

 PROFILE

Profile of Amy N. Finkelstein

Jennifer Viegas, *Science Writer*

"It is a very exciting time to be an economist," says Amy Finkelstein, a professor of economics at the Massachusetts Institute of Technology (MIT) who was elected to the National Academy of Sciences in 2018. "Economics has become a rigorous science, combining theory and data to better understand how the world works and how to improve it." Focusing on the health-care sector in the United States, Finkelstein integrates economic models, empirical methods, and data to find solutions for problems facing health insurance markets and healthcare delivery systems. Her research carries implications for healthcare policy. Finkelstein's Inaugural Article (1) reports that a nationwide Medicare reform influenced the treatment of patients who were covered by other kinds of health insurance. The findings suggest that such broad effects should be taken into account when formulating future healthcare policies.

Three Generations of Women with Doctorates

Finkelstein was born in New York City in 1973 to biologist parents, who both earned doctorates at The Rockefeller University. In 1940, her mother immigrated to the United States from Poland, where her maternal grandmother had received a doctorate in comparative literature at the University of Warsaw. Finkelstein says, "It is remarkable that a Jewish woman in the 1920s was able to earn a doctorate in Eastern Europe." The Finkelstein family papers documenting their lives are archived at the US Holocaust Memorial Museum in Washington, DC.

Finkelstein was greatly influenced by her parents and shares their passion for research and academia. She attended the prestigious Brearley School in New York City before majoring in government at Harvard College. Finkelstein says, "I gravitated to government and political science as a way of trying to make sense of history, but I increasingly found myself drawn to quantitative and empirical work within that field."

Objective Approach to Social Problems

During her senior year at Harvard, Finkelstein took a course on social problems facing the American economy that was taught by economist Lawrence Katz. Finkelstein says, "It was eye-opening, as it showed me that you can use data to try to answer social policy



Amy Finkelstein. Image credit: MacArthur Foundation.

questions objectively, rather than rhetorically. That inspired me to study economics." She earned a Master of Philosophy degree in economics at Oxford University in 1997. Finkelstein then worked as a staff economist at the Council of Economic Advisers in Washington, DC. The experience fueled her interest in insurance markets and demonstrated the utility of economics in developing frameworks to analyze policy decisions.

Studying under economists James Poterba, Jonathan Gruber, and Jerry Hausman, Finkelstein earned a doctoral degree in economics from MIT in 2001. She received support from the National Institutes of Health to work as a postdoctoral fellow at the National Bureau of Economic Research in Cambridge, Massachusetts for a year. She was then elected to the Harvard Society of Fellows, where she held a junior fellowship for three years before returning to MIT to work as an assistant professor of economics in 2005.

Information Asymmetry in Insurance Markets

One theme of Finkelstein's research on insurance markets concerns information asymmetry, which can

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occur, for example, when one party in a transaction is more risk-prone or risk-averse, and how this knowledge may affect market performance. With economist Kathleen McGarry, Finkelstein demonstrated the existence of multiple dimensions of private information in the long-term care insurance market (2). These factors may have offsetting effects on the relationship between insurance coverage and risk occurrence.

Finkelstein also analyzed how asymmetric information affects annuity markets, which are insurance products that offer survival-contingent payment streams. With Poterba, she found evidence of adverse selection in how individuals make annuity purchase decisions: Customers had private information about their life expectancy to which insurance companies were not privy, influencing the type of product purchased (3).

With her long-term collaborator Liran Einav, Finkelstein developed a framework for empirically estimating welfare loss, or cost to society, from adverse selection in insurance markets (4). The original application of this work was to adverse selection in employer-provided health insurance. However, the framework has since been widely applied by other researchers to analyses of additional insurance markets as well as other settings with hidden information, such as credit markets. In follow-up work, they have explored extensions, such as the possibility that individuals may select insurance coverage based, in part, on their anticipated behavioral (moral hazard) response to insurance, a phenomenon that the article describes as “selection on moral hazard” (5).

For this work and others, Finkelstein earned the John Bates Clark Medal in Economics in 2012. The award annually recognizes an American economist under the age of 40 who is judged to have made significant contributions to economic thought and knowledge.

In 2007, Finkelstein was promoted to an associate professorship with tenure and rose through the ranks to her current position. To date, she has advised 33 doctoral students and continues to collaborate with several of them. Finkelstein’s students at MIT have bestowed her with awards for Best Advisor—Graduate Economics Association and Graduate Teacher of the Year.

