Title
Prescription Drug Demand for Therapeutic Substitutes: Do Copayments and Insurer Non-Price Rationing Influence Patient Utilization?

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Abstract
RESEARCH OBJECTIVE: To determine if differential copayments and type of insurance arrangements affect the demand for therapeutically equivalent cholesterol-lowering prescription drugs in the statins class.

STUDY DESIGN: The statins were chosen due to their widespread use among patients with cardiovascular disease, their aggregate U.S. expenditure as a class, and the expectation of considerably greater utilization in the future. This study examines drug choice, with a multinomial logit, for a sample of 44,642 patients who each use only one statin (monotherapy). The data source is medical and pharmacy claims from the 1997 and 1998 MarketScan Commercial Claims and Encounters database, which allows for simultaneous examination of patient health care utilization, prescription drug use and patient health status. A variety of health plans, including preferred provider organizations, point of service plans, indemnity plans, and health maintenance organizations, provide healthcare to the individuals represented in this database. Average copayments vary across and within insurer type; for example, HMO copayments range from $11.48 for Lipitor to $8.96 for Lescol. Explanatory variables used to model drug choice include relative copayments, insurance type, demographic characteristics (age, gender, and region), and clinical factors (comorbidities, utilization of other lipid-modifying drugs, and evidence of or cardiovascular disease).

POPULATION STUDIED: Commercial health plan enrollees aged 18-94 representing 33 health plans throughout the United States.

PRINCIPAL FINDINGS: An increase in the relative copayment of the patient’s drug of choice by 10% decreases that drug’s market share by as much as 2.8%. Patients’ insurance type also influences drug choice independently from differential copayments. HMOs shifted patient utilization away from Lipitor and Mevacor to Zocor, Pravachol and Lescol in this sample. Compared to utilization among indemnity plans, Lipitor’s market share is nearly 30% lower in HMOs while use of Zocor is 20% higher. Results relating to demographic and health status variables also provide clinically interesting comparisons across statins.

CONCLUSIONS: Results demonstrate that copayments imposed by insurers do influence drug choice, shifting market share in health plans among therapeutic alternatives. Consequently, since copayments are set insurers company rather than pharmaceutical firms, health plans have a device with which they can shift demand. Findings also indicate that insurers affect choice through non-price rationing methods.

IMPLICATIONS FOR POLICY, DELIVERY OR PRACTICE: Results have implications for bargaining between insurers and drug manufacturers as well as the implementation of the Medicare prescription drug benefit. By setting differential copayments for therapeutically equivalent drugs, insurers can alter market share by shifting patients towards preferred agents. If drug firms are willing to lower prices to obtain higher volume, insurers could use differential
copayments as a negotiating tool. This strategy could also be employed to encourage utilization of cost-effective alternatives within therapeutic drug classes. Prescription drug plans (PDPs) who enroll Medicare beneficiaries could also utilize this approach. The implementation of pharmacy benefit schemes targeted to influence drug selection among beneficiaries would give PDPs substantial bargaining power to command price reductions and generate cost savings to Medicare.