The Impact of Prior Authorization on Buprenorphine Dose, Relapse and Cost of Opioid Addiction Treatment

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*Et al.*
The Impact of Prior Authorization on Buprenorphine Dose, Relapse and Cost of Opioid Addiction Treatment

Evidence from Massachusetts’ Medicaid Program

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Buprenorphine/naloxone

- Introduced in 2003 (Suboxone®)
- First opioid for addiction treatment that can be dispensed in an outpatient setting and taken without direct observation
  - Considered safer than methadone
  - Doses > 24 mg not recommended
Why we are interested in Buprenorphine & Medicaid?

- Medicaid is a key payer for buprenorphine treatment
- Increasing concern about cost and diversion of buprenorphine
- Most states restrict access through prior authorization requirements
Buprenorphine treatment in MassHealth has risen steadily

MassHealth* Members with a Opioid Use Disorder Who were Treated with Buprenorphine

*Massachusetts’ Medicaid program
Prior Authorization

• Prescribers must get authorization before a prescription is filled
• Seeks to reduce cost and/or improve safety
• Typically imposed by an insurer
• A favorite tool for Medicaid programs
Unanticipated Effects

• Does not always reduce costs
• May break treatment continuity
• May contribute to relapse

(Law et al, 2008; Abouzaid et al 2010; Lu et al. 2011; Morden 2008)
MassHealth* Prior Authorization for Suboxone®

• Implemented in January 2008
• High doses required more frequent authorization

<table>
<thead>
<tr>
<th>Daily Dose</th>
<th>Authorization Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 32 mg</td>
<td>Each prescription</td>
</tr>
<tr>
<td>&gt; 24 mg &amp; ≤ 32</td>
<td>Every 90 days</td>
</tr>
<tr>
<td>&gt; 16 mg &amp; ≤ 24</td>
<td>Every 180 days</td>
</tr>
<tr>
<td>≤ 16 mg</td>
<td>None required</td>
</tr>
</tbody>
</table>

* The Massachusetts Medicaid Program
Research Questions

1. Did high-dose treatment decrease?
2. Did prior authorization affect medication costs and total costs?
3. Did prior authorization affect relapse rates?
Methods

- Medicaid claims January 2007 through December of 2008
- Additional data on other publically funded detoxification treatment
- Limited to those who used Suboxone®
- Three treatment groups: Low dose < 16 mg/day, Medium 16-24 mg, High >24mg
Time series

• Population level analysis
  - analyzed claims for all patients using month as the unit of observation

• Individual level multivariable analysis
  - analyzed claims for continuously enrolled patients as the unit of observation (n =2,049)

• Generalized estimating equations for both
## Suboxone users in 2007

<table>
<thead>
<tr>
<th></th>
<th>Low ( n = 908 )</th>
<th>Medium ( n = 699 )</th>
<th>High ( n = 442 )</th>
<th>Total ( n = 2,049 )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>32.9 (9.9)</td>
<td>33.1 (9.4)</td>
<td>34.2 (9.7)</td>
<td>33.2 (9.7)</td>
</tr>
<tr>
<td><strong>% Women</strong></td>
<td>43.1%</td>
<td>37.0%</td>
<td>33.3%</td>
<td>38.9%</td>
</tr>
<tr>
<td><strong>MH conditions</strong></td>
<td>1.4 (1.5)</td>
<td>1.3 (1.4)</td>
<td>1.2 (1.2)</td>
<td>1.3 (1.4)</td>
</tr>
<tr>
<td><strong>Physical conditions</strong></td>
<td>0.7 (1.0)</td>
<td>0.6 (0.9)</td>
<td>0.8 (1.0)</td>
<td>0.7 (1.0)</td>
</tr>
<tr>
<td><strong>Suboxone® $/month</strong></td>
<td>$164 ($96)</td>
<td>$284 ($128)</td>
<td>$362 ($179)</td>
<td>$248 ($151)</td>
</tr>
<tr>
<td><strong>Total $/month</strong></td>
<td>$1,372 ($1,640)</td>
<td>$1,110 ($1,025)</td>
<td>$1,102 ($1,185)</td>
<td>$1,224 ($1,367)</td>
</tr>
</tbody>
</table>

*(Standard deviation)*
Suboxone® Doses Before and After Prior Authorization

- **Low dose (≤ 16mg)**
- **Medium dose (>16 and ≤ 24 mg)**
- **High dose (> 24 mg)**
Cost impact

- **Suboxone®** expenditures decreased in the high dose group
- Increased in other groups
- Net 2008 **Suboxone®** savings from $131,347 to $492,641
- No savings in overall healthcare costs
Temporary Increase in Relapses

![Graph showing the relapse rate over time with different dosage levels. The graph indicates a temporary increase in relapses during a specific period.](image-url)
Limitations

• Measures limited to administrative data
• Cannot rule out secular (time) effects
Summary

• The PA effectively lowered high doses
• Modest decrease in Suboxone® cost
• No impact on total cost
• Temporary increase in relapses for medium & high dose groups
• Long-term impact of dose limits needs further study
Why should we care?

- At least 6 states now place lifetime limits on buprenorphine treatment
- Limiting access to medication-assisted treatment can result in more relapses, deaths and higher costs
- Dose related PAs may be a relatively safe way to manage “over prescribing”