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Limiting the Duration of Medication Assisted Treatment for Opioid Addiction: Will New State Policies Help or Hurt?

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Keywords
Opioid management, pharmacy, behavioral health, Medicaid, buprenorphine therapy, opioid dependence

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Limiting the Duration of Medication Assisted Treatment for Opioid Addiction: Will New State Policies Help or Hurt?

Medicaid Evidence-Based Decisions Project
June 25, 2014

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- Elizabeth O’Connell, MS
- Bill Fisher, PhD

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Treatment for Opioid Dependence

• A variety of drug-free treatments, including professionally led and self-help

• Medication assisted treatment
  – Buprenorphine
  – Methadone
  – Naltrexone
Evidence strongly supports medication assisted treatment

- Effectiveness of drug free treatment varies widely
- Methadone is slightly more effective than buprenorphine
- Extended release naltrexone not available until late 2010
Concerns about medication assisted treatment (MAT)

- Diversion
- Methadone overdose
- Cost of long-term maintenance
- Public opinion (e.g. “substituting one opioid for another”)
These concerns shape treatment access for Medicaid beneficiaries

- Methadone maintenance is limited in many states
- Increasingly, Medicaid programs are limiting the lifetime duration of treatment (6 months to 3 years)
The state policy perspective

1. How many long-term MAT users are there?
2. What might the effects of restricted MAT treatment length be?
3. Are non-drug treatments for opioid addiction a viable alternative?
4. Can states save money by limiting the duration of treatment?
Sample

• 56,278 Medicaid members in MA treated for opioid addiction (2004 – 2010)
• 108,145 episodes of treatment lasting 3 months or more
• Allowing for a break of up to 60 days within an episode
Data

- Medicaid claims and enrollment 2003 - 2010
- Merged with other Public Health treatment data
- Relapse event = detoxification, emergency department visit, or hospitalization for substance abuse
Study design

• Compare buprenorphine, methadone and non-medication treatment episodes

• Outcome measures: episode length, relapses per month, Medicaid expenditures per month

• Adjust for demographics and clinical characteristics

• Members followed for up to 36 months
### MassHealth Members Treated for Opioid Addiction between 2004 - 2010

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total (N = 56,278)</th>
<th>Type of Treatment Received¹</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N = 56,278)</td>
<td>Buprenorphine (N = 18,866)</td>
</tr>
<tr>
<td>Gender, n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>32,636 (58.0)</td>
<td>10,999 (58.3)</td>
</tr>
<tr>
<td>Female</td>
<td>23,642 (42.0)</td>
<td>7,867 (41.7)</td>
</tr>
<tr>
<td>Average age², mean (SD)</td>
<td>33.8 (10.4)</td>
<td>32.1 (9.5)</td>
</tr>
<tr>
<td>CDPS², mean (SD)</td>
<td>3.2 (2.0)</td>
<td>3.0 (1.7)</td>
</tr>
<tr>
<td>Behavioral health diagnosis², n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMI</td>
<td>13627 (24.2)</td>
<td>3,878 (20.6)</td>
</tr>
<tr>
<td>Other</td>
<td>13,647 (24.3)</td>
<td>5,080 (26.9)</td>
</tr>
<tr>
<td>Major depression</td>
<td>8,113 (14.5)</td>
<td>2,564 (13.6)</td>
</tr>
<tr>
<td>Co-occurring substance use², n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>12,861 (22.9)</td>
<td>3,338 (17.7)</td>
</tr>
<tr>
<td>Other drug</td>
<td>19,266 (34.2)</td>
<td><strong>7,783 (41.3)</strong></td>
</tr>
<tr>
<td>Treatment episodes per person, mean (SD)</td>
<td>1.9 (1.2)</td>
<td>1.3 (0.7)</td>
</tr>
<tr>
<td>Medicaid expenditures³, mean (SD)</td>
<td>$1,086 (2224)</td>
<td><strong>$867 (1802)</strong></td>
</tr>
<tr>
<td>Relapse during treatment⁴, n (%)</td>
<td>19,578 (34.8)</td>
<td>3,901 (20.7)</td>
</tr>
</tbody>
</table>
Length of Episodes: Methadone, Buprenorphine & Other Treatment
# Percentage in treatment

