

**The Faculty of Medicine of Harvard University
Curriculum Vitae**

Date Prepared: January 9, 2024
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Education:

2005-2009	B.S. (with Honors)	Statistics	University of Michigan
2009-2013	M.D.	Medicine	Dartmouth Geisel School of Medicine
06/2019-05/2022	M.P.H.	Quantitative Methods	Harvard T.H. Chan School of Public Health

Postdoctoral Training:

07/13-06/14	Intern	Internal Medicine	Boston Medical Center
07/14-06/16	Resident	Internal Medicine	Boston Medical Center
07/16-06/17	Chief Resident & Chief Resident in Quality and Safety	Internal Medicine	Boston Medical Center; VA Boston Healthcare; Boston University School of Medicine
07/17-06/20	Clinical Fellow	Department of Medicine, Pulmonary/Critical Care	Massachusetts General Hospital; Beth Israel Deaconess Medical Center; Harvard Medical School
09/19-08/21	Research Fellow	Department of Health Care Policy	Harvard Medical School

Faculty Academic Appointments:

2016-2017	Instructor	Medicine	Boston University School of Medicine
2021-2023	Instructor in Medicine	Medicine	Harvard Medical School
2023	Assistant Professor of Medicine	Medicine	Harvard Medical School

Appointments at Hospitals/Affiliated Institutions:

2016-2019	Attending Physician	Internal Medicine	Boston Medical Center
2016-2020	Attending Physician	Internal Medicine	VA Boston Healthcare
2017-2020	Fellow	Pulmonary & Critical Care Medicine	Massachusetts General Hospital
2017-2020	Fellow	Pulmonary & Critical Care Medicine	Beth-Israel Deaconess Medical Center
2019-	Attending Physician	Pulmonary & Critical Care Medicine	Newton-Wellesley Hospital
2020-2021	Graduate Assistant	Pulmonary & Critical Care Medicine	Massachusetts General Hospital
2020-2023	Assistant in Medicine	Pulmonary & Critical Care Medicine	Massachusetts General Hospital
2023-	Assistant Physician	Pulmonary & Critical Care Medicine	Massachusetts General Hospital

Other Professional Positions:

2021-	Teaching Associate	Harvard Medical School Department of Health Care Policy
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Committee Service:

Local

2014-2016	Housestaff Quality Improvement Council	Boston Medical Center
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2015-2016	Dept. of Medicine Inpatient Leadership Group	Boston Medical Center
2015-2016	Clinical Learning Environment Review (CLER) Committee	Boston Medical Center
2016-2017	Hospital Acquired Infection Committee	VA Boston Healthcare
2016-2017	Inpatient Flow Committee	VA Boston Healthcare
	2016-2017	
2016-2017	Systems Improvement in the Medical Service Committee	VA Boston Healthcare
2021-	Committee on Diversity, Equity, and Inclusion	MGH Division of Pulmonary and Critical Care Medicine
2023-	Physician-Scientis Member, Institutional Review Board	Mass General Brigham

National

2016-2017	Executive Committee	Committee of Interns and Residents
2016-2017	Open School	Institute for Healthcare Improvement
	2016-2016	IHI National Forum Planning Committee
	2016-2017	Advisor
2021-	Early Career Working Group, Behavioral Science & Health Services Research Assembly	American Thoracic Society
	2021-2023	Co-Chair, Early Career Working Group, Behavioral Science & Health Services Research Assembly

Professional Societies:

2014-	Massachusetts Medical Society	
	2014-2016	Committee on Bylaws

	2015-2016	Secretary, Resident & Fellow Section
	2016-2017	Chair, Resident & Fellow Section
	2017-	Delegate, Suffolk District; Task Force on Health Insurance Coverage
	2019-2020	Trustee, Board of Trustees
2015-	Alpha Omega Alpha Honor Medical Society	
2015-	American Medical Association	
	2015-2016	Sectional Delegate to House of Delegates (Resident and Fellow Section)
	2015-2020	Delegate (Massachusetts) to Resident & Fellow Section
	2020-	Delegate to House of Delegates (American Thoracic Society)
2015-	American Thoracic Society	
	2021-	Co-Chair, BSHSR Early-Career Working Group
2016-	American College of Physicians	
2023	Massachusetts Thoracic Society	
	2023-	Education Committee

