

Harvard Medical School Curriculum Vitae

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Name: William B. Feldman

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Education

2004	B.A. (<i>summa cum laude</i>)	Philosophy	Duke University, Durham, NC
2007	M.Phil.	Political Theory	University of Oxford, Oxford, UK
2011	D.Phil.	Political Theory (Advisor: Simon Caney)	University of Oxford
2015	M.D.	Medicine	University of California, San Francisco (UCSF) School of Medicine, San Francisco, CA
2020	M.P.H.	Clinical Effectiveness	Harvard T.H. Chan School of Public Health (HSPH), Boston, MA

Postdoctoral Training

06/2015-06/2017	Resident	Internal Medicine	Brigham and Women's Hospital (BWH), Boston, MA
07/2017-06/2020	Clinical Fellow	Pulmonary and Critical Care Medicine	BWH
09/2019-03/2022	Research Fellow (Mentor: Aaron Kesselheim)	Pharmacoepidemiology and Pharmacoeconomics	BWH

Faculty Academic Appointments

03/2022-03/2024	Instructor	Medicine	Harvard Medical School (HMS), Boston, MA
04/2024-	Assistant Professor	Medicine	HMS

Appointments at Hospitals/Affiliated Institutions

05/2019-	Associate Physician	General Internal Medicine and Primary Care	BWH
07/2020-	Associate Physician	Pulmonary and Critical Care Medicine	BWH
03/2022-	Associate Scientist (Investigator)	Pharmacoeconomics and Pharmacoeconomics	BWH
03/2022-	Faculty Member	Program On Regulation, Therapeutics, And Law (PORTAL)	BWH
10/2024-	Faculty Member	Center for Bioethics	HMS

Other Professional Positions

2019	Consultant (Speaker)	Blue Cross Blue Shield of Massachusetts, Boston, MA	
2019-2020	Consultant	Aetion, Boston, MA	
2022-2024	Expert Witness	Sharp Law, Prairie Village, KS	5 days per year
2019-	Consultant	Alosa Health, Boston, MA	12.5 days per year

Major Administrative Leadership Positions**Local**

2020-2023	Co-Leader, Pulmonary Clinical Work-in-Progress Series	Division of Pulmonary and Critical Care Medicine, BWH
2022-	Co-Chair, Ethics Committee	BWH
2022-	Associate Director, Ethics Consult Service	BWH

Committee Service**Local**

2011-2014	Committee on Curriculum and Education Policy	UCSF
2012-2013	Teaching Awards Committee	UCSF
2014-2015	Graduation Committee	UCSF
2015-2017	Resident Task Force	Phyllis Jen Center, BWH
2016-2017	Intern Curriculum Committee	Department of Medicine, BWH
2020-2021	COVID Ethics Working Group	BWH
2020-	Fellowship Selection Committee	Division of Pulmonary and Critical Care Medicine, BWH
2022-	Post-Doctoral Fellowship Interviewer	Program on Regulation, Therapeutics, and Law (PORTAL), BWH
2022-2024	Equity Domain Team	Department of Quality and Safety, BWH
2023-2024	Housestaff Mentoring Program	Department of Medicine, Brigham and Women's Hospital
2023-	Fellowship Interviewer	Division of General Internal Medicine, BWH
2023-	Metered-Dose Inhaler Initiative	Mass General Brigham

Professional Societies

2019-	American Thoracic Society	Member
2020-	American College of Chest Physicians	Member

Grant Review Activities

2019	Patient Centered Approach to Research Enrollment in Acute Cardiovascular Disease	Patient Centered Outcomes Research Institute
2021	Medical Research Council	Grant Reviewer United Kingdom Research and Innovation Grant Reviewer

Editorial Activities

Ad hoc Reviewer

American Journal of Epidemiology
American Journal of Managed Care
American Journal of Respiratory and Critical Care Medicine
Annals of Internal Medicine
Applied Health Economics and Health Policy
BMC Public Health
BMJ
BMJ Open
Chest Pulmonary
Chronic Obstructive Pulmonary Diseases
Clinical Trials
Drug Delivery
Expert Review of Respiratory Medicine
JAMA
JAMA Health Forum
JAMA Internal Medicine
JAMA Network Open
Journal of Academic Ethics
Journal of General Internal Medicine
Journal of Hospital Medicine
Journal of Investigative Medicine
Journal of Law, Medicine & Ethics
Health Affairs
Health Services Research
Neurology
New England Journal of Medicine
Pharmacoepidemiology & Drug Safety
PLOS Medicine
Trials

