A Contingency Management Intervention for Adolescent Substance Abuse:

Therapy Manual

Jody L. Kamon, Ph.D.
Catherine Stanger, Ph.D.
Alan J. Budney, Ph.D.

Revised 9.5.13

BACKGROUND

Marijuana remains the most prevalent illicit substance used by adolescents, and those who use are at increased risk for delinquency, school failure, physical and psychological problems, and selling illegal drugs (Rey, Martin, & Krabman, 2004; Tims et al., 2002). Marijuana is being used at increasingly younger ages and use among adolescents remains twice as high as in 1991 such that current estimates in the U.S. indicate that 6%, 16%, and 20% of 8th, 10th, and 12th graders, respectively have used during the prior month (Johnston, O'Malley, Bachman, & & Schulenberg, 2004). Remarkably, the number of adolescents receiving treatment for primary marijuana abuse or dependence increased 350% from 1992 to 2002 and the majority of all adolescent substance abuse admissions report marijuana as their primary substance (SAMHSA, 2004). During this same period, admissions involving primary marijuana and no alcohol increased 632%, while admissions involving primary alcohol and no marijuana declined by 60% (SAMHSA, 2004).

PSYCHOSOCIAL INTERVENTIONS

There is no consensus on how to treat substance abuse among adolescents. Well-controlled clinical trials are lacking, and most treatments examined have had difficulty documenting initial periods of marijuana abstinence. Most recently, a much publicized but as yet unpublished multi-site study compared 5 treatments for adolescent marijuana abuse: (1) motivational enhancement therapy and cognitive behavioral therapy (MET/CBT) for five sessions; (2) MET/CBT for 12 sessions (considered the community standard treatment); (3) MET/CBT plus a family support network; (4) community reinforcement approach; and (5) multidimensional family therapy. Preliminary reports suggest that, across treatment groups, significant improvement in drug use and decreases in symptoms of dependence were observed (Dennis et al., 2004).

In addition to treating substance use, it is also important to treat risk factors related to adolescent substance use. Conduct problems often predate and are one of the most important and chronic risk factors for adolescent substance abuse (Brook, Whiteman, Cohen, Shapiro, & Balka, 1995; Farrington, 1991; Kandel, 1988; Lynskey & Fergusson, 1995; Windle, 1990). Adolescent substance abuse and conduct problems also share many important risk factors, including family conflict, poor parental monitoring, parental psychopathology and substance use, academic problems, and association with deviant peers (Anderson & Henry, 1994; Brook & Brook, 1988; Brook, Nomura, & Cohen, 1989; Catalano et al., 1993; Dishion, Patterson, & Reid, 1988; Fergusson & Horwood, 1996; Kandel, 1985; Wills, Vaccaro, & McNamara, 1992). Specific parental behaviors are important predictors of adolescent drug use and conduct problems. In particular, parental drug use, permissive parental attitudes toward drug use, low parental monitoring of children, and failure to use consistent consequences for misbehavior have been related to initiation and use of drugs, as well as to aggressive and delinquent behavior (Chilcoat, Dishion, & Anthony, 1995; Chilcoat & Anthony, 1996; Larzelere & Patterson, 1990; McDermott, 1984).

Parent management training is the best researched approach to the treatment of conduct problems (Borduin, 1999; Chamberlain & Reid, 1998; Conduct Problems Prevention Research Group, 1999; Dishion & Andrews, 1995; Forehand, Furey, & McMahon, 1984; Forgatch & DeGarmo, 1999; Irvine, Biglan, Smolkowski, Metzler, & Ary, 1999; Kazdin & Wassell, 2000; Patterson & Reid, 1973). Because it has shown the largest and most enduring treatment effects on childhood

conduct problems, including substance use in that population, parent CM training is a central component of the intervention described in this manual. Specifically, we modified the parent CM training program called "Adolescent Transitions" by emphasizing CM training and focusing on drug use and abstinence as primary targets for contingency contracting (Dishion & Andrews, 1995; McGillicuddy, Rychtarik, Duquette, & Morsheimer, 2001).

One intervention which has shown promise with adult substance abusing populations is the use of contingency management (CM). Repeated controlled trials have demonstrated CM interventions to be efficacious in treating adult marijuana, cocaine, and opiate dependence (Bickel, Amass, Higgins, Badger, & Esch, 1997; Budney, Higgins, Radonovich, & Novy, 2000; Higgins, Wong, Badger, Haug Ogden, & Dantona, 2000; Higgins, Budney, & Bickel, 1994; Higgins et al., 1993; Higgins et al., 1991). These CM interventions consist of abstinence based voucher programs which use results from systematic urine testing to provide positive reinforcement contingent on documented drug abstinence. These voucher programs, effectively engage clients in treatment, engender greater drug abstinence than standard therapies, and enhance abstinence rates and other behavioral outcomes when added to other behavioral therapies.

However, prior to our adolescent treatment study, CM interventions had not yet been applied to the adolescent drug-abusing population. Thus, we developed a developmentally appropriate contingency-management intervention to treat adolescent marijuana abuse.

This manual provides the necessary guidance for therapists to implement our intervention which combines individual motivation enhancement therapy and cognitive behavior therapy for adolescents, parent contingency management training, contingency management to promote parent participation, and the use of an abstinence-based voucher system to treat marijuana abuse among adolescents.

