# ANDREW S. LEA, M.D., D.PHIL.

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## EDUCATION

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| 2022 | M.D., Johns Hopkins University School of Medicine<br>Match Day Speaker. Advisor: Jeremy A. Greene |
| 2020 | D.Phil. (Ph.D.) in History of Science and Medicine, University of Oxford<br>Rhodes Scholar. Advisor: Mark Harrison |
| 2015 | M.Sc. in History of Science, Medicine, and Technology, University of Oxford |
| 2014 | A.B., *summa cum laude*, in History and Science, Harvard College<br>Sophia Freund Prize (valedictorian). Advisor: David S. Jones |

## CLINICAL TRAINING

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| 2024-2025 | Senior Resident Physician, Department of Medicine, Brigham and Women's Hospital/Mass General Brigham, Harvard Medical School |
| 2023-2024 | Assistant Resident Physician, Department of Medicine, Brigham and Women's Hospital/Mass General Brigham, Harvard Medical School |
| 2022-2023 | Medical House Officer (Intern), Department of Medicine, Brigham and Women's Hospital/Mass General Brigham, Harvard Medical School |

## PROFESSIONAL APPOINTMENTS

UNIVERSITY OF ROCHESTER

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| 2025- | Assistant Professor of Health Humanities and Bioethics and Assistant Professor of Medicine, School of Medicine and Dentistry |
| 2025- | Attending Physician, Division of Hospital Medicine, University of Rochester Medical Center and Strong Memorial Hospital |
| 2025- | Faculty Affiliate, Goergen Institute for Data Science and Artificial Intelligence, Hajim School of Engineering and Applied Sciences |

HARVARD MEDICAL SCHOOL

2025        Chief Medical Resident, West Roxbury VA Medical Center, Brigham and Women's
            Hospital Internal Medicine Residency Program

2022-2025   Clinical Fellow in Medicine


JOHNS HOPKINS UNIVERSITY

2018-2022   Doctoral Fellow, Center for the Medical Humanities and Social Medicine


MAX-PLANCK-INSTITUT FÜR WISSENSCHAFTSGESCHICHTE

2018        Stipendiary Research Fellow, Department II (Lorraine Daston)


## AWARDS AND HONORS

2025        Faculty Open Access Publishing Grant (for *Digitizing Diagnosis*), Humanities Center,
            University of Rochester

2025        NIH/NLM Michael E. DeBakey Fellowship in the History of Medicine

2022        Match Day Speaker, Johns Hopkins University, selected by peers

2020        Dev Family Book Prize, University of Oxford, best doctoral dissertation in medical
            history

2017        Henry Belin du Pont Research Grant, Hagley Museum and Library

2017        Michael S. Mahoney Travel Award, Society for the History of Technology

2015        M.Sc. with Distinction, University of Oxford

2014        Rhodes Scholarship

2014        Sophia Freund Prize (valedictorian), Harvard College

2014        Robert and Maurine Rothschild Prize, Harvard College, best thesis in the history of
            science

2014        Thomas Temple Hoopes Prize, Harvard College, outstanding scholarly research

2013        Phi Beta Kappa, Harvard College, elected as a junior

2013        Carol K. Pforzheimer Fellowship, Harvard College, contribution "to the
            advancement of knowledge"

2013        Patricia King Fellowship, Harvard College, research that "demonstrates academic
            excellence"

2011-2013   John Harvard Scholarship, Harvard College, top five percent of class

2011        Detur Book Prize, Harvard College

## BOOKS AND MONOGRAPHS

ˆ *single-author publication*

-- *Aid to Thought: A History of the Peripheral Brain in Medicine—from Pocket Guide to AI.* In preparation.

2023ˆ *Digitizing Diagnosis: Medicine, Minds, and Machines in Twentieth-Century America.* Baltimore, MD: Johns Hopkins University Press.

> *Reviews*: Cummings, *Society for U.S. Intellectual History Blog* (2024); Freeborn, *European Journal for the History of Medicine and Health* (2024); Fried, *Social History of Medicine* (2024); Levy, "The Past and Future Promise of Computerized Medical-Decision Making" (essay review), *Annals of Science* (2025); Marcum, "The Computer Will See You Now," *Metascience* (2023); Maas, "How Computerized Advancements Have Reshaped the Medical Profession," *Metascience* (2024); Magalhães Moreira, *Family Medicine* (2024); Tobbell, *Technology and Culture* (2025).

> *Media*: Kolata, *The New York Times* (November 17, 2024); *Campaign for the American Reader Network* (August 2023); *Harvard Magazine* (September-October 2023); Peyton, *Biomedical Odyssey* (2023); Smith, *Hopkins Medicine Magazine* (2024).

