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

Robin E. Clark  
*University of Massachusetts Medical School*

Jeffrey D. Baxter  
*University of Massachusetts Medical School*

Bruce A. Barton  
*University of Massachusetts Medical School*

*See next page for additional authors*

Follow this and additional works at: [http://escholarship.umassmed.edu/commed_pubs](http://escholarship.umassmed.edu/commed_pubs)

Part of the Health Economics Commons, Health Law and Policy Commons, Health Policy Commons, Health Services Administration Commons, Health Services Research Commons, and the Substance Abuse and Addiction Commons

**Recommended Citation**  
[http://escholarship.umassmed.edu/commed_pubs/98](http://escholarship.umassmed.edu/commed_pubs/98)

This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in Commonwealth Medicine Publications by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.
Limiting the Duration of Medication Assisted Treatment for Opioid Addiction: Will New State Policies Help or Hurt?

Authors
Robin E. Clark, Jeffrey D. Baxter, Bruce A. Barton, Gideon Aweh, Elizabeth O'Connell, and William H. Fisher

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

This presentation is available at eScholarship@UMMS: http://escholarship.umassmed.edu/commed_pubs/98
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

Supported by National Institute of Drug Abuse grant number R01DA029741
The UMass Research Team

• Robin Clark, PhD
• Jeff Baxter, MD
• Bruce Barton, PhD
• Gideon Aweh, MS
• Elizabeth O’Connell, MS
• Bill Fisher, PhD

This presentation is solely the responsibility of the authors and does not necessarily represent the views of the Massachusetts EOHHS or of NIDA. The authors have no conflicts of interest to disclose.
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></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>7,783 (41.3)</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>$867 (1802)</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

![Graph showing the length of episodes for Methadone, Buprenorphine, and Other treatments over time. The graph displays a decline in the number of episodes over the months of treatment.]

Number of episodes vs Month of treatment for Methadone, Buprenorphine, and Other treatments. The graph shows a significant decrease in the number of episodes over time for all three treatments. Methadone shows a steady decline, Buprenorphine shows a slower decline, and Other treatments show a more gradual decline compared to Methadone.
# 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 1st 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

![Graph showing relapse rates over time for Methadone, Buprenorphine, and Other treatments.](image-url)
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
### Adjusted Monthly Costs — selected factors

<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)</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