Do Purchasers Care About Underuse?
What Should They Do About It?

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About Pitney Bowes

- 80-plus year legacy
- Fortune 500 company
- $4.1 billion global provider of integrated mail and document management solutions
- Global team of more than 35,000 employees
- Presence in more than 130 countries worldwide
- More than 2 million customers
Pitney Bowes Employees

Average Age – 40.3 yrs
   Enterprise Solutions – 39
   Mailstream Solutions – 42

Gender – 60% male; 40% female

YOS – 7.1
   Enterprise Solutions – 4
   Mailstream Solutions – 10.6
Healthy Corporation

Healthy Work Environment
- On-site medical facilities/Fitness Centers
- Ergonomic workspaces/Stretch breaks
- Non-smoking work sites
- Healthy food options in cafeterias
- Lactation rooms

Personal Responsibility
- Wellness/prevention
- Demand management
- Disease management

Healthy, Engaged, Productive Employees

- Culture and values
- Benefit plans
- Management practices
- Employee resources
Pitney Bowes Medical Benefits

Mixture of Self-insured (80%) and Fully-insured (20%) plans, with common benefit designs

HMO providers: 43 local and national carriers
PPO providers: 3 national carriers
Pitney Bowes Net Employee Cost vs. Benchmark

- Net Employee Cost
- Benchmark
Research/Predictive Modeling

- Use of multiple data points and databases to determine logic on prediction of health care costs
  - Database constructed from:
    - Medical Claims
    - Clinic Encounters
    - Disability
    - Workers’ Comp
    - HR Database
  - Defined outcome
    - $10,000 threshold in total cost
Key Predictors for High Cost Claims

- Diagnosis
- Medical expense
- Compliance
Predictive Modeling – Preliminary Findings

Examples of rules for predicting future high and low cost individuals

1. If an individual has filled over 6 prescriptions for antidepressant medication and has no workers’ compensation claims in one year, they will be at low risk for being a high cost claimant in the subsequent year. Key driver: compliance
Predictive Modeling – Preliminary Findings

2. Individuals over age 22 who have filed no more than 6 prescriptions for antidepressant drugs or 9 prescriptions for diabetes drugs are predicted to be at high cost for the subsequent year. (Related to Rule #1 above.) Compliance issue
Predictive Modeling – Preliminary Findings

3. Individuals with total health care costs less than $781 but greater than $0 in the base year will be low cost in the subsequent year.
Revised Design

- Tier 1 – Most Generics
  - All medications for:
    - Diabetes
    - Asthma
    - Hypertension
- Tier 2 – Most Preferred
- Tier 3 – Non-preferred Name Brand Drugs
- No mandatory mail order
- No mandatory generic
- No step therapy
- Limited prior authorization
### Background: Formulary changes

In January 2002, PB made some modifications to the formulary design. These changes, which were announced to most members, essentially allow members to pay brand name drugs at the Tier1 co-insurance payment for specific conditions—namely asthma, diabetes or cardiac conditions.

<table>
<thead>
<tr>
<th>Type of Prescription Drug</th>
<th>Tier 2 drugs affected by the formulary change (i.e., the “intervention groups”)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Asthma Drugs</strong></td>
<td></td>
</tr>
<tr>
<td>Inhalers</td>
<td>• Advair Diskus, Azmacort, Pulmicort Turbuhaler</td>
</tr>
<tr>
<td>Oral drugs</td>
<td>• Accolate, Singulair</td>
</tr>
<tr>
<td><strong>Diabetes Drugs</strong></td>
<td></td>
</tr>
<tr>
<td>Oral drugs</td>
<td>• Actos, Amaryl, Avandia, Glucotrol XL, Glucovance, Prandin, Precose</td>
</tr>
<tr>
<td>Insulins</td>
<td>• Humalog, Humulin, Lantus, Novolin, Novolog</td>
</tr>
<tr>
<td><strong>Cardiovascular Drugs</strong></td>
<td></td>
</tr>
<tr>
<td>Blood pressure lowering</td>
<td>• Accupril, Accuretic, Altace</td>
</tr>
</tbody>
</table>

Possible confounding factors: Because of delays in educating members of the formulary changes, the actual impact of the change may be understated in the results. Also, hypertension impacted drugs may not be comparable to other hypertensives.
Pharmacy Per Member Per Month

<table>
<thead>
<tr>
<th>Year</th>
<th>1997</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$25.00</td>
<td>$30.00</td>
<td>$35.00</td>
<td>$40.00</td>
<td>$35.00</td>
<td>$40.00</td>
<td>$45.00</td>
</tr>
</tbody>
</table>
Preliminary Findings
18 Months Post Implementation

- Significant change in drug market share
  - Migration to combination therapies
    - Easy compliance
    - Previously 3rd tier products

- Increased drug possession rates
  - Combination meds
  - Controllers vs. rescue

- Medication member cost per day reduced 40%

- Decrease in median annual spend -- 9 – 15%
Diabetes – Changes in Drug Use

- Use of impacted drugs increased from 41% to 71%
  - For Type 2 diabetes, use of impacted drugs increased from 29% to 52%
- 85% of members on an impacted drug remained on treatment
- 17% of people on previously Tier 1 drugs switched to impacted drugs
- Members who remained on Tier 1 drugs had higher rates of visit and admission rates with consequent high cost
Asthma – Changes in Drug Use

- Use of “rescue” drugs decreased from 35% to 12%
- Use of “controller” drugs increased from 26% to 39%
- Tier 1 users were most likely to discontinue drug use – ? Valid diagnosis
- Users of impacted drugs had highest adherence rates
Conclusion

- Underuse has significant impact on costs
  - Compliance

- Benefit design must support appropriate use/compliance
  - “Make it easy for individual to do the right thing.”