PROGRAM OVERVIEW

Program Goal

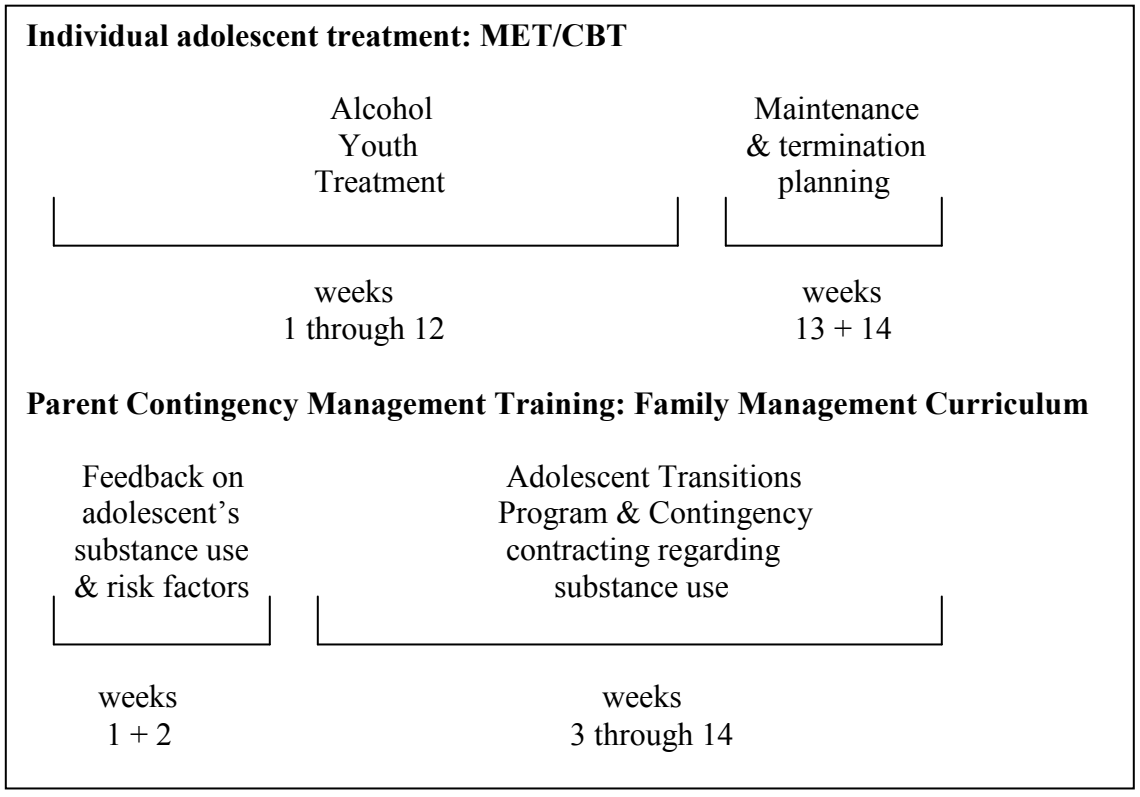
This treatment is designed to work with parents and their teen to help the teen achieve abstinence from marijuana and other drugs. If a teen does not want to set abstinence goals as he/she may feel his/her substance use is not a problem, then therapists should encourage the teen to try abstinence by using appropriate motivational interviewing, behavioral counseling, and educational techniques.

Treatment Parameters

Schedule

All participants (both adolescent and guardian(s)) participate in an initial evaluation which screens for adolescent substance, as well as adolescent and family risk factors for continued substance use. The initial evaluation lasts approximately three hours. After the initial evaluation, all participants attend 14, 60-90-minute sessions once per week for 14 consecutive weeks. These sessions involve a 40-minute individual session with the adolescent, a 40-minute session with the guardian(s) alone, and 5-10-minutes with everyone together.

In addition, urinalysis monitoring occurs weekly for 14 weeks. The adolescent participates in urine testing at the time of his/her weekly session. Additional patient contacts in the form of brief phone calls, or in-person sessions are employed as needed.



Components

Initial Assessment of Adolescent's Substance Use and Potential Risk Factors

Prior to beginning treatment adolescents and their parents participate in a comprehensive evaluation to assess the adolescent's current level of substance use as well as for other potential risk factors which might place the adolescent at greater risk for continued use. Risk factors assessed include both individual and familial characteristics. Some examples of individual characteristics assessed include factors such as emotional and behavioral functioning, peer relationships, and deviant belief systems. Examples of familial characteristics assessed include factors such as family relationships, marital conflict, and parent psychological functioning, including substance use.

Feedback on Adolescent's Substance Use

Results from the evaluation are shared with the teen and his/her parents. Specifically, information is shared detailing teen's current level of substance use, individual risk factors for continued use, and familial risk factors for continued use. Feedback regarding the evaluation is utilized to help the adolescent and his/her parents establish goals related to the adolescent's substance use.

Motivation Enhancement Therapy and Cognitive Behavioral Therapy

The teen sessions focus on the development or refinement of skills that we believe are important in stopping substance use. These skills include analysis of drug use patterns, drug refusal skills and increasing non-drug pleasurable activities.