Other Editorial Roles

2024-	Editorial Board Member	Journal of Law, Medicine & Ethics
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Book/Textbook Editorial Roles

2025	Institute for Clinical and Economic Review	Special Assessment to Inform CMS Drug Price Negotiations: Trelegy Ellipta and Breo Ellipta for Patients with COPD Expert Reviewer
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Honors and Prizes

2000-2004	Benjamin N. Duke Scholarship (full tuition)	Duke University	Leadership
2000-2004	Dean's List with Distinction (all semesters present)	Duke University	Academic excellence
2002	Phi Beta Kappa (junior induction)	Duke University	Academic excellence
2004-2005	Fulbright fellowship	University of Haifa	Research
2005-2008	United Kingdom Overseas Research Scholarship	University of Oxford	Research
2005-2009	Nuffield College Studentship (partial)	University of Oxford	Research
2007-2008	Department of Politics Bursary	University of Oxford	Research
2010-2011	Dissertation Fellowship	Harry Frank Guggenheim Foundation	Research
2012	Dean's Summer Research Scholarship	UCSF	Research
2015	Alpha Omega Alpha	UCSF	Academic excellence
2018	Department of Medicine Fellowship Teaching Award	BWH	Teaching
2018, 2020	Top peer reviewer	<i>Annals of Internal Medicine</i>	Peer review
2019-2020	Zuckerman Fellowship (full tuition)	HSPH	Academic excellence
2019-2022	Division of Pulmonary and Critical Care, T32 Training Grant	BWH	Research
2021	Young Investigator Award	American College of Chest Physicians	Research
2022-2024	Loan Repayment Program Award	National Institutes of Health (NIH)	Research
2023	Department of Medicine Chair's Research Award	BWH	Research
2024	Excellence in Professionalism Award	BWH	Leadership
2024	Department of Medicine Chair's Research Award	BWH	Research

Report of Funded and Unfunded Projects

Funding Information

Past

- 2022-2023 The Ethics of Implementing Coronavirus Vaccines: Independence, Transparency, and Social Confidence
Greenwall Foundation
PI (\$190,245)
This project examines factors associated with trust in the Food and Drug Administration during the Coronavirus pandemic.
- 2022-2023 Improving the Efficiency of the US Drug Market for Patient Benefit: Patents, Regulation, and Drug Innovation
Commonwealth Fund
Co-Investigator (PI: Aaron Kesselheim, MD, JD, MPH)
This project analyzes how pharmaceutical companies have relied on the patent and regulatory system in the United States to extend periods of market exclusivity on brand-name drugs, and it explores policies to promote innovation in the pharmaceutical system.
- 2022-2024 The 340B Drug Pricing Program: Evolution, Economics, and Prescriptions for Reform
Arnold Ventures
Co-Investigator (PI: Ameet Sarpatwari, JD, MPH)
This project explores the 340B Prescription Drug Pricing Program with a particular focus on how hospitals rely on this program to generate revenue on clinician-administered drugs.
- 2022-2024 Factors that Influence Physicians' Antimicrobial Drug Prescribing Decisions: Informing Drug Development and Approval Process
Arnold Ventures
PI (\$419,246)
This project aims to identify and evaluate the factors that influence antimicrobial drug prescribing and to inform future drug development and approval decisions so that they better align with patients' and physicians' needs and priorities.

Current

- 2022-2027 Improving COPD Outcomes: Using Real-World Data to Analyze Treatment Effectiveness, Safety, and Adherence
NIH/National Heart, Lung, and Blood Institute K08HL163246
PI (\$767,773)
This project aims to investigate the comparative effectiveness and safety of therapies for COPD and to develop a clinical prediction rule for inhaler adherence using a longitudinal healthcare database. The goal is to supplement existing data from randomized controlled trials to refine treatment strategies for COPD and thereby improve clinical outcomes.
- 2023-2025 Improving the Efficiency of the US Drug Market for Patient Benefit: Patents, Regulation, and Drug Innovation
Commonwealth Fund
Co-Investigator (PI: Aaron Kesselheim, MD, JD, MPH)
This project analyzes how pharmaceutical companies have relied on the patent and regulatory system in the United States to extend periods of market