Editorial Activities:

Ad hoc Reviewer

Federal Practitioner

Sleep Medicine

Lancet Digital Health

Annals of Internal Medicine

Annals of the American Thoracic Society

Healthcare: The Journal of Delivery Science and Innovation

JAMA Network Open

Neurology

Journal of Intensive Care

Journal of Hospital Medicine

NEJM Evidence

JAMA Health Forum

CHEST Pulmonary

Environmental Epidemiology

BMJ

Other Editorial Roles

2017-2018	Editorial Fellow	JAMA Internal Medicine
2022	Associate Editor	Healthcare: The Journal of Delivery Science and Innovation

Honors and Prizes:

2006	Intramural Research Training Award	National Institutes of Health	Awarded competitive funding for summer research at the National Institute of Child Health and Human Development
2009	Excellence and Outstanding Academic Achievement in Statistics	University of Michigan	Awarded for Honors Thesis: "A stochastic model of retinal development in zebrafish"
2010	Scholarship for Summer Research	Dartmouth Geisel School of Medicine	Awarded for summer research at the National

			Institute on Minority Health and Health Disparities
2013	Urban Health Scholar Award	Dartmouth Geisel School of Medicine	Award for study, immersion, and advocacy in Urban Health
2014	Recognition for Teamwork and Collaboration with Nursing	VA Boston Healthcare	
2015	Alpha Omega Alpha Honor Medical Society	Boston University Chapter	Inducted into AOA after nomination by medical students and confirmation by faculty
2015	Scholarship for Academy for Emerging Leaders in Patient Safety	Committee of Interns and Residents	Awarded competitive scholarship for a week-long training in patient safety
2017	Appreciation for Advocacy, Leadership, and Service	CIR/SEIU Healthcare National Executive Committee	
2017	Recognition for Outstanding Leadership	Massachusetts Medical Society	
2017	Centers for Expertise in Health Policy and Management Grant	Partners Healthcare	Competitive grant supporting participation in the Academy Health National Health Policy Conference
2020	Centers for Expertise in Health Policy and Management Grant	Partners Healthcare	Competitive grant funding to complete the Value Based Health Care Delivery mini-course at Harvard Business School

2023	Leadership Development Program	Massachusetts General Hospital	Selected for and completed year-long competitive leadership training program for investigators
2023	2023 Must-Read Book List	Next Big Idea Club	Book, "Random Acts of Medicine"
2023	2023 Finalist in Economics	Goody Business Book Awards	Book, "Random Acts of Medicine"

Report of Funded and Unfunded Projects

Past

2016-2017	Quality Improvement Grant Boston Medical Center Investigator (PI: Worsham, \$2,000) Competitive grant supporting Intensive Care Unit infection control improvement project with the goal to reduce hospital acquired infections
2020-2022	Use of Prescription Opioids Following Surgery and Associated Adverse Patient Outcomes in Older Adults NIH (NIA); R56AG059620 Co-Investigator (PI: Jena) The opioid epidemic has increasingly affected older adults, a group that is particularly vulnerable to the adverse effects associated with opioid use. A common but little understood setting for new opioid prescriptions is following surgery, a time when older adults are particularly vulnerable to adverse effects of opioids given the fragmented nature of post-surgical care and patients' clinical fragility post-operatively. The proposed research will improve our understanding of the effects of opioid prescribing following surgery on long-term opioid use and opioid-related adverse outcomes in older adults, with a specific focus on using quasi-experimental research methods to demonstrate how individual surgeons and pain management techniques such as regional anesthesia may influence chronic prescription opioid use and opioid-related adverse outcomes following surgery.