Parent Contingency Management

Parents/guardians receive a parent-training program that focuses on encouraging positive behavior, setting limits and using consequences, and communication skills and family problem solving. They also receive instruction in and practice how to effectively set goals for change and develop systematic plans for meeting the target goals.

In addition, to encourage full participation in the treatment program, parents/guardians are offered an opportunity to take part in a prize-drawing activity for completing important activities related to treatment (e.g., attending sessions, administering at-home breathalyzers, completing out-of-session parenting assignments, and implementing agreed-upon incentives and consequences at home).

Fishbowl Prize Drawing

Teens receive rewards in the form of Fishbowl pulls for alcohol and other drug abstinence. The goal of the fishbowl incentives is to increase motivation to participate in treatment by providing teens with monetary incentives for providing a valid sample for urine drug testing. Also encourages teens to engage in more pro-social activities that are in concert with the treatment

goal of increasing reinforcement derived from non-drug related activities. The earned incentives are loaded onto a reloadable MasterCard.

Structure

Treatment is delivered through individual counseling with the teen, parent counseling with the adolescent's parents, and also through the use of the abstinence-based voucher system. Although the treatment sessions will be somewhat different in content for both adolescents and parents, all sessions follow the same basic structure.

The treatment session begins with a brief check-in by the therapist with all family members. The purpose of this initial check-in is to review how the past week went and to provide family members with an opportunity to bring up any topics they feel might be important to address during the session. Again, this check-in should be brief, lasting between five and ten minutes.

Individual sessions with the adolescent begin by reviewing urinalysis results, discussing any use or craving using functional analysis, reviewing the abstinence contract established between the adolescent and his/her parents, and discussing the current status of the adolescent's Fishbowl pulls/earned incentives. The individual session continues by reviewing the CYT skills training component taught in the preceding session and the "real life practice" (homework) assignment. The therapist and adolescent then begin the CYT skills training component for the current week. At the end of the individual adolescent session, the therapist reviews the homework assignment for the week and attempts to address any potential compliance issues.

Parent contingency management training sessions begin by reviewing the urinalysis results with the parents and discussing whether the parents are following through on the terms of the abstinence contract they established with their adolescent. Similar to the adolescent sessions, the parent sessions continue by reviewing how the past week went and any specific homework assignments they might have been given from the previous session. The therapist and parents then begin the current week's topic from the Family Management Curriculum. The session concludes with the therapist reviewing parents' homework assignment for the week. In addition, parents can earn chances to win prizes based on the number of assigned activities (e.g. attending sessions, completing homework, etc.) they complete each week. At the end of each session, the therapist reviews with each parent the number of activities they have completed and allows them to draw prizes from our Fishbowl.

At the close of the session, the therapist meets briefly with all family members to review the plan for the next week. This typically includes reviewing the urine contract and homework assignments for the next week, as well as confirming appointment times for the next appointment and for the youth to provide a mid-week urine sample.

Absences

If a family does not come to a scheduled session, the therapist should immediately try to contact the parents by telephone to ascertain why the session was missed and to reschedule if possible. If

the adolescent is refusing to come to treatment, but the parents are willing to come, the therapist should continue to meet with the parents and explore ways to get the adolescent involved again.

Clinical Deterioration and Referral

The therapist will not terminate treatment because of lack of progress or lack of abstinence. However, treatment may be terminated in the event of acute psychosis, significant suicidal or homicidal ideation, serious deterioration of physical health, or extensive drug or alcohol use that places the client at risk for harm. If five consecutive urines are missed and/or three consecutive therapy sessions, the case is reviewed to determine whether referral to another treatment provider is appropriate.

ASSESSMENT

Once contacting our program, families participate in an initial evaluation which screens for adolescent substance use, as well as adolescent and family risk factors for continued substance use. Risk factors assessed include both individual and familial characteristics. Some examples of individual characteristics assessed include factors such as emotional and behavioral functioning, peer relationships, and deviant belief systems. Examples of familial characteristics assessed include factors such as family relationships, marital conflict, and parent psychological functioning, including parent substance use.

The initial evaluation lasts approximately three hours. Results from the evaluation are shared with the adolescent and his/her parents during the first therapy session. Specifically, information is shared detailing the adolescent's current level of substance use, individual risk factors for continued use, and familial risk factors for continued use. Feedback regarding the evaluation is utilized to help the adolescent and his/her parents establish goals related to the adolescent's substance use.

Assessment procedure

Families first visit to our clinic consists of the initial evaluation described above. Upon arriving at the clinic, a trained staff member meets with the adolescent and parents to review the consent for the appointment. Then, staff conducts the following interviews with teen: Youth Substance Use History Interview, Timeline Follow Back Interview, Vermont Structured Diagnostic Interview for Substance Use, and Vermont Structured Interview for Mental Health. (The structured diagnostic interviews assess for adolescent Substance Abuse/Dependence, Attention Deficit Hyperactivity Disorder, Conduct Disorder, Oppositional Defiant Disorder, Depression, Generalized Anxiety Disorder, and Separation Anxiety Disorder as based on criteria from The Diagnostic and Statistical Manual of Mental Disorders, 4th edition (American Psychiatric Association, 1995)).