2024-2027	exclusivity on brand-name drugs, and it explores policies to promote innovation in the pharmaceutical system.
	<p>The Safety of Switching Between Complex Branded and Generic Drugs: Developing a Semi-Automated Sequential Surveillance System Using Tree-Based Scan Statistics</p> <p>Food and Drug Administration 1U01FD008316</p> <p>Co-PI (\$1,298,060)</p> <p>The project develops a principled, scalable, and reproducible approach for rigorous and timely evaluation of the safety and effectiveness of generic drug-device combinations compared to brand-name reference products using large longitudinal healthcare datasets in the post-marketing setting. Using 3 recently approved generic drug-device combinations, the project involves a description of utilization patterns, evaluation of comparative effects, and systematic screening for unsuspected safety issues.</p>

Report of Local Teaching and Training

Teaching of Students in Courses

HMS/HSDM/DMS Courses

2022-2024	Essentials of the Profession (PWY120) Small-group facilitator 1 st year medical students	HMS 6 hours per week for 4 weeks per year
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Clinical Supervisory and Training Responsibilities

2022-	Medical Intensive Care Unit Attending Residents and fellows	BWH 60 hours per week for 4 weeks per year
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Laboratory and Other Research Supervisory and Training Responsibilities

2022-	Supervision of research in the Program On Regulation, Therapeutics, And Law (PORTAL) Undergraduates, master's students, medical students, medical residents, and postdoctoral fellows	BWH 16 hours per week for 48 weeks per year
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Formally Mentored Harvard Medical, Dental, Graduate, and Undergraduate Students

2021-2023	T. Anders Olsen, Harvard Kennedy School Class of 2023 Oversight of a research project on patenting insulin drug-device combinations, leading to 1 first-authored original research investigation, "Patents and Non-Patent Statutory Exclusivities on FDA-Approved Insulin Products, 1986-2019" (<i>PLOS Medicine</i>).
2021-2023	Sanjay Reddy, Harvard Kennedy School Class of 2023 Oversight of a research project on patent challenges and litigation on inhaler for asthma and COPD, leading to 1 first-authored original research investigation, "Patent Challenges and Litigation on Inhalers for Asthma and COPD" (published in <i>Health Affairs</i>).
2021-2024	Brandon Demkowicz, Harvard College Class of 2024

Oversight of a research project on inhaler delivery device patents, leading to 1 first-authored original research investigation, “Patent strategies on inhaler delivery devices” (published in *Chest*), and oversight of senior thesis comparing the effectiveness and safety of fluticasone-salmeterol metered-dose inhalers vs. dry powder inhalers in COPD.

2023- Jin Park, Harvard Medical School Class of 2024
Oversight of a research project on patenting practices and litigation on steroid-containing pharmaceutical products.

Other Mentored Trainees and Faculty

2022-2023 Benjamin Liu, MD / Resident physician, Beth Israel Deaconess Medical Center, Boston, MA
Career stage: Resident. *Mentoring role:* Supervision of a research project on the 340B Drug Pricing Program. *Accomplishments:* 1 first-authored original research investigation (published in *Health Services Research*).

2022-2024 Edward Cliff, MBBS, MPH / Post-doctoral fellow, BWH, Boston, MA
Career stage: Postdoctoral fellow. *Mentoring role:* Supervision of research related to drug-pricing. *Accomplishments:* 2 first-authored original research investigation (1 published in *JAMA Network Open* and 1 under review) and 1 perspective (published in the *Journal of Clinical Oncology*).

2022-2024 Rasha Alhiary, PharmD / Research scientist, BWH, Boston, MA
Career stage: Research scientist. *Mentoring role:* Supervision of a research project on the patenting practices and litigation on glucagon-like peptide 1 (GLP-1) receptor agonists. *Accomplishments:* 2 first-authored original research investigations (both published in *JAMA*).

2023-2024 Jelle Stoelinga, BA / Master’s student, Utrecht University, Utrecht, the Netherlands
Career stage: Master’s student. *Mentoring role:* Supervision of a research project comparing supplemental indications added to oncology drugs approved in the United States and European Union. *Accomplishments:* 1 first-authored research investigation (published in the *European Journal of Cancer*).

2022- Adam Raymakers, PhD / Post-doctoral fellow, BWH, Boston, MA
Career stage: Postdoctoral fellow. *Mentoring role:* Supervision of research related to drug-pricing. *Accomplishments:* 1 first-authored original research investigation on the price of gene therapy (published in *JAMA Dermatology*) and 2 others in preparation on health technology assessments and patenting practices on medications to treat HIV.

