omicron Delta Epsilon | Assumption College | Economics honors society |
| 2014 | Conference Travel Award | Assumption College | |
| 2015 | Full tuition remission | Clark University | Merit-based |
| 2017 | Best Teaching Assistant in Economics | Department of Economics, Clark University | Departmental award |
| 2018 | Best Teaching Assistant in Economics | Department of Economics, Clark University | Departmental award |

| 2019 | Outstanding Teaching Assistant of the Year | Clark University | University award |
|------|-----------------------------------------------|-------------------------------------------------------------------------|----------------------|
| 2020 | First Place | Massachusetts Institute of Technology Covid-19 Challenge Datathon | Lead of winning team |

Report of Funded and Unfunded Projects

Past

2018 - 2022 A new approach to patient safety: identifying risky clinical states to reduce preventable

harms for hospitalized patients Doris Duke Charitable Foundation Co-Investigator (PI: Jennifer Stevens)

Despite ambitious efforts to improve the safety of hospitalized patients, the rate of preventable harms remains unchanged. Our proposal will develop and refine a tool to quantify the level of risk of preventable patient harms of intensive care units, prospectively validate this tool, and spread this tool to a new clinical environment.

Current

2020 - 2022 Quantifying secondary health impacts of Covid-19

Google.org

Co-Investigator (PI: Jennifer Stevens)

The goal of this project is to quantify the impact of Covid-19 on non-Covid-associated healthcare. A fundamental hypothesis is that preventive care and routine care will be delayed and deferred, leading to subsequent increased healthcare utilization

Report of Local Teaching and Training

Teaching of Students in Courses:

| reaching of Students in Courses: | | | | | |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--|--|--|
| 2015 - 2016 | Teaching Assistant, Economics and the World Economy 50 undergraduate students Student evaluations: 4.5/5.0 and 4.6/5.0 | Clark University 17.5 hours per week | | | |
| 2016 - 2017 | Teaching Assistant, Introduction to Statistics 40 undergraduate students Student evaluations: 4.9/5.0 and 4.8/5.0 | Clark University 17.5 hours per week | | | |
| 2017 | Teaching Assistant, Economics and the World Economy 50 undergraduate students Student evaluations: 4.8/5.0 | Clark University 17.5 hours per week | | | |
| 2018 | Teaching Assistant, Introduction to Statistics 40 undergraduate students Student evaluations: 4.8/5.0 | Clark University 17.5 hours per week | | | |
| 2018 | Instructor, Economics and the World Economy 30 undergraduate students Student evaluations: 4.8/5.0 | Clark University 17.5 hours per week | | | |

2019 Teaching Assistant, Economics and the World Clark University
Economy 17.5 hours per week

50 undergraduate students Student evaluations: 4.9/5.0

2019 Instructor, Economics and the World Economy Clar

30 undergraduate students Student evaluations: 4 9/5 0 Clark University 17.5 hours per week

Local Invited Presentations:

No presentations below were sponsored by 3rd parties/outside entities

2020 Prospective cohort study of a proof-of-concept method to monitor nursing stress in the

emergency department before and after an operational change

Artificial Intelligence/Machine Learning Symposium, Beth Israel Deaconess Medical

Center

2020 Real-time machine-learning driven Covid-19 forecasting

Invited research lecture

Center for Healthcare Delivery Science Work-in-Progress Seminar, Beth Israel Deaconess

Medical Center

2020 Real-time machine-learning driven Covid-19 forecasting

Invited research lecture

Department of Healthcare Quality Seminar, Beth Israel Deaconess Medical Center

2020 Reopening businesses and risk of Covid-19 transmission

Invited research lecture

Center for Healthcare Delivery Science Work-in-Progress Seminar, Beth Israel Deaconess

Medical Center

The effect of the Medicaid expansion on opioid prescribing rates and drug-related foster

care removals

Invited healthcare delivery science grand rounds

Beth Israel Deaconess Medical Center

Report of Regional, National and International Invited Teaching and Presentations

