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### Education and Training

**2006 - B.A., College of Arts and Sciences, *Magna Cum Laude*, University of Pennsylvania**

- *Major*: Biological Basis of Behavior, with Distinction. *Minors*: Economics, BBB/Health Care Systems

**2008 - Post-Bachelor's Fellowship, Initiative for Global Health, Harvard University**

- *Advisors*: Majid Ezzati, Christopher Murray

**2010 - M.S., Health Care Management and Economics, The Wharton School, University of Pennsylvania**

**2016 - M.D., The Perelman School of Medicine, University of Pennsylvania**

**2016 - Ph.D., Health Care Management and Economics, The Wharton School, University of Pennsylvania**

- *Dissertation*: "Firm Response to Low-Reimbursement Patients in the Market for Unscheduled Outpatient Care," *Defended August 1, 2014*
- *Committee*: Mark Pauly (Chair), Daniel Polsky, Guy David, Kevin Volpp, Brendan Carr

**2019 - Residency, Harvard Affiliated Emergency Medicine Residency at Beth Israel Deaconess Medical Center**

### Publications

#### Peer Reviewed

Trueger NS, Friedman AB. Triage, the Tip of the Shears. *JAMA Network Open*. 2025. 8(5):e258508.

Gettel CJ, Venkatesh AK, Uzamere I, Galske J, Chera T, White M, Hwang U, PROM-OTED Group. Development and validation of the Patient-Reported Outcome Measure – Older adult care Transitions from the Emergency Department (PROM-OTED) tool. *Ac Emerg Med*. 2025.

Unachukwu I, Adjei-Poku MN, Sailors OC, et al. Images in Black and White: Disparities in Utilization of Computed Tomography and Ultrasound for Older Adults with Abdominal Pain. *Western J EM*. 2025.

Zikry HE, **Friedman AB**, Dresden SD, Gupta R. Integrating Emergency Departments Into The CMS GUIDE Model For People Living With Dementia. *Health Affairs Forefront*. 2025.

**Friedman A**, Adjei-Poku MN, Gonzales R, Kelz R, Wu R, Cappola AR. Prevalence of Serious Diagnoses and Disposition among Older Adults Presenting with a Chief Complaint of Constipation, a Retrospective Repeated Cross-sectional Study. *J Geri Emerg Med*. 2024.

Wu RR, Adjei-Poku MN, Kelz RR, Peck GL, Hwang U, Cappola AR, **Friedman AB**. Trends in visits, imaging, and diagnosis for emergency department abdominal pain presentations in the United States, 2007-2019. *Ac Emerg Med*. 2024.

Schneider ALC, Ginestra JC, Kerlin MP, Shashaty MGS, Miano TA, Herman DS, Mitchell OJL, Bennett R, Moffett AT, Chandler J, Kalanuria A, Faraji Z, Bishop NS, Schmid B, Chen AT, Bowles KH, Joseph T, Kohn R, Kelz RR, Anesi GL, Kumar M, **Friedman AB**, Vail E, Meyer NJ, Himes BE, Weissman GE. The Complete Inpatient Record Using Comprehensive Electronic Data (CIRCE) Project: A Team-Based Approach to Clinically Validated, Research-Ready Electronic Health Record Data. *Learning Health Systems*. 2024. In Press.

**Friedman AB**, Delgado MK, Weissman GE. Artificial Intelligence for Emergency Care Triage—Much Promise, but Still Much to Learn. *JAMA Netw Open*. 2024.

**Friedman AB**, Delgado MK, Auriemma CL, Kilaru AS. Hospital-free days: A novel measure to study outcomes for emergency department care. *Academic Emergency Medicine*. 2024.

McCoy MS, Wu A, Burdyl S, Kim Y, Smith NK, Gonzales R, **Friedman AB**. User Information Sharing and Hospital Website Privacy Policies. *JAMA Netw Open*

Gonzales RE, Seeberger EF, **Friedman AB**, Agarwal AK. Patient perceptions of behavioral flags in the emergency department: A qualitative analysis. *Ac EM*.

Chen A, Kurma R, **Friedman AB**. Identifying Low Acuity Emergency Department Visits with a Machine Learning Approach: The Low Acuity Visit Algorithms (LAVA). *HSR*. 2024.

Kaufman EJ, Wirtalla CJ, Keele LJ, et al. Costs of Care for Operative and Non-Operative Management of Emergency General Surgery Conditions. *Annals of Surgery*. 2023.

**Friedman AB**, et al. Information about Provision of Abortion on US Hospital Websites: a Cross-Sectional Analysis. *Annals Intern Med*. 2023. [ePub 17 October 2023].

McCoy MS, **Friedman AB**, Hoffman AK. The Scope and Legal Implications of Tracking Technologies on Hospital Websites. *JAMA*. 2023.

**Friedman AB**, Merchant RM, Maley A, et al. Widespread Third-Party Tracking On Hospital Websites Poses Privacy Risks For Patients And Legal Liability For Hospitals: Study examines the widespread use of third-party tracking on hospital websites and the privacy risks for patients and legal liability for hospitals. *Health Affairs*. 2023. 42(4):508–15.

Brooks ES, Mavroudis CL, Tong J, Wirtalla CJ, **Friedman AB**, Kelz RR. Health System Structure: An Opportunity to Address Structural Racism and Discrimination. *Annals of Surgery* 2023. 277(5):854–8.

Seeburger E, South EC, **Friedman AB**, Agarwal AK. Understanding electronic health record behavioral flags to promote workplace safety: Qualitative perspectives from emergency nurses. *JAMA Netw Open*. 2023.