2023- Anushka Bhaskar, MPhil / Research scientist, BWH, Boston, MA
Career Stage: Research scientist. *Mentoring role:* Supervision of research related to drug-pricing. *Accomplishments:* 1 first-authored original research investigation in preparation on the evaluation of medications to treat cystic fibrosis.

2023- Advaita Krishnan / Undergraduate student, Emory University, Atlanta, GA
Career stage: Undergraduate student. *Mentoring roll:* Supervision of research related to FDA regulation. *Accomplishments:* 1 first-authored original research investigation in preparation on the frequency and typology of drug reformulation in the United States, 1984-2023.

2023 Dongzhe Hong/ Post-doctoral fellow, BWH, Boston, MA
Career Stage: Postdoctoral fellow. *Mentoring role:* Supervision of research related to antibiotic prescribing. *Accomplishments:* 1 first-authored research investigation (published in the *Journal of General Internal Medicine*).

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

No presentations below were sponsored by outside entities.

2024	Pharmacoepidemiology and Pharmacoeconomics of Asthma Update on Severe Asthma Harvard Medical School	1 talk Boston, MA
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Local Invited Presentations

No presentations below were sponsored by outside entities.

2018	Vasopressors in Septic Shock: History, Controversy, and the Future / Grand Rounds Division of Pulmonary and Critical Care Medicine, BWH, Boston, MA
2018	Exception from Informed Consent and the IMMEDIATE Trial (with Joni Beshansky and Bizu Gelaye) / Research Ethics Consortium Center for Bioethics, HMS, Boston, MA
2018	Bypassing Informed Consent in Critical Care Trials / Grand Rounds Division of Pulmonary and Critical Care Medicine, BWH, Boston, MA
2021	The High Costs of Treating Asthma in the United States / Research Conference Division of Allergy and Immunology, BWH, Boston, MA
2022	Unilateral Do Not Resuscitate Orders / Clinical Ethics Consortium Center for Bioethics, HMS, Boston, MA
2022	Unconsented: Research Conducted with Exceptions to Informed Consent / Health policy and bioethics consortium (with Neal Dickert and Carrie Sims) Center for Bioethics, HMS, Boston, MA
2023	Inhalers, patents, the FDA, and Asthma / Asthma Grand Rounds Mass General Brigham, Boston, MA

Report of Regional, National and International Invited Teaching and Presentations

Invited Presentations and Courses

No presentations below were sponsored by outside entities.

Regional

2019	Therapeutic Interchange: Opportunities and Challenges to Reduce Unnecessary Prescription Drug Spending (with Benjamin Rome) / Invited Presentation Blue Cross Blue Shield of Massachusetts, Boston, MA
2021	The High Costs of Treatment for Asthma and COPD in the US / Invited Presentation Division of Pulmonary and Critical Care Medicine, Yale University, New Haven, CT
2024	Drug-Device Combinations: Patents, Litigation, and Barriers to Generic Competition / Invited Presentation / Invited Presentation Richard A. and Susan F. Smith Center for Outcomes Research, Beth Israel Deaconess Hospital, Boston, MA
2025	The High Costs of Inhalers for Asthma and COPD: Patents, Litigation, and FDA Generic Approval Standards / Invited Presentation Brigham and Women's Faulkner Hospital, Department of Medicine Grand Rounds, Boston, MA