## ACADEMIC ARTICLES

ˆ *single-author publication*
⁺ *lead-author publication*

2026ˆ "Doctor's Order: Managing Medical Information in the Twentieth Century," accepted and forthcoming, with *Bulletin of the History of Medicine.*

2026ˆ "Cognitive Aids, Artificial Intelligence, and Deskilling in Medicine: The History of an Enduring Anxiety," *New England Journal of Medicine AI* 3, no. 1.

2025/26 "Advancing Medical Artificial Intelligence Using a Century of Cases," *ArXiv* (ArXiv:2509.12194), with Thomas A. Buckley, Riccardo Conci, Peter G. Brodeur, Jason Gusdorf, Sourik Beltrán, Bita Behrouzi, Byron Crowe, Jacob Dockterman, Muzzammil Muhammad, Sarah Ohnigian, Andrew Sanchez, James A. Diao, Aashna P. Shah, Daniel Restrepo, Eric S. Rosenberg, Marinka Zitnik, Scott H. Podolsky, Zahir Kanjee, Raja-Elie E. Abdulnour, Jacob M. Koshy, Adam Rodman, and Arjun K. Manrai.

> Featured in *HMS News*, "Harvard Medical School's Top Science News of 2025," December 18, 2025; *The New Yorker*, "If AI Can Diagnose Patients,

What Are Doctors For?," September 22, 2025; *Quantum Zeitgeist*, "Medical Artificial Intelligence Advances with CPC-Bench," September 18, 2025.

2025[+]     "Medical Reference Tools and Pharmaceutical Promotion: A History of Entanglement," *Annals of Internal Medicine* 178, no. 2, with Jai Krishan Khurana.

2024[+]     "Centering the Peripheral Brain—The History of Reference Tools in Medicine." *New England Journal of Medicine* 391, no. 10, with Scott H. Podolsky.

> Featured in Spencer Dorn, "How AI Is Changing The Way Doctors Access Medical Knowledge," *Forbes*, December 14, 2024.

2024[^]     "Pyrite Standards: Medical Uncertainty, Ground Truth, and AI Model Evaluation in Historical Perspective," *Journal of General Internal Medicine* 39, no. 14.

2024[+]     "Mind the Gap—Machine Learning, Dataset Shift, and History in the Age of Clinical Algorithms." *New England Journal of Medicine* 390, no. 4, with David S. Jones.

> Featured on *NEJM* Interviews Podcast, January 25, 2024.

2023[+]     "Evaluating Medical Student Learning Preference and its Relationship to Clerkship Satisfaction." *Neurology Education* 2, no. 4, with Margo A. Peyton, Roy E. Strowd III, Charlene Gamaldo, Rachel M. E. Salas, and Doris G. Leung.

2023[^]     "Dissecting Data: History of Data as History of the Body." *IEEE Annals of the History of Computing* 45, no. 4.

2019       "Digital Futures Past—The Long Arc of Big Data in Medicine." *New England Journal of Medicine* 381, no. 5, with Jeremy A. Greene.

> Featured in the newsletter of the Berman Institute of Bioethics, "Tracking the Long Arc of Big Data in Medicine," July 31, 2019.

2019[^]     "Computerizing Diagnosis: Keeve Brodman and the Medical Data Screen." *Isis* 110, no. 2.

2016[^]     "Gender Identity and the Politics of Etiology." *Endeavour* 40, no. 3.


## REVIEWS

2024       Review of Adrian Johns, *The Science of Reading: Information, Media, and Mind in Modern America* (University of Chicago Press, 2023), *Isis* 115, no. 2.

2023       Review of Katja Guenther, *The Mirror and the Mind: A History of Self-Recognition in the Human Sciences* (Princeton University Press, 2022), *Bulletin of the History of Medicine* 97, no. 2.

2017       Review of Thomas Mullaney, *The Chinese Typewriter: A History* (MIT Press, 2017), *Annals of Science* 75, no. 3.

## TEACHING

UNIVERSITY OF ROCHESTER

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| 2026- | Primary Instructor, MHB 423: Life Stories in Medicine |
| 2025- | Primary Instructor, MHB 401 / PHIL 406: AI Ethics in Healthcare |
| 2025- | One-off Instructional Sessions: Human Structure and Function Curriculum |
| 2025- | Dissertation Committee Member: Sloane Wesloh (History and Philosophy of Science, University of Pittsburgh, external member) |

HARVARD COLLEGE

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| 2023 | Guest Lecturer, Medical Ethics and History (GEN-ED 1116), "The History and Ethics of Medical Computing" |
| 2023-2025 | Teaching Fellow in History of Science, HISTSCI 99a (Senior Thesis Course), History of Science Department |