No presentations below were sponsored by 3rd parties/outside entities

Regional

2019 The effect of naloxone access on opioid-related mortality

Selected oral abstract

17th Multidisciplinary Conference, Clark University, Worcester, MA

2019 The effect of naloxone access on opioid-related mortality

Invited research lecture

Economics Seminar Series, Fitchburg State University, Fitchburg, MA

2020 Real-time machine-learning driven Covid-19 forecasting

Invited research lecture

Massachusetts Health Data Consortium, Virtual Webinar

National

2019 The effect of a large-scale workfare program on child marriage in India Selected oral abstract International Union for the Scientific Study of Population Research Meeting, Ann Arbor, MI 2019 The effect of a large-scale workfare program on child marriage in India Selected oral abstract Southern Economic Association Annual Meeting, Fort Lauderdale, FL 2020 The effect of the Medicaid expansion on opioid prescribing rates and drug-related foster care removals Selected oral abstract Eastern Economic Association Annual Meeting, Boston, MA 2020 The effect of the Medicaid expansion on opioid prescribing rates and drug-related foster care removals Selected oral abstract American Society of Health Economists Annual Meeting, St. Louis, MO This presentation was scheduled, but then cancelled because of a Covid-19 travel/meeting ban. 2020 The effect of the Medicaid expansion on opioid prescribing rates and drug-related foster care removals Selected oral abstract Southern Economic Association Annual Meeting, New Orleans, LA 2021 Analysis of filled naloxone prescriptions before and during the COVID-19 pandemic in the **United States** Selected oral abstract AcademyHealth Annual Research Meeting, Virtual 2021 Access to buprenorphine: evidence from telehealth waivers during the COVID-19 pandemic Selected oral abstract American Society of Health Economists Annual Meeting, Virtual 2021 Analysis of filled naloxone prescriptions before and during the COVID-19 pandemic in the **United States** Invited Research Lecture Opioid x COVID RDB Grand Rounds, COVID-19 Research Database, Virtual 2022 Access to Buprenorphine/Naloxone for Postpartum Women with Opioid Use Disorder during the COVID-19 Pandemic Selected oral abstract American Society of Health Economists Annual Meeting, Austin, TX

International

2021 Real-time machine learning-driven Covid-19 forecasting

Invited Keynote Speaker

Business & Economics Society International Conference, Virtual

Report of Scholarship

Peer-Reviewed Scholarship in print or other media:

Research Investigations

- Horng S, Joseph J, Calder S, O'Donoghue A, Safran C, Nathanson L, Leventhal E. Assessment of unintentional duplicate orders by emergency department clinicians before and after implementation of visual aid in the electronic health record ordering system. *JAMA Network Open.* 2019;2(12):e1916499.
- 2. Mitra A, Griesdale D, Haljan G, **O'Donoghue A**, Stevens J. How the high acuity unit changes mortality in the intensive care unit: a retrospective before-and-after study. *Canadian Journal of Anesthesia*. 2020.
- 3. **O'Donoghue A**, Dechen T, Pavlova W, Boals M, Moussa G, Madan M, Thakkar A, DeFalco F, Stevens J. Reopening businesses and risk of COVID-19 transmission. *npj Digital Medicine*. 2021.
- 4. **O'Donoghue A**, Biswas N, Dechen T, Anderson T, Talmor N, Punnamaraju A, Stevens J. Analysis of filled naloxone prescriptions before and during the COVID-19 pandemic in the United States. *JAMA Health Forum.* 2021.
- 5. Stevens J, Mechanic O, Markson L, **O'Donoghue A**, Kimball A. Telehealth use by age and race at a single academic medical center during COVID-19. *Journal of Medical Internet Research*. 2021.
- 6. Tsaneva M, **O'Donoghue A**. The effect of a large-scale workfare program on child marriage in India. *Oxford Development Studies*. 2021.
- 7. Horng S, <u>O'Donoghue A</u>, Dechen T, Rabesa M, Shammout A, Markson L, Jegadeesan, Tandon M, Stevens J. Secondary use of COVID-19 symptoms incidence among hospital employees as an example of syndromic surveillance of hospital admissions within 7 days. *JAMA Network Open.* 2021. (co-first author)
- 8. Anderson T, **O'Donoghue A**, Dechen T, Herzig S, Stevens J. Trends in telehealth and in-person transitional care management visits during the COVID-19 pandemic. *Journal of the American Geriatrics Society*. 2021.
- Anderson T, O'Donoghue A, Dechen T, Mechanic O, Stevens J. "Uptake of outpatient monoclonal antibody treatments for COVID-19 in the United States: a cross-sectional analysis," *Journal of General Internal Medicine*. 2021.
- 10. **O'Donoghue A**. "Association of university student gatherings with community COVID-19 infections before and after the NCAA March Madness Tournament," *JAMA Network Open*. 2021.
- 11. Haber N, Wieten S, Rohrer J, Arah O, Tennant P, Stuart E, Murray E, Pilleron S, Lam S, Riederer E, Howcutt S, Simmons A, Leyrat C, Schoenegger P, Booman A, Dufour M, O'Donoghue A, Baglini R, Do S, Takashima M, Evans T, Rodriguez-Molina D, Alsalti T, Dunleavy D, Meyerowitz-Katz G, Antonietti A, Calvache J, Kelson M, Salvia M, Parra C, Khalatbari-Soltani S, McLinden T, Chatton A, Seiler J, Steriu A, Alshihayb T, Twardowski S, Dabravolskaj J, Au E, Hoopsick R, Suresh S, Judd N, Peña S, Axfors C, Khan P, Aguirre A, Odo N, Schmid I, Fox M. "Causal and associational language in observational health research: a systematic evaluation," Accepted at the American Journal of Epidemiology, In Press.
- 12. Riviello E, Dechen T, **O'Donoghue A**, Cocchi M, Hayes M, Molina R, Moraco N, Mosenthal A, Rosenblatt M, Talmor N, Walsh D, Sontag D, Stevens J. "Assessment of a crisis standards of care scoring system for resource prioritization and estimated excess mortality by race, ethnicity, and socially vulnerable area during a regional surge in COVID-19," *JAMA Network Open.* 2022.

Non-peer reviewed scholarship in print or other media:

Reviews, chapters, monographs and editorials

- 1. Stevens J, Horng S, **O'Donoghue A**, Moravick S, Weiss A. How one Boston hospital built a Covid-19 forecasting system. *Harvard Business Review.* 2020.
- 2. Stevens J, **O'Donoghue A**, Horng S, Tandon M, Tabb K. Healthcare's earthquake: lessons from complex adaptive systems to develop COVID-19 responsive measures and models. *NEJM Catalyst*. 2020.
- 3. **O'Donoghue A**, Dechen T. Reopening businesses during the COVID-19 pandemic: how can we improve measures of human interaction? *npj Digital Medicine Community: Behind the Paper*. March 16, 2021.
- 4. Chawla K, Oriol N, **O'Donoghue A**. "Addressing racial health inequities includes addressing the minimum wage," *The Hill*. April 18, 2021.

Thesis:

1. **O'Donoghue A**. Three Essays in Health Economics. Doctoral Thesis, Department of Economics, Clark University. 2020.