National

- 2021 Estimating Rebates and Other Discounts in Medicare Part D (with Aaron Kesselheim) / Invited Presentation
Program in Health Economics and Outcomes Research Methodologies, School of Pharmacy, University of Washington, Seattle, WA
- 2021 COPD Exacerbations and Pneumonia Hospitalizations in New Users of Combination Maintenance Inhalers / Invited Presentation
Division of Pulmonary and Critical Care Medicine, University of Pittsburgh Medical Center, Pittsburgh, PA
- 2022 Patents and Regulatory Exclusivities on Inhalers to Treat Asthma and COPD / Invited Presentation
Office of Generic Drugs, US Food and Drug Administration, Silver Spring, MD
- 2023 Trust in the FDA During the COVID-19 Pandemic / Invited Presentation
AcademyHealth and American Board of Internal Medicine Trust Research Group, New York, NY
- 2023 Metered-Dose Inhalers: Small Devices, Big Climate Impact (with Gregg Furie and Brian Chesebro) / Invited Presentation
CleanMed 2023, Pittsburgh, PA
- 2023 Comparative Effectiveness and Safety of Generic vs. Brand-Name Fluticasone-Salmeterol to Treat COPD / Invited Presentation
Office of Generic Drugs, US Food and Drug Administration, Silver Spring, MD
- 2024 Improving Respiratory Care for Patients and the Planet: Addressing the Environmental Impact of Metered Dose Inhalers (with Gregg Furie) / Invited Presentation
American Medical Association Council on Science and Public Health, Chicago, IL
- 2024 Barriers to Entry for Generic Drug-Device Combinations in the US / Invited Presentation
Center for Research on Complex Generics, Rockville, Maryland
- 2024 The High Costs of Inhalers for Asthma and COPD: Patents, Litigation, and Opportunities for Reform / Invited Presentation
Hoop Lecture and Visiting Professorship, Pulmonary and Critical Care Medicine Grand Rounds, Massachusetts General Hospital, Boston, MA
- 2024 Exploring the Facts: Are Patent Thickets Real and Do They Delay Competition? (with Sean Tu, Bernard Chao, and Rachel Goode) / Invited Presentation
The ERISA Industry Committee, Washington, DC
- 2024 The High Costs of Inhalers for Asthma and COPD: Patents, Litigation, and FDA Generic Approval Standards / Invited Presentation
University of California San Diego, Skaggs School of Pharmacy and Pharmaceutical Science, San Diego, CA
- 2025 The High Costs of Inhalers for Asthma and COPD: Patents, Litigation, and FDA Generic Approval Standards / Invited Presentation
University of California Los Angeles, Pulmonary and Critical Care Medicine Grand Rounds, Los Angeles, CA

National Abstract Oral Presentations

- 2021 COPD Exacerbations and Pneumonia Hospitalizations in New Users of Combination Maintenance Inhalers
Annual Meeting, American College of Chest Physicians, Virtual Meeting
- 2022 Patents and Regulatory Exclusivities on Inhalers for Asthma and COPD, 1986-2020
Annual Meeting, American Thoracic Society, San Francisco, CA
- 2023 Comparative Effectiveness of Brand-name vs. Generic Fluticasone-Salmeterol Inhalers to Treat COPD

Annual Meeting, American Thoracic Society, Washington, DC

International

- 2023 The High Costs of Pharmaceuticals to Treat Asthma and COPD in the United States /
Invited Presentation
Department of Health Policy, London School of Economics and Political Science,
London, United Kingdom
- 2023 "Patent Evergreening" on Drug-Device Combination Products: A Phenomenon in the
US and Abroad / Research Conference
Faculty of Pharmacy, University of Toronto, Toronto, Canada

International Abstract Oral Presentations

- 2023 Comparative effectiveness of generic versus brand-name fluticasone-salmeterol dry
powder inhalers to treat COPD
International Conference of Pharmacoepidemiology, Halifax, Nova Scotia, Canada
(International Society of Pharmacoepidemiology)

Report of Clinical Activities and Innovations

Past and Current Licensure and Certification

- 2017 National Board of Medical Examiners Certification
2017 Massachusetts Board of Registration in Medicine License
2018 American Board of Internal Medicine, Internal Medicine Certification
2020 American Board of Internal Medicine, Pulmonary Disease Certification
2023 American Board of Internal Medicine, Critical Care Certification

Practice Activities

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| 2022- | Medical Intensive Care Unit | BWH | 60 hours per week (4 weeks/year) |
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Report of Education of Patients and Service to the Community

No presentations below were sponsored by outside entities.

Activities

- 2024 T1 International
Lecture to patient advocates (with Rasha Alhiary) on opportunities for patent reform
on glucagon-like peptide-1 (GLP-1) receptor agonists.
- 2024 United States Senate Judiciary Committee
Testimony on patent thickets, product hops, and barriers to generic competition.
- 2024 Ohio Hospital Association
Lecture to hospital representatives (with Gregg Furie) on the environmental impact of
metered-dose inhalers.

Educational Material for Patients and the Lay Community

Books, monographs, articles and presentations in other media

- 2020 Liu M, **Feldman WB**, Avorn J, Kesselheim AS. March-in-Rights and Compulsory Licensing—Safety Nets for Access to a COVID-19 Vaccine. *Health Affairs Blog*, May 6, 2020. Available at:
<https://www.healthaffairs.org/doi/10.1377/hblog20200501.798711/full/>.

Articles in newspapers or magazines

- 2020 Sadovnikoff N, Jurchak M, Milliken A, **Feldman WB**, Goralnick E. Ventilators: Harsh Realities, Wrenching Decisions. *New York Times*, April 9, 2020.
- 2023 **Feldman WB**, Kesselheim AS. How the Makers of Inhalers Keep Prices So High. *Washington Post*, June 1, 2023.

