

Heterogeneity in Effectiveness of Flu-Shot Incentives: Evidence from a Large-scale Field Experiment

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Abstract

Despite the proven effectiveness of flu vaccinations in reducing morbidity and mortality, uptake rates remain suboptimal. This paper tests whether offering a state scratch-off lottery ticket before an upcoming primary or specialty appointment can increase vaccination rates in a large-scale field experiment involving nearly 58,000 participants. We compare the lottery incentive with two other nudges: a small cash incentive and a text message reminder, alongside a passive control group. Our findings demonstrate that receiving any intervention significantly increased vaccination rates by 2 percentage points at scheduled appointments (an 8% increase from the control mean) and by 1.45 percentage points over the flu season (a 3% increase from the control mean). Notably, we found no additional benefits from cash or lottery incentives beyond the reminder. Given the large sample size and rich set of covariates from electronic health records, the setting is well-suited for a causal forest machine learning algorithm to identify heterogeneous effects across patient and county characteristics. Patients with characteristics in the top quartile of effectiveness were 3 to 4 times more likely to be influenced by the nudges. These results highlight the importance of targeting behavioral strategies in public health.

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