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings:

- 1. Tocci N, Anderson A, **O'Donoghue A**, Curley C, Joyce C, FitzGerald J, Sheehan J, Reichheld A, Devlin S, Dechen T, Li S, O'Donoghue S, Holland S, Cocchi M, Stevens J. The effect of an electronic decision-support tool on quality outcomes in the intensive care unit. American Thoracic Society, Dallas, TX, May 2019.
- 2. Tocci N, Anderson A, **O'Donoghue A**, Curley C, Joyce C, FitzGerald J, Sheehan J, Reichheld A, Devlin S, Dechen T, Li S, O'Donoghue S, Holland S, Cocchi M, Stevens J. Interruptions in the intensive care unit during multidisciplinary grand rounds. American Thoracic Society, Dallas, TX, May 2019.
- 3. Tocci N, Anderson A, **O'Donoghue A**, Curley C, Joyce C, FitzGerald J, Sheehan J, Reichheld A, Devlin S, Dechen T, Li S, O'Donoghue S, Holland S, Cocchi M, Stevens J. The effect of care team composition on clinical rounds in the intensive care unit. American Thoracic Society, Dallas, TX, May 2019.
- 4. O'Donoghue S, Patel P, **O'Donoghue A**. Sustaining our Clinical Scene Investigator Academy Project: Accurate Delirium Assessment Rates. American Association of Critical Care Nurses National Teaching Institute, Orlando, FL, May 2019.
- 5. O'Donoghue S, Anderson A, Joseph B, **O'Donoghue A**. Implementing a multidisciplinary mock code program in a medical intensive care unit. American Association of Critical Care Nurses National Teaching Institute, Orlando, FL, May 2019.
- 6. O'Donoghue S, Anderson A, Tocci N, **O'Donoghue A**. Descriptive analysis of intensive care unit patients who transition to comfort focused care. American Association of Critical Care Nurses National Teaching Institute, Orlando, FL, May 2019.
- 7. **O'Donoghue A**. The effect of the Medicaid expansion on opioid prescribing rates and drug-related foster care removals. AcademyHealth, Boston, MA, June 2020.
- 8. Curran C, Eche I, Safrolashrafi M, Elsamadisi P, **O'Donoghue A**, Dechen T, Hayes M, Stevens J. Impact of a pharmacist-driven antibiotic adjustment protocol on vasopressor duration in patients on continuous renal replacement therapy. American Society of Health-System Pharmacists Midyear Clinical Meeting and Exhibition, virtual, December 2020.