Current

2021-2024	Prescribing of opioids at hospital discharge and associated adverse patient outcomes
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AHRQ; R01HS026753

Co-Investigator (PI: Jena)

Opioid prescribing rates have quadrupled in the United States over the past 25 years, with large effects on the older Medicare population, among whom hospitalization rates for opioid overdoses have grown over five-fold since 1993. An underappreciated potential avenue through which new opioid use begins among older Americans is after hospitalization for non-surgical, general medical conditions, which comprise nearly two-thirds of all hospitalizations in the US. The proposed grant will provide national estimates of the frequency of opioid prescribing at hospital discharge for Medicare beneficiaries hospitalized with general medical conditions, study the relationship of prescribing with adverse patient outcomes and long-term opioid use, and improve our understanding of the role of specific providers - both hospitals and physicians - in driving opioid prescribing at the time of hospital discharge.

2023-2028

Use of Inter-Hospital Transfer Services in Critical Illness and Acute Respiratory Failure

AHRQ; K08HS029197

PI (\$723,500)

Inter-hospital transfer of patients with critical illnesses like acute respiratory failure (ARF)—by ground or by air—is a common and costly practice in the U.S. critical care system despite a limited evidence base for its efficacy in improving outcomes and unknown cost-effectiveness. The proposed study will use commercial insurance and Medicare claims data to characterize national use patterns for inter-hospital transfer of the broad population of critically ill adult patients; estimate the effect on mortality of air compared to ground transfer of patients with ARF using a novel instrumental variables approach that takes advantage of random weather conditions; and perform a rigorous cost-effectiveness analysis of the use of air compared to ground inter-hospital transfer of patients with ARF. The results of this research will provide physicians, health systems, insurers, and governments with actionable evidence to inform decisions, resource allocation, and policy surrounding inter-hospital transfer within the U.S. critical care system.

Report of Local Teaching and Training

Teaching of Students in Courses:

2015-2016	Quality Improvement Curriculum	Boston University School of Medicine
	Small group leader, QI simulation leader	2 hours / week
	for 1st and 3rd year medical students	

2016-2017	Internal Medicine Clerkship 3rd year medical students	Boston University Medical Center; VA Boston Healthcare 2 hours / week
2021-2023	Essentials of the Profession II Final Presentations 4th Year Medical Students	Harvard Medical School 4 hours / year
2022-	Essentials of the Profession I 1st Year Medical Students	Harvard Medical School 10 hours / year Small group leader for Health Policy
2023-2023	Essentials of the Profession II 4th Year Medical Students	Harvard Medical School 6 hours / year Small group leader for Clinical Epidemiology and Population Health

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

2016-2017	Morning Report Residents	Boston University Internal Medicine 3 hours / week
2016-2017	Patient Safety Case Conference Residents	VA Boston Healthcare 2 hours / week
2017-2019	Critical Care Morning Conference Residents	MGH and BIDMC 10 hours / year
2018-2018	Basics of Pulmonary Function Testing Residents	Mass General Hospital 2 hours / year
2019	Critical Care Ultrasound Residents	MGH and BIDMC 5 hours / year

Clinical Supervisory and Training Responsibilities:

2021	Medical Intensive Care Unit Supervision Medical Residents	Massachusetts General Hospital 252 hours / year
2021-	Respiratory Acute Care Unit Supervision Pulmonary and Critical Care Fellows	Massachusetts General Hospital 120 hours / year

Research Supervisory and Training Responsibilities:

2020	Student Supervision Undergraduates, Medical Students, and Masters Students	Harvard Medical School Department of Health Care Policy 4.5 hours / week
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Other Mentored Trainees and Faculty:

2019-2021 Jaemin Woo, BA / PhD Candidate (Economics), Brown University
Mentored, tutored, and supervised research while he was a research assistant
at HMS-HCP
Several original research publications published in top medical journals

2019-2022 Nathan Varady, MD MBA / Orthopedic Surgery Resident, Hospital for
Special Surgery
Mentored and supervised research projects while he was a medical student at
Harvard Medical School and a resident physician at the Hospital for Special
Surgery
Original research publication studying non-financial conflicts of interest and
"spin" in reporting of research

2021-2021 David Shaw / Undergraduate, Harvard University
Mentored, tutored, and supervised research while he was a summer intern at
HMS-HCP while an undergraduate at Harvard
Published original research manuscript

