

# A Randomized Trial of Contingency Management (CM) vs Treatment as Usual (TAU) in an Adolescent Concurrent Disorders Treatment Program

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## Background

The Addiction Centre (AC) is a hospital-based outpatient treatment program for adolescents and their families with concurrent addiction and mental health concerns. The treatment program consists of individual and family therapy and psychiatric consultation.

Treatment of substance abuse is generally difficult as motivation to change substance using behaviours varies over time. Our adolescent clients struggle with maintaining motivation to address their substance use. This may partly be because attendance in our program is often driven by their family members' concerns. Contingency Management (CM) approaches have become one of the most researched and effective behavioural procedures to increase drug abstinence across adult substance use disorders. A CM approach provides rewards for drug-free urinalysis and is based on theoretical ideas that abstinence can be improved by providing tangible incentives that are contingent on providing objective evidence of abstinence. The goal of the current research project is to assess the feasibility and effectiveness of implementing CM approach at the AC.

### RESEARCH QUESTIONS

- Is implementing a CM approach at the AC clinically feasible?
- Does CM reduce substance use and increase program attendance, as compared to treatment as usual (TAU)?

### HYPOTHESIS

- Adding CM to TAU will reduce substance use and increase treatment attendance compared to TAU

## Program Overview

After being referred to our treatment service, clients and their families are asked to attend an orientation session where they learn about the AC and the CM study. If they meet study inclusion criteria and agree to participate, they will be scheduled to be enrolled in the study at their intake assessment.

The intake assessment involves parents and adolescents completing intake questionnaires and a semi-structured diagnostic interview. This is concluded with a working diagnosis and treatment plan provided to the adolescent and the family. The intake questionnaires include:

- Demographics
- Beck Depression Inventory – II
- Substance Use Questionnaire\*
- DSM-5 cross cutting measures (adolescent and parent version)
- Adverse Childhood Experiences questionnaire
- Brief Symptom Inventory\*
- ADHD Rating Scale – 5 for Adolescents
- Client Feedback Survey\*

\*these questionnaires are completed by adolescents and a family member every three months until discharge and will serve as outcome measures

Once the client has completed the intake assessment, they are admitted to the program and enrolled in the study. They will be expected to attend weekly sessions and provide weekly urinalyses.

## Study Design

80 adolescent participants will be randomly assigned to either TAU or CM

- "Treatment as Usual" consists of individual and family therapy sessions and psychiatric follow-up sessions. Treatment modalities include psychoeducation, motivational interviewing, cognitive behavioural therapy, interpersonal therapy, systemic family therapy, and art therapy and weekly urine drug screens
- "Contingency Management" will include the TAU sessions as well as receiving weekly contingencies for providing clean (drug and alcohol free) urine drug screens

### OUTCOME MEASURES

All participants will be asked to complete questionnaires after 12 weeks of enrolment in the study and three months after study completion. Other outcome measures to be analyzed include,

- Number of sessions attended
- Retention in treatment
- Number of clean urinalyses
- THC/Creatinine ratio levels in urine
- Number of days/weeks abstinent during treatment

## Contingency Schedule

If completely clean on all drug screens the gift card (gc) values and prizes would look as follows:

Weeks 1: \$5 for providing urine drug screen  
 Week 2: \$5 for clean screen (except for cannabis)  
 Week 3: \$5 + \$5 for two in a row + one prize draw  
 Week 4: \$5 + \$5 for two in a row + two prize draws  
 Week 5: \$5 + \$5 for two in a row + three prize draws  
 Week 6: \$5 + \$5 for two in a row + four prize draws  
 Week 7: \$5 + \$5 for two in a row + five prize draws  
 Week 8: \$5 + \$5 for two in a row + six prize draws  
 Week 9: \$5 + \$5 for two in a row + seven prize draws  
 Week 10: \$5 + \$5 for two in a row + eight prize draws  
 Week 11: \$5 + \$5 for two in a row + eight prize draws  
 Week 12: \$5 + \$5 for two in a row + eight prize draws

The fish bowl would contain the following ratio of prizes (as recommended in the Petry (2012) manual):

Total of 500 slips  
 250 "Good Jobs"  
 209 Small (value \$1)  
 40 Large (value \$20 gc)  
 1 Jumbo (value \$100 gc)



Participants could earn up to \$110 in gift cards if clean for the entire 12 weeks and 52 prize-bowl draws.

## Project Implementation

To date, the study team has completed:

- Study plan and protocol
- Contingency management training day with staff
- Surveyed adolescent clients and parents for contingency ideas
- Staff have trialed new urine drug screen containers

In progress

- Ethics
- Study/Training manual

The study team plans to begin enrolment in early 2018

## Intake Assessment & Study Enrolment

40 participants assigned to TAU

40 participants assigned to CM

TAU

TAU & Weekly Contingencies

See Contingency schedule

12-week questionnaires & outcome measures

3-month follow up