Agarwal AK, Seeburger E, O’Neill G, Nwakanma CC, Marsh LE, Soltany KA, South EC, **Friedman AB**. Prevalence of Behavioral Flags in the Electronic Health Record Among Black and White Patients Visiting the Emergency Department. *JAMA Netw Open*. 2023.

**Friedman AB**, Bauer L, Gonzales R, McCoy MM. Prevalence of Third-Party Tracking on Abortion Clinic Web Pages. *JAMA-IM*. 2022.

Buta B, **Friedman AB**, Chung SE, Sheehan OC, Blinka MD, Gearhart S, Xue QL. The combined effects of physical frailty and cognitive impairment on emergency department- versus direct-admission hospitalizations. *BMC Geriatrics*. 2022.

Chen A, Muralidharan M, **Friedman AB**. Algorithms Identifying Low Acuity Emergency Department Visits: A Review and Validation Study. *HSR*. 2022.

Nguemini Tiako MJ, Meinhofer A, **Friedman AB**, South EC, Epstein RL, Meisel ZF, Morgan J. Buprenorphine Uptake During Pregnancy Following the 2017 Guidelines Update on Prenatal Opioid Use Disorder. *Am J Obstet Gynecol*. 2022;In press.

**Friedman AB**, Pathmanabhan C, Glicksman A, Demiris G, Cappola A, McCoy M. Addressing Online Health Privacy Risks for Older Adults: A Perspective on Ethical Considerations and Recommendations.

*Gerontology and Geriatric Medicine.* 2022.

Lee K, Morgan A, Chaiyachati K, et al. Pulse oximetry versus subjective dyspnea alone for monitoring home dwelling patients with Covid-19: A pragmatic randomized trial. *NEJM.* 2022.

Gupta R, **Friedman AB**, McCoy M. Prevalence of Third-Party Tracking on Medical Journal Websites. *JAMA Health Forum.* 2022.

Khatri U, Delgado K, South E, **Friedman AB**. Racial Disparities in the Management of Emergency Department Patients Presenting with Psychiatric Disorders. *Ann Epi.* 2022.

Delgado MK, Morgan AU, Asch DA, et al. Comparative Effectiveness of an Automated Text Messaging Service for Monitoring COVID-19 at Home. *Ann Intern Med.* 2021.

**Friedman AB**, Chen AT, Wu R, Coe NB, Halpern S, Hwang U, Kelz R, Cappola AR. Evaluation and Disposition of Older Adults Presenting to the Emergency Department With Abdominal Pain. *J Am Geri Soc.* 2021.

Nguemini Tiako MJ, **Friedman AB**, Culhane J, South E, Meisel ZF. Predictors of Initiation of Medication for Opioid Use Disorder and Retention in Treatment Among U.S. Pregnant Women, 2013–2017. *Obstetrics & Gyn.* 2021.

**Friedman AB**, Gervasi S, Song H, Bond AM, Chen AT, Bergman A, David G, Bailey JM, Brooks R, Smith-McLallen A. Telemedicine catches on: Changes in the utilization of telemedicine services during the COVID-19 pandemic. *Am J Managed Care.* 2021.

**Friedman AB**, Miller E, McCoy MS. Prevalence of Medical Journal Websites That Deny Access to Users Who Block Browser Cookies. *JAMA Network Open.* 2021.

Wang B, Mehrotra A, **Friedman AB**. The Missing Evidence: Urgent Care Centers Deter Some Emergency Department Visits But, On Net, Increase Spending. *Health Aff.* 2021.

Nguemini Tiako MJ, **Friedman AB**, Culhane J, South E, Meisel ZF. Predictors of Initiation of Medication for Opioid Use Disorder and Retention in Treatment Among U.S. Pregnant Women, 2013–2017. *Obstetrics & Gyn.* 2021.

**Friedman AB**, Barfield D, David G, et al. Delayed emergencies: The composition and magnitude of non-respiratory emergency department visits during the COVID-19 pandemic. *J Am Coll Emerg Phys Open.* 2021.

Song H, Bergman A, Chen AT, et al. Disruptions in preventive care: Mammograms during the COVID-19 pandemic. *Health Serv Res.* 2020.

McCoy MS, Libert T, Buckler D, Grande DT, **Friedman AB**. Prevalence of Third-Party Tracking on COVID-19–Related Web Pages. *JAMA.* 2020.

Grischkan JA, **Friedman AB**, Chandra A. Moving the Financing of Graduate Medical Education Into the 21st Century. *JAMA.* 2020.

Pomerantz A, Burke R, **Friedman AB**, Burke L, Wolfe R, Smulowitz P. The Influence of Medicare for All on Reimbursement for Emergency Care Treat-and-Release Visits. *Annals EM.* 2020.

Canares T, **Friedman AB**, Rodean J, Burns R, Berkowitz D, Hall M, Alpern E, Montalbano A. Pediatric Outpatient Utilization by Differing Medicaid Payment Models in the United States. *BMC Health Services Research.* 2020.

**Friedman AB**, Berning A, Marill KA. Confidence at 100 Percent: Characteristics of Likelihood Ratio Confidence Intervals in the Emergency Medicine Diagnostics Literature. *Academic EM.* 2020.

Rischall M, Smith S, **Friedman AB**. Correcting the QT for Heart Rate: Correction Methods and the Accuracy of the ‘Half the RR’ Rule. *West J EM.* 2020.

