The Effect of Prices on the Prescription Behavior of Pharmaceuticals

Gurumurthy Kalyanaram, Peter S.H. Leeflang, and Kishore Gopalakrishna Pillai

Abstract Health care spending has been increasing sharply and shifting towards outpatient care and drug prescriptions in particular. Despite the cost of prescription drugs being an important component of health expenditures, relatively little attention has been spent on the effects of prices on either aggregate demand or on physician prescription behavior. In this study we demonstrate how price elasticities can be obtained from prescription data where we also show the effects of constraints that are specified for prescribers (physicians). More specifically, the possible differential responsiveness of HMO (Health Maintenance Organization) and non-HMO physicians to drug prices may shed more light on the price sensitivity of pharmaceuticals. HMO physicians are directed by insurance providers to contain and reduce the cost of medication and treatment, which could guide their prescription decision. Our objective is to expand the rather limited empirical base of knowledge on this issue by studying the differential effects of price on HMO and non-HMO physician prescription behavior.

We examine an extensive database covering 11,235 prescriptions for 19 brands in four therapeutic classes, recorded by 2,320 physicians. We find that price effects on prescription choice are significantly negative and up to four times higher for HMO physicians, who, on average, exhibit an elastic response. Our findings are in contrast with those reported by previous studies using physician-level data.

Keywords Healthcare • HMO • Price Elasticities • Empirical

G. Kalyanaram (⊠)

International University of Japan, Niigata, Japan

City University of New York, New York, NY, USA

e-mail: kalyan@alum.mit.edu

P.S.H. Leeflang

University of Groningen, Groningen, Netherlands

Aston Business School, Birmingham, UK

K.G. Pillai

Aston Business School, Birmingham, UK

References

References Available Upon Request