Department of Health Policy and Management

Mailman School of Public Health

Columbia University

722 W. 168th St., 4th fl.

New York NY 10032

phone: 212-342-4522

mn2191@columbia.edu

http://www.columbia.edu/~mn2191/

EMPLOYMENT

2018-present	Professor, Department of Health Policy and Management, Mailman School of
	Public Health, Columbia University
2011-2018	Associate Professor, Department of Health Policy and Management, Mailman
	School of Public Health, Columbia University
2012-2013	Visiting Professor, Department of Economics, European University Institute
2004-2011	Assistant Professor, Department of Health Policy and Management, Mailman
	School of Public Health, Columbia University
2002-2004	Post-doctoral Research Associate, Department of Economics and Center for
	Integrating Statistical and Environmental Science, University of Chicago

AFFILIATIONS

2018-present	Associate Member, Earth Institute
2015-present	Developmental Core Chair, Columbia Population Research Center (CPRC)
2016-present	Research Fellow, Institute of Labor Economics (IZA)
2011-present	Research Associate, National Bureau of Economic Research (NBER)
2011-present	Faculty Member, NIEHS Center for Environmental Health in Northern Manhattan
2008-2015	Faculty Member, Columbia Population Research Center (CPRC)
2010, 2011,	Lone Mountain Fellow, The Property and Environment Research Center (PERC).
2014	
2008-2011	Faculty Research Fellow, National Bureau of Economic Research (NBER)

POLICY SERVICE

2021-present	Member, BenMAP and Benefits Methods Panel, Scientific Advisory Board,
_	Environmental Protection Agency
2020-present	Task Lead and Member, Fighting Oppression, Racism and White Supremacy
-	through Action, Research and Discourse (FORWARD), Columbia University
	Mailman School of Public Health
2018-2021	Executive Committee, External Environmental Economics Advisory Committee
2017-2018	Chief Economist, Health, Rockefeller Foundation Economic Council on Planetary
	Health, Oxford Martin School, University of Oxford
2016-2018	Member, Environmental Economics Advisory Committee, Scientific Advisory
	Board, Environmental Protection Agency
2014-2017	Consultant, Environmental Protection Agency, "Climate Change Impacts and
	Risk Analysis"
2016-2017	Consultant, World Bank, "Pollution Management and the Making of Prosperous
	Cities"

2010-2011 Committee Member, Institute of Medicine, "Study on an Oral Health Initiative"

EDUCATION

1997-2002 Ph.D., Economics, UCLA 1990-1994 B.A., Economics, Duke University

PUBLICATIONS

"When Externalities Collide: Influenza and Pollution," with Joshua Graff Zivin, Nicholas Sanders, and Gregor Singer, *American Economic Journal: Applied Economics*, forthcoming, 2022.

"This is Air: The 'Non-Health' Effects of Air Pollution," with Sandra Aguilar-Gomez, Holt Dwyer, and Joshua Graff Zivin, *Annual Review of Resource Economics*, 14(1):403-425, 2022.

"Temperature and work: Time allocated to work under varying climate and labor market conditions," with Joshua Graff Zivin, Megan Sheahan, Jacqueline Willwerth, Charles Fant, Marucs Sarofim, and Jeremy Martinich, *PLoS One* 16(8), 2021.

"The Unintended Effects from Halting Nuclear Power Production: Evidence from the Fukushima Daiichi Accident," with Shinsuke Uchida and Marcella Veronesi, *Journal of Health Economics*, 79, 2021.

"Using Crowd-Sourced Data to Assess the Temporal and Spatial Relationship between Indoor and Outdoor Particulate Matter," with Benjamin Krebs, Jennifer Burney, and Joshua Graff Zivin, *Environmental Science and Technology*, 55(9), 2021.

"What about tocilizumab? A retrospective study from a NYC Hospital during the COVID-19 outbreak," with Monica Mehta, Lawrence Purpura, et al, *PLoS One*, 16(4), 2021.

"Long-Run Pollution Exposure and Adult Mortality: Evidence from the Acid Rain Program," with Alan Barreca and Nicholas Sanders, *Journal of Public Economics*, 200, 2021.

"Estimating Causal Effects of Particulate Matter Regulation on Mortality," with Alan Barreca and Nicholas Sanders, *Epidemiology*, 31(2), 2020.

"The Effect of Pollution on Worker Productivity: Evidence from Call-Center Workers in China," with Tom Chang, Joshua Graff Zivin, and Tal Gross. *American Economic Journal: Applied Economics*, 11(1), 2019 (Media coverage: *PBS, HBR, Vox-EU, Washington Post*)

"Temperature and Human Capital in the Short- and Long-Run," with Joshua Graff Zivin and Solomon Hsiang. *Journal of the Association of Environmental and Resource Economists*, 5(1), 2018. (Media coverage: *Washington Post*)

"Pollution's Hidden Impacts," with Joshua Graff Zivin, Science, 359(6371), 2018.