Samuels-Kalow ME, Niedwiecki M, **Friedman AB**, Sokolove PE, Hsia RY. Comparing Resource Use Between Pediatric Emergency Department Visits by Triage Level. *BMJ Emergency Medicine Journal*. 2018.

Grischkan J, George BP, Chaiyachati K, **Friedman AB**, Dorsey ER, Asch DA. Distribution of Medical Education Debt by Specialty, 2010-2016. *JAMA Intern Med*. 2017.

Rhodes KV, Basseyn S, **Friedman AB**, Kenney GM, Dissoker D, Polsky D. Access to Primary Care Appointments Following 2014 Insurance Expansions. *Ann Fam Med*. 2017.

**Friedman AB**, Grischkan JA, Dorsey ER, George BP. Forgiven But Not Relieved: Workforce Consequences of Changes to Public Service Loan Forgiveness. *JGIM*. 2016.

**Friedman AB**, Owen DD, Perez VIE. Trends in Hospital ED Closures Nationwide and Across Medicaid Expansion, 2006-2013. *Am J Emerg Med*. 2016.

Hsia RY, **Friedman AB**, Niedzwiecki M. Urgent Care Needs Among Nonurgent Visits to the Emergency Department. *JAMA Int Med*. 2016.

Marill KA, Chang Y, Wong KF, **Friedman AB**. Estimating Negative Likelihood Ratio Confidence When Test Sensitivity is 100%: A Bootstrapping Approach. *Stat Methods Med Res*. 2015. 1-16.

**Friedman AB**, Saloner B, Hsia RY. No Place to Call Home – Policies to Reduce ED Use In Medicaid. *N Engl J Med*. 2015. 2382-2385.

Saloner B, Polsky D, **Friedman AB**, Rhodes KV. Primary Care Appointment Availability and Preventive Care Utilization Evidence From an Audit Study. *Med Care Res Review*. 2015. 1-19.

Rhodes KV, Kenney GM, **Friedman AB**, Saloner B, Lawson CC, Chearo D, Wissoker D, Polsky D. Primary Care Access for New Patients on the Eve of Health Care Reform. *JAMA Int Med* 2014. 174(6):861-869.

**Friedman AB**, Mendola T. To Cover Their Child, One Couple Navigates A Health Insurance Maze In Pennsylvania. *Health Affairs* 2013. 32(5):994-997.

Rooney MS, Arku RE, Dionisio KL, Paciorek C, **Friedman AB**, Carmichael H, Zhou Z, Hughes AF, Vallarino J, Agyei-Mensah S, Spengler JD, Ezzati M. Spatial and temporal patterns of particulate matter sources and pollution in four communities in Accra, Ghana. *Science of the Total Environment* 2012. 435-6:107-114.

Dionisio KL, Rooney MS, Arku RE, **Friedman AB**, Hughes AF, Vallarino J, Agyei-Mensah S, Spengler JD, Ezzati M. Within-neighborhood patterns and sources of particle pollution: mobile monitoring and geographic information system analysis in four communities in Accra, Ghana. *Environmental Health Perspectives* 2010. 118(5):607-13.

Ezzati M, Horwitz MEM, Thomas DSK, **Friedman AB**, Roach R, Clark T, Murray CJL, Honigman B. Altitude, life expectancy and mortality from ischaemic heart disease, stroke, COPD and cancers: national population-based analysis of US counties. *Journal of Epidemiology and Community Health* 2011. 66(7).

Danaei G, **Friedman AB**, Oza S, Murray CJL, Ezzati M. Diabetes Prevalence and Diagnosis in US States: analysis of health surveys. *Population Health Metrics* 2009. 7(16).

Ezzati M, **Friedman AB**, Kulkarni SC, Murray CJL. Reversal of Fortunes: Trends in County Mortality and Cross-County Mortality Disparities in the United States. *PLoS Medicine* 2008. 5(4). e66.

Li X, **Friedman AB**, Zhu W, Wang L, Boswell S, May RS, Davis LL, Jope RS. Lithium regulates GSK3b in human peripheral blood mononuclear cells: implication in the treatment of bipolar disorder. *Biol Psych* 2007. 61(2):216-22.

Li X, **Friedman AB**, Roh MS, Jope RS. Anesthesia and post-mortem interval profoundly influence the regulatory serine phosphorylation of GSK3 in mouse brain. *J Neurochem* 2005. 92(3):701-4.

Li X, Rosborough KM, **Friedman AB**, Zhu W, Roth KA. Regulation of mouse brain glycogen synthase kinase-3 (GSK3) by atypical antipsychotics. *Int J Neuropsychopharm* 2007. 10(1):7-19.

Li X, Zhu W, Roh MS, **Friedman AB**, Rosborough K, Jope RS. In vivo regulation of GSK3b by serotonergic activity in mouse brain. *Neuropsychopharm* 2004. 29(8):1426-31.

### Editorials and Letters

Grischkan JA, **Friedman AB**, Chandra A. Financing of US Graduate Medical Education—Reply. *JAMA* 2021.

Smulowitz PB, **Friedman AB**, Pines JM. Appropriations for ‘Appropriate’ Visits: Payment Denials for Emergency Department Care. *Am J Emerg Med* 2017.

**Friedman AB**. The Uncertain Economics of Insurance Enabling More Emergency Department Visits. *Annals EM*. 19 June 2017.

Schwartz AL, **Friedman AB**. Comments on Geographic Variations in Controlled Trials. *New Eng J Med*. 2017.