2021- Charles Bray, BS / Research Assistant, Harvard Medical School
Mentored, tutored, and supervised research while a research assistant at HMS-
HCP (6 hours/week)
Several original research publications published in top medical journals

2022-2022 Daniel Arroyo-Ariza, MD / Post-doctoral research fellow, Massachusetts
General Hospital
Mentored in research and clinical areas while he was a post-doctoral research
fellow
Internal medicine residency match at Washington University in St. Louis

Formal Teaching of Peers (e.g., CME and other continuing education courses):

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

2016-2017	Medical Forum VA Boston Healthcare	6 one-hour clinical case conferences with expert discussants Boston, MA
2016-2017	Morbidity & Mortality VA Boston Healthcare	2 one-hour quality and safety case reviews Boston, MA
2017-2020	Pulmonary & Critical Care Grand Rounds MGH and BIDMC	6 one-hour clinical case conferences Boston, MA
2020-2022	Training to Teach Training to Teach: Egyptian Health Care System Educators (HMS Office of External Education)	10 one-hour online small group teaching sessions per year Virtual

Local Invited Presentations:

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

2015	“Evolution of Sepsis: Incorporating New Research Into the History of a Disease” / Invited Lecture Boston University Internal Medicine, Boston, MA
2018	“Critical Care Ultrasound” / Workshop Principles of Critical Medicine for Non-Intensive Care Specialists, Boston, MA
2019	“A Breathtaking Case of Vision Loss and Mental Status Changes” / Invited Lecture MGH Pulmonary & Critical Care 2019 Course, Boston, MA
2020	“Natural Experiments in Big Data” / Invited Lecture Brigham & Women’s Hospital Center for Evidence-Based Imaging, Boston, MA
2021	"Natural Experiments in Clinical Outcomes Research" Medical Grand Rounds / Grand Rounds Department of Medicine, VA Boston Healthcare

- 2021 "Gas Exchange" Resident Education / Invited Lecture
MGH Department of Medicine
- 2021 "Natural Experiments in Clinical Medicine" / Invited Lecture
Beth Israel Deaconess Center for Healthcare Delivery Science
- 2024 "Natural Experiments in Clinical Outcomes Research" / Invited Lecture
Mongan Institute, Massachusetts General Hospital

Report of Regional, National and International Invited Teaching and Presentations

Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.

Regional

- 2019 "HST 953: Collaborative Data Science in Medicine" / Clinical Course
Faculty
Massachusetts Institute of Technology
- 2020 "Advocacy Through Organized Medicine" / Lecture
Boston University School of Medicine, Boston, MA
- 2020 "Advocacy Through Writing for the Lay Press" / Lecture
Boston University School of Medicine, Boston, MA

National

- 2015 "A CLER Aim: Leveraging Trainees to Improve Healthcare" / Lecture
Institute for Healthcare Improvement 27th National Forum, Orlando, FL
- 2015 "Quality Improvement Virtual Practicum" / 4-hour Workshop
Institute for Healthcare Improvement 27th National Forum, Orlando, FL
- 2016 "Formal Debate: Patients Are Best Cared for with Virtual, On-Demand
Medicine" / Debate
Institute for Healthcare Improvement 28th National Forum, Orlando, FL
- 2019 "Using Technology to Your Advantage in Academic Medicine" / Presentation
& Panel
American Thoracic Society 2019, Dallas, TX

- 2019 "Using Technology to Your Advantage in Academic Medicine" / Webinar
American Thoracic Society 2019

- 2021 "A Day in the Life of Different Physicians: Health Care Policy Research" /
Lecture
PRIMES Mentorship Program, New York, NY

- 2021 "Axios Expert Voices: The Future of Climate Change and Lung Health" /
Online Panel / Expert Panelist
Web (Axios)

- 2022 "Perioperative Pain Management: Emphasizing the Role of Multi-Modal
Analgesia" / Webinar / Speaker
Online (Alosa Health for Pennsylvania Patient Safety Authority)