- "Cost-effectiveness of Diabetes Screening Initiated through a Dental Visit," with Barbara Shearer and Ira Lamster. *Community Dentistry and Oral Epidemiology*, 45(3), 2017.
- "Association of groundwater constituents with topography and distance to unconventional gas wells in NE Pennsylvania," with Yan B, Stute M, Panettieri RA Jr, Ross J, Mailloux B, Soares L, Howarth M, Liu X, Saberi P, Chillrud SN. *Sci Total Environ*, 15(570), 2017.
- "Air Pollution and Worker Productivity," IZA World of Labor, June, 2017.
- "Energy Production and Health Externalities: Evidence from Oil Refinery Strikes in France," with Emmanuelle Lavaine. *Journal of the Association of Environmental and Resource Economists*, 4(2), 2017.
- "Particulate Pollution and the Productivity of Pear Packers," with Tom Chang, Joshua Graff Zivin, and Tal Gross. *American Economic Journal: Economic Policy*, 8(3), 2016. (Media coverage: *Washington Post, The Economist, Huffington Post*)
- "Early-Life Exposure to the Great Smog of 1952 and the Development of Asthma," with Bharadwaj P, Zivin JG, Mullins JT. *Am J Respir Crit Care Med*, 194(12), 2016. (Media coverage: *London Times* (page 2), *NPR Marketplace*)
- "Trends in mortality, length of stay, and hospital charges associated with health care-associated infections, 2006-2012," with Glied S, Cohen B, Liu J, Larson E. *Am J Infect Control*, 44(9), 2016.
- "Pollution and Climate Change," with Allison Larr. The Future of Children. 26(1): 2016.
- "Cost-Effectiveness Analysis of Dental Sealants versus Fluoride Varnish in a School-Based Setting," with Barbara Shearer and Ira Lamster. *Caries Res.* 22;50 Suppl 1, 2016.
- "The Norwood operation: Relative effects of surgeon and institutional volumes on outcomes and resource utilization," with BR Anderson, AJ Ciarleglio, DJ Cohen, WW Lai, M Hall, SA Glied, and EA Bacha. *Cardiol Young*. 26(4):683-92, 2016.
- "Unconventional Gas and Oil Drilling Is Associated with Increased Hospital Utilization Rates," with T Jemielita, GL Gerton, S Chillrud, B Yan, M Stute, M Howarth, P Saberi, N Fausti, TM Penning, J Roy, KJ Propert, and RA Panettieri, Jr.. *PLoS One*, 15;10(7), 2015.
- "What Do We Know About Short- and Long-Term Effects of Early-Life Exposure to Pollution?" with Janet Currie, Joshua Graff Zivin, and Jamie Mullins. *Annual Review of Resource Economics*, 6, 2014.
- "Temperature and the Allocation of Time: Implications for Climate Change," with Joshua Graff Zivin. *Journal of Labor Economics*, 32(1), 2014.

- "Prenatal exposure to airborne polycyclic aromatic hydrocarbons and IQ: estimated benefit of pollution reduction," with Frederica Perera, Katherine Weiland, and Shuang Wang. *J Public Health Policy*. 35(3), 2014.
- "Disconcordance in statistical models of bisphenol A and chronic disease outcomes in NHANES 2003-08," with Martin Casey. *PLoS One*. 8(11), 2013.
- "Gender Differences in Risk of Bloodstream and Surgical Site Infections," with Bevin Cohen, Yoon Jeong Choi, Sandra Hyman, E. Yoko Furuya, and Elaine Larson. *Journal of General Internal Medicine*, 28(4), 2013.
- "Environment, Health, and Human Capital," with Joshua Graff Zivin. *Journal of Economic Literature*, 51(3), 2013.
- "Something in the Water: Contaminated Drinking Water and Infant Health," with Janet Currie, Joshua Graff Zivin, Katherine Meckel, and Wolfram Schlenker. *Canadian Journal of Economics*, 46(3), 2013.
- "The Impact of Pollution on Worker Productivity," with Joshua Graff Zivin. *American Economic Review*, 102(7), 2012. (Media coverage: *New York Times, NBER Digest, ZDNet*)
- "On the Role of Length of Stay in Healthcare-associated Bloodstream Infection," with Christie Jeon Jia H, Matthew Sinisi, and Elaine Larson. *Infection control and hospital epidemiology*, 33(12), 2012.
- "Costs of Healthcare- and Community-Associated Infections with Antimicrobial-Resistant Versus Antimicrobial-Susceptible Organisms," with Bevin Cohen, Yoko Furuya, Jennifer Hill, Christie Jeon, Sherry Glied, and Elaine Larson. *Clinical Infectious Disease*, 55(6), 2012.
- "Quasi-experimental Studies Suggest that Lowering Air Pollution Levels Benefits Infants' and Children's Health," with Janet Currie and Samantha Heep Ray. *Health Affairs*, 30(12), 2011.
- "Using Electronically Available Inpatient Hospital Data for Research," with Mandar Apte, Yoko Furuya, David Caplan, Sherry Glied, and Elaine Larson. *Clinical and Translational Science*, 4(5), 2011.
- "The Effect of an Early Education Program on Adult Health: The Carolina Abecedarian Project Randomized Controlled Trial," with Peter Muennig, Dylan Robertson, Gretchen Johnson, Frances Campbell, and Elizabeth Pungello. *American Journal of Public Health*, 101(3), 2011.
- "Cost of Developmental Delay from Prenatal Exposure to Airborne Polycyclic Aromatic Hydrocarbons," with Katherine Weiland, Virginia Rauh, and Frederica Perera. *Journal of Health Care for the Poor and Underserved*, 22(1), 2011.

