

Impact of adherence to diabetes mellitus medical follow-up on hospital admissions: Panel data evidence from France

Bussière C., Sirven N., Rapp T., Sevilla-Dedieu C.

Abstract

Diabetes is associated with a large economic burden, and the major cost driver is hospitalization. That's why policy planners have developed strategies to prevent diabetes complications and limit hospital use. In particular, the French authority for health has issued eight guidelines, including regular controls of blood pressure and lipids to reduce cardiovascular risk, and regular screening for damage to the eyes, kidneys and feet. However, less is known on the efficacy of that prevention strategy.

We aim to analyze the impact of diabetes follow-up care on the probability of being hospitalized. We use six waves (2010-2015) of an administrative dataset of detailed medical records from a major French social security provider. Our study sample is a balanced panel sample of 52,218 adults with diabetes. We construct a score of medical follow-up representing the quality of adherence to the eight current guidelines. We control for patient's socioeconomic features, diabetes severity, ambulatory care consumption, and geographic variables measuring the supply of care providers. We estimate a dynamic panel data model, which accounts for the impact of previous period hospital admissions, previous adherence to medical recommendations, and potential confounders. We use a random effect model with a Mundlak correction to deal with the presence of potential biases associated with patients' unobserved heterogeneity.

Our results indicate that higher adherence to medical guidance is associated with a lower probability of being hospitalized. Optimizing adherence to diabetes follow-up guidelines may contribute to prevent the risk of hospitalization and avoid costs.