- 2022 "Axios Roundtable Conversation: The Impact of Climate Change on Human
Health" / Online Panel / Expert Panelist
Web (Axios)

- 2023 Transforming Cardiopulmonary Care: What Payers and Providers Need to
Know / Symposium
Web (AHIP/NuvoAir)

Report of Clinical Activities and Innovations

Past and Current Licensure and Certification:

- 2013 BLS/ACLS Certification, American Heart Association

- 2015 Institute for Healthcare Improvement Basic Certificate in Quality & Safety

- 2015 Institute for Healthcare Improvement Change Agent Network Scholar Certificate

- 2016 DEA Certificate

- 2016 Internal Medicine, American Board of Internal Medicine

- 2016 Massachusetts Controlled Substance Certificate

- 2016 Massachusetts Full Medical License

- 2020 Pulmonary Disease, American Board of Internal Medicine

- 2021 Critical Care Medicine, American Board of Internal Medicine

Practice Activities:

2016-2017	Medical Service Attending	Boston Medical Center	240 hours / year
2016-2017	Medical Service Attending	VA Boston Healthcare	240 hours / year
2016-2020	Nocturnist	VA Boston Healthcare	120 hours / year
2020-	Overnight Intensivist	Newton-Wellesley Hospital	60 hours / year
2020-	Overnight Intensivist	Massachusetts General Hospital	252 hours / year
2021	Critical Care Service Attending Physician	Massachusetts General Hospital	420 hours / year

Report of Teaching and Education Innovations

Novel Quality & Safety Graduate Medical Education (2018) As a Chief Resident in Quality and Safety, developed two teaching tools to teach core principles of health care quality improvement and patient safety to medical residents and students. The 60-Minute Root Cause Analysis helps teach principles of sentinel event response, and the Quality Improvement Simulator is a longer team exercise which gives participants simulated experience with plan-do-study-act cycles for improvement. Both have been published on MedEdPORTAL and have been adopted and modified in dozens of teaching curricula around the world.

Report of Education of Patients and Service to the Community

Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.

Activities

2017-2019	Massachusetts Medical Society National advocacy, advising Sen. Warren, Sen. Markey, Rep. Capuano, Rep. Kennedy, Rep. Pressley and staff on policy reform
2021-	PrIMES Mentorship Program Provide longitudinal, structured, individualized mentorship to a pre-medical student from an under-represented minority in medicine background.

- 2021- Impact Advisory Group
Asked by the City of Boston to serve on an impact advisory group to plan for construction of life sciences laboratories in Boston
- 2022-2022 Twitter, Inc. / Birdwatch Misinformation Program Feedback Team (unpaid)
Worked with developers at Twitter to provide feedback on the Birdwatch program designed to combat misinformation, such as about COVID-19
- 2023 Harvard Book Store / Speaker
Author Speaker: "Random Acts of Medicine"
- 2023 St. Louis County Library / Speaker
Author Speaker Series: "Random Acts of Medicine"
- 2023 Analysis Group / Speaker
Author Speaker: "Random Acts of Medicine"

Educational Material for Patients and the Lay Community:

Books, articles, and presentations in other media

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| 2016 | “Opinion: Let’s Talk About Residents’ Hours—And Their Scut’ Work Too.” | Op Ed | CommonHealth: Reform and Reality. Boston NPR. 2016 February 16. Web. https://www.wbur.org/commonhealth/2016/02/16/residents-hours-scut-work |
| 2017 | “Dear Tom Price: As you pursue Medicaid changes, remember your roots” | Op Ed | STAT News. 2017 February 27. Web. https://www.statnews.com/2017/02/27/tom-price-medicaid-changes/ |
| 2017 | “President Trump’s immigration ban will decrease veterans’ access to medical care” | Op Ed | STAT News. 2017 June 13. Web. https://www.statnews.com/2017/06/13/veterans-trump-immigration-ban/ |
| 2017 | "Blood Pressure Measurement: Who performs it, how useful is it, and why did | Forum Moderator | American Medical Association Integrated |