- "Water Quality Violations and Avoidance Behavior: Evidence from Bottled Water Consumption," with Joshua Graff Zivin and Wolfram Schlenker. *American Economic Review Papers and Proceedings*, 101(3), 2011.
- "Pollution, Health, and Avoidance Behavior: Evidence from the Ports of Los Angeles," with Enrico Moretti. *Journal of Human Resources*, 46(1), 2011.
- "Cognitive and Non-Cognitive Peer Effects in Early Education," with Jane Waldfogel. *Review of Economics and Statistics*, 92(3), 2010.
- "The Economic Value of Teeth," with Sherry Glied. *Journal of Human Resources*, 45(2), 2010. (Media coverage: *New York Times, Wall Street Journal, Atlantic Monthly, Marginal Revolution*)
- "Long Term Effects of Childhood Asthma on Adult Health," with Jason Fletcher and Jeremy Green. *Journal of Health Economics*, 29(3), 2010.
- "Medical Technology Adoption, Uncertainty, and Irreversibilities: Is a Bird in the Hand Really Worth More than the Bush?" with Joshua Graff Zivin. *Health Economics*, 19(2), 2010.
- "The Association between Community Water Fluoridation and Adult Tooth Loss," with Sherry Glied and Karin Herzog. *American Journal of Public Health*, 100(10), 2010.
- "Factors Associated with Variation in Estimates of the Cost of Resistant Infections," with Bevin Cohen, Elaine Larson, Patricia Stone, and Sherry Glied. *Medical Care*, 48(9), 2010.
- "Air Quality Warnings and Outdoor Activities: Evidence from Southern California using a Regression Discontinuity Design." *Journal of Epidemiology and Community Health*, 64(10), 2010.
- "Health Care Savings Attributable to Integrating Guidelines-based Asthma Care in the Pediatric Medical Home," with Roy Grant, Shawn Bowen, Timothy Prinz, and Irwin Redlener. *Journal of Health Care for the Poor and Underserved*, 21(2), 2010.
- "Estimates of the Association between Ozone and Asthma Hospitalizations that Account for Behavioral Responses to Air Quality Information," with Patrick Kinney. *Environmental Science and Policy*, 13(2), 2010.
- "Effects of a Prekindergarten Educational Intervention on Adult Health: 37-Year Follow-Up Results of a Randomized Controlled Trial," with Peter Muennig, Lawrence Schweinhart, and Jeanne Montie. *American Journal of Public Health*, 99(8), 2009.
- "Voluntary Information Programs and Environmental Regulation: Evidence from 'Spare the Air'," with W. Bowman Cutter. *Journal of Environmental Economics and Management*, 58(3), 2009.