**Friedman AB**. Comment on Economic Incentives and Use of the Intensive Care Unit. *JAMA* 2014. 311(22):2336-2337.

**Friedman AB**. Comment on Preparing for Responsible Sharing of Clinical Trial Data. *N Engl J Med* 2014. 370(5):484-485.

Becker NV, **Friedman AB**. Emergency Department, Heal Thyself. *Am J Emerg Med* 2014. 32(2):175-177.

**Friedman AB**. Comment on Effects of Medicaid on Clinical Outcomes. *N Engl J Med* 2013. 369(6):581-583.

### Non-Peer Reviewed

**Friedman AB**. Access to Unscheduled Care Across the Continental United States: Primary Care Clinics, Retail Clinics, Urgent Care Clinics, and Emergency Departments. *Figshare*.

### Other Scholarly Writing

**Friedman AB**. Roe Is Under Attack: How Can I Help? *Medpage Today*. May 8, 2022

**Friedman AB**. Abdominal Pain in Older Adults. *Penn LDI Research Brief*. 2021.

McCoy M, Libert T, **Friedman AB**. Online privacy loss: another Covid-19 aftershock. *STAT News*. 2020.

**Friedman AB**, Pauly M. Why the Emergency Room is Always Crowded and What We Can Do About It. *Philadelphia Inquirer*. (Op Ed) January 6, 2020.

Fisher K, **Friedman AB**, Joshi N, Ranney M. Everything in its Season? Letters to the Editor Printed Seasons Later. *FemInEM*. May 10, 2018.

**Friedman AB**, Smith S. QT Correction Formulas Compared to The Rule of Thumb (“Half the QT”). *Dr. Smith’s ECG Blog*. November 2017.

**Friedman AB**, Weiner J. What’s the Story with Drug Prices? *Health PolicySense*. May 2016.

Becker NV, **Friedman AB**. *King v Burwell* Through the Lens of Economics. *LDI Health Economist*. March 2015.

**Friedman AB**, Ndwandwe S. Relative Value Health Insurance And Pay For Performance For Insurers: Complements, Not Substitutes. *Health Affairs Blog*. September 19, 2014.

Van den Broeck J, Brestoff JR, **Friedman AB**, Becker N, Hoaglin MC, Robberstad B. The Measurement Plan. In: *Epidemiology*: Van den Broeck J, Brestoff JR, eds. Principles and Practical Guidelines. 1st ed. New York, NY: Springer; 2013:197-240.

**Friedman AB**, Becker N. Understanding the Individual Mandate’s SCOTUS Pivot Points. *LDI Health Economist*. April 2012.

## Presentations/Conference Abstracts/Invited Talks

Friedman AB. Identifying Low Acuity ED Visits: Lessons from the past to guide new efforts in AI. Grand Rounds. Emergency Department, Seattle Childrens/University of Washington. Seattle, WA. Nov 14, 2024.

Development and Assessment of the Performance of a Large Language Model for Administering the Short Blessed Test. Geriatric Society of America. Seattle, WA. Nov 15, 2024.

Friedman AB. Geriatric Emergencies-Challenges and Opportunities to Address Medical and Psychosocial Needs. Eastern Pennsylvania Geriatrics Society. Conshohocken, PA. Dec 3, 2024.

Kang H, et al. How Good Does a Risk Calculator Need to Be to Triage Abdominal Imaging of Crohn's Disease in the Emergency Department? Am. College of Gastroenterology. Philadelphia, PA. 2024.

Demiris G et al. Generative AI in Gerontology: Centering Stakeholders' Voices. Gerontological Society of America, Seattle, WA. 2024.

Friedman AB. Identifying Low Acuity ED Visits. School of Public Health, University of Alabama-Birmingham. 2024.

Chen A, Kurma R, Friedman AB. Identifying Low Acuity Emergency Department Visits with a Machine Learning Approach. AcademyHealth, Baltimore, MD. 2024.

Friedman AB. Identifying Low Acuity ED Visits: Lessons from the past to guide new efforts in AI. Grand Rounds. Emergency Department, Northwestern University. 2024.

Rachel Wu, Friedman AB. Comparison of Diagnostic Complexity and Imaging Decisions in Younger, Middle Age, and Older Adults. Geriatric Society of America Annual Scientific Meeting. Nov 11, 2023.

Friedman AB, Mywinyogle A, Gopal K, Yang L, Kelz R. Emergency Department Practice Patterns for Older Adults With Abdominal Pain. Geriatric Society of America Annual Scientific Meeting. Nov 11, 2023.

Boateng CC, Friedman AB. Influence of Cognition and Functional Limitations on Hospitalizations Among Older Adults in the United States. Geriatric Society of America Annual Scientific Meeting. Nov 9, 2023.

Friedman AB. Digital health for women seeking abortions in the US: Implications for privacy and care seeking. UPenn OB/GYN Grand Rounds. Philadelphia, PA. November 30, 2023.

Yapalater Y, Friedman AB, Fernandez-Penny F, Loh N, Courtright K, Auriemma C. "Feasibility and Acceptability of Goals of Care Elicitation in an Emergency Department Setting." American Thoracic Society International Conference. Washington, DC. May 20, 2023.

**Friedman AB**, Khatri U. "Chemical sedation of Black patients in the ED." New York County Psychiatric Society, New York, Ny. March 9, 2023.

**Friedman AB**, Andrew Chou. "Not Your Typical Observational Study: Natural Experiments for Emergency Care Research." SAEM23, Austin, Tx. May 16-19, 2023.

