



## **Disentangling True Determinants of Drug Therapy Effectiveness: a Double Fixed Effect Approach.**

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The aim of this paper is to disentangle the effects of adherence to treatment (patient behavior) and prescribed treatment regime (technology, chosen by physician) on reducing cholesterol for a cohort of hypercholesterolemic patients receiving treatment. According with epidemiological literature, we recognize that not only are important the efforts and the natural endowments of patients in order to lower cholesterol level, but also the ability and the communication skills of the physicians.

This slightly different perspective has dramatic impact on standard economic models, that we extend to encompass patients and physicians characteristics. Some of these characteristics cannot be measured or are unavailable to us, hence we purge the unobservable but constant characteristics exploiting the panel nature of the data. The distinctive feature of this paper is that we consider the unobservable characteristics of both patients and physicians.

Although the heterogeneity of patients is the most important source of bias, by taking simultaneously into account physicians' heterogeneity allows to estimate more correctly the parameters of interest. Moreover, statistical tests suggest that controlling for both patient and physician fixed effects is better than control just for one source of heterogeneity.

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