Recognition

- 2017 Publicity on research relating to recruitment in stroke trials published in *Stroke*
Reuters: <https://www.reuters.com/article/us-health-research-stroke/stroke-research-trials-struggle-to-get-enough-participants-idUSKBN15E2K7> (January 20, 2017)
Medscape:
<https://www.medscape.com/viewarticle/875606> (February 9, 2017)
- 2018-2020 Publicity on research relating to informed consent in emergency clinical research published in *Health Affairs*
STAT:
<https://www.statnews.com/2018/10/01/african-americans-clinical-trials/> (October 1, 2018)
Politico:
<https://www.politico.com/newsletters/politico-pulse/2018/10/02/trumps-short-term-health-plans-have-arrived-358947> (October 2, 2018)
Reuters Health News:
<https://www.mdlinx.com/emergency-medicine/top-medical-news/article/2018/10/08/7546293/> (October 8, 2018)
Regulatory Focus:
<https://www.raps.org/news-and-articles/news-articles/2019/7/fda-should-build-greater-public-consensus-on-appro> (July 24, 2019)
USA Today:
<https://www.usatoday.com/story/news/health/2020/06/14/festering-racial-bias-health-care-factor-covid-19-disparities/5320187002/> (June 14, 2020)
- 2019-2020 Publicity on research relating to pharmaceutical costs in asthma and COPD published in *JAMA Internal Medicine* and *Annals of the American Thoracic Society*
Kaiser Health News:
<https://kffhealthnews.org/morning-breakout/research-roundup-fetal-alcohol-syndrome-rural-health-care-medicare-plans-and-more/> (December 5, 2019)

2020-2021	Publicity on research relating to pharmaceutical costs in diabetes published in <i>JAMA Internal Medicine</i>	<p>STAT: https://www.statnews.com/pharmalot/2020/12/03/medicare-inhaler-asthma-copd/ (December 3, 2020)</p> <p>STAT: https://www.statnews.com/pharmalot/2020/02/03/medicare-insulin-diabetes-drug-prices/ (February 3, 2020)</p> <p>MedPage Today: https://www.medpagetoday.com/publichealthpolicy/healthpolicy/84668 (February 3, 2020)</p> <p>US News and World Report: https://www.usnews.com/news/health-news/articles/2020-02-04/medicare-could-save-billions-if-allowed-to-negotiate-insulin-prices (February 4, 2020)</p> <p>Healio: https://www.healio.com/news/primary-care/20200206/medicare-part-d-could-save-44-billion-on-insulin-using-vaprices?page=2 (February 6, 2020)</p> <p>Washington Post: https://www.washingtonpost.com/health/2021/10/29/biden-medicare-drug-negotiation/ (October 29, 2021)</p>
2020-2021	Publicity on work related to crisis standards of care	<p>The Quarantine Tapes: https://quarantine-tapes.simplecast.com/episodes/the-quarantine-tapes-022-dr-will-feldman (April 21, 2020).</p> <p>Wall Street Journal: https://www.wsj.com/articles/covid-19-crisis-forces-california-hospitals-to-plan-who-gets-life-saving-care-11610115894 (January 8, 2021)</p>
2021	Publicity on research relating to hospital pricing transparency published in <i>JAMA Internal Medicine</i>	<p>Regulatory Focus: https://www.raps.org/news-and-articles/news-articles/2021/1/perspective-drug-price-transparency-in-the-biden-e (January 18, 2021)</p> <p>STAT: https://www.statnews.com/pharmalot/2021/11/08/medicare-hospitals-340b-cash-health-insurer/ (November 8, 2021)</p>
2022	Publicity on research relating to patents and litigation on inhalers for asthma and COPD published in <i>Health Affairs</i> , <i>Nature Biotechnology</i> , and <i>Chest</i>	<p>STAT: https://www.statnews.com/pharmalot/2022/05/17/inhaler-asthma-copd-generics-monopoly-patents-fda/ (May 17, 2022)</p> <p>Endpoints News: https://endpts.com/pricy-inhalers-remain-expensive-due-to-device-tweaks-that-keep-competitors-at-bay-researchers-find/ (May 17, 2022)</p>