HARVARD MEDICAL SCHOOL

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| 2025 | Chief Medical Resident, West Roxbury VA Medical Center: teaching residents and medical students at noon conferences and morning reports |
| 2023-2025 | Medical Simulation Educator, Brigham and Women's Internal Medicine Residency Program |
| 2023-2024 | Scholars in Medical Education Track, Brigham and Women's Internal Medicine Residency Training Program |
| 2023-2025 | BWH Practice of Medicine Core Educator Team, HMS medical student teaching |

JOHNS HOPKINS UNIVERSITY

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| 2021-2022 | Taskforce Member, Johns Hopkins University School of Medicine, Visiting Elective in Equitable Healthcare |
| 2021-2022 | Osler Apprentice, Johns Hopkins University School of Medicine, neurology clerkship |
| 2020-2021 | Workshop Organizer, Johns Hopkins University School of Medicine, Genes to Society curriculum |

## NAMED LECTURES AND KEYNOTES

| 2024 | Charles E. Culpeper Lecture in the History of Medicine, "Doctor's Order: Managing Medical Information in the Twentieth Century," History of Science, Technology, and Medicine (HSTM) Colloquium, University of Minnesota, Minneapolis, MN |
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## Grand Rounds

| 2025 | "Aid to Thought: Understanding the Peripheral Brain in Medicine, from Pocket Guide to AI," Department of Medicine, Strong Memorial Hospital, University of Rochester Medical Center, Rochester, NY |
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| 2025 | "Aid to Thought: A History of the Peripheral Brain in Medicine, from Pocket Guide to AI," Department of Medicine, Brigham and Women's Faulkner Hospital, Boston, MA |

## Invited Presentations

| 2026 (*future*) | "Who's in Whose Pocket? Reference Tools, Industry Interests, and the Quest for Therapeutic Reform," Invited Presentation for the Corner Society for the History of Medicine, Rochester Academy of Medicine, Rochester, NY |
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| 2025 | "AI and the Shaping of the Next-Generation Physician-Investigator," Invited Panelist, American Physician Scientists Association (APSA) Northeast Regional Conference, University of Rochester Medical Center, Rochester, NY |
| 2025 | "'Memory is Treacherous': Cognitive Aids in Medicine, from Vade Mecum to OpenEvidence," Invited Presentation for the History of Medicine Working Group, Department of the History of Science, Harvard University, Cambridge, MA |
| 2025 | "The Sieve of Asclepius," Invited Presentation for the Critical Health Humanities Seminar Series, Mahindra Humanities Center, Harvard University, Cambridge, MA |
| 2025 | "How to Keep a Medical File, ca. 1960," Invited Presentation for Brigham and Women's Faulkner Hospital Noon Conference, Mass General Brigham, Boston, MA |
| 2024 | "Mind the Gap: Doing History in the Age of Clinical Algorithms," Invited Presentation for Department of Health Humanities and Bioethics, University of Rochester, Rochester, NY |
| 2024 | "Digitizing Diagnosis: Medicine, Minds, and Machines in Twentieth-Century America," Countway Longwood Author Series, Harvard Medical School, Boston, MA |
| 2024 | "The History and Ethics of Medical Computing," Lunch Seminar, Science, Technology, and Society (STS) Program, Tufts University, Cambridge, MA |

| 2023 | "Digitizing Diagnosis: Medicine, Minds, and Machines in Twentieth-Century America," Richardson Seminar on the History of Psychiatry, DeWitt Wallace Institute of Psychiatry, Weill Cornell Medicine, New York, NY |
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| 2023 | "Digitizing Diagnosis: Medicine, Minds, and Machines in Twentieth-Century America," Invited Presentation for Department of Health Humanities and Bioethics, University of Rochester, Rochester, NY |
| 2023 | Book Colloquium: Digitizing Diagnosis: Medicine, Minds, Machines in Twentieth-Century America, Practices of Validation in the Biomedical Sciences Working Group, Max-Planck-Institut für Wissenschaftsgeschichte, MPIWG, Berlin, Germany |
| 2022 | "Computerizing Diagnosis: Minds, Medicine, and Machines in Twentieth-Century America," Invited Presentation for the Colloquium on the History of Psychiatry and Medicine, McLean Hospital and the Center for the History of Medicine, Francis A. Countway Library of Medicine, Boston, MA [virtual] |
| 2018 | "Communicable Knowledge: MYCIN Explains Itself, 1972-1984," Invited Presentation for the Doctoral Seminar Series of the Max-Planck-Institut für Wissenschaftsgeschichte, MPIWG, Department II, Berlin, Germany |
| 2017 | "Computers, Material Culture, and the Definitions of Disease: Historical Reflections," Invited Presentation for the Seminar Series in the History of Science, Medicine and Technology, University of Oxford, Oxford, UK |


