

# BE OUR PARTNER IN THE CHI-VENTURE PROJECT

A CLUSTER RANDOMIZED TRIAL INVESTIGATING THE EFFECTS OF DELAYING THE ONSET OF SUBSTANCE USE ON ADOLESCENT COGNITIVE DEVELOPMENT AND ACADEMIC PERFORMANCE



Situation Sensations Thoughts Actions

The **Prevention Program** is a school-based alcohol and drug prevention program developed in Canada and tested in the United Kingdom, Australia, and other countries. It has proven to delay onset and growth of alcohol and substance use and to reduce problem drinking and drug use in adolescents. Its personalized approach is based on a biopsychosocial model that targets four personality-specific motivational pathways known to increase risk for substance misuse: (1) impulsivity, (2) thrill seeking, (3) anxiety; and (4) depression / negative thinking.

The **Chi-Venture Project** will be the first research project to test the **Prevention Program** in the United States by implementing it in select secondary schools in Chicago. It will provide a unique opportunity to examine neuropsychological factors implicated in the predisposition to early alcohol and drug abuse in adolescents and to evaluate the beneficial effects of early intervention on cognitive development, academic performance and future addiction.

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## PROBLEM BEING INVESTIGATED

**Adolescent onset alcohol and illicit drug use** are associated with a myriad of immediate, short-term and long-term negative consequences. Onset of alcohol use at or before 14 years of age is strongly associated with increased risk of developing alcohol use disorders, with rates of adult alcohol dependence in this group estimated at ~40%. Adolescent alcohol and drug use is associated with an increased risk of mental health problems, addiction, suicidal behavior, poor physical health, injuries, risky sexual behaviour, poor academic performance and school drop-out.

It is urgent to address substance use problems in adolescents, because the adolescent brain, particularly the prefrontal cortex – the part that enables us to assess situations, make sound decisions, and keep our emotions under control, has not fully developed. The fact that this critical part of the brain is still a work-in-progress puts adolescents at increased risk

**Illinois Statistics:** Within the past month, 40% of adolescents report having used alcohol, 25% have engaged in binge drinking during this period, and 5.7% had alcohol dependence or abuse. Similarly, 9.5% of adolescents used illicit drugs and 4.5% met criteria for illicit drug dependence or abuse in the past month. Also, 14.5% of 8<sup>th</sup> graders, 29% of 10<sup>th</sup> graders, and nearly 36% of 12<sup>th</sup> graders report using marijuana within the past year. Nearly 16% of 12<sup>th</sup> graders report abusing prescription pain medications and roughly 5% of 12<sup>th</sup> graders admit using cocaine or crack cocaine within the past year.

for poor decisions, such as trying drugs or continued alcohol and drug abuse. Also, introducing drugs while the brain is still developing can disrupt brain function in areas critical to motivation, memory, learning, judgment, and behavioral control, and may have profound and long-lasting consequences. Unfortunately, most universal school-based prevention programs produce small and inconsistent effects on drinking and drug using behavior. That is why there is currently a shift from such generic universal programs to the “next generation” of selective interventions that are characterized by two main qualities: (1) they are **personalized** and tailored to the individual; and (2) they are **preemptive**, in that they prevent rather than treat the damaging consequences of substance misuse. [The Preventure Program](#) and the [Chi-Venture Project](#) are perfect examples of such state-of-the-science evidence-based preemptive interventions.

**What is the Preventure program?** This is a brief, personalized school-based coping skills intervention targeting personality risk factors that increase risk for adolescent substance misuse. Its effects have been shown to last for up to two years and possibly even longer. Although typically delivered by trained mental health professionals, it has proven both feasible and effective when delivered by trained school-staff, and can easily be implemented in schools in a sustainable manner. Our research team has repeatedly and consistently shown that such personalized psychological interventions targeting personality risk factors for substance misuse are highly effective in preventing and reducing alcohol and drug use in adolescents. Beneficial effects of the Preventure program on substance use outcomes have been replicated in separate clinical trials in Canada, United Kingdom, Czech Republic, Netherlands, and Australia, showing 30%-80% reductions in drinking, binge drinking and illicit drug use over a two-year period. [The Chi-Venture Project](#) will be the first clinical trial of the Preventure Program in USA, pending approval and funding from the [National Institutes of Health](#).