**Friedman AB**. "The economics of urgent care." Centre for Health Economics, U. York (UK). 2022.

**Friedman AB**. "Trajectories of cognitive frailty after ED visits resulting in discharge." Pepper Center, Johns Hopkins U. 11/4/2022.

**Friedman AB**. "Cognitive frailty and the emergency department." Health Services Group, Johns Hopkins U. 11/4/2022.

**Friedman AB**. "Health privacy threats from routine web browsing." Penn Bioethics Seminar. 7/19/2022.

Unachukwu I, Meisel ZF, South EC, **Friedman AB**. "Racial Disparities in Imaging of Older Adults Presenting to the Emergency Department for Abdominal Pain." Am Geri Soc Annual Conference. May 11-14, 2022.

Muralidharan M, Chen A, **Friedman AB**. "Algorithms Identifying Low Acuity Emergency Department Visits: A Review and Validation Study." Western Society for Academic Emergency Medicine. April 1-2, 2022.

Tiako MJN, Meinhofer A, **Friedman AB**, South EC, Epstein RL, Meisel ZF, Morgan JR. Buprenorphine Uptake Among US Pregnant Women Following the 2017 ACOG Guidelines Update on Perinatal Treatment of Opioid Use Disorder. SMFM22. January 31-February 5, 2022.

Khatri U, Delgado K, South E, **Friedman AB**. Racial Disparities in the Management of Emergency Department Patients Presenting with Psychiatric Disorders. SAEM22. May 10-14, 2022.

**Friedman AB**, Wang B, Mehrotra A. Urgent Care Centers Deter Some Emergency Department Visits But, On Net, Increase Spending. ACEP Research Forum 2021. Boston. October 28, 2021.

Wu R, Chen A, Cappola A, **Friedman AB**. Characterizing Abdominal Pain in Older Adults Presenting to the Emergency Department. American Geriatrics Society Annual Conference. May 12, 2021.

Moderator, Geriatric Emergency Medicine Panel. SAEM21 Virtual Meeting. May 11-14, 2021.

Wu R, Chen A, Cappola A, **Friedman AB**. Evaluation, Management, and Disposition of Abdominal Pain in Older Adults Presenting to the Emergency Department. SAEM21 Virtual Meeting. May 11-14, 2021.

Chen A, Muralidharan M, **Friedman AB**. Algorithms Identifying Emergency Department Visits Amenable to Lower-Acuity Care: A Systematic Review. SAEM21 Virtual Meeting. May 11-14, 2021.

**Friedman AB**, Wang B, Mehrotra A. Assessing the Impact of Urgent Care Clinics on Emergency Departments. AcademyHealth Annual Research Meeting. Boston, MA. June 13-16, 2020.

**Friedman AB**, Wang B, Mehrotra A. The Impact of Urgent Care Clinics on Emergency Departments. U. Penn Emergency Department Research Day. Philadelphia, PA. April 1, 2020.

**Friedman AB**, Berning A, Marril K. Diagnostic Tests in Emergency Medicine Journals Under-Report Confidence Intervals and Likelihood Ratios. Society for Academic Emergency Medicine. Denver, CO. May 12-15, 2020.

Pomerantz A, Burke R, **Friedman AB**, Burke LG, Wolfe RE, Smulowitz P. The Impact of a 'Medicare For All' Single Payer System on Emergency Care Reimbursement. Society for Academic Emergency Medicine. Las Vegas, NV. May 14-17, 2019.

**Friedman AB**, Marril K. Likely Underused: Improving Diagnostic Tests in Emergency Medicine. Society for Academic Emergency Medicine. Indianapolis, IN. May 15-18, 2018.

Canares TL, **Friedman AB**, et al. Pediatric Acute Care Utilization in Differing Medicaid Payment Models. 18th Annual AcademyHealth National Health Policy Conference. Washington, D.C. February 5, 2018.

Samuels-Kalow M, Niedzwiecki M, **Friedman AB**, Sokolove P, Hsia R. Urgent care needs for pediatric emergency department patients assigned non-urgent triage status. Society for Academic Emergency Medicine (SAEM). May 18, 2017.

Perez VE, **Friedman AB**. Impact of Medicaid Expansion on Hospital Closures. Association for Public Policy Analysis and Management Fall Conference (APPAM). November 3, 2016.

Perez VE, **Friedman AB**. Impact of Medicaid Expansion on Hospital Closures. 86th Annual Conference of the Southern Economic Association. November 19-21, 2016.

Perez VE, **Friedman AB**. The Impact of the Affordable Care Act on Hospital Market Structure and Patient Access. Sixth Biennial Conference of The American Society for Health Economists (ASHEcon). June 12, 2016.

**Friedman AB**. Some Simple Economics of Emergency Medicine. Society for Academic Emergency Medicine (SAEM) Annual Conference. New Orleans, LA. May 12, 2016.

**Friedman AB**. Why Wait? An Econometric Analysis Of The Supply Of Emergency Department Care. Society for Academic Emergency Medicine (SAEM) Annual Conference. New Orleans, LA. May 13, 2016.

Perez VE, **Friedman AB**. The Impact of the Affordable Care Act on Hospital Market Structure and Patient Access. American Economic Association (AEA) Annual Meeting. San Francisco, CA.

Nguyen BM, Bounds G, **Friedman AB**. Exploring the ‘Dean’s Lie’: Which Specialties Medical Schools Report as Primary Care in the Match. North American Primary Care Research Group (NAPCRG) Annual Meeting. Cancun, MX. June 29-30, 2015.