- "Program Participation of Immigrant Children: Evidence from the Local Availability of Head Start," with Jane Waldfogel. *Economics of Education Review*, 28(6), 2009.
- "Does Pollution Increase School Absences?" with Janet Currie, Eric Hanushek, E. Megan Kahn, and Steven Rivkin. *Review of Economics and Statistics*, 91(4), 2009.
- "Days of Haze: Environmental Information Disclosure and Intertemporal Avoidance Behavior," with Joshua Graff Zivin. *Journal of Environmental Economics and Management*, 58(2), 2009.
- "Air Pollution and Infant Health: Lessons from New Jersey," with Janet Currie and Johannes Schmieder. *Journal of Health Economics*, 28(3), 2009.
- "Information, Avoidance Behavior, and Health: The Effect of Ozone on Asthma Hospitalizations." *Journal of Human Resources*, 44(2), 2009.
- "Getting Inside the 'Black Box' of Head Start Quality: What Matters and What Doesn't?" with Janet Currie. *Economics of Education Review*, 26(1), 2007.
- "Air Pollution and Infant Health: What Can We Learn from California's Recent Experience?" with Janet Currie. *Quarterly Journal of Economics*, 120(3), 2005. (Media coverage: *San Francisco Chronicle*, *PERC Reports*, *NBER Bulletin on Aging and Health*)
- "Air Pollution, Health, and Socio-Economic Status: The Effect of Outdoor Air Quality on Childhood Asthma." *Journal of Health Economics* 23(6), 2004. (Media coverage: *Wall Street Journal*)

BOOK CHAPTERS

- "Incentivizing Learning-By-Doing: The Role of Compensation Schemes," with Joshua Graff Zivin and Lisa B. Kahn, in <u>Workplace Productivity and Management Practices</u> (*Research in Labor Economics*, Vol. 49), Polachek, S.W., Tatsiramos, K., Russo, G. and van Houten, G. (Ed.), Emerald Publishing Limited, Bingley, 2021.
- "Pollution and Health," with Joshua Graff Zivin, in <u>Encyclopedia of Health Economics</u>, Tony Culyer (Ed.), Elsevier, 2014.
- "Treatment Uncertainty and Irreversibility in Medical Care: Implications for Cost-Effectiveness Analysis," with Lauri Feldman and Joshua Graff Zivin, in <u>The Economics of New Health Technologies Incentives, Organization and Financing</u>, J Costa-Font, C Courbage, and A McGuire (Eds.), Oxford University Press, 2009.

WORKING PAPERS

"The Dynamics of Inattention in the (Baseball) Field," with James Archsmith, Anthony Heyes, and Bhaven Sampat, NBER Working Paper 28922.

POPULAR PRESS (SELECT)

- "Nuclear Power Isn't Perfect. Is It Good Enough?" *Freakonomics Radio* (podcast), episode 516, Sep 21, 2022.
- "How does climate change affect workers' productivity?" Economics Observatory, Oct 20, 2021.
- "How Heat and Air Pollution Affect Our Productivity," The Sweaty Penguin (pbs.org), 2021.
- "What Mark Zuckerberg, Barack Obama, and MLB umpires can teach us about making better decisions," *Fortune* June 23, 2021
- "In hot weather, outdoor laborers work less—when economy is growing," *Phys.org*, Aug. 25, 2021.
- "Pollution exposure can raise flu risk," Mint, Nov. 12, 2020.
- "The economic case for fighting pollution to boost productivity," *Financial Times*, Sept. 17, 2019.
- "How Pollution Can Hurt the Health of the Economy," The New York Times, Nov. 27, 2018.
- "Smog in New York City could be affecting the stock market, new research says," interview with Steve Curwood for *Public Radio International's Living on Earth*, January 1, 2017.
- "Air Pollution Is Making Office Workers Less Productive," with Tom Chang, Joshua Graff Zivin, and Tal Gross, *Harvard Business Review*, September 29, 2016.
- "Cutting Fossil Fuel Pollution Should Make Children Healthier and More Productive," with Allison Larr, *Child and Family Blog*, August 19, 2016.
- "The Effect of Pollution on Worker Productivity: Evidence from Call-Centre Workers in China," with Tom Chang, Joshua Graff Zivin, and Tal Gross, *Vox-EU*, July 15, 2016.

GRANTS AND HONORS

- NYC Town + Gown, "Climate Vulnerability, Impact, and Adaptation Analysis."
 Role: Task lead.
 NICHD, "The Health and Education Impacts of Long-Run Exposure to Pollution in Childhood: Evidence from the US Army." Role: Co-I.
- 2022-2027 NIH, "GeoHealth Hub for Research and Training in Eastern Africa-US." Role: Co-I.
- 2021-2023 NIA, "The Health Impacts of Long-Run Exposure to Pollution in Adulthood and Later Life: Evidence from the US Army." Role: Co-I.
- 2020-2023 NHLBI, "Linking State Medicaid and Congenital Heart Surgery Registry Data: Building Capacity to Assess Disparities in Longitudinal and Value for Children