After completing the interviews, the adolescent is asked to complete several forms related to their substance use (computer based):

Teen Marijuana Check Up

Alcohol Withdrawal Scale

Behavior Checklist Diary (Budney, Novy, & Hughes, 1999), a 15-item questionnaire assessing for marijuana withdrawal symptoms

Rutgers Alcohol Problem Inventory (White & Labouvie, 1989), a 23-item questionnaire assessing negative consequences related to alcohol use,

Marijuana Problem Inventory, the same 23-items asked about consequences of marijuana use

Readiness to Change Ruler (CASAA, 1998), a 13-item questionnaire for rating readiness to change marijuana and other substances

Fagerstrom Test for Nicotine Dependence (Heatherton, Kozlowski, Frecker, & Fagerstrom, 1991), a 6-item questionnaire assessing tobacco smoking behavior

We also assess other adolescent risk factors, including association with substance using and delinquent peers, beliefs and expectancies about substance use, family conflict, and other behavioral/emotional problems. Adolescents complete several questionnaires to assess for risk factors including:

Friends Questionnaire - (Huizinga, Loeber, & Thornberry, 1993), a questionnaire for rating how many friends engage in prosocial behaviors (e.g., get along well with teachers and peers at school) and antisocial behaviors (e.g., stolen something worth more than $100), plus questions about how often peers pressured the youth to use drugs or alcohol

Loeber Youth Questionnaire-Relationship with Mother (assesses family processes)

Loeber Youth Questionnaire-Relationship with Father (assesses family processes)

Youth Self-Report – (Achenbach & Rescorla, 2001), a questionnaire assessing adolescent competencies and behavioral and emotional problems

Parents complete the following measures about their adolescent and family:

Child Behavior Checklist for Ages 6-18 – (Achenbach & Rescorla, 2001), parent-version of the Youth Self Report described above

Antisocial Process Screening Device – (Frick & Hare, 2001), a 20-item questionnaire assessing adolescent psychopathy

Friends Questionnaire – (Huizinga et al., 1993), same measure adolescent completes assessing adolescent's peer relationships

Substance Use Questionnaire – (Huizinga et al., 1993), a 60-item questionnaire assessing parents' knowledge of their adolescent's substance use

Alabama Parenting Questionnaire – (Frick, 1991), a 42-item questionnaire assessing parenting practices related to disruptive behavior problems in children

LYQ-Parent Relationship with Youth same measure adolescent completes assessing family processes

Readiness to Change Parent

House Rules Questionnaire

Management of Child Behavior Scale

Parents also complete the following measures about themselves:

Adult Self Report for Ages 18-59 – (Achenbach & Rescorla, 2003), a 126-item questionnaire assessing adult emotional and behavioral problems

Once families have completed the above assessment materials and the adolescent has left a urine specimen, the family can be scheduled for their first therapy session. Much of the information collected above is used to provide families with a Personalized Feedback Report during the first session. Therefore, it is important that the first session be scheduled so that staff has enough time to prepare the feedback report and also so that therapists have enough time to examine the report prior to meeting with the family for the first therapy session (a week is recommended).

The process of reviewing the Personalized Feedback Report was adapted from the Cannabis Youth Treatment series, Volume I (Sampl & Kadden, 2001).

THE VOUCHER PROGRAM

The voucher program is a contingency-management procedure that systematically reinforces abstinence from marijuana and other drugs. Money in the form of vouchers is awarded for reported abstinence and negative urine and breathalyzer test results. In addition, the monetary value of the vouchers increases with each consecutive negative urine and breathalyzer test result (see Table 1). "Negative" urine tests are defined as tests in which the presence of marijuana or other drugs is NOT detected in the urine sample, while "positive" urine tests are defined as tests in which marijuana or other drugs are detected. Similarly, "negative" breathalyzer tests are defined as tests in which no presence of alcohol is detected, while "positive" breathalyzer tests are defined as tests in which the presence of alcohol is detected. Failure to submit a scheduled urine specimen or participate in a breathalyzer test is also treated as a positive sample. This procedure not only provides a reward for each substance use negative test, but because of its incremental increase in monetary value, it also provides a greater incentive for youth to maintain long periods of continuous abstinence.

Rationale for targeting all substance use

It is important to target all substance use for several reasons. First, although marijuana is the primary drug of dependence for youth participating in this treatment program, oftentimes, youth involved in illicit drug use engage in more than marijuana use. In particular, our experience has been that youth who use marijuana often engage in alcohol use and occasionally in other drug use such as opiate or cocaine use. In fact, it can be anticipated that alcohol use will be fairly common among adolescent marijuana users and that continued alcohol use will increase the probability of continued marijuana use or relapse. Alcohol intoxication impairs judgment such that, under the influence, marijuana use may occur even among those committed to abstaining. Experience and data from prior studies supports this contention (Carroll, Rounsaville, & Bryant, 1993; Higgins, Roll, & Bickel, 1996). Second, we feel that parents would not be receptive to a treatment that provides reinforcement for marijuana abstinence when we/they know that their child has been using other drugs such as alcohol, cocaine, opiates, or other drugs typically considered more harmful than marijuana. Indeed, some parents are more disturbed by other illicit drug use than by marijuana use. Finally, our work suggests that placing contingencies on all drugs of abuse in adolescent marijuana abusers is not problematic. Little other drug use is usually observed, attrition is low, and the majority of adolescents earn incentives for drug abstinence during the intervention.