		<p>Regulatory Focus: https://www.raps.org/news-and-articles/news-articles/2022/5/study-inhaler-manufacturers-use-patents-exclusivit (May 19, 2022)</p> <p>HealthDay: https://consumer.healthday.com/regulatory-patent-reform-needed-for-inhalers-for-asthma-copd-2657345080.html (May 20, 2022)</p> <p>Endpoints News: https://endpts.com/how-brand-name-inhalers-keep-generics-at-bay-better-than-nebulizers-study-investigates/ (September 9, 2022)</p> <p>STAT: https://www.statnews.com/pharmalot/2023/03/16/inhalers-asthma-copd-generics-patents-fda/ (March 16, 2023)</p> <p>New York Times: https://www.nytimes.com/2023/09/14/business/ftc-drug-patents-inhalers.html (September 14, 2023)</p> <p>Endpoints News: https://endpts.com/ftc-challenges-more-than-100-drug-patents-owned-by-abbvie-astrazeneca-boehringer-and-7-others/ (November 7, 2023)</p>
2022	Publicity on perspective on over-the-counter inhalers published in <i>JAMA</i>	<p>Healio: https://www.healio.com/news/pulmonology/20220318/a-call-for-switching-to-otc-availability-of-asthma-rescue-inhalers (March 18, 2022)</p>
2023	Publicity on research relating to revenue on inhalers for asthma and COPD published in <i>JAMA</i>	<p>Endpoints News: https://endpts.com/drugmakers-benefit-substantially-from-secondary-patents-on-inhalers-report/ (January 3, 2023)</p> <p>L'actualite: https://lactualite.com/sante-et-science/le-business-des-inhalateurs/ (January 17, 2023)</p>
2023	Publicity on research relating to the comparative effectiveness of combination inhalers for COPD published in <i>JAMA Internal Medicine</i>	<p>MedPage Today: https://www.medpagetoday.com/pulmonology/smokingcopd/104645 (May 23, 2023)</p> <p>AJMC: https://www.ajmc.com/view/lama-laba-therapy-provides-improved-outcomes-in-copd-over-ics-laba (June 9, 2023)</p>
2023	Publicity on research relating to generic vs. brand-name fluticasone-salmeterol published in <i>Annals of Internal Medicine</i>	<p>Medscape https://www.medscape.com/viewarticle/995249 (August 7, 2023)</p> <p>MedPage Today: https://www.medpagetoday.com/pulmonology/smokingcopd/105794 (August 7, 2023)</p> <p>Health Day: https://consumer.healthday.com/physicians-briefing-copd-2662832886.html (August 7, 2023)</p>

2023	Publicity on research relating to continuation patents published in <i>JAMA</i>	MedPage Today: https://www.medpagetoday.com/special-reports/features/105720 (August 1, 2023) STAT: https://www.statnews.com/pharmalot/2023/08/08/patents-generic-fda-monopoly-medicine/ (August 8, 2023)
2023	Publicity on research relating to patents on glucagon-like peptide-1 (GLP-1) agonists published in <i>JAMA</i>	Tradeoffs: https://tradeoffs.org/2023/09/19/patents-keep-obesity-drug-prices-high/ (September 19, 2023)
2023	Publicity on research relating to patents on insulin products published in <i>PLOS Medicine</i>	Medscape: https://www.medscape.com/viewarticle/998559?src= (November 16, 2023) Time: https://time.com/6336840/patent-manipulation-insulin-prices/ (November 17, 2023)
2024-2025	Publicity on research relating to the effectiveness and safety of triple inhaler therapy in COPD published in <i>BMJ</i>	MedPage Today: https://www.medpagetoday.com/pulmonology/smokingcopd/113593 (December 30, 2024); HealthDay: https://www.healthday.com/healthpro-news/pulmonology/study-compares-single-inhaler-triple-therapies-for-treatment-of-copd (January 3, 2025)

Report of Scholarship

ORCID: <https://orcid.org/0000-0003-3467-5869>

Peer-Reviewed Publications in Print or Other Media

Research investigations

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† Indicates corresponding author.

^ Indicates research letter.

Other peer-reviewed publications

1. **Feldman WB**, Besterman AD, Yu JJ, Devido JJ, Bourgeois JA. Persistent Perceptual Disturbances After Lithium Toxicity: A Case Report and Discussion. *Psychosomatics*. 2015 May-Jun;56(3):306-310. PMID 25624181.
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20. **Feldman WB**[†]. Patent thickets and product hops: Challenges and Opportunities for Legislative Reform. *J Law Med Ethics*. In press.

* Indicates co-first authors or co-senior authors.

