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

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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

*BMassachusetts’ 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

Month:
- Jan-07
- Feb-07
- Mar-07
- Apr-07
- May-07
- Jun-07
- Jul-07
- Aug-07
- Sep-07
- Oct-07
- Nov-07
- Dec-07
- Jan-08
- Feb-08
- Mar-08
- Apr-08
- May-08
- Jun-08
- Jul-08
- Aug-08
- Sep-08
- Oct-08
- Nov-08
- Dec-08

Doses:
- Low dose (≤ 16 mg)
- 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 increase in relapse rates over time, with a temporary spike noted around July 2008. The graph includes lines for different dose levels: Low dose (≤ 16 mg), Medium dose (> 16 mg and ≤ 24 mg), and High dose (> 24 mg).]
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”