Jesus JE, Elliot B, Cooksey L, **Friedman AB**, Allen MB, Arnold R. Effect of Do-Not-Resuscitate Orders on the Disposition of Patients with Severe Sepsis. Society for Academic Emergency Medicine (SAEM) Annual Conference. San Diego, CA. May 15, 2015. <!-- Poster, not presenter -->

Li KC, Griff JE, Heisler EK, Grossestreuer AV, **Friedman AB**, Leary M, Abella BS, Becker LB. Association of Bystander CPR Rates with County-level Median Household Income in Pennsylvania. Society for Academic Emergency Medicine (SAEM) Annual Conference. San Diego, CA. May 12-16, 2015. <!-- Oral -->

**Friedman AB**, Trueger NS. Differences in Probability of Admission and Triage Status Across Race, Ethnicity, and Insurance Status. Society for Academic Emergency Medicine (SAEM) Annual Conference. San Diego, CA. May 12-16, 2015. <!-- Oral -->

**Friedman AB**, Basseyn S, Rhodes KV. Waiting, Here Or There: The Relationship Between Primary Care Access and Emergency Department Wait Times in New Jersey. Society for Academic Emergency Medicine (SAEM) Annual Conference. San Diego, CA. May 12-16, 2015. <!-- Oral -->

**Friedman AB**, Smith S. Assessing the Rule-of-Thumb For QT Prolongation Rule-out. Society for Academic Emergency Medicine (SAEM) Annual Conference. San Diego, CA. May 12-16, 2015. <!-- Poster -->

Lawson C, Basseyn S, **Friedman AB**, Rhodes KV. “There’s not really an incentive to do it another way”: Barriers to unscheduled ambulatory care. Society for Academic Emergency Medicine (SAEM) Annual Conference. San Diego, CA. May 12-16, 2015. <!-- Oral, not presenter -->

Rhodes KV, Basseyn S, **Friedman AB**. Changes in Access to Primary Care in the Aftermath of Insurance Expansions: Early Results. Society for Academic Emergency Medicine (SAEM) Annual Conference. San Diego, CA. May 12-16, 2015. <!-- Oral, not presenter -->

Marill K, **Friedman AB**. Bootstrapping: What, When, and How. Society for Academic Emergency Medicine (SAEM) Annual Conference. San Diego, CA. May 15, 2015. <!-- Oral -->

**Friedman AB**. Tools for Reproducible Research. Society for Academic Emergency Medicine (SAEM) Annual Conference. San Diego, CA. May 15, 2015.

**Friedman AB**, Rhodes KV, Kocher K, Lee M. Natural Experiments in Emergency Medicine. Society for Academic Emergency Medicine (SAEM) Annual Conference. San Diego, CA. May 15, 2015.

**Friedman AB**. Why Wait? An Econometric Analysis of the Supply of Emergency Department Care. National Conference for Physician-Scholars in the Social Sciences and Humanities. April 18-19, 2015.

**Friedman AB**, Davis BJ, Reese C, Jesus J. Urgencies And Emergencies: The Differential Impact Of Urgent Care Centers On Emergency Department Visits From Low-severity, Privately-insured Patients. University of Pennsylvania Medical Scientist Training Program Annual Conference. Philadelphia, PA. August 7, 2014.

**Friedman AB**, Prager E. Competition Through Wait Times in the Market for Unscheduled Care. American Society of Health Economists (ASHEcon) Fifth Biennial Conference. Los Angeles, CA. June 24, 2014. “Health & Healthcare in America: From Economics to Policy.”

Saloner B, Polsky D, Rhodes K, **Friedman AB**. Access to Primary Care for New Medicaid Patients and Preventive Care Utilization: Evidence from an Audit Study. American Society of Health Economists (ASHEcon) Fifth Biennial Conference. Los Angeles, CA. June 25, 2014. “Health & Healthcare in America: From Economics to Policy.”

**Friedman AB**, Polsky D, Saloner B, Rhodes KV. Waiting, Here Or There: The Relationship Between Primary Care Access and Emergency Department Wait Times. AcademyHealth Annual Research Meeting. San Diego, CA. June 9, 2014.

**Friedman AB**, Berdahl C, Hsia R, Seabury S. The Out-of-Pocket Costs Of Emergency Department Visits According To Patient Insurance Status. Society for Academic Emergency Medicine (SAEM) Annual

Conference. Dallas, TX. May 14, 2014.

**Friedman AB**, Davis BJ, Reese C, Jesus J. Urgencies And Emergencies: The Differential Impact Of Urgent Care Centers On Emergency Department Visits From Low-severity, Privately-insured Patients. Society for Academic Emergency Medicine (SAEM) Annual Conference. Dallas, TX. May 16, 2014.

Jesus J, Rifai N, **Friedman AB**, Bracey A, Allen MB, Fisher J, Shogilev D. Actual Treatment Choices of Patients with Do-Not-Resuscitate/Do-Not-Intubate Orders: a Two-year Follow-up Study. Society for Academic Emergency Medicine (SAEM) Annual Conference. Dallas, TX. May 15, 2014.

**Friedman AB**, Davis BJ, Reese C, Jesus J. Urgencies And Emergencies: The Differential Impact Of Urgent Care Centers On Emergency Department Visits From Low-severity, Privately-insured Patients. Hospital of the University of Pennsylvania Emergency Department Research Day. Philadelphia, PA. April 9, 2014.

