Marijuana Use and Buprenorphine Treatment Retention at an Urban Community Health Center

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Disclosures

• None
Introduction

• Buprenorphine is an effective treatment for opioid use disorder (OUD) in primary care settings
• Polysubstance use often co-occurs in patients with OUD and may portend poor treatment outcomes
• Marijuana use is increasing nationally and common among patients with OUD
• However, it’s unclear how marijuana use is associated with buprenorphine treatment outcomes
Objective

• To compare buprenorphine treatment retention in patients with or without baseline marijuana use
Methods - Overview

• Retrospective cohort study
• Patients who initiated buprenorphine treatment at a Bronx community health center from January 2013 to June 2016
• Treatment retention calculated for 1, 3, 6 months
• Demographic characteristics, baseline substance use, and buprenorphine prescription data extracted from electronic health records
Methods - Setting

- Experienced buprenorphine treatment program embedded in general primary care
- Eligible for buprenorphine treatment:
  - ≥18 years
  - OUD diagnosis
  - No alcohol or benzodiazepine use disorder
  - Cocaine and marijuana use not eligibility criteria
- Baseline substance use by self-report collected on standardized intake form prior to treatment initiation
Methods - Setting

- If ongoing substance use despite buprenorphine treatment, treatment intensification recommended:
  - On-site psychosocial counseling
  - Outpatient drug treatment programs

- Treatment may be terminated if known buprenorphine diversion and/or refusal to follow through treatment intensification
Methods – Outcomes

- Treatment retention (y/n) defined by active buprenorphine prescription(s) during period of time following treatment initiation

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

• Key exposure: marijuana use at baseline (y/n), extracted from standardized intake form in EHR

• Other variables:
  – Age (continuous)
  – Race/ethnicity (Hispanic, non-Hispanic Black, non-Hispanic other)
  – Sex (female, male)
  – Baseline substance use
    • Alcohol (y/n)
    • Benzodiazepine (y/n)
    • Cocaine (y/n)
Methods – Data Analyses

• Treatment retention at 1, 3, and 6 months compared by baseline marijuana use (chi-square)

• Association of baseline marijuana use with treatment retention tested with logistic regression
  – Separate models for 1, 3, and 6 months
  – Adjusted for potential confounders (p≤0.05)
Demographic and Substance Use Characteristics by Baseline Marijuana Use (N=235)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>MJ use (N=62)</th>
<th>No MJ use (N=173)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age – median (IQR)</td>
<td>40 (33, 52)</td>
<td>47 (39, 54)</td>
<td>0.03</td>
</tr>
<tr>
<td>Female – n (%)</td>
<td>16 (26)</td>
<td>36 (21)</td>
<td>0.42</td>
</tr>
<tr>
<td>Race/ethnicity - n (%)</td>
<td></td>
<td></td>
<td>0.17</td>
</tr>
<tr>
<td>Hispanic</td>
<td>27 (44)</td>
<td>88 (51)</td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>14 (22)</td>
<td>22 (13)</td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic other</td>
<td>21 (34)</td>
<td>63 (36)</td>
<td></td>
</tr>
<tr>
<td>Baseline substance use – n (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alcohol</td>
<td>35 (47)</td>
<td>58 (34)</td>
<td>0.002</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>12 (19)</td>
<td>20 (12)</td>
<td>0.13</td>
</tr>
<tr>
<td>Cocaine</td>
<td>15 (24)</td>
<td>19 (11)</td>
<td>0.01</td>
</tr>
</tbody>
</table>
**Treatment Retention by Baseline Marijuana Use (Unadjusted)**

<table>
<thead>
<tr>
<th></th>
<th>1 month</th>
<th>3 month</th>
<th>6 month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana use</td>
<td>80.7%</td>
<td>66.1%</td>
<td>53.2%</td>
</tr>
<tr>
<td>No marijuana use</td>
<td>87.9%</td>
<td>72.3%</td>
<td>57.8%</td>
</tr>
</tbody>
</table>

*none of the findings are significant (p=0.16, 0.36, 0.53, respectively)*
## Association Between Baseline Marijuana Use and 1-month Treatment Retention (Adjusted)

<table>
<thead>
<tr>
<th></th>
<th>AOR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baseline marijuana use</strong></td>
<td>0.60</td>
<td>0.27 to 1.35</td>
<td>0.21</td>
</tr>
<tr>
<td><strong>Age (10-year increment)</strong></td>
<td>1.03</td>
<td>0.74 to 1.43</td>
<td>0.16</td>
</tr>
<tr>
<td><strong>Baseline alcohol use</strong></td>
<td>1.00</td>
<td>0.49 to 2.20</td>
<td>0.99</td>
</tr>
<tr>
<td><strong>Baseline cocaine use</strong></td>
<td>0.82</td>
<td>0.30 to 2.28</td>
<td>0.70</td>
</tr>
</tbody>
</table>
Association Between Baseline Marijuana Use and 3-month Treatment Retention (Adjusted)

<table>
<thead>
<tr>
<th></th>
<th>AOR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline marijuana use</td>
<td>0.72</td>
<td>0.37 to 1.37</td>
<td>0.31</td>
</tr>
<tr>
<td>Age (10-year increment)</td>
<td>0.88</td>
<td>0.68 to 1.14</td>
<td>0.35</td>
</tr>
<tr>
<td>Baseline alcohol use</td>
<td>1.10</td>
<td>0.60 to 2.01</td>
<td>0.75</td>
</tr>
<tr>
<td>Baseline cocaine use</td>
<td>0.83</td>
<td>0.36 to 1.87</td>
<td>0.65</td>
</tr>
</tbody>
</table>
## Association Between Baseline Marijuana Use and 6-month Treatment Retention (Adjusted)

<table>
<thead>
<tr>
<th></th>
<th>AOR</th>
<th>95% CI</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baseline marijuana use</strong></td>
<td>0.60</td>
<td>0.27 to 1.35</td>
<td>0.21</td>
</tr>
<tr>
<td><strong>Age (10-year increment)</strong></td>
<td>0.93</td>
<td>0.74 to 1.19</td>
<td>0.58</td>
</tr>
<tr>
<td><strong>Baseline alcohol use</strong></td>
<td>1.04</td>
<td>0.60 to 1.81</td>
<td>0.88</td>
</tr>
<tr>
<td><strong>Baseline cocaine use</strong></td>
<td>0.63</td>
<td>0.29 to 1.34</td>
<td>0.23</td>
</tr>
</tbody>
</table>
Limitations

- Single site experience may not be generalizable to other primary care settings
- Relatively small sample size with limited power
- Baseline substance use was self-reported
- Did not include mental health or physical health conditions in analyses
Conclusion

• No significant association between baseline marijuana use and buprenorphine treatment retention
Implications

• Findings support guidelines that include patients with marijuana use in buprenorphine treatment

• As marijuana laws and use change, future studies needed to examine the association between marijuana use and buprenorphine treatment outcomes
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