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JEFFREY E. HARRIS Condensed Curriculum Vitae*

Academic Medical Practice

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Current Positions

Internal Medicine Physician & Senior Clinician, Eisner Health, Los Angeles, California, 2018–Professor Emeritus, Department of Economics, Massachusetts Institute of Technology, 2020–

Prior Employment

Professor (1998–2020), Associate Professor (1980–1998), Assistant Professor (1976–1980), Department of Economics, Massachusetts Institute of Technology

Physician, Providence Community Health Centers, Providence, RI, 2006–2008, 2012–2018

Physician, Blackstone Valley Community Health Care, Pawtucket, RI, 2008–2012

Physician, Internal Medicine Associates, Massachusetts General Hospital, 1977–2006

Professor (1998–2008), Associate Professor (1980–1998), Assistant Professor (1976–1980), Harvard University–M.I.T. Division of Health Sciences and Technology

Education and Training

Ph.D. in Economics, 1975, University of Pennsylvania

M.D., 1974, University of Pennsylvania

A.B. (summa cum laude), 1969, Harvard University

Resident & Clinical Fellow, Medical Services, Massachusetts General Hospital, 1974–1977

Selected Public Service, Honors and Awards

Appointed member of committees of U.S. National Academy of Sciences, 1980–2007.

These include the Diesel Impacts Study Committee (1980–1981); the Committee to Study the Prevention of Low Birthweight (1983–1985); the Committee on National Strategies toward AIDS (1986); the Committee on Risk Characterization (1994–1996); and the Committee on Reducing Tobacco Use (2004–2007). My participation in the Diesel Impacts Study Committee resulted in a peer-reviewed monograph, <u>Potential Risk of Lung Cancer from Diesel Engine Emissions</u>, issued under the auspices of the National Academy of Sciences.

Invited testimony before the U.S. Congress and other governmental entities, including expert testimony in litigation brought by governmental agencies, 1993–2004.

These include testimony on financing healthcare reform before the U.S. House of Representatives Ways and Means Committee (1993); and testimony on a global tobacco settlement (1997) before the U.S. House Judiciary Committee and the U.S. Senate Agriculture and Judiciary Committees. I <u>testified</u> as an expert witness on behalf of the U.S. Department of Justice in its racketeering lawsuit against tobacco manufacturers (2004).

^{*}A long-version CV with all publications, honors, grants, testimony and professional experience is available.

Selected Public Service, Honors and Awards (continued)

Consultant to nonprofit organizations and governmental agencies on health and health policy.

These include consulting to the U.S. National Cancer Institute (1979); American Lung Association (1981); Cooperative Trial of Percutaneous Transluminal Angioplasty, U.S. Veterans Administration (1981–1982); National WIC Evaluation, U.S. Department of Agriculture (1981–1984); and the National Household HIV Seroprevalence Survey, U.S. Centers for Disease Control (1989). I served as an appointed member of the National Hospice Advisory Committee (1981–1984); Scientific Advisory Committee, American Foundation for AIDS Research (1987–1994); and the National Advisory Research Resources Council, U.S. National Institutes of Health (1991–1994).

Fulbright Specialist Award, J. William Fulbright Foreign Scholarship Board, Bureau of Education and Cultural Affairs of the U.S. Department of State, 2011.

I led a group of eight professionals in an evaluation of Uruguay's tobacco control campaign, published in the *Lancet*, bringing the country international recognition. Our findings played an important role in the ultimate dismissal of a billion-dollar lawsuit brought by a multinational tobacco company against Uruguay for allegedly violating a bilateral investment treaty.

Distinguished Guest / Honorary Citizen (*Huésped Distinguido*), City of Salamanca, Spain, 2008.

I gave the keynote address in Spanish on high-risk conduct as a transmissible disease at the plenary session of the XXVIII Jornadas de Economía de la Salud. This was one of numerous addresses to scientific conferences in Guatemala, Mexico, the Dominican Republic, Brazil, Costa Rica, Uruguay, and Chile.