<table>
<thead>
<tr>
<th>Treatment length</th>
<th>Buprenorphine</th>
<th>Methadone</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month 1</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Month 6</td>
<td>62%</td>
<td>78%</td>
<td>40%</td>
</tr>
<tr>
<td>Month 12</td>
<td>33%</td>
<td>52%</td>
<td>12%</td>
</tr>
<tr>
<td>Month 24</td>
<td>13%</td>
<td>27%</td>
<td>1%</td>
</tr>
<tr>
<td>Month 36</td>
<td>5%</td>
<td>9%</td>
<td>&lt; 1%</td>
</tr>
</tbody>
</table>
Statistical comparisons

- Cox proportional hazards for time to 1\textsuperscript{st} relapse
- GEE for expenditures
- Adjusted for age, gender, mental health diagnoses, other substance abuse, disease burden, relapses prior to the current episode, prior costs
Relapse Rates: Methadone, Buprenorphine & Other Treatment
Factors contributing to relapse

Cox proportional hazards survival model

<table>
<thead>
<tr>
<th>Factor</th>
<th>Hazard rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol abuse</td>
<td>3.7</td>
</tr>
<tr>
<td>Other drug abuse</td>
<td>2.1</td>
</tr>
<tr>
<td>Relapses 6 months before treatment</td>
<td>1.9</td>
</tr>
<tr>
<td>Severe mental illness</td>
<td>1.8</td>
</tr>
<tr>
<td>Buprenorphine treatment</td>
<td>0.31</td>
</tr>
<tr>
<td>Methadone treatment</td>
<td>0.26</td>
</tr>
</tbody>
</table>

Full model includes: age, gender, disease burden, relapses 6 mos. before tx., severe mental illness, major depression, other mental illness, alcohol abuse, other drug abuse, treatment type.
Average Monthly Medicaid Expenditures

[Graph showing Medicaid expenditures (PMPM) over the months of treatment. The graph compares Buprenorphine, Methadone, and Other treatments.]
## Adjusted Monthly Costs — selected factors¹

Generalized Estimating Equations

<table>
<thead>
<tr>
<th>Factor</th>
<th>Regression coefficient (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol abuse</td>
<td>$396 (360, 430)</td>
</tr>
<tr>
<td>Severe mental illness</td>
<td>$249 (220, 277)</td>
</tr>
<tr>
<td>Other drug abuse</td>
<td>$106 (86, 125)</td>
</tr>
<tr>
<td>Disease burden (per CDPS point) ²</td>
<td>$146 (135, 158)</td>
</tr>
<tr>
<td>Buprenorphine treatment</td>
<td>$-386 (-409, -363)</td>
</tr>
<tr>
<td>Methadone treatment</td>
<td>$-146 (-170, -123)</td>
</tr>
</tbody>
</table>

¹ Full GEE model includes: age, gender, disease burden, cost before tx, severe mental illness, major depression, other mental illness, alcohol abuse, other drug abuse, treatment type. Clustered by year of treatment start.

² Chronic Illness and Disability Payment System. Kronick et al 2000
Limitations

• Relied on administrative data
• Non-randomized study. Cannot control for unobserved differences in individuals using different treatments.
• Other important outcomes were not included—abstinence, arrest, incarceration, death
Conclusions

- Most treatment episodes last less than 2 years
- Relapse rates are lower for MAT
- Medicaid costs are lower for MAT
- Relapses and costs decrease with longer treatment
Policy implications

• 6 month treatment limits would affect most MAT users
• Limiting MAT is likely to increase relapse rates and costs
• Current non-drug treatment does not appear to be a dependable alternative to MAT