Oregon Health Insurance Experiment

Another area of Finkelstein’s research concerns the impact of public health insurance programs, including Medicare and Medicaid. In a 2007 study, she showed that the introduction of Medicare for the elderly in 1965 affected not only directly covered individuals but also the entire healthcare sector (6). She found that Medicare altered the practice of medicine and contributed to a 40% increase in healthcare spending.

Finkelstein also led the Oregon Health Insurance Experiment, a comprehensive study of a lottery for Medicaid. In 2008, the state of Oregon implemented a Medicaid policy to expand coverage; because their funding limited the expansion to 10,000 eligible adults but many more were eligible for coverage, they

chose to use a random lottery to allocate the limited number of slots. Finkelstein was quick to recognize the opportunity and created the Oregon Health Insurance Experiment, which was the first randomized controlled trial of the impact of Medicaid. Finkelstein and her collaborators used this random assignment of Medicaid to some low-income, uninsured adults but not others to study how Medicaid coverage affects health, healthcare use, and economic security. The results showed that in the first year, Medicaid coverage increased healthcare use, reduced out-of-pocket medical expenditures and medical debt, and improved self-reported physical and mental health (7).

Finkelstein and her colleagues also used the lottery to investigate how Medicaid coverage affected clinical outcomes in the two years after coverage began (8). They determined that while there was no detectable impact on the rates of hypertension and high cholesterol, Medicaid coverage decreased rates of depression. It also increased usage of preventive services and nearly eliminated catastrophic out-of-pocket medical expenditures. In yet another study, Finkelstein and her team reported that—contrary to the conjecture that Medicaid coverage of the uninsured would decrease their emergency room use—Medicaid increased emergency room visits by 40% (9).

The Oregon data also allowed Finkelstein’s team to analyze how recipients value Medicaid (10). They found that low-income adults valued the program at 20 to 50 cents per dollar of Medicaid spending paid on their behalf. The authors estimate that part of the reason why Medicaid recipients value Medicaid spending at much less than the cost of the spending is that, in the absence of Medicaid, a large portion of this spending would have been paid for, not by the recipients themselves, but rather by other sources, such as publicly funded health clinics, nonprofit hospitals, and unpaid medical debt. A large part of what Medicaid does, therefore, is essentially to act as a subsidy for healthcare providers and state programs that help to cover the costs of otherwise-uninsured patients. The findings reinforced those of a separate study Finkelstein conducted in Massachusetts, where she similarly found that low-income beneficiaries of a state health insurance program valued it at less than 50% of their expected insurance costs (11).

Challenging Conventional Assumptions

Finkelstein’s empirical results often challenge conventional assumptions. For example, it was long thought that the healthcare sector’s idiosyncratic features left little possibility for market forces to allocate consumers to high-performance purveyors, such as high-quality hospitals. Finkelstein and her colleagues, however, determined that these hospitals have relatively greater market shares and grow more over time (12). The researchers determined that the relationship between performance and allocation is stronger among patients who have more scope for hospital choice than others. Finkelstein says, “These findings suggest that healthcare may have more in common

with 'traditional' sectors subject to market forces than often assumed."

There are regional disparities in United States medical spending, which has led to considerable speculation that place-based factors, such as differences across doctors and hospitals, are the cause. Finkelstein and her team examined the healthcare usage of 500,000 Medicare patients who moved from one market to another between 1998 and 2008 (13). The researchers found that patient-based factors—their health and their preferences for healthcare—accounted for approximately half of the geographic variation in healthcare use.

More recently, Finkelstein and her colleagues designed a trial to investigate whether a high-profile program in Camden, New Jersey, called "hotspotting"—in which providers identify high-cost patients and attempt to reduce their medical spending—is effective (14). A typical prepost analysis showed substantial declines in healthcare use in the treatment group, but the trial revealed virtually identical declines in the control group. This underscored the dangers of mean reversion when studying healthcare interventions as well as the importance of rigorous research designs.

Randomized Controlled Trials in Healthcare Policy

In her Inaugural Article (1), Finkelstein examined how a Medicare bundled payment reform for hip and knee replacement, targeting traditional Medicare patients and randomly implemented in some parts of the country, affected privately insured Medicare Advantage patients. She and her team found that both groups of patients were affected similarly in terms of their healthcare use and spending for the 2016 to 2017 study period. The authors recommend that future design and analysis of healthcare policies should take into account nontargeted patients due to probable spillovers.

Like the 2008 Oregon Medicaid policy, this healthcare payment reform resulted in a trial that Finkelstein developed. She is the cofounder and coscientific director of MIT-based J-PAL North America, which supports and encourages randomized controlled trials on domestic policy problems. Finkelstein says, "I think there is no reason we should not demand and get the same standard of rigorous evidence for healthcare policy as we do for medical trials."

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