## OTHER PRESENTATIONS

| 2025 | Panelist for "Artificial Intelligence and the Medicalization of Grief: Historical, Literary, and Ethical Perspectives," American Society for Bioethics and Humanities (ASBH) Annual Conference, Portland, OR |
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| 2025 | "On File(s): Managing Medical Information in the Twentieth Century," Presentation at the Society for the History of Authorship, Reading, and Publishing (SHARP) Annual Meeting, Rochester, NY |
| 2025 | "In the Thick of It: Hyperviscosity Syndrome and Secondary Polycythemia," VA Medical Forum, West Roxbury Veterans Administration, Boston, MA |
| 2025 | "A Gut Decision: FMT in Severe Fulminant Clostridium difficile Infection," VA Medical Forum, West Roxbury Veterans Administration, Boston, MA |
| 2023 | Journal Club with Scott H. Podolsky on "Metrics and the New Ecologies of Academic Misconduct" (M. Biagioli and A. Lippman), Brigham and Women's Internal Medicine Residency Program, Boston, MA |
| 2021 | "Computerizing Diagnosis: Minds, Medicine, and Machines in Twentieth-Century America," Presentation at the Joint Meeting of the Society for the History of |

Technology (SHOT) and the History of Science Society (HSS), New Orleans, LA [virtual]

2019    "MYCIN Explains Itself: Computing, Authority, and Trust in American Medicine," Presentation at the Annual Meeting of the Society for the History of Technology (SHOT), Milan, Italy

2018    "MYCIN Explains Itself: Computing, Authority, and Trust in American Medicine," Presentation at the Annual Meeting of the History of Science Society (HSS), Seattle, WA

2018    "Diagnosing by Numbers," Presentation at "The Work of Diagnosis," Johns Hopkins Center for Medical Humanities and Social Medicine, Johns Hopkins University, Baltimore, MD

2017    "'The Total Patient': Keeve Brodman and the Medical Data Screen," Presentation at the Special Interest Group in Computers, Information, and Society (SIGCIS) Conference, Measure, Model, Mix: Computer as Instrument, Society for the History of Technology, Philadelphia, PA

2017    "Computerizing Diagnosis," Presentation at "Media Medica: Medicine and the Challenge of New Media," Institute of the History of Medicine & Alexander Grass Humanities Institute, Johns Hopkins University, Baltimore, MD


## INSTITUTIONAL SERVICE

2026- (*future*)    Director, Pathway in Health Humanities and Bioethics, University of Rochester School of Medicine and Dentistry

2023-2025    Non-Resident Tutor, Currier House, Harvard College

2021-2022    Admissions Committee, Johns Hopkins University School of Medicine


## PROFESSIONAL SERVICE

2025-2026    George Rosen Prize Committee Member, American Association for the History of Medicine

2022-    Ad hoc reviewer for:
    *Bulletin of the History of Medicine*; *IEEE Annals of the History of Computing*; *Isis: A Journal of the History of Science Society*; *Journal of General Internal Medicine; Medical History*; *Medical Humanities*


## PROFESSIONAL MEMBERSHIPS

American Association for the History of Medicine (AAHM)

American College of Physicians (ACP)

American Institute of the History of Pharmacy (AIHP)

Friends of the National Library of Medicine

Health Humanities Consortium

History of Science Society (HSS)

Society for the History of Authorship, Reading and Publishing (SHARP)

Society for the History of Technology (SHOT)

Society for the Social Studies of Science (4S)

## NARRATIVE

Andrew Lea is a physician-historian at the University of Rochester, where he works as a general internist at Strong Memorial Hospital and an assistant professor of health humanities and bioethics. He graduated first in his class from Harvard College, earning an A.B. *summa cum laude* in History and Science. He went on to receive his D.Phil. (Ph.D.) in History of Science and Medicine from the University of Oxford with the support of a Rhodes Scholarship and earned his medical degree from the Johns Hopkins University School of Medicine, where he was selected by his peers as Match Day speaker. Returning to Boston, he completed his residency training in internal medicine at Brigham and Women's Hospital / Mass General Brigham.

His research explores the history of artificial intelligence, communications media, and information technology in medicine and has appeared in leading historical and medical journals, including *Isis* and the *New England Journal of Medicine*. His first book *Digitizing Diagnosis: Medicine, Minds, and Machines in Twentieth-Century America* (Johns Hopkins University Press, 2023) examines early efforts to computerize medical diagnosis and decision-making. He is working on his second book project, *Aid to Thought: A History of the Peripheral Brain in Medicine*, which looks at the history of reference tools in medicine, from *Index Medicus* and *Harrison's Principles of Internal Medicine*, to UpToDate and new AI-mediated resources. His work has been supported by fellowships at the National Institutes of Health, the Max Planck Institute for the History of Science, and the Johns Hopkins Center for Medical Humanities and Social Medicine.