	medical students recently fail the AMA Blood Pressure Check Challenge?"		Health Model Initiative. Web.
2018	"Digital Health and Chronic Disease Management"	Forum Moderator	American Medical Association Integrated Health Model Initiative. Web.
2018	"Why Doctors Shouldn't Dismiss the Apple Watch's New ECG App"	Op Ed	Harvard Business Review. https://hbr.org/2018/10/why-doctors-shouldnt-dismiss-the-apple-watches-new-ecg-app
2019	"The Art of Evidence-Based Medicine"	Op Ed	Harvard Business Review. https://hbr.org/2019/01/the-art-of-evidence-based-medicine
2020	"How Much Does Voting Spread Viruses?"	Op Ed	New York Times
2020	"Where is Big Data when we need it most?"	Op Ed	The Hill. https://thehill.com/opinion/technology/494124-where-is-big-data-when-we-need-it-the-most
2020	"What Coronavirus Researchers Can Learn From Economists"	Op Ed	New York Times
2020	"If we want to beat covid-19, we need to get a lot better at vaccinating people"	Op Ed	Washington Post

2020	“Make Flu Shots Mandatory for School Openings”	Op Ed	Bloomberg
2020	“The curious link between kids’ birthdays and their getting the flu vaccine”	Op Ed	STAT. https://www.statnews.com/2020/07/31/curious-link-kids-birthdays-and-getting-flu-vaccine/
2020	“Twitter verified our medical expertise, but we are powerless to stop Covid-19 misinformation”	Op Ed	STAT. https://www.statnews.com/2020/10/15/twitter-let-verified-medical-experts-flag-covid-19-misinformation/
2021	"Insurers should cover energy costs for prescribed medical equipment"	Op Ed	STAT. https://www.statnews.com/2021/10/19/insurers-cover-cost-electricity-prescribed-medical-equipment/
2021	Facts Alone Aren’t Going to Win Over the Unvaccinated. This Might.	Op Ed	New York Times
2022	The successful failures’ of Apollo 13 and Covid-19 vaccination	Op Ed	STAT
2023	The Science of What We Eat Is Failing Us	Op Ed	New York Times
2023	Do Younger or Older Doctors Get Better Results?	Essay	Wall Street Journal

2023	How did E-ZPass help expectant mothers who live near toll booths?	Essay	Harvard Gazette. https://news.harvard.edu/gazette/story/2023/07/book-excerpt-from-random-acts-of-medicine/
2023	Random Acts of Medicine: The Hidden Forces That Sway Doctors, Impact Patients, and Shape Our Health	Book	Doubleday/Penguin Random House (ISBN: 978-0385548816)
2023	Why kids with summer birthdays face surprising health risks	Op Ed	Los Angeles Times
2023	The Surprising Link Between Thunderstorms and Asthma	Op Ed	Wall Street Journal

Report of Scholarship

ORCID: 0000-0002-1611-6871

Peer-Reviewed Scholarship in print or other media:

Research Investigations

1. **Worsham CM**, Martin ST, Nouraie SM, Cohen RT, Klings ES. Clinical and laboratory findings associated with sleep disordered breathing in sickle cell disease. *Am J Hematol.* 2017 Dec;92(12):E649-E651. PMID: 28833466, <https://doi.org/10.1002/ajh.24892>
2. Zimmerman A, **Worsham C**, Woo J, Jena AB. The need for speed: observational study of physician driving behaviors. *BMJ.* 2019 Dec 18;367:l6354. PMID: 31852682, PMCID: PMC7191945, <https://doi.org/l6354>
3. **Worsham C**, Woo J, Jena AB. Birth Month and Influenza Vaccination in Children. *N Engl J Med.* 2020 Jul 9;383(2):184-185. PMID: 32640138, PMCID: PMC7386461, <https://doi.org/10.1056/NEJMc2005928>
4. Maley JH, **Worsham CM**, Landon BE, Stevens JP. Association between Palliative Care and End-of-Life Resource Use for Older Adults Hospitalized with Septic Shock. *Ann*