Faculty representative for the MIT Sloan Latin American Office, Chile, 2013.

As part of a publicity-generating campaign for the MIT Sloan Latin American Office, I gave lectures in Spanish on the evaluation of anti-tobacco campaigns at Universidad de Chile, the Spanish MIR system of residency assignment at the Pontificia Universidad Católica de Chile, and current controversies on screening mammography at the Fondación Educación Popular en Salud. I gave podcast and press interviews.

Consulting Scientific Editor, Contributor, and Senior Reviewer, U.S. Surgeon General's Reports on Smoking and Health, 1979–1983, 1986, 1988, 1989, 1996.

My contributions included key chapters on cigarette smoking in the United States (1979), the evolution of smoking among successive birth cohorts (1980), and total deaths attributable to cigarette smoking (1989).

Appointed Physician Member, Massachusetts Board of Registration and Discipline in Medicine, 1978–1980.

Competitive research grant awards, 1969–2015.

These include a grant from the Medical Scientist Training Program, U.S. Public Health Service (1969–1974); a Research Career Development Award, U.S. Public Health Service (1980–1985); and grants from the Health Sciences Fund (1979); American Cancer Society (1985–1987); Robert Wood Johnson Foundation (1988–1989); Bloomberg Foundation (through the Ministerio de Salud Pública, Uruguay, 2013–2014); and MISTI Global Seed Funds (2014–2015).

Contributions to the COVID-19 Epidemic: Selected Peer-Reviewed Papers

The Repeated Setbacks of HIV Vaccine Development Laid the Groundwork for SARS-CoV-2 Vaccines. *Health Policy and Technology*, June 2022.

How the repeated failures of phase 2 and 3 clinical trials of HIV vaccine candidates paved the way for current COVID-19 vaccines.

Contributions to the COVID-19 Epidemic: Selected Peer-Reviewed Papers (continued)

Critical Role of the Subways in the Initial Spread of SARS-CoV-2 in New York City. *Frontiers of Public Health*, December 2021.

Initially issued as a provocative <u>NBER working paper</u> (cited by 205), the final published, peer-reviewed version assembles multiple strands of compelling evidence.

Mobility was a Significant Determinant of Reported COVID-19 Incidence During the Omicron Surge in the Most Populous U.S. Counties. *BMC Infectious Diseases*, August 2022.

Tens of millions of Americans managed to evade Omicron by engaging in risk-mitigating behaviors. The behavioral response to perceived risk is an intrinsic part of the natural course of epidemics in humans.

Geospatial Analysis of a COVID-19 Outbreak at the University of Wisconsin – Madison: Potential Role of a Cluster of Local Bars. *Epidemiology & Infection*, April 2022.

Tracking device movements from college residence halls to local establishments implicated a network of local bars, rather than any single bar, as a potential super-spreader of SARS-CoV-2 infection. University-community relationships were critical to outbreak control.

Los Angeles County SARS-CoV-2 Epidemic: Critical Role of Multi-generational Intrahousehold Transmission. *Journal of Bioeconomics*, March 2021.

Initially imported by travelers into Los Angeles county's affluent communities, the virus propagated radially toward those neighborhoods with high concentrations of multigenerational families.

COVID-19 Incidence and Hospitalization During the Delta Surge were Inversely related to Vaccination Coverage Among the Most Populous U.S. Counties. <u>Health Policy and Technology</u>, June 2022.

Repeatedly cited as the first large-scale, population-based confirmation that mRNA-based vaccines against SARS-CoV-2 reduced both disease severity and mortality from COVID-19.

Concentric Regulatory Zones Failed to Halt Surging COVID-19: Brooklyn 2020. *Frontiers of Public Health*, December 2022.

Why a novel regulatory scheme introduced by then Governor Cuomo failed to curb an outbreak of COVID-19 in South Brooklyn in the fall of 2020.

Data From the COVID-19 Epidemic in Florida Suggest That Younger Cohorts Have Been Transmitting Their Infections to Less Socially Mobile Older Adults. *Review of Economics of the Household,* August 2020.

