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

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MATHEMATICA
Policy Research, Inc.
Research Questions

- Do differential copayments influence demand for therapeutically equivalent prescription drugs?
- Does insurance plan type have an independent effect on drug choice?
- What are the implications for Medicare Part D prescription drug insurance?
Research Design

- **Drug class of interest: the Statins**
- **MarketScan commercial claims (1997-1998)**
  - Statin Monotherapy
  - Commercial health plan enrollees (33 U.S. plans)
- **Multinomial logit specification**
  - Demographics: Age, gender, region
  - Medical: Comorbidities
  - Economic: Copayments, insurer type
Sample Statistics

- Sample Size: 44,709
- Gender: 59% (Male)
- Mean Age: 54
- Health Plan Type
  - Indemnity: 37%
  - HMO: 9%
  - PPO: 27%
  - POS: 27%
- Statin Utilization:
  - Lescol: 6%
  - Lipitor: 36%
  - Mevacor: 6%
  - Pravachol: 17%
  - Zocor: 35%
- Health Status
  - Coronary Heart Disease: 77%
  - Hypertension: 31.5%
  - Diabetes: 13%
Magnitude of Copayment Differences

<table>
<thead>
<tr>
<th>Copayment Difference Range</th>
<th>Number of Health Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;$5</td>
<td>2</td>
</tr>
<tr>
<td>$5 to $2</td>
<td>8</td>
</tr>
<tr>
<td>$2 to $1</td>
<td>10</td>
</tr>
<tr>
<td>$1 to $0.50</td>
<td>6</td>
</tr>
<tr>
<td>&lt; $0.50</td>
<td>4</td>
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</tbody>
</table>
Principal Findings

- Differential copayments influence drug choice

- Insurer type influences drug choice
  - Market share in HMOs is 30% lower for Lipitor and 20% higher for Zocor

- Demographic and health status factors provide clinically interesting comparisons
  - Diabetes and Lipitor utilization
### Interpreting Results on Copayments

**Impact of a 20% Change in Copayment of Lipitor**

<table>
<thead>
<tr>
<th>Statin</th>
<th>Effect on Use</th>
<th>Original Distribution</th>
<th>New Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lipitor</td>
<td>-0.281</td>
<td>36%</td>
<td>30.4%</td>
</tr>
<tr>
<td>Zocor</td>
<td>0.375</td>
<td>35%</td>
<td>42.5%</td>
</tr>
</tbody>
</table>

**Impact of a 20% Change in Copayment of Zocor**

<table>
<thead>
<tr>
<th>Statin</th>
<th>Effect on Use</th>
<th>Original Distribution</th>
<th>New Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lipitor</td>
<td>0.123</td>
<td>36%</td>
<td>38.4%</td>
</tr>
<tr>
<td>Zocor</td>
<td>-0.026</td>
<td>35%</td>
<td>34.5%</td>
</tr>
</tbody>
</table>
General Implications

- Bargaining between insurers, or other large drug purchasers and drug manufacturers
- Differential copayments can shift market share for prescription drugs within a health plan or group of plans
Policy Implications

- Prescription drug plans under Medicare Part D could utilize differential copayments to decrease drug costs

- Number of options available to beneficiaries could influence impact and costs to Medicare