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## Research Description

*The Impact of Insurance on Recommended Medical Care, Lifestyle Behaviors and the Health of Non-Elderly Diabetics*

Over the past decade, the prevalence of diabetes among Americans has risen by 30 percent. Without proper maintenance, diabetics can experience very serious or fatal outcomes. Maintenance involves regular monitoring of blood sugar levels, cholesterol and other important indicators of disease severity as well as adequate exercise, appropriate nutrition and, in some cases, prescription medication. These behaviors, while generating positive expected health returns, can impose a significant financial burden on some individuals. Therefore, health insurance is an important factor in the demand for medical care and through cross-price effects, may also influence relevant lifestyle decisions. The extent of the impact of insurance on behavior, however, depends on the relative effectiveness of these inputs in maintaining health.

This paper examines the impact of health insurance coverage on diabetics' decisions to monitor and treat the disease and assesses the subsequent productive effects of health inputs on health. Using a sample of non-elderly diabetics from the Medical Expenditure Panel Survey, I employ various estimation methods to account for the endogeneity of insurance and health inputs, ranging from a two-stage least squares instrumental variables approach to a random effects joint estimation of the entire model of demand for insurance coverage, medical care, lifestyle behaviors and health production. The joint estimation procedure accounts for unobserved individual characteristics that may influence all these decisions. Using simulations, I estimate the effect of insurance coverage on the frequency of checkups and examinations, the use of medications and lifestyle behaviors. Through these changes in input allocation, I quantify the total effect of insurance on health.

I find that the presence of insurance with drug coverage leads to better adherence to diabetic care guidelines. Furthermore, the presence of insurance lowers the probability of eye and kidney problems. Using valuations of an additional year of life and the disutility associated with blindness from the literature, individuals value this decreased risk of negative health outcomes at over \$40,000 per year. There is, however, some evidence of ex ante moral hazard in that those covered by insurance with a drug plan also show slightly lower probabilities of exercising regularly.