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Differences in treatment for substance use disorders by insurance status: Self-help versus outpatient medical treatment

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Background

Substance use disorders (SUD) have been a pressing public health concern and affect 20.1 million people.1 The SUD costs $440 billion dollar annually; however, only 10.6 percent of people with SUD receive treatment.3 Different types of SUD treatments include:

- Abstinence based approach (e.g., self-help groups): little evidence-based support for reducing relapse rates and other recovery outcomes.4,6
- Outpatient medical treatment including pharmacological and/ or psychological therapies: stronger evidence on effectiveness.7,8

The role of insurance on SUD treatment utilization is generally poorly understood and still less is known on how insurance status relates to the use of evidence based medication assisted treatment compared to other treatments, like self-help groups.

Study aims:
- To examine the association between health insurance and any SUD treatment utilization
- To examine differences between the use of self-help versus outpatient medical treatment by insurance status

Method

Data were from the 2015-2017, nationally representative cross-sectional National Surveys on Drug Use and Health (NSDUH), 3 waves of data (2015, 2016, 2017).
- Study sample: 13,213 people having SUD aged 19-64.
- Population size: 55,092,536

Dependent variables
- Past year utilization of any alcohol/ drug treatment
- Past year utilization of outpatient medical treatment versus self-help (among those who received any SUD treatment)

Independent variable
- Health insurance coverage: No insurance, Medicaid, private, others.
(Medicare category was dropped due to its small sample size of disabled people with SUD (n=107) when we restricted the sample to people aged 19-64).
Covariates: Age, gender, race/ethnicity, education, family income, urbanicity, and recent major depressive episode (MDE).

Analysis
- Unadjusted associations between SUD treatment use and insurance status were examined using a Z-test.
- Adjusted logistic regressions

\[ Y_i = \beta_0 + \beta_1 \text{insurance}, \beta_2 \text{Family income}, \beta_3 \text{Age}, \beta_4 \text{Gender}, \beta_5 \text{Race}, \beta_6 \text{Urbanicity}, \beta_7 \text{MDE}, \beta_8 \text{year}, \epsilon_i \]

All analyses used survey weights to be representative of the US population and account for the NSDUH's complex survey design.

Principal Findings

1. Insurance coverage and any SUD treatment

<table>
<thead>
<tr>
<th>Type of health insurance coverage</th>
<th>Past year utilization of any SUD treatment (AOR)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uninsured</td>
<td>Private</td>
<td>2.1***</td>
</tr>
<tr>
<td>Medicaid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td></td>
<td>0.8</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>1.4</td>
</tr>
</tbody>
</table>

**P value <0.001, AOR = Adjusted Odd Ratios, CI = Confidence Interval

Before adjustment, those with SUD covered by Medicaid were most likely to access any SUD treatment compared with those without insurance (37.8% versus 20%, p<0.001).

After adjustment, those with SUD covered by Medicaid remained more likely to use any SUD treatment in the past year compared to those without insurance (AOR=2.1, p<0.001).

2. Insurance coverage and outpatient medical treatment versus self-help

<table>
<thead>
<tr>
<th>Type of health insurance coverage</th>
<th>Percent of Outpatient Medical Treatment versus Self-help by insurance status (AOR)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uninsured</td>
<td>Uninsured: 59.2% (CI: 55.3-63.1) vs. Medicaid: 41.5% (CI: 38.9-44.1) vs. Private: 57.2% (CI: 54.0-60.5) vs. Others: 58.6% (CI: 55.3-61.9)</td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td>still less is known on how insurance status relates to the use of evidence based medication assisted treatment compared to other treatments, like self-help groups.</td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>Still remains more likely to use medical treatment compared with those without insurance (AOR=2.1, p&lt;0.05).</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>Still remains more likely to use medical treatment compared with those without insurance (AOR=2.1, p&lt;0.05).</td>
<td></td>
</tr>
</tbody>
</table>

**P value <0.001, AOR = Adjusted Odd Ratios, CI = Confidence Interval

Before adjustment, those with SUD covered by Medicaid were more likely than those without insurance to use outpatient medical treatment versus self-help (59% versus 42.8%, p<0.05).

After adjustment, those with SUD covered by Medicaid remained more likely to use outpatient medical treatment versus self-help, compared to those without insurance (AOR=2.1, p<0.05).

Conclusions

Limitation
- Data were from cross-sectional surveys and so causal inferences cannot be made. Insurance, substance use, utilization of SUD treatment are self-reported and so may be measured with error.
- SUD treatment options differ widely by drug of abuse (e.g., alcohol, methamphetamines, opioids, etc.). Thus, the importance of insurance coverage in access to SUD treatment utilization may vary by substance choice.
- Health insurance is potentially endogenous and failure to account for this may lead to biased estimates.

Exploring how to address this endogeneity in next steps of this project.

Conclusion
Individuals with SUD covered by Medicaid insurance programs appear:
- More likely to receive SUD treatment in the past year.
- More likely to receive outpatient medical treatment, while the uninsured are more likely to use self-help groups.
 Medal has taken a central role in providing evidence-based SUD treatment.

Additional research is needed to:
- Assist policymakers to increase access to SUD treatment
- Shift access towards outpatient medical treatments that have stronger evidence-based links to improved recovery outcomes.

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