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Non-Peer Reviewed Scientific or Medical Publications/Materials in Print or Other Media

Proceedings of meetings or other non-peer reviewed scholarship

1. **Feldman WB**, Kesselheim AS, Tu SS, et al. Amicus curiae brief to the United States Court of Appeals for the Federal Circuit in the case of Teva vs. Amneal (Civil Action No. 23-cv20964). September 6, 2024.

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Letters to the Editor

1. **Feldman WB**, Chiong W, Kim SYH. Head Positioning in Acute Stroke. *N Engl J Med*. 2017 Sep 14;377(11):1101-1102. PMID 28905616.
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Narrative Report

I am an Assistant Professor of Medicine at HMS, an Associate Physician in Pulmonary and Critical Care Medicine, and an Associate Scientist (Investigator) in Pharmacoepidemiology and Pharmacoeconomics at BWH. My area of excellence is Investigation and my significant supporting activity is Administration and Institutional Service. I work with an interdisciplinary team to study the pricing, regulation, use, and outcomes of pharmaceuticals with a particular focus on drugs to treat asthma and chronic obstructive pulmonary disease (COPD).

During my fellowship, I became interested in disparities in the care of patients with chronic lung disease. I observed firsthand how patients with asthma and COPD were often unable to fill their inhaler prescriptions, leading to decreased adherence and worse outcomes. Drawing on this clinical experience, I undertook research on the costs of inhalers and barriers to generic competition. In the largest study to date examining the intellectual property on inhaled products, my co-authors and I showed that, among the 53 brand-name inhalers approved by the Food and Drug Administration (FDA) from 1986-2020, more than half of all patents listed were on the inhaler delivery devices. Manufacturers had secured long periods of market exclusivity by obtaining an increasing number of patents and shifting old ingredients into new devices.

This work has led to several further projects, supported by the Commonwealth Fund, examining patenting strategies on other drug-device combinations, including insulin pens and glucagon-like peptide 1 (GLP-1) receptor agonist pens. I am also leading a comprehensive analysis of patent challenges and litigation on all pharmaceutical products from 2003-2022. These projects provide an empirical foundation for policy reforms aimed at expediting generic competition and improving prescription drug affordability for patients. I have been invited to present my findings to audiences at Yale University, the FDA's Office of Generic Drugs, the London School of Economics, and the University of Toronto and have testified before the US Senate Judiciary Committee on my research.

Separate from my work on pharmaceutical pricing and regulation, my interest in improving outcomes for patients with chronic lung disease has also led me to undertake a series of studies on the comparative effectiveness and safety of different therapies to treat COPD. I received a Career Development Award from the National Heart, Lung, and Blood Institute to use longitudinal healthcare databases to examine treatment strategies among patients with COPD treated in routine clinical practice. Prior studies have demonstrated that patients enrolled in randomized controlled trials for COPD tend to be younger and have fewer co-morbidities than patients treated in routine clinical practice. My Career Development Award aims to complement randomized controlled trials with real-world evidence to shape clinical practice guidelines. In one recent study, my co-authors and I showed that patients receiving long-acting muscarinic antagonist (LAMA)-long-acting beta agonist (LABA) inhalers had fewer COPD exacerbations and fewer pneumonia hospitalizations than those receiving inhaled corticosteroid (ICS)-LABA inhalers after adjusting for a range of confounders. In another, we found that generic fluticasone-salmeterol performed similarly to the brand-name version among patients with COPD treated in routine clinical practice. This latter study has led to a grant from the FDA through the Office of Generic Drugs in which we further explore the performance of generic drug-device combinations compared to brand-name reference products in the post-marketing setting. The overarching goal of my research in both health policy and pharmacoepidemiology is to ensure that patients with chronic lung disease receive care rooted in the best possible evidence.

In addition to my work as a research investigator, I also contribute in an administrative capacity to BWH. I currently serve as co-Chair of the Ethics Committee and Associate Director of the Ethics Consult Service. In this role, I spend one day per week performing Ethics consultations, and I help develop and write hospital policy for physicians, nurses, and other staff across BWH.

Clinically, I practice as an intensivist in the Medical Intensive Care Unit. I supervise residents in providing care to complex patients with respiratory failure, shock, and other life-threatening conditions. I was fortunate to receive a Department of Medicine fellowship mentoring award for outstanding teaching

to medical residents during my fellowship. I also teach bioethics to Harvard Medical School (HMS) students, and I mentor trainees from HMS, the Harvard Kennedy School, and residency and fellowship programs at the Harvard teaching hospitals.