	with Congenital Heart Disease." Role: Co-I.
2020-2021	New York Presbyterian Hospital Service Agreement, "Postpartum Wellness
	Remote Monitoring Evaluation." Role: Co-I.
2016-2021	NIH, "Multi-level supermarket discounts of fruits and vegetables on intake and
	health." Role: Co-I.
2017-2019	HPM Investment Grant, "Air Pollution and Human Well-Being." Role: PI
2016-2019	FEMA, "Economic Recovery from Disasters Training Program." Role: Co-I.
2014-2019	NICHD, "Columbia Population Research Center." Role: Developmental Core Chair
2014-2017	Centers for Medicare and Medicaid Services, "CMMI - My Smile Buddy:
	Demonstrating the value of Technology-assisted non-surgical caries management in young children." Role: Co-I.
2010-2013	National Institute of Environmental Health Sciences, National Institutes of
2010-2013	Health, "The impact of environmental conditions on the productivity of
	agricultural workers." Role: PI.
2008-2013	National Institute of Nursing Research, National Institutes of Health,
	"Improving Antimicrobial Prescribing Practices in the Neonatal Intensive Care Unit." Role: Co-I.
2007-2012	National Institute of Nursing Research, National Institutes of Health,
	"Distribution of the Costs of Antimicrobial Resistant Infections." Role: Co-I.
2008-2009	Institute for Social and Economic Research and Policy (seed grant), "The impact
	of air quality on the productivity of agricultural workers." Role: PI.
2008-2009	NIEHS Center for Environmental Health in Northern Manhattan (seed grant),
2000 2009	"The impact of air quality on the productivity of agricultural workers." Role: PI.
2008-2009	Columbia Center for Homelessness Prevention Studies (seed grant), "The impact
2000 2009	of recent initiatives to end United States homelessness on measures of health
	utilization and health." Role: Co-PI.
2007-2008	Irving Institute Collaborative and Multidisciplinary Pilot Research (CaMPR)
2007 2000	Awards (seed grant), "Gravity Neutral Orthotic (GNO) - Design and evaluation
	of a novel rehabilitation device for people with severe physical disability." Role:
	Co-PI.
2005-2008	Environmental Protection Agency Science to Achieving Results Grant,
2000 2000	"Information, Altruism, and Regulation: Evidence from 'Spare the Air' Using a
	Regression Discontinuity Approach." Role: PI.
2005-2007	The Spencer Foundation, "Spillover Effects from Early Education: Evidence from
2002 2007	Head Start." Role: PI.
2005-2006	Calderone Research Prize (seed grant), "The Economic Value of Teeth: Evidence
	from Water Fluoridation." Role: PI.
2003-2004	California Center for Population Research Small Grants Program, "Air Pollution,
2000 200 .	Health, and Socio-Economic Status: Evidence from the Port of Los
	Angeles." Role: Co-PI.
2001-2002	Joseph L. Fisher Dissertation Award, Resources for the Future.
2001-2002	Outstanding Student Award, UCLA Program in Economic Demography.
2000-2001	Maternal and Child Health Training Grant (under Neal Halfon), Department of
222 -001	Health and Human Services.
2000	UC-Berkeley Russell Sage Summer Institute in Behavioral Economics, Attendee.
	, , , , , , , , , , , , , , , , , , , ,

1999-2000 Research Mentorship (under Janet Currie), UCLA Graduate Division.

PROFESSIONAL ACTIVITIES

JOURNALS

Editorial Board, Review of Environmental Economics and Policy, 2021-present Associate Editor, Journal of Human Resources, 2018-present Co-Editor, Journal of the Association of Environmental and Resource Economists, 2013-present

REFEREE

American Economic Journal: Applied Economics, American Economic Journal: Economic Policy, American Economic Review, American Journal of Epidemiology, American Journal of Public Health, B.E. Journal of Economic Analysis & Policy, Canadian Journal of Economics, Child Development, Community Dentistry and Oral Epidemiology, Contemporary Economic Policy, Eastern Economic Journal, Economic Inquiry, Economic Journal, Economics of Education Review, Economic Letters, Energy Economics, Environmental and Resource Economics, Environmental Science and Technology, Global Public Health, Health Affairs, Health Economics, Health Services Research, International Dental Journal, Journal of Environmental Economics and Management, Journal of Health Economics, Journal of Human Capital, Journal of Human Resources, Journal of the European Economic Association, Journal of Labor Economics, Journal of Policy Analysis & Management, Journal of Political Economy, Journal of Public Economics, Journal of Public Health Dentistry, Review of Economics of the Household, Review of Economics and Statistics, Review of Economic Studies, Proceedings of the National Academy of Sciences, Nature Energy, Science, Science of Total Environment, Sociology of Education, Southern Economic Journal, Quarterly Journal of Economics.