Objective monitoring

Regular objective monitoring of marijuana and other drug use via urinalysis and breathalyzer testing is an essential part of implementing this treatment.

Oftentimes, adolescents referred for substance use treatment do not view their substance use as problematic and would like to continue engaging in drug use. In addition, parents and other support people in the adolescent's life may be unaware of any substance use on the part of the adolescent. Or, if parents are aware that their adolescent is engaging in substance use, they are often unaware of the frequency, amount, or type of substance use in which their adolescent is

engaging. Consequently, at the time adolescents enroll in substance use treatment, family members and other support people in their lives have often lost confidence in their veracity. Lying often has become part and parcel of regular involvement in adolescents' daily activities to hide their substance use from their parents and others. Objective monitoring provides an effective means for adolescents to reduce suspicion and rebuild trust and respect among their significant others.

Objective monitoring is necessary for fair and effective implementation of the incentive program and other behavioral contracts used in this treatment. Such contracts are only effective if they are administered consistently and precisely. Reliance on self-reports would not be adequate for those purposes.

Objective monitoring keeps all interested parties, especially therapists and parents, regularly apprised of the ups and downs in adolescents' efforts to resolve their substance use problem. Timely and objective evidence of adolescents' progress is necessary for developing and revising treatment plans.

Urinalysis schedule

Urine specimens are collected from all patients under staff observation weekly. Every time the youth provides a urine sample, the youth should also be asked to report whether they used any alcohol or other drugs since their last urine test, the days on which the youth used, and how much of the reported substance the youth used. In addition, parents should also be asked to report if their youth admitted to using alcohol or other drugs since the last urine test, as well as the number of breathalyzer tests they administered and the results of those tests. Adolescents and their parents should be informed of the urinalysis results as soon as possible after specimens are submitted.

The schedule is designed to optimize the probability of detection of marijuana and other drug use. Frequent testing allows detection of almost any use of marijuana and other drugs once abstinence has been achieved. However, there is a small chance that a single marijuana use episode may results in multiple positive tests. This possibility cannot be avoided. Inform adolescents and their parents about this possibility at the start of treatment. Providing information about multiple positives in the beginning of treatment will greatly reduce controversy over the results or the fairness of the voucher system.

Parents are instructed to attend all of their adolescent's urine testing appointments. If a parent is not present during urine testing to receive the results, a treatment staff member should contact the adolescent's parent the same day as the urine testing is conducted to provide him/her with the results. Providing parents with the test results immediately allows parents to continue utilizing behavioral contracting with their adolescent around their adolescent's substance use.

Specimen collection

Staff members who collect urine specimens should have received special instruction for several weeks by a trained staff person in the collection and analysis of urine. Adequate precautions must be taken to ensure against submission of bogus specimens. We recommend that clinics utilize a same-sex staff member to observe specimen collection and that staff also monitor the temperature and dilution of the specimen. Whenever a urine specimen is collected, the staff member collecting the sample should also:

a. Administer a breathalyzer test (or alcohol testing strip) and record results on "UA Daily Review" sheet.

b. Ask adolescent days on which they might have used since last urine specimen was collected and record information on TLFB Calendar sheet.

c. If adolescent reports any substance use, ask adolescent which substance(s) s/he used, the days on which s/he engaged in substance use, and the amount of each substance used for each day the adolescent engaged in substance use. Record this information on TLFB Calendar sheet.

d. Ask parents whether their adolescent reported any substance use to them since the last urine testing appointment and record information on "Urinalysis Results" sheet.

e. Ask parents to report the number of breathalyzers they administered to their adolescent since the last urine testing appointment and record information on "UA Daily Review" sheet.

f. Ask parents if they need additional breathalyzers.

A written copy of the rationale and procedures for specimen collection should be provided to all adolescents and their parents before they enter the treatment program.

After families have read these materials, the therapist or staff member should ask if they have any questions and whether each family member understands these rules. Taking time at the outset to discuss the rationale and procedures for collecting specimens and referring to them while collecting the first specimen can prevent later confusion and problems. Adolescents or parents who have any difficulty with these procedures should be asked to discuss their concerns with the appropriate treatment staff, oftentimes their therapist.

It is important to note that adolescents typically do not want to participate in observed urine testing. It is an uncomfortable process, and this should be acknowledged with the adolescent and their parents. However, the therapist, treatment staff, and parents need to deliver a clear message to the adolescent that they need to provide a urine specimen under observation in order to participate in the program. If the adolescent refuses, it is the role of the therapist to work with the parents to obtain the adolescent's compliance with this part of the program, acknowledging that this may take several sessions. Specific procedures used to obtain the adolescent's cooperation with observed urine drug testing are discussed again later in the manual.

