Buprenorphine Treatment at 11 Years: Trends in an Urban Community Health Center

Tiffany Lu, MD
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Disclosures

• None
Introduction

- Buprenorphine is an effective treatment for opioid use disorder (OUD) in primary care settings
- Treatment retention is a key predictor in effectively managing OUD as chronic disease
- Robust primary care-based buprenorphine treatment retains >50% of patients at 6 months
- Ensuring consistent treatment retention over time may be challenging as primary care-based buprenorphine treatment expands

Stein et al 2005; Cunningham et al 2008; Alford et al 2011
Objective

• To examine trends in buprenorphine treatment retention over 11 years in a Bronx community health center buprenorphine treatment program
Methods - Overview

- Retrospective cohort study
- Patients who initiated buprenorphine treatment at a Bronx community health center from January 2005 to September 2016
- Treatment retention calculated for 1, 3, 6, 9, and 12 months
- Data extracted from electronic health records
Methods - Setting

- Buprenorphine treatment program embedded in general primary care since 2005
  - 25+ general internists over time, 1 clinical pharmacist
  - No substance abuse counselors or support groups
- Patients eligible for buprenorphine treatment if ≥18 years, have OUD, insured or pay sliding scale fee
- If ongoing drug use, treatment intensification recommended
- Treatment may be terminated if buprenorphine diversion and/or refuse treatment intensification
Methods – Data Collection

• Electronic health records
  – Demographic characteristics (age, sex, race/ethnicity)
  – Buprenorphine prescription data (prescription dates, strength, dose, frequency, quantity)
Methods – Dependent Variable

• Treatment retention defined by active buprenorphine prescription(s) during period of time following treatment initiation

- 30-89 days (1-month)
- 90-179 days (3-month)
- 180-269 days (6-month)
- 270-359 days (9-month)
- 360-449 days (12-month)

• Contingent outcomes (i.e. 12 month-retention means retained at 1, 3, 6, and 9 months)
Methods – Independent Variables

- Year of buprenorphine treatment initiation
- Age (continuous)
- Sex (female, male)
- Race/ethnicity (Hispanic, non-Hispanic black, non-Hispanic white, non-Hispanic other)
Methods – Data Analyses

- Overall treatment retention at 1, 3, 6, 9, 12 months described
- Treatment retention examined by year of buprenorphine treatment initiation
  - Adjusted for age, sex, race/ethnicity
  - Linear trend over 11 years assessed by chi square for linear trend
### Results (n=793)

<table>
<thead>
<tr>
<th>Demographic Characteristics</th>
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</thead>
<tbody>
<tr>
<td>Age, median (IQR)</td>
<td>46 (37, 52)</td>
</tr>
<tr>
<td>Female, n(%)</td>
<td>191 (24)</td>
</tr>
<tr>
<td>Race/ethnicity, n(%)</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>377 (48)</td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>132 (17)</td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>62 (8)</td>
</tr>
<tr>
<td>Non-Hispanic other</td>
<td>222 (28)</td>
</tr>
</tbody>
</table>
Overall Treatment Retention (n=793)

<table>
<thead>
<tr>
<th>Treatment Retention</th>
<th>% Patients Retained in Treatment</th>
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<tbody>
<tr>
<td>1 month</td>
<td>85.9%</td>
</tr>
<tr>
<td>3 months</td>
<td>72.0%</td>
</tr>
<tr>
<td>6 months</td>
<td>58.8%</td>
</tr>
<tr>
<td>9 months</td>
<td>49.6%</td>
</tr>
<tr>
<td>12 months</td>
<td>43.8%</td>
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</tbody>
</table>
1-month Treatment Retention

*Adjusted for age, sex, and race/ethnicity; P = 0.08 for linear trend
3-month Treatment Retention

<table>
<thead>
<tr>
<th>Period</th>
<th>Retention Rate</th>
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<tbody>
<tr>
<td>2005-2006</td>
<td>67.2% (n=39)</td>
</tr>
<tr>
<td>2007-2008</td>
<td>75.1% (n=176)</td>
</tr>
<tr>
<td>2009-2010</td>
<td>75.2% (n=187)</td>
</tr>
<tr>
<td>2011-2012</td>
<td>77.3% (n=125)</td>
</tr>
<tr>
<td>2013-2014</td>
<td>71.3% (n=143)</td>
</tr>
<tr>
<td>2015-2016</td>
<td>60.2% (n=123)</td>
</tr>
</tbody>
</table>

*Adjusted for age, sex, and race/ethnicity; P = 0.03 for linear trend
6-month Treatment Retention

*Adjusted for age, sex, and race/ethnicity; P = 0.001 for linear trend
12-month Treatment Retention

*Adjusted for age, sex, and race/ethnicity; P = 0.07 for linear trend
Limitations

• Single site experience may not be generalizable to other primary care settings
• Did not have reliable prescriber information (3 separate EHR systems)
• Clinically, patients “stretch” medication, which was not taken into account in analyses
Conclusions

• Treatment retention was generally stable over time with a slight trend for worse outcomes
• Differences in treatment retention may reflect turnover and variable experiences among buprenorphine prescribers
• Support for buprenorphine treatment retention should be an important focus as programs expand in primary care settings
Acknowledgements

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