TITLE: Smoking Cessation Aids for Patients in Treatment for Substance Abuse: Clinical Effectiveness, Cost-Effectiveness and Guidelines

DATE: 18 August 2015

RESEARCH QUESTIONS

1. What is the clinical effectiveness of smoking cessation aids for patients starting detoxification or treatment for substance abuse?

2. What is the cost-effectiveness of smoking cessation aids for patients starting detoxification or treatment for substance abuse?

3. What are the evidence-based guidelines regarding smoking cessation and for the use of smoking cessation aids in patients starting detoxification or treatment for substance abuse?

KEY FINDINGS

One systematic review, five randomized controlled trials, and three non-randomized studies were identified regarding the clinical effectiveness of smoking cessation aids for patients starting detoxification or treatment for substance abuse. Additionally, one evidence-based guideline was identified regarding smoking cessation and for the use of smoking cessation aids in patients starting detoxification or treatment for substance abuse.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2010 and August 4, 2015. Internet links were provided, where available.
The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

**SELECTION CRITERIA**

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

**Table 1: Selection Criteria**

<table>
<thead>
<tr>
<th>Population</th>
<th>Adult smokers undergoing detoxification or treatment for substance abuse in an in-patient or outpatient setting</th>
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<tbody>
<tr>
<td>Intervention</td>
<td>Pharmaceutical and non-pharmaceutical smoking cessation aids (e.g., nicotine replacement, yoga, mindfulness, etc.)</td>
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<td>Comparator</td>
<td>Unassisted sudden smoking cessation, no smoking cessation, no comparator</td>
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<td>Outcomes</td>
<td>Q1: Clinical benefits (e.g., successful smoking cessation) and harms (e.g., increased anxiety and depression, failure to complete substance abuse treatment program, etc.)</td>
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<td>Q2: Cost-effectiveness</td>
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<td>Q3: Guidelines and recommendations regarding indications, populations, and best practices for particular smoking cessation aids administered in a detoxification and substance abuse rehabilitation setting</td>
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<tr>
<td>Study Designs</td>
<td>Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies, economic evaluations, evidence-based guidelines</td>
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</table>

**RESULTS**

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, economic evaluations, and evidence-based guidelines.

One systematic review, five randomized controlled trials, and three non-randomized studies were identified regarding the clinical effectiveness of smoking cessation aids for patients starting detoxification or treatment for substance abuse. Additionally, one evidence-based guideline was identified regarding smoking cessation and for the use of smoking cessation aids in patients starting detoxification or treatment for substance abuse. No relevant health technology assessments or economic evaluations were identified.

Additional references of potential interest are provided in the appendix.

**OVERALL SUMMARY OF FINDINGS**

One systematic review\(^1\) determined that a range of interventions including nicotine patches, nicotine gum, counseling, cognitive behavioural therapy (CBT) with nicotine replacement, and a combination of bupropion, nicotine replacement, counseling and contingency management
improved point prevalence smoking abstinence (PPA) at six or 12 months for patients with substance use disorders.

One RCT\(^2\) compared abstinence-contingent and non-contingent vouchers with motivational interviewing or brief advice for smokers in residential treatment for substance abuse. Contingent vouchers plus motivational interviewing resulted in higher PPA than when combined with brief advice. Overall, rates of post-treatment PPA were low. A second RCT\(^3\) compared smoking monitoring plus behavioural support with or without contingent incentives. Percent of carbon monoxide free days was significantly greater in the incentive group.

One RCT\(^4\) compared nicotine replacement plus motivational interviewing or brief advice for smoking cessation in residential alcohol treatment. They found both methods to be equally effective. One RCT\(^6\) compared CBT for smoking cessation with autogenic training for individuals in an alcohol detoxification program. Individuals in the CBT group were significantly more likely to reduce the number of cigarettes per day but quit rates did not differ between groups.

One RCT\(^5\) compared substance abuse treatment as usual for cocaine and/or methamphetamine with usual treatment plus bupropion and counseling. Individuals in the smoking cessation group had significantly more drug-free days and better PPA at six months. A non-randomized study\(^9\) compared the number of cigarettes smoked per day by substance-dependent women taking bupropion, citalopram/escitalopram or no antidepressant medication. Daily smoking was greater for the bupropion group when compared with citalopram/escitalopram but was similar to the group who received no antidepressants.

At one year following a 90 day in-patient substance abuse treatment program, one non-randomized study\(^7\) reported lower substance use relapse rates for individuals who also attempted to quit smoking. In a veterans substance use disorder program, smoking did not decrease but the use of nicotine replacement therapies increased.\(^8\) The authors concluded this represented a willingness of participants to attempt to stop smoking.

One summary of guidelines,\(^10\) prepared by the Canadian Action Network for the Advancement, Dissemination and Adoption of Practice-informed Tobacco Treatment, recommends brief advice and pharmacotherapy be provided to all individuals who smoke and are making use of addiction services.
REFERENCES SUMMARIZED

Health Technology Assessments
No literature identified.

Systematic Reviews and Meta-analyses

Randomized Controlled Trials


Non-Randomized Studies


**Economic Evaluations**
No literature identified.

**Guidelines and Recommendations**


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APPENDIX – FURTHER INFORMATION:

Qualitative Studies


Review Articles