How socially mobile younger people brought their infections back home to their less mobile grandparents.

COVID-19, Bar Crowding, and the Wisconsin Supreme Court: A Non-linear Tale of Two Counties. *Research in International Business and Finance*, December 2020.

The Wisconsin Supreme Court's May 2020 decision to nullify a statewide Stay at Home order triggered a motley collection of uncoordinated local measures that ultimately opened the door to a debacle.

Harris JE. Population-Based Model of the Fraction of Incidental COVID-19 Hospitalizations During the Omicron Wave in the United States. *COVID*, April 2023.

Incidental infections constituted an estimated 11% of all COVID-19-positive hospitalized patients during the Omicron BA.1 wave. The burden of patients admitted for complications of their viral infections was far greater.

Contributions to the COVID-19 Epidemic: Selected Peer-Reviewed Papers (continued)

Chen K, Wilson-Barthes M, Harris JE, Galárraga O. Incentivizing COVID-19 Vaccination among Racial/Ethnic Minority Adults in the United States: \$209 per Dose Could Convince the Hesitant. *Health Economics Review*, January 2023.

Based on a survey of patients at a community health center, we projected the incentive payment required to get 80 percent vaccinated.

Harris JE. Timely Epidemic Monitoring in the Presence of Reporting Delays: Anticipating the COVID-19 Surge in New York City, September 2020. <u>BMC Public Health</u>, May 2022.

A statistical technique originally developed to forecast AIDS cases would have anticipated the COVID-19 surge.

Contributions to the COVID-19 Epidemic: Latest Preprint

New Approach to the SIR Inversion Problem: From the 1905-1906 Plague Outbreak in the Isle of Bombay to the 2021-2022 Omicron Surge in New York City. *MedRxiv*, Updated April 2023.

A new solution to a century-old mathematical problem suggests that Omicron's infectivity lasted much longer than reported in small-scale studies of mostly symptomatic subjects. The Bombay plague outbreak studied in Kermack and McKendrick's classic 1927 paper may have been the pneumonic human-to-human-transmitted form rather than the bubonic rat-flea-human-transmitted form.

Selected Recent Opinion

Harris JE. An AI-Enhanced EHR Could Boost Primary Care Productivity. *JAMA*, Aug. 7, 2023.

"...the current approach of governmental certification of electronic health records is hindering rather than enhancing innovation."

Harris JE, Gerstenblüth M, Triunfo P. Tabaquismo: ¿políticas públicas basadas en evidencia? <u>La Diaria</u> (Montevideo), September 9, 2022.

Evidence-based critique of the Uruguayan government's most recent tobacco control measures.

Harris JE. The Demise of Roe Threatens the Privacy of a Woman's Entire Reproductive Health Record. *Jurist*, August 9, 2022.

Far-reaching consequences of the reversal of Roe v. Wade for the privacy of a woman's reproductive health record.

Harris JE. In Mask Mandate Case, Judge Ruled on Wordplay, Not Public Health. <u>STAT News</u>, Apr. 22, 2021.

One of a continuing series of op-ed pieces critiquing U.S. federal court decisions on public policy toward COVID-19

Harris JE. Judicial Folly: The Mask Mandate as Wordplay. *Milken Institute Review*, April 30, 2022.

The Fifth Circuit Court Got the Science Wrong on Vaccine Mandates. <u>STAT News</u>, Dec. 2, 2021.

Gostin LO, Harris JE, Reiss DR. The Supreme Court Must Uphold Biden's Vaccine Mandates – and Fast. *Washington Post*, Dec. 29, 2021.

A collaboration with law professors from Georgetown University and U. California at Berkeley.

Selected Recent Opinion (continued)

Vaccines Remain the Way Out: They Prevent Severe Disease. *City Journal*, August 24, 2021.