Am Thorac Soc. 2020 Aug;17(8):974-979. PMID: 32275846, PMCID: PMC7531025, <https://doi.org/10.1513/AnnalsATS.202001-038OC>

5. Zou E, **Worsham C**, Miller NH, Molitor D, Reif J, Jena AB. Emergency Visits for Thunderstorm-Related Respiratory Illnesses Among Older Adults. *JAMA Intern Med.* 2020 Sep 1;180(9):1248-1250. PMID: 32777000, PMCID: PMC7418045, <https://doi.org/10.1001/jamainternmed.2020.1672>
6. Shoults B, Barber M, Millham L, Mulla M, Nanji N, Steele G, Peck T, Smithedajkul P, **Worsham C**, Currier P, Raphaely RA. Feasibility and Limitations of Proning Protocol for Nonintubated Patients With COVID-19. *J Patient Exp.* 2021;8:2374373520981486. PMID: 34179358, PMCID: PMC8205337, <https://doi.org/2374373520981486>
7. Varady NH, **Worsham CM**, Jena AB. Analysis of institutional conflict of interest and bias in research findings and reporting. *Healthc (Amst).* 2021 Mar;9(1):100515. PMID: 33517178, <https://doi.org/10.1016/j.hjdsi.2020.100515>
8. **Worsham CM**, Woo J, Jena AB, Barnett ML. Adverse Events And Emergency Department Opioid Prescriptions In Adolescents. *Health Aff (Millwood).* 2021 Jun;40(6):970-978. PMID: 34097510, PMCID: PMC8654605, <https://doi.org/10.1377/hlthaff.2020.01762>
9. Kahn PA, **Worsham CM**, Berland G. Characterization of Prescription Patterns and Estimated Costs for Use of Oxygen Concentrators for Home Oxygen Therapy in the US. *JAMA Netw Open.* 2021 Oct 1;4(10):e2129967. PMID: 34665242, PMCID: PMC8527353, <https://doi.org/e2129967>
10. **Worsham CM**, Woo J, Zimmerman A, Bray CF, Jena AB. Association of Maternal Cervical Disease With Human Papillomavirus Vaccination Among Offspring. *JAMA Netw Open.* 2021 Dec 1;4(12):e2134566. PMID: 34902041, PMCID: PMC8669541, <https://doi.org/e2134566>
11. **Worsham CM**, Woo J, Kearney MJ, Bray CF, Jena AB. Carbon Monoxide Poisoning during Major U.S. Power Outages. *N Engl J Med.* 2022 Jan 13;386(2):191-192. PMID: 35020991, <https://doi.org/10.1056/NEJMc2113554>
12. **Worsham C**, Woo J, Zimmerman A, Bray CF, Jena AB. An Empirical Assessment of Reviewer 2. *Inquiry.* 2022;59:469580221090393. PMID: 35506674, PMCID: PMC9073107, <https://doi.org/00469580221090393>
13. Varady NH, **Worsham CM**, Chen AF, Smith EL, Woo J, Jena AB. Inappropriate prescribing of opioids for patients undergoing surgery. *Proc Natl Acad Sci U S A.* 2022

Dec 6;119(49):e2210226119. PMID: 36442133, PMCID: PMC9894214,
<https://doi.org/e2210226119>

14. Cron DC, **Worsham CM**, Adler JT, Bray CF, Jena AB. Organ Donation and Transplants During Major US Motorcycle Rallies. *JAMA Intern Med.* 2023 Jan 1;183(1):22-30. PMID: 36441514, PMCID: PMC9706401, <https://doi.org/10.1001/jamainternmed.2022.5431>
15. **Worsham CM**, Zimmerman A, Woo J, Shaw D, Jena AB. Association between UFO sightings and emergency department visits. *Am J Emerg Med.* 2023 Apr;66:164-166. PMID: 36681598, <https://doi.org/10.1016/j.ajem.2023.01.022>
16. Goodwin Cartwright BM, Wang M, Rodriguez P, Stewart S, **Worsham CM**, Stucky N, Jena AB. Changes in Minoxidil Prescribing After Media Attention About Oral Use for Hair Loss. *JAMA Netw Open.* 2023 May 1;6(5):e2312477. PMID: 37159202, PMCID: PMC10170338, <https://doi.org/e2312477>

