



## Effective Public Health Practice Project Summary Statement

December 2005

This is a summary statement written to condense the work of the authors of a systematic review. The reference for the full review is below. The intent of this summary is to provide an overview of the findings and implications of the full review. For more information on individual studies included in the review, please see the review itself.

**Reference for Review in APA:** Roozen, H. G., Boulogne, J.J., van Tudler, M. W., van den Brink, W., De Jong, C. A. J., Kerkhof, A. J. F. M. (2003). **A systematic review of the effectiveness of the community reinforcement approach in alcohol, cocaine and opioid addiction.** *Drug and Alcohol Dependence*, 74, (2004), 1-13.

**Issue:** The Mandatory Health Programs and Services Guidelines prepared by the Ontario Ministry of Health and Long-term Care include three explicit objectives related to alcohol and substance abuse, including "To reduce the rate of illicit substance use and the non-medical use of drugs and of other psychoactive substances by 20 per cent by the year 2010." (Ministry of Health, 1997). In 2001/2002, there were 8,949 hospitalizations for alcohol dependence and 3,519 for drug dependence in Canada (Statistics Institutes for Health, 2004). Alcohol, cocaine and opioid addiction are chronic relapsing disorders that require long-term treatment. In addition to psychotherapy or counselling, pharmacotherapy (e.g., methadone maintenance for heroin addiction and disulfiram for alcohol addiction) may be used to reduce cravings and prevent relapse (O'Brien, 2005). However, there is concern that substance-based interventions may maintain dependence (Faggiano et al, 2005). The Community Reinforcement Approach (CRA) is a psychosocial approach to treating addiction that substitutes rewarding social activities unrelated to substance use for drug-related reinforcers (Schottenfeld et al, 2000)..

**Review Content Summary:** A systematic review with meta-analysis was done to determine whether CRA is effective as an alternative or adjunct to usual care in terms of changing the pattern of substance abuse among adults (aged 18-65) with alcohol, cocaine or opiate addiction. Eleven randomized trials were reviewed (five for alcohol, two for opioid and four for cocaine addiction). For most studies, control groups received "usual care", which was not further defined in the review. Studies took place in a variety of inpatient and outpatient settings. With respect to alcohol addiction, CRA reduced the amount of time spent drinking but no effect on abstinence rates was observed. CRA with abstinence-contingent incentives significantly improved abstinence rates in cocaine addicts compared to usual care or CRA alone. There was insufficient evidence to determine the effectiveness of CRA in opioid addiction.

**Comments on this review's methodology:** Twelve medical and social science databases were searched for randomized trials published in English before March 2002. Two reviewers independently selected studies based on defined eligibility criteria. They also assessed methodological quality using a 22-point scale and abstracted a predetermined set of data. Where possible, data from individual studies were pooled to estimate overall relative risk. Published criteria were used to categorize the evidence as strong, moderate or limited.

**Evidence points ARE weighted or ranked according to strength.**

City of Hamilton  
Public Health Services

Kingston, Frontenac and Lennox  
& Addington Public Health

Middlesex-London Health Unit

Sudbury District Health Unit

Ottawa People Services

Public Health Branch  
Ministry of Health and Long-Term Care

<b>What's the evidence?</b>	<b>Implications for practice and policy:</b>
<ul style="list-style-type: none"> <li>&gt; There is strong evidence (3 RCTs) that CRA treatment is more effective than usual care in reducing the total number of drinking days, while there is conflicting evidence in regards to continuous abstinence.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; CRA is effective for reducing the amount of time spent drinking.</li> <li>&gt; Further research should be conducted to determine the effect of CRA on abstinence.</li> </ul>
<ul style="list-style-type: none"> <li>&gt; There is moderate evidence (2 of 3 RCTs) that CRA treatment used with disulfiram is more effective than disulfiram with usual care in reducing the total number of drinking days, while there is insufficient evidence to determine if CRA with disulfiram and CRA with usual care yield different results in maintaining abstinence from alcohol.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; As disulfiram is often used in the treatment of alcohol addiction, CRA in conjunction with disulfiram may be an effective treatment for certain populations such as homeless alcoholics.</li> </ul>
<ul style="list-style-type: none"> <li>&gt; There is strong evidence (pooled analysis of 2 RCTs) that CRA with incentives is more effective than usual care in regards to cocaine abstinence..</li> </ul>	<ul style="list-style-type: none"> <li>&gt; It is not possible to tell if CRA without incentives is effective in cocaine addiction because no studies compared CRA alone with usual care..</li> </ul>
<ul style="list-style-type: none"> <li>&gt; There is strong evidence (pooled analysis of 2 RCTs) that CRA with abstinence-contingent incentives is more effective than CRA alone in treating cocaine abstinence.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Research should investigate the most effective components of CRA-based treatment so that emphasis can be placed on these components in therapist training.</li> </ul>
<ul style="list-style-type: none"> <li>&gt; There is limited evidence that CRA is effective at helping participants to complete a detoxification program for opioid addiction.</li> </ul>	<ul style="list-style-type: none"> <li>&gt; CRA may be an effective tool for achieving opioid independence by optimizing compliance with pharmacotherapy.</li> </ul>
<p><b>General Implications:</b></p> <ul style="list-style-type: none"> <li>&gt; There is insufficient evidence to determine if CRA alone is more effective than drug-based interventions in managing drug and alcohol addictions.</li> <li>&gt; Evidence suggests that CRA in conjunction with other operant methods can be more effective than usual care or CRA alone.</li> <li>&gt; Therapists should be trained to apply CRA to their practices.</li> </ul>	

**Cost Benefit or Cost-Effectiveness Information:**

Not included in review.

**References Used to Outline Issue:**

Faggiano F., Vigna-Taglianti F., Versino E., Lemma P. (2005). Methadone maintenance at different dosages for opioid dependence. *The Cochrane Database of Systematic Reviews*, Issue 4.

Ministry of Health/Public Health Branch. (1997). *Mandatory Health Programs and Services Guidelines*. Available on the web at:

<http://www.health.gov.on.ca/english/providers/pub/pubhealth/manprog/mhp.pdf>

Statistics Institutes for Health Information. (2004). Canadian statistics: Hospitalizations for mental disorders, by cause. Available on the web at:  
<http://www40.statcan.ca/01/cst01/health56a.htm>

O'Brien C.P. (2005). Anticraving medications for relapse prevention: A possible new class of psychoactive medications. *American Journal of Psychiatry*, 162, 1423-1431.

Schottenfeld R.S., Pantaloni M.V., Chawarski M.C., Pakes J. (2000). Community reinforcement for combined opioid and cocaine dependence. Patterns of engagement in alternative activities. *Journal of Substance Abuse Treatment*, 18, 255-261.

**Other References on this Topic:**

[Bamford, Z.](#), [Booth, P.G.](#), [McGuire, J.](#), Salmon, P. (2005). Minimal intervention as a preparation for the treatment of alcohol dependency. *British Journal of Clinical Psychology*, 44 (2), 289-294.

[Petry, N. M.](#), Martin, B., [Simcic, F.](#) (2005). Prize reinforcement contingency management for cocaine dependence: integration with group therapy in a methadone clinic. *Journal of Consulting and Clinical Psychology*, 73 (2), 354-359.

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