The Effect of Information Disclosure on Industry Payments to Physicians
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Abstract

U.S. pharmaceutical companies paid $2.6 billion to physicians in the form of direct payments (consulting and speaker fees, conference travel, and meals) in order to promote their medicine in 2015. Offering financial incentives to prescribers raises concerns about potential conflict of interest. To curb such financial relationships between healthcare providers and firms, several states instituted disclosure laws wherein firms were required to publicly declare the payments that they made to physicians. In 2013, this law was rolled out to all 50 states as part of the Affordable Care Act. A consequence of the public disclosure is that all stakeholders in the market - patients, physicians, rival firms, and payers (insurance companies and the government) - can observe which physicians are being targeted by which firms as well as the amount of marketing expenditure directed towards each physician. How does the enhanced transparency change the relationship between firms and physicians? In this paper we investigate empirically the causal impact of public disclosure of payments on subsequent payments between firms and physicians. Physicians and firms operating in the states without prior disclosure laws were “treated” by receiving the new information on their competitors from the federal disclosure, while their counterparts in the states with prior disclosure laws received no new information. Combining machine learning with quasi-experimental difference-in-difference research design, we find control "clones" for every physician-product pair in the treated states using the Causal Forest algorithm (Wager and Athey 2017). The algorithm is computationally efficient and robust to model mis-specifications, while preserving consistency and asymptotic normality. Using a 29-month national panel covering $100 million-dollar payments between 20 anti-diabetics brands and 50,000 physicians, we find that the monthly payments declined by 2%, on average, due to disclosure. However, there is considerable heterogeneity in the treatment effects with 14% of the drug-physician pairs showing a significant increase in their monthly payment. Moreover, the decline in payment is smaller among drugs with larger marketing expenditure and prescription volumes, and among physicians who were paid more heavily pre-disclosure and prescribed more heavily. Thus, while information disclosure did lead to reduction in payments on average (as intended by policy makers), the effect is limited for big drugs and popular physicians. We further explore potential mechanisms that are consistent with the data pattern. This paper takes the first step towards shedding light on the role of public disclosure policy in solving conflict-of-interest issues in the pharmaceutical industry, especially in reducing payments made by pharmaceutical firms to physicians. This paper also contributes to understanding the consequences of information disclosure about competitor strategies in other settings. As Federal Trade Commission is pushing for sponsorship disclosure for digital content in social influencer/Key Opinion Leader (KOL) marketing (e.g. among fashion bloggers and TV celebrities), our findings provide a preview of the consequences of such policies.