Other peer-reviewed scholarship

1. **Worsham C**, Ackrivo J, Breu AC. Prompt Extubation After Intensive Care Unit Procedures: A Teachable Moment. *JAMA Intern Med.* 2015 Sep;175(9):1447-1448. PMID: 26193488, <https://doi.org/10.1001/jamainternmed.2015.3656>
2. Ganatra RB, Swamy L, **Worsham C**, Frosch Z, Breu AC. A Mission for Graduate Medical Education at VA. *Fed Pract.* 2017 Oct;34(10):12-15. PMID: 30766234, PMCID: PMC6370407
3. Roy PJ, **Worsham C**. Treating the "Wake-up Call" of Alcohol Use: A Teachable Moment. *JAMA Intern Med.* 2017 Dec 1;177(12):1849-1850. PMID: 29059276, <https://doi.org/10.1001/jamainternmed.2017.5502>
4. **Worsham C**, Swamy L, Gilad A, Abbott J. Quality Improvement Virtual Practicum: The QI Simulator. *MedEdPORTAL.* 2018 Jan 19;14:10670. PMID: 30800870, PMCID: PMC6342354, <https://doi.org/10670>
5. Swamy L, **Worsham C**, Bialas MJ, Wertz C, Thornton D, Breu A, Ronan M. The 60-Minute Root Cause Analysis: A Workshop to Engage Interdisciplinary Clinicians in Quality Improvement. *MedEdPORTAL.* 2018 Feb 15;14:10685. PMID: 30800885, PMCID: PMC6342415, <https://doi.org/10685>
6. Sclafani A, **Worsham CM**, McNeill J, Anandaiah A. Advances in Interstitial Lung Disease Genetics. *Am J Respir Crit Care Med.* 2019 Jul 15;200(2):247-249. PMID: 31014082, <https://doi.org/10.1164/rccm.201902-0471RR>

7. **Worsham CM**, Barnett ML. The Role of the Household in Prescription Opioid Safety. JAMA Netw Open. 2020 Mar 2;3(3):e201108. PMID: 32219402, <https://doi.org/10.1001/jamanetworkopen.2020.1108>
8. **Worsham CM**, Banzett RB, Schwartzstein RM. Air Hunger and Psychological Trauma in Ventilated Patients with COVID-19. An Urgent Problem. Ann Am Thorac Soc. 2020 Aug;17(8):926-927. PMID: 32501114, PMCID: PMC7393786, <https://doi.org/10.1513/AnnalsATS.202004-322VP>
9. **Worsham CM**, Banzett RB, Schwartzstein RM. Dyspnea, Acute Respiratory Failure, Psychological Trauma, and Post-ICU Mental Health: A Caution and a Call for Research. Chest. 2021 Feb;159(2):749-756. PMID: 33011205, PMCID: PMC7528739, <https://doi.org/10.1016/j.chest.2020.09.251>
10. **Worsham CM**, Jena AB. Recent Improvements in Data From the Gun Violence Archive-Will They Lead to Change?. JAMA Netw Open. 2023 Jun 1;6(6):e2316512. PMID: 37266945, <https://doi.org/10.1001/jamanetworkopen.2023.16512>

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Letters to the Editor

1. **Worsham C**, Jena AB. More on Carbon Monoxide Poisoning during Major U.S. Power Outages. Reply. N Engl J Med. 2022 Apr 7;386(14):1387. PMID: 35388685, <https://doi.org/10.1056/NEJMc2201981>

Professional educational materials or reports, in print or other media:

1. "Breathe Easy: Caring for Patients in Law Enforcement Custody." Podcast, American Thoracic Society (Host)
2. Perioperative Pain Management. Print CME material, Alosa Health (Primary author)
3. Chronic Pain Management. Print CME material, Alosa Health (Editor)
4. "Breathe Easy: Vaccine Hesitancy in the Modern Age." Podcast, American Thoracic Society (Invited Guest)

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