Intensive Tobacco Dependence Treatment for Clients with Substance Use Disorder and/or Mental Illness

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BACKGROUND

• Drug treatment populations are disproportionately affected by morbidity and mortality due to tobacco use. However, with appropriately intensive intervention, individuals in drug treatment settings can succeed in their efforts towards smoking cessation.

• The Tobacco Dependence Clinic (TDC) is a program that provides smoking cessation counseling and up to 26 weeks of free pharmacotherapy for clients through Vancouver Coastal Health Addiction Services, British Columbia, Canada. There are currently three clinic sites: Pacific Spirit, Three Bridges, and Downtown Community Health Centre (DCHC).

• The purpose of this study is to provide 2-year pilot evaluation data (in terms of program completion and smoking cessation outcomes) from the TDC.

METHODS

DATA COLLECTION

• Data from patient charts and questionnaires administered during the course of the program were obtained for individuals accessing the TDC sites from September 2007 to April 2009.

MEASURES

• Data on participants demographics (sex and age), TDC site (sites 1, 2, 3), primary substance of abuse (none, alcohol, heroin and other opiates, cocaine, marijuana, methamphetamine and related drugs), primary mental health status (none, mood disorder, anxiety disorder, psychotic disorder), number of evidence-based modalities used to quit smoking in the past (none, NRT only, NRT and oral medications, oral medications only), age at smoking initiation, importance and confidence in quitting, Fagerström Test for Nicotine Dependence (FTND) score, expired CO level at baseline, number of group or individual counselling sessions attended, physician and nurse visits, and total number of visits to the clinic.

• Smoking cessation was defined as not smoking in the past 7 days, based on participant self-report with biochemical (CO <8 ppm) validation when available.

FINDINGS

• Data from the 2-year pilot evaluation of the TDC are summarized in Table 1.

• Based on intent to treat analysis (i.e., considering program non-completers as treatment failures, N=202), approximately 33% (66/202) of individuals were successful at achieving smoking cessation (Figure 1).

• Among program completers (N=152), approximately 43% (66/152) of individuals were successful at achieving smoking cessation (Figure 2).

• In multivariate logistic regression analysis, among program completers, important significant predictors of cessation were primary substance use and lower expired CO level at baseline. Individuals with alcohol, heroin and other opiates, and marijuana use histories were significantly less likely to achieve cessation as compared with individuals with no substance use history.

• In multivariate logistic regression analysis, important predictors of program completion were being female, site, receiving both NRT and oral medications (compared with only receiving NRT), and lower expired CO levels at baseline.

CONCLUSIONS

• Smoking cessation programming for drug treatment clients is important in reducing the harms associated with tobacco use in this population.

• Drug treatment clients can successfully quit smoking at rates similar to the general population, with no negative impact on their drug use behavior, if given access to intensive treatment programs.

Table 1. Demographic characteristics

<table>
<thead>
<tr>
<th>Age of participant (years)</th>
<th>Mean ± SD</th>
<th>Median</th>
<th>N=152</th>
<th>N=202</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean ± SD</td>
<td>48.5 ± 13.1</td>
<td>46.4 ± 15.9</td>
<td>48.3 ± 12.0</td>
<td>0.701</td>
<td></td>
</tr>
<tr>
<td>Age at smoking initiation</td>
<td>14.2 ± 4.1</td>
<td>14.3 ± 4.0</td>
<td>13.9 ± 4.2</td>
<td>0.524</td>
<td></td>
</tr>
<tr>
<td>Importance of quitting</td>
<td>9.0 ± 1.3</td>
<td>9.1 ± 1.3</td>
<td>8.9 ± 1.3</td>
<td>0.525</td>
<td></td>
</tr>
<tr>
<td>Confidence in quitting</td>
<td>7.3 ± 2.3</td>
<td>7.4 ± 2.3</td>
<td>7.5 ± 2.4</td>
<td>0.622</td>
<td></td>
</tr>
<tr>
<td>FTND at baseline</td>
<td>6.4 ± 1.8</td>
<td>6.4 ± 1.9</td>
<td>6.3 ± 1.7</td>
<td>0.670</td>
<td></td>
</tr>
<tr>
<td>Expired CO level at baseline</td>
<td>22.6 ± 12.9</td>
<td>21.4 ± 11.8</td>
<td>26.5 ± 15.3</td>
<td>0.017</td>
<td></td>
</tr>
<tr>
<td>Number of individual sessions</td>
<td>2.3 ± 2.0</td>
<td>3.0 ± 3.2</td>
<td>1.0 ± 1.1</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Number of group sessions</td>
<td>9.0 ± 6.7</td>
<td>11.1 ± 6.3</td>
<td>2.4 ± 1.4</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Total number of MD visits</td>
<td>2.4 ± 2.3</td>
<td>2.9 ± 2.4</td>
<td>1.0 ± 1.0</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Total number of RN visits</td>
<td>6.5 ± 6.4</td>
<td>7.9 ± 6.7</td>
<td>2.0 ± 1.5</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Total number of visits to the TDC</td>
<td>11.4 ± 7.1</td>
<td>13.9 ± 6.6</td>
<td>4.1 ± 1.0</td>
<td>&lt;0.001</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Smoking cessation rate of the Tobacco Dependence Clinic participants (intention-to-treatment population)

Figure 2. Smoking cessation rate of the Tobacco Dependence Clinic participants who completed the program

• Data from patients who have completed the TDC program are shown in Figure 2.

• In multivariate logistic regression analysis, important predictors of program completion were being female, site, receiving both NRT and oral medications (compared with only receiving NRT), and lower expired CO levels at baseline.