Mulligan K, Harris JE. COVID-19 Vaccination Mandates for School and Work Are Sound Public Policy. *USC Schaeffer Center for Health Policy & Economics*, July 7, 2021.

A peer-reviewed white paper issued by the University of Southern California Schaeffer Center.

Community Health Centers Can Help Stamp Out COVID-19. <u>STAT News</u>, February 3, 2021.

Community health centers are located right in the COVID-19 hotspots in Los Angeles County.

Harris JE, Brodine WJ. Low-Income Californians and Their Community Health Centers Need Telephone Health Care Parity to Beat COVID-19 and Maintain Health Equity. *Written Testimony*. *California State Assembly Committee on Health*, February 16, 2021.

Joint testimony with the CEO of Eisner Health advocating Medicaid coverage of telephone health care.

Other Selected Peer-Reviewed Papers

Galárraga O, Harris JE. Effect of an Abrupt Change in Sexual and Reproductive Health Policy on Adolescent Birth Rates in Ecuador, 2008–2017. *Economics and Human Biology*, May 2021.

Teen birth rates rose after the president of Ecuador abruptly switched from a program of contraceptive services at local health centers to a so-called family-centered program based on abstinence.

Nazzal C, Harris JE. Lower incidence of myocardial infarction after smoke-free legislation enforcement in Chile. *Bulletin of the World Health Organization*, October 2017.

We used regression discontinuity techniques to demonstrate that Chile's smoke-free legislation was associated with an abrupt drop in heart attacks but not degenerative disc disease or colon cancer.

Harris JE, Balsa AI, Triunfo P. Tobacco control campaign in Uruguay: Impact on smoking cessation during pregnancy and birth weight. *Journal of Health Economics*, July 2015.

Non-price policies, including regulation of cigarette packaging and marketing as well as provider-level interventions to treat nicotine dependence, had the largest impact on smoking cessation during pregnancy.

Harris JE, López-Valcárcel BG, Ortún V, Barber P. Specialty choice in times of economic crisis: cross-sectional survey of Spanish medical students. *BMJ Open*, February 2013.

During Spain's economic crisis, medical school graduates opted in greater numbers for low-prestige family medicine residency programs as a form of insurance against cutbacks in higher-prestige specialties.

Abascal W, Esteves E, Goja B, González Mora F, Lorenzo A, Sica A, Triunfo P, Harris JE. Tobacco control campaign in Uruguay: a population-based trend analysis. *Lancet* Sept. 2012.

I was the corresponding author and principal drafter of this key paper that put Uruguay on the world map as the pioneer among low-to-middle-income countries with effective, comprehensive anti-smoking campaigns.

Harris JE. Why We Don't Have an HIV Vaccine and How We Can Develop One. <u>Health Affairs</u>, Nov.-Dec. 2009

Path-breaking paper contending that the development of an HIV vaccine was as much an economic as a scientific problem.

Other Selected Peer-Reviewed Papers (continued)

Sosa-Rubí SG, Galárraga O, Harris JE. Heterogeneous Impact of the 'Seguro Popular' Program on the Utilization of Obstetric Services in Mexico, 2001–2006: A Multinomial Probit Model with a Discrete Endogenous Variable. *Journal of Health Economics*, Dec 2009.

Mexico's "people's insurance" program, established to confront long-standing inequities in the country's fragmented healthcare system, brought pregnant women into newly established obstetrical services, but also increased their use of private providers.

Harris JE, Thun MJ, Mondul AM, Calle EE. Cigarette Tar Yields in Relation to Mortality from Lung Cancer in the Cancer Prevention Study II Prospective Cohort, 1982–8, <u>British Medical</u> Journal, January 2004.

Key paper reporting that increased lung cancer risk was similar in smokers of medium tar, low tar, and very low tar cigarettes, while smoking high-tar non-filtered cigarettes posed an even higher risk compared to not smoking.

Biener L, Harris JE, Hamilton W. Impact of the Massachusetts Tobacco Control Programme: Population Based Trend Analysis. *British Medical Journal*, August 2000.