Laboratory analysis

As we have been discussing, monitoring the use of marijuana and other illicit drugs for clinical purposes can be accomplished through observed urine testing. As a general rule of thumb, most illicit substances tested through urinalysis can be detected for up to 2 to 3 days after use. Longer intervals, up to almost 2 weeks, can result from use of high doses or marijuana or other drugs. Because most specimens collected from adolescents enrolled in drug treatment are expected to be negative, immunoassays are recommended for screening out negative samples (e.g. (Braithwaite, Jarvie, Minty, Simpson, & and Widdop, 1995). We typically do not read urine tests for substances youth report using since the previous test for two reasons. One, in rare cases a youth might report substance use on one occasion since their last urine screen but urinalysis results are negative. Again, this can occur because some illicit substances cannot be detected after 2 days use. Thus, if a youth has a urine screen on Thursday and uses marijuana Thursday night, they could have a negative urinalysis result at the time of their scheduled screen next Thursday. The second reason we do not test urine specimens for substances youth report using is to minimize clinic expenses.

Similarly, because of cost and other factors, positive specimens are not regularly confirmed. Immunoassays for delta-9-tetrahydrocannabinol (THC) like the Enzyme Multiplied Immunoassay Technique (EMIT) are very specific; that is, there is little reaction with other compounds that might produce a positive result. Also, in the majority of cases, patients confirm the screens through self-reported marijuana use.

If your clinic policy is to regularly confirm positive specimens, experts recommend high performance liquid chromatography (HPLC) for clinical purposes and gas chromatography mass spectrometry (GCMS) for forensic purposes (e.g. (Braithwaite et al., 1995).

Breathalyzer testing by parents

Parent reports of alcohol use must be confirmed either by home breath alcohol tests or the admission of use by the adolescent. Parents are provided with disposable breathalyzers and instructed to use them upon any suspicion of alcohol use. More specifically, if parents suspect alcohol use, they are to proceed through the following steps:

1. Ask adolescent if they have used alcohol that day.

2. If youth say yes, s/he used alcohol, parents do not need to administer a breathalyzer.

3. If youth says no, s/he has not used alcohol, parents ask their youth to participate in a breathalyzer test.

    a. If youth takes the test and it is negative (indicates no alcohol use), parents are instructed to thank youth for taking the test and praise him/her for abstaining from alcohol use.

b. If youth takes the test and it is positive (indicates presence of alcohol use), parents are instructed to use a series of steps. In addition to providing parents with recommendations for how to respond to their youth after a positive test, the handout also recommends that parents implement a consequence for alcohol use. The use of consequences in relation to substance use is discussed further in the "Contingency Management" chapter. The youth also fails to receive a voucher at their next scheduled urine testing appointment regardless if youth tests negative for other drugs.

c. If youth refuses to take breathalyzer test, parents are instructed to assume youth used alcohol and follow same series of steps referred to above.

Fishbowl Pulls

During weeks 1-14 of treatment, adolescents receive fishbowl pulls for providing urine specimens and breath alcohol tests indicating they have not used alcohol, marijuana or other drugs. In addition, both the adolescent and parents must report no alcohol use since the last scheduled urine test. The use of a "Fishbowl" was developed by Dr. Nancy Petry at the University of Connecticut Health Center (Petry, Martin, Cooney, & Kranzler, 2000). It is a low-cost way to reinforce individuals for completing therapeutic tasks.

Adolescents are informed of their urinalysis results immediately (10-15 min) after submitting their specimens. At the end of each session, abstinent teens earn a number of "draws" from the Fishbowl.

The Fishbowl contains 500 slips of paper, each with a message written on it describing a prize or indicating that it is a "great job" (no win) slip. There are 250 great job slips. Among the winning slips are three prize categories: 209 $1.50 value small prizes, 40 $20.00 value medium prizes, and 1 $100.00 value large prize. The earnings are loaded onto a reloadable MasterCard by staff.

It is important to remember that earnings cannot be lost once achieved.

Failed or missed specimens

This system also recognizes that slips (use of marijuana and/or other drugs) are highly probable during treatment. A urine sample is considered positive if one of the following events occur: 1) youth tests positive for marijuana or another drug based on urinalysis results; 2) youth tests positive on breathalyzer test administered at home by parent(s) since last urine test or refuses a breathalyzer request; 3) youth self-reports use since last urine test; or 4) youth fails to provide a valid urine sample.

To discourage slips, the number of fishbowl pulls reverts back to its initial number of pulls whenever substance use occurs. In other words, specimens that are drug-positive or failure to submit a scheduled specimen resets the number of pulls back to original potential from which

they can escalate again according to the same schedule as before. In addition, adolescents can regain their highest fishbowl pull potential by providing 3 consecutive negative specimens. Thus, if Erin earns 10 pulls for a negative specimen and then tests positive at her next screening, her third consecutive negative test increases to 10 pulls again.

Invalid specimens

Occasionally, results from urine samples are invalid. In other words, the youth's urine sample is too dilute to be read by the urinalysis machine or the temperature is too low. Dilute urine can occur for several reasons. The youth might be nervous at the prospect of providing a urine sample under observation and therefore, may drink a substantial amount of water or fluids prior to testing to ensure s/he will be able to urinate. On the other hand, youth may purposely attempt to dilute their urine by drinking too many fluids or by ingesting drugs designed to purge the body of toxins in order to disguise their substance use. Low temperature typically occurs if youth attempt to replace their urine with a urine specimen they obtained from someone else. If a urine sample is considered invalid, the youth is encouraged to provide another sample later that same day or early the next day. If the youth fails to do so, the invalid sample is treated as a positive test result for substance use.