## RESEARCH DESIGN OF THE CHICAGO CO-VENTURE TRIAL

In October 2012, we will be submitting a research grant application to the National Institutes of Health (NIH), who have expressed interest in funding such trial in USA. The trial will have a cluster randomized design in which 18-20 high schools across Chicago will be randomly assigned to have the [Chi-Venture Project](#) delivered by our trained mental health professionals to one cohort of Grade 9 students (intervention group) or to have the program delivered to a future Year 9 cohort (control group). Interested schools can also have their school staff trained by us in the delivery of the intervention, to increase their efficacy in addressing substance use problems among students in a self-sustainable manner. Students will be assessed annually for three consecutive years on personality, substance use, mental health, cognitive, and educational measures.

The [Chi-Venture Project](#) involves delivering specialized coping skills group workshops to students when they are in the 9th grade. Only about 45% of students in a given grade will be invited to participate in the workshops. The workshops focus on motivating adolescents to understand how their personality style leads to certain emotional and behavioral reactions which, in turn, may lead to increased use and abuse of alcohol and drugs. Four different workshops will be run, focusing either on managing impulsivity, thrill seeking, anxiety sensitivity or negative thinking. The students will first be asked to participate in a survey asking them about their personality, their strengths and weaknesses, their risk-taking behaviour and their learning style. Then, if their school has been assigned to the intervention group, they might be invited to participate in two 70-90-minute workshops, delivered at school during class time or lunch hour. All children who agree to participate in the study will be invited to complete the same survey in three consecutive academic years.

### OBJECTIVES

**Primary:** to examine how this evidence-based intervention can delay the onset of substance use disorders in young people and to test its effects on related mental health, academic and cognitive outcomes.

**Secondary:** to use developmentally sensitive neuropsychological measures to examine how this intervention can positively impact on cognitive development over the course of adolescence.

**DATA COLLECTION PROCEDURES**  
(PENDING APPROVAL AND FUNDING BY THE NATIONAL INSTITUTES OF HEALTH)

NUMBER OF STUDENTS REQUIRED:	100 per school ( average)
SCHOOL STAFF INVOLVEMENT: (OPTIONAL)	<ul style="list-style-type: none"> <li>Experienced counselors, educators, or teachers</li> <li>Staff can be trained to implement the Co-Venture program</li> <li>12 to 18 hours of training for interested staff</li> </ul>
PARTICIPATION DATES (APPROXIMATE):	<p style="color: red;"><b>Application to NIH will be submitted in October 2012</b> <b>Tentative start date of the project: Fall 2013 (pending NIH funding)</b></p> <ul style="list-style-type: none"> <li>One (1) baseline assessment and two (2) annual follow-up assessments.</li> <li>Assessment periods: September to November.</li> <li>Intervention periods: January to April.</li> <li>Intervention period lasts from 1-3 months depending on the school and its resources</li> </ul>
TIME REQUIRED WITH STUDENTS:	<ul style="list-style-type: none"> <li>60 minutes ( at least one class period) for the annual assessment for all Grade 9 students (Years 1- 3 of the project)</li> <li>2.5 - 3 hours for the interventions (workshops) for ~45% of the students ( Year 1 of the project)</li> </ul>
COSTS TO SCHOOL	<p style="color: red;"><b>NONE</b></p> <p>All materials (software, hardware and other) will be provided by the research team.</p>

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**ADVANTAGES**

Partnering with us on this project will allow your school to receive training and intervention tools, materials and methods relevant to the Chi-Venture project at no costs to your administration. The technique can be applied by your school staff to Secondary students of subsequent years long after the project is complete. This initiative will greatly expand your school's drug and alcohol prevention measures. As an academic institution, there is much to gain in contributing to this research project, particularly given that drug and alcohol use has detrimental effects on the cognitive development and academic performance of adolescents.

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