- 9. Curran C, Eche I, Hayes M, **O'Donoghue A**, Sadrolashrafi M, Elsamadisi P. Impact of a pharmacist-driven antibiotic adjustment protocol on vasopressor duration in patients on continuous renal replacement therapy. American College of Clinical Pharmacy Virtual Poster Symposium, virtual, May 2021.
- 10. Anderson T, **O'Donoghue A**, Dechen T, Herzig S, Stevens J. Trends in the delivery of transitional care management in the COVID-19 era. AcademyHealth Annual Research Meeting, virtual, June 2021.
- 11. Fernandez L, Shorett P, **O'Donoghue A**, Blair J, Wright S, Markson L, Dechen T, Stevens J. Evaluation of COVID-19 vaccine administration at a large hospital network by race, ethnicity, and language. AcademyHealth Annual Research Meeting, virtual, June 2021.
- 12. Fernandez L, **O'Donoghue A**, Shorett P, Blair J, Markson L, Dechen T, Stevens J, Wright S. Prioritized access to COVID-19 vaccines among vulnerable communities increases vaccination rates. IDWeek, virtual, September 2021.
- 13. Theodore M, Dechen T, **O'Donoghue A**, Stevens J. Timing of code status discussion in patients with cancer admitted to the intensive care unit. American Thoracic Society, San Francisco, CA, May 2022.
- 14. Dechen T, <u>O'Donoghue A</u>, Anderson T, Talmor N, Annas C, Stevens J. Disparities in second-dose completion of COVID-19 vaccines. AcademyHealth Annual Research Meeting, Washington, DC, June 2022.
- 15. Reichheld A, Stevens J, **O'Donoghue A**. Increase in postpartum buprenorphine/naloxone fills following postpartum Medicaid expansion during the COVID-19 pandemic. AcademyHealth Annual Research Meeting, Washington, DC, June 2022.
- 16. Reichheld A, **O'Donoghue A**, Verma N, Dutton C, Stevens J, Luo E. Decline in surgical abortions during the COVID-19 pandemic in the United States. AcademyHealth Annual Research Meeting, Washington, DC, June 2022.
- 17. Lee E, Sheehan H, Dechen T, **O'Donoghue A**, Anderson T, Punnamaraju A, Annas C, Harvey L, Luo E, Perkins A, Severo M, Brockmeyer D, Kimball A, Stevens J, Mechanic O. Telehealth navigator program improves virtual video appointment attendance. AcademyHealth Annual Research Meeting, Washington, DC, June 2022.
- 18. Mechanic O, Sheehan H, Harvey L, **O'Donoghue A**, Anderson T, Perkins A, Severo M, Luo E, Stevens J, Kimball A. Return on investment: the value of a telehealth navigator. AcademyHealth Annual Research Meeting, Washington, DC, June 2022.
- 19. Anderson T, **O'Donoghue A**, Mechanic O, Dechen T, Stevens J. Administration of anti-SARS-CoV-2 monoclonal antibodies following Food and Drug Administration deauthorization. AcademyHealth Annual Research Meeting, Washington, DC, June 2022.
- 20. Haber N, Wieten S, Rohrer J, Arah O, Tennant P, Stuart E, Murray E, Pilleron S, Lam S, Riederer E, Howcutt S, Simmons A, Leyrat C, Schoenegger P, Booman A, Dufour M, O'Donoghue A, Baglini R, Do S, Takashima M, Evans T, Rodriguez-Molina D, Alsalti T, Dunleavy D, Meyerowitz-Katz G, Antonietti A, Calvache J, Kelson M, Salvia M, Parra C, Khalatbari-Soltani S, McLinden T, Chatton A, Seiler J, Steriu A, Alshihayb T, Twardowski S, Dabravolskaj J, Au E, Hoopsick R, Suresh S, Judd N, Peña S, Axfors C, Khan P, Aguirre A, Odo N, Schmid I, Fox M. Causal and associational language in observational health research: a systematic evaluation. Society for Epidemiologic Research Meeting, Chicago, IL, June 2022.
- 21. Haber N, Wieten S, Rohrer J, Arah O, Tennant P, Stuart E, Murray E, Pilleron S, Lam S, Riederer E, Howcutt S, Simmons A, Leyrat C, Schoenegger P, Booman A, Dufour M, **O'Donoghue A**, Baglini R, Do S, Takashima M, Evans T, Rodriguez-Molina D, Alsalti T, Dunleavy D, Meyerowitz-Katz G, Antonietti A, Calvache J, Kelson M, Salvia M, Parra C, Khalatbari-Soltani S, McLinden T, Chatton A, Seiler J, Steriu A, Alshihayb T, Twardowski S, Dabravolskaj J, Au E, Hoopsick R, Suresh S, Judd N, Peña S, Axfors C, Khan P, Aguirre A, Odo N, Schmid I, Fox M. Causal and associational language in

- observational health research: a systematic evaluation. Society for Social Medicine & Population Health Annual Scientific Meeting, Exeter, UK, September 2022.
- 22. Haber N, Wieten S, Rohrer J, Arah O, Tennant P, Stuart E, Murray E, Pilleron S, Lam S, Riederer E, Howcutt S, Simmons A, Leyrat C, Schoenegger P, Booman A, Dufour M, **O'Donoghue A**, Baglini R, Do S, Takashima M, Evans T, Rodriguez-Molina D, Alsalti T, Dunleavy D, Meyerowitz-Katz G, Antonietti A, Calvache J, Kelson M, Salvia M, Parra C, Khalatbari-Soltani S, McLinden T, Chatton A, Seiler J, Steriu A, Alshihayb T, Twardowski S, Dabravolskaj J, Au E, Hoopsick R, Suresh S, Judd N, Peña S, Axfors C, Khan P, Aguirre A, Odo N, Schmid I, Fox M. Causal and associational language in observational health research: a systematic evaluation. Meta-Research Innovation Center at Stanford (METRICS) International Forum, virtual, May 2022.