CT Payer

Money earned through fishbowl pulls is deposited to a reloadable MasterCard using the CT payer system.

Presenting the results

As mentioned earlier, ideally, urine specimens should be tested immediately after collection, while the adolescent and parents wait. If you have a drug-testing system in your agency and all testing is done by trained assistants, turnaround time can be very rapid (2-5 minutes). If your agency does not have laboratory capability, the results should be presented to clients as soon as possible.

To be consistent with our model, treatment staff members should adhere to the following protocol when informing adolescents and their parents of the urinalysis results. It is important to inform both adolescents and their parents of the results. If a parent is not present at the time of the scheduled urine testing appointment, it is the responsibility of the staff to contact one of the adolescent's parents via telephone and provide him/her with the urine test results that same day.

- Engage in pleasant conversation with adolescents and their parents while waiting for the results of the urinalysis.

- The staff member records the information on the "Urinalysis Results" handout.

- If the urine specimen and breathalyzer are negative for substance use and neither the adolescent nor the parents report any use since the last urine testing, praise the adolescent for remaining abstinent, inform him/her of the voucher amount s/he

earned that day and the total amount of voucher money s/he has earned to date, ask the adolescent if they want to purchase anything with their voucher balance, and try to engage him/her in positive interaction for a few minutes. For example, you might say something like, "Great job, Sara. You are doing great! That is three times in a row now that you've been clean. You earned $4.50 today which brings your voucher balance to $39.00. Is there anything you want to spend your vouchers on? How's everything else going?"

- In addition, it is important to encourage parents to praise their adolescent's abstinence verbally and also by allowing the adolescent to select an agreed upon reward from the behavioral contract established at the onset of treatment (see Chapter x for a detailed description of the contract).

- If either the urine specimen or breathalyzer test is positive for substance use, or substance use has been reported since the last urine test, the staff member informs the adolescent and parents of the test results. Tell adolescents and parents to speak to their therapist at their next appointment and *immediately terminate the conversation.* This is very important. Do not engage in pleasant conversation. Do not ask about what happened. Do not give therapeutic advice. Merely refer families to their therapist. Inform the therapist of the urinalysis result as soon as possible. It is important that the clinic staff not provide any social reinforcement for substance use. By providing social contingencies, the clinic staff send a clear message to the adolescent supporting abstinence.

On days where the family has a scheduled therapy appointment, the therapist is apprised of the urinalysis results and is responsible for presenting the results to the family. As the therapist meets individually with the adolescent first, the therapist typically shares urinalysis results first with the adolescent and later with the parents. If the urinalysis and breathalyzer results are negative, it is important that the therapist praise the youth in his/her efforts to abstain, review the youth's voucher balance, and explore whether the youth wants to spend their voucher earnings. In addition, it is helpful if the therapist briefly explores whether there were any periods during the week when the youth was tempted to engage in substance use. If so, the therapist reviews with the youth strategies s/he used to avoid engaging in substance use.

If the urinalysis or breathalyzer results are positive (or the youth reports engaging in substance use), the therapist briefly explores with the adolescent circumstances surrounding use, including positive and negative consequences from use (complete a functional analysis of substance use as described in the CYT manual). If the youth denies engaging in substance use since the past urine screening, it is important that the therapist does not challenge the youth, but instead responds in a matter-of-fact manner. If the youth does not instigate any conversation, the therapist gently proceeds with questions about potential situations in which the youth might have used. If the youth continues to adamantly deny any use since the last urine screening, the therapist simply reiterates that progress in treatment is based on urinalysis results and that today's results indicate that the client may be struggling with abstinence. The therapist then attempts to review the past few days, recruiting the adolescent's help in identifying any potentially high-risk contacts or

situations s/he perhaps encountered. Even if the youth continues to deny any use, this discussion may highlight particular areas worth re-examining.

Example of therapist's conversation with youth who just tested positive but denies engaging in substance use:

Therapist: "Hi Tim. The lab just called me with your urinalysis results. You're positive for pot."

Client: "That can't be right. I haven't used. I didn't do anything this weekend."

Therapist: "That's how the machine read the sample. Let's talk about what you did over the weekend and perhaps that will give some insight into what might be going on."

Client: "I just closed down the store around midnight, went home and went to bed on Friday night. Then I worked Saturday morning. After I got off work, I just hung out with some friends for a while."

Therapist: "You didn't get to the gym like you planned?"

Client: "Nope. I should've, but I just got side tracked by running into some buddies."

Therapist: "Do any of those guys get high?"

Client: "One does, but he knows I'm trying to quit. I've gotten high with him but now he won't smoke around me anymore."

Therapist: "So what did you guys do?"

Client: "Just hung out at his house, watched a movie, and smoked a few cigarettes. Wow, we roll our own cigarettes, I wonder if he snuck in some pot."

Therapist: "Maybe. It sounds like hanging out with those guys might continue to get you in trouble."

Client: "Yeah, I agree. I'm not sure why I did that. I've been doing really well with sticking to my weekend plans even when I run into old friends. I guess I just

happened to run into these guys, started shooting the breeze, and then I decided to skip the gym. I guess I kind of blew it."