**Friedman AB**. Competition in the Unscheduled Care Market. Jefferson School of Population Health Lunch and Learn. Philadelphia, PA. March 12, 2014.

**Friedman AB**, Rhodes KV, Polsky D. Waiting, Here Or There: The Relationship Between Primary Care Access and Emergency Department Wait Times. Association for Public Policy Analysis and Management (APPAM) Annual Conference. Washington, DC. November 8, 2013.

Rhodes KV, Kenney G, **Friedman AB**, Lawson C, Wissoker D, Chearo D, Polsky D. Measuring Primary Care Access: Evidence From a 10 State Audit Study. Association for Public Policy Analysis and Management (APPAM) Annual Conference. Washington, DC. November 8, 2013.

Saloner B, Rhodes K, Kenney G, **Friedman AB**, Polsky D. How Does Primary Care Access Promote Utilization of Preventive Health Care? Evidence From An Experimental Audit Study. Association for Public Policy Analysis and Management (APPAM) Annual Conference. Washington, DC. November 8, 2013.

Saloner S, Rhodes KV, Kenney G, **Friedman AB**, Polsky D. How Does Primary Care Access Promote Utilization of Preventive Health Care? Evidence from an Experimental Audit Study. AcademyHealth Annual Research Meeting. Baltimore, MD. June 24, 2013.

Lawson CC, **Friedman AB**, Carroll K, Rhodes KV. Financial Drivers of Access: Barriers to Unscheduled Outpatient Care. AcademyHealth Annual Research Meeting. Baltimore, MD. June 24, 2013.

KV Rhodes, Kenney G, **Friedman AB**, Wissoker D, Chearo D, Lawson CC, Saloner B, Polsky D. Access to Primary Care on the Eve of ACA Implementation. AcademyHealth Annual Research Meeting. Baltimore, MD. June 24, 2013.

**Friedman AB**, Rhodes KV, Polsky D. The Impact of Retail and Urgent Care on Conventional Primary Care Appointment Availability. AcademyHealth Annual Research Meeting. Baltimore, MD. June 24, 2013.

**Friedman AB**, Rhodes KV, Polsky D. The Impact of Retail and Urgent Care on Conventional Primary Care Appointment Availability. 19th Annual AHRQ NRSA Research Trainees Conference. Baltimore, MD. June 22, 2013.

**Friedman AB**, Carr BG, David G. Does The “Invisible Hand” Optimally Regionalize Acute Care Providers? Society for Academic Emergency Medicine (SAEM) Annual Conference. Atlanta, GA. May 17, 2013.

**Friedman AB**, Carr BG, David G. Does The “Invisible Hand” Optimally Regionalize Acute Care Providers? Penn Emergency Medicine Department Research Day. Philadelphia, PA . March 13, 2013.

**Friedman AB**. Paying for Health: Insurer incentives to achieve the goals of health reform. University of Pennsylvania Medical Scientist Training Program Annual Conference. Philadelphia, PA. August 8, 2012.

Dionisio KL, Rooney MS, Arku RE, **Friedman AB**, Paciorek C, Hughes AF, Vallarino J, Carmichael H, Agyei-Mensah S, Spengler JD, Ezzati M. Within-neighborhood variation of particle pollution in developing country cities: mobile monitoring and GIS analysis in four neighborhoods in Accra. International Society of Environmental Epidemiology Conference. Dublin, Ireland. August 2009.

Dionisio KL, Arku RE, Hughes AF, Vallarino J, Carmichael H, **Friedman AB**, Agyei-Mensah S, Spengler JD, Ezzati M. Particle pollution in Accra neighborhoods: spatial and socioeconomic patterns. International Society of Environmental Epidemiology Conference. Dublin, Ireland. August 2009.

Ezzati M, **Friedman AB**, Oza S, Murray CJL. Improving estimates of state diabetes prevalence. Lancet/IHME Launch Conference. Seattle, WA. 10 April 2008.

O'Brien WT, O'Donnell M, **Friedman AB**, Klein PS. Role of GSK in Behavior and Neurobiology. U. Penn. Institute on Aging: Sylvan M. Cohen Annual Retreat. Philadelphia, PA. 4 May 2006.

**Friedman AB**, Li X, Roh MS, Jope RS. Anesthesia and postmortem interval profoundly influence the regulatory serine phosphorylation of GSK3 in mouse brain. Society for Neuroscience Annual Meeting. Baltimore, MD. 16 Nov 2005.

## **Grants, Awards, Positions, and Fellowships**

### **Grants**

PI, Large Project Grant, "Private Equity in Emergency Medicine: Impacts for Medicare patients." Emergency Medicine Foundation, 2024.

PI, 1-K23-AG080061, "Geriatric Abdominal Pain." National Institute on Aging. 2023-2028.

PI, Pilot Grant, "Urgent Care Clinics." Leonard Davis Institute of Health Economics, 2023.

PI, NIA GEMSSTAR 5-R03-AG078933, "Trajectories of Cognitive Frailty after Emergency Department Visitation." 2022-2024.

PI, Medical Communications Research Institute Pilot Grant, University of Pennsylvania, 2022.

McCabe Fellow, University of Pennsylvania, 2021-2022.

PI, The Penn-CMU Digital Health Privacy Initiative, Public Interest Technology - University Network, 2021-2022.

PI, Small Project Grant, Emergency Medicine Foundation, 2021.

PI, The Penn-CMU Digital Health Privacy Initiative, Public Interest Technology - University Network, 2020-2021.

PI, Pilot Grant, The Leonard Davis Institute of Health Economics, 2020.