Culmination of a series of peer-reviewed papers documenting the success of the Massachusetts Tobacco Control Program in reducing the percentage of adult cigarette smokers and per capita smoking rates.

Harris JE. Reporting Delays and the Incidence of AIDS, <u>Journal of the American Statistical Association</u>, December 1990.

Seminal paper deriving a simple method for estimating incidence rates in an epidemic with delayed case reporting. This method has now been applied to <u>COVID-19</u>.

Harris JE. Improved Short-Term Survival of AIDS Patients Initially Diagnosed with Pneumocystis carinii Pneumonia, 1984 through 1987, *Journal of the American Medical Association*, January 1990.

The first population-based demonstration that the introduction of zidovudine was associated with improvement in short-term survival from AIDS.

Harris JE. Trends in Smoking-Attributable Mortality, in: *Reducing the Health Consequences of Smoking, 25 Years of Progress: <u>A Report of the Surgeon General</u>. Washington, D.C.: U.S. Department of Health and Human Services, January 1989*

Key chapter in the 25th anniversary Surgeon General's Report, establishing and testing methods to be used to estimate annual smoking-attributable deaths from lung cancer and other diseases in the United States.

Harris JE. The 1983 Increase in the Federal Excise Tax on Cigarettes, in Lawrence Summers, ed., *Tax Policy and the Economy* 1987; 1: 87-111

Widely cited study of the coordination of oligopoly price increases by major cigarette manufacturers after the passage of an increase in the federal excise tax in 1983.

Harris JE. How Many Doctors are Enough? *Health Affairs*, Winter 1986

When the number of needed physicians is highly uncertain, erring on the side of too many doctors is the preferred strategy.

DuMouchel WH, Harris JE. Bayes Methods for Combining the Results of Cancer Studies in Humans and Other Species, (with Comment and Rejoinder) <u>Journal of the American Statistical Association</u>, June 1983.

As Sharon Bertsch McGrayne <u>wrote</u> in *The Theory That Would Not Die*, "Today, Bayesian meta-analyses are statistically old hat, but DuMouchel and Harris made Bayesians salivate for more big-data methods..."

Other Selected Peer-Reviewed Papers (continued)

Harris JE. Cigarette Smoking Among Successive Birth Cohorts of Men and Women in the United States During 1900-80, *Journal of the National Cancer Institute*, September 1983.

Key study establishing how to use data from contemporary smoking surveys to estimate the past smoking histories of successive generations and to correlate those histories with lung cancer rates.

Harris JE. Taxing Tar and Nicotine, *American Economic Review*, 1980.

Key paper creating a framework for economists to analyze the benefits and costs of tobacco control policies.

Harris JE. Cigarette Smoking in the United States, 1950-1978, in <u>Smoking and Health, A Report of the Surgeon General</u>. U.S. Department of Health, Education, and Welfare, 1979: A1-A29.

Precedent-setting chapter in the 1979 Surgeon General's Report, reviewing for the first time the evidence on the effects of various public policies on cigarette smoking rates.

Harris JE. The Internal Organization of Hospitals: Some Economic Implications, <u>Bell Journal of Economics</u>, Autumn 1977.

Seminal paper based upon PhD thesis. The modern U.S. hospital is really two organizations in one. Reprinted in R.D. Luke and J.C. Bauer, eds., *Issues in Health Economics* (Aspen Systems Press, 1982); and A.R. Kovner and D. Neuhauser, eds., *Health Services Management: Readings and Commentary*, 3rd edition (Health Administration Press, 1987).

Williamson O, Wachter M, Harris JE. Understanding the Employment Relation: The Analysis of Idiosyncratic Exchange, *Bell Journal of Economics*, 1975.

Paper as grad student with thesis advisor Oliver Williamson. Reprinted in: O. Williamson, *Markets and Hierarchies: Analysis and Antitrust Implications* (Free Press, 1976), and L. Putterham, ed., *The Economic Nature of the Firm: A Reader* (Cambridge University Press, 1986).