### **Awards, Fellowships, and Positions**

Amy H. Kaji MD PhD Early Investigator Award, Society for Academic Emergency Medicine, 2025.

Board Member, Academy of Geriatric Emergency Medicine, Society for Academic Emergency medicine, 2025-2026.

Board Member, Geriatric Emergency Medicine Section, American College of Emergency Physicians, 2024-2025.

Scientific Advisor, Penn Core for Precision Resource Utilization, 2024-.

Sigma Xi, Full Member, 2024-.

Academy of Geriatric Emergency Medicine, Early Investigator Achievement Award, 2024.

Committee Member, Penn Medical Scientist Training Program Admissions Committee, 2020-.

Committee Member, Emergency Department Compensation Committee, 2019-.

Committee Member, ACEP Artificial Intelligence Taskforce, 2024-.

Penn Population Aging Research Center, Research Associate, 2024-.

Board Member, Eastern Pennsylvania Geriatrics Society, 2024-.

STAT Madness best paper nominee - 2024.

Fellow, College of Physicians of Philadelphia. 2023-.

AGEM Author Spotlight. 9/1/2022.

Penn Faculty Pathways Program, University of Pennsylvania. 2022-2023.

Fellow, Institute on Aging, University of Pennsylvania. 2019- .

Core Faculty, Center for Emergency Care Policy and Research, University of Pennsylvania. 2019- .

Senior Fellow, Leonard Davis Institute of Health Economics, University of Pennsylvania. 2019- .

Academic Excellence Award. Emergency Medicine Residents Association. 2018.

Resident Research Grant. Massachusetts College of Emergency Physicians. 2017.

William L. Kissick Health Policy Research Prize. University of Pennsylvania. 2016.

“Cost-shifting between public and private insurers.” Russell Ackoff Doctoral Student Fellowship. 2013.

Fellow, Center for Emergency Care Policy and Research, University of Pennsylvania. 2012-present.

“The Adoption of Cost-Effective Interventions.” Mack Center for Technological Innovation. 2012.

“Insurer incentives in an international context.” Penn Lauder CIBER Program. 2010.

“Insurance Churn and Investment in Preventive Care.” Medical Student Health Services and Policy Summer Research Fellowship. 2009.

Benjamin Franklin Scholar, University of Pennsylvania, 2002-2006.

## Selected Press Coverage

Levins H. “Making ED Triage Assessments More Accurate.” *LDI Blog*. June 17, 2024.

Stedman N. “Why Health Privacy Online Is a Myth.” *LDI Blog*. April 12, 2024.

Riddle K. “Patients struggle to navigate abortion with changing laws and provider confusion.” *NPR*. Oct 25, 2023.

Reddy S. “How to Know Whether to Go to Your Doctor, or Visit Urgent Care.” *WSJ*. Nov 14, 2023.

Rothman J, Feinberg S. “Just What the (Urgent Care) Doctor Ordered.” *NY Times*. Nov 17, 2023.

Palmer K, Feathers T, Fondrie-Teitler S. “Out of control: Dozens of telehealth startups sent sensitive health information to big tech companies.” *STAT*. Dec 13, 2022.

McNamara D. “Your Interests Likely Tracked on Medical Journal Sites.” *Medscape*. March 23, 2022.

Lejeune C. “Your miserable ER experience isn’t just because of COVID.” *Philadelphia Citizen*. Feb 25, 2022.

Mercado D. “Solving the low-acuity emergency department problem.” *KevinMD*. 2022.

Tachibana C. “Can Telemedicine Be Equitable?” *Penn LDI Blog*. 2022.

“Mistriage of older ED abdominal pain patients is legal concern.” *ED Management*, February 2022.

Agarwala V, Larkin J, Richardson L. “Bio Eats World: The Problem with Urgent Care.” *Andreessen Horowitz*. 2021.

Young, Liz. “The Scramble for Urgent Cares.” *Albany Business Review*, 24 Oct 2019.

Pines, Jesse and Ari Friedman (interview). “The Uncertain Economics of Insurance Enabling More ED Visits.” *Urgent Matters*, 8 Feb 2018.

Hiltzik, Michael. “A Big Health Insurer is Planning to Punish Patients for ‘Unnecessary’ ER Visits.” *LA Times*, 2 June 2017.

Hiltzik, Michael. "Here's why it's so difficult to solve soaring drug prices." *LA Times*, 1 June 2016.

Doyle, Kathryn. "'Nonurgent' patients might still end up being hospitalized." *Reuters Wire*, 18 April 2016.

Caffrey, Mary K. "NEJM Authors Seek Solutions to Keep Medicaid Clients out of the Emergency Department." *AJMC Journal*, 18 June 2015.

Frakt, Austin. "Shortage of Medicaid Doctors? Not if You Ask Patients." *The Upshot, The New York Times*, 10 Nov, 2014.

Wynne, Bill. "Health Wonk Review - T.G.I.R. Edition." *Health Care Lighthouse*, 25 Sep, 2014.

Brown, David. "Life Expectancy Hits Record High in United States." *Washington Post*. 12 June 2008.

Brown, David. "Life Expectancy Drops for Some U.S. Women." *Washington Post*. 22 April 2008.

The Patt Morrison Show. Ari Friedman, Patt Morrison (Interview). "Women's Life Expectancy on the Decline." *National Public Radio*. 22 April 2008.

Francis, Theo. "Life-Expectancy Study Shows Regional Declines." *Wall Street Journal*. 22 April 2008.