Therapist: "The most important thing to do here is to learn from this situation and move on. What do you think you need to do to be sure you test clean for marijuana next week?"

It is important that the therapist refrain from arguing with the youth over a single instance of denied drug use. If the youth has resumed regular use, a pattern of positives will soon emerge. Instead, the therapist might review the risks of hanging out with drug-abusing friends and the risks of continuing to smoke cigarettes while trying to quit marijuana. The therapist might also express confidence that the next urine screen will be negative and encourage the youth not to worry about one positive test, but to focus on ways to ensure the next urine screen will be negative.

When meeting with the parents, if the youth tests negative, the therapist models praising the youth for the parents and encourages the parents to implement one of the rewards from the behavioral contract established at the onset of treatment (discussed in the Contingency Management chapter). If the youth tests positive, the therapist informs parents of the positive results and encourages the parents to implement one of the consequences from the behavioral contract established at the onset of treatment.

PARENT-DIRECTED CONTINGENCY MANAGEMENT

As mentioned earlier, parent management training has been shown to produce some of the largest and most enduring treatment effects on conduct problems and thus, serves as one of the main components of this intervention. Basic elements of contingency management programs for adolescents include:

- Identifying and labeling adolescent behavior
- Reducing preoccupation with problem behavior and increasing attention to prosocial goals
- Daily monitoring of target behaviors
- Using contingency contracts to reinforce prosocial behavior and to implement appropriate consequences for misbehavior
- Using alternatives to physical punishment
- Communicating effectively
- Anticipating and solving new problems

For the current treatment, parent management training involves two steps. First, parents participate in a 12 session curriculum developed by Dr. Thomas Dishion called Adolescent Transitions. How to best utilize this curriculum in the context of our intervention is discussed in chapter X. The second step teaches parents how to implement a contingency contract at home which focuses solely on their adolescent's substance use.

Rationale for parent-directed contingency management targeting adolescent substance use

The contingency contract is an agreement between parents and youth which specifies positive and negative consequences to be implemented by parents in response to obtaining urinalysis test results or breath testing for alcohol use. Initially, it may be difficult to understand the purpose of the Substance Monitoring Contract as youth already receive rewards in the form of vouchers from the clinic for abstaining from substance use. However, introducing the Substance Monitoring Contract at the onset of treatment provides parents with a tool for increasing and sustaining their youth's motivation to abstain from substance use over time. The Substance Monitoring Contract also provides parents with information on how to respond to substance use and abstinence. In addition, the Substance Monitoring Contract allows parents to reverse their previous pattern of an inability to provide positive attention to their teen for abstinence and provide consistent negative consequences for substance use (because parents cannot detect substance use without urine or breath testing). Throughout treatment, parents and the therapist work together to continually adapt the Substance Monitoring Contract to maximize its effectiveness. Through this process, parents become familiar with the main principles of contingency contracting and at the end of treatment are able to sustain the Substance Monitoring

Contract beyond treatment, as well as extend the concepts of contingency contracting to increase their teen's overall compliance at home.

The Substance Monitoring Contract is compatible with the Adolescent Transitions' Family Management Curriculum, which focuses on teaching parents to effectively use contingency contracting in the home environment to decrease adolescent problem behaviors and increase positive, prosocial behaviors. The primary difference between the Family Management curriculum and the Substance Monitoring Contract is that the latter is specific to addressing substance use.

Developing and implementing the Substance Monitoring Contract

During the first two sessions, the therapist simply introduces the concept of developing and implementing the Substance Monitoring Contract as a way of increasing adolescents' motivation to abstain from substance use. The therapist provides parents and teen with a copy of the contract, requesting that they look over the contract before their third session. The therapist informs families that they will discuss the Substance Monitoring Contract in detail at session three and that, because of the washout period, the contract will not be implemented until week three.

<u>Rewards for abstinence</u>

At session 3, the therapist works individually with the youth to identify rewards s/he can earn for testing negative at urine testing appointments. Within the Substance Monitoring Contract, it states that the youth is eligible for a reward if their urine drug screen is negative, there were no self reports of substance use, and there were no positive or refused alcohol breath tests since the last drug screen. We typically recommend that the process of selecting rewards follows three key principles suggested by Patterson and Forgatch (Patterson & Forgatch, 1987):

1. The youth desires the rewards enough to put forth effort in abstaining from substance use. If the rewards selected hold no value for the youth, s/he is much less likely to be motivated to abstain from substance use in order to earn the reward. Therefore, it is especially important that the therapist steer the youth towards selecting rewards which are meaningful to her/him.

2. The rewards are items or privileges that parents are willing and able to provide. If the rewards selected are ones which parents are unwilling or unable to provide consistently, it is highly likely the youth will become discouraged with the Substance Monitoring Contract and this may increase conflict between the youth and her/his parents. If the youth begins to view the Substance Monitoring Contract as a negative thing, s/he is much less likely to attempt to abstain in order to earn a reward s/he is not even sure of receiving. On the other hand, if parents consistently provide the selected rewards, the youth's motivation to abstain is likely to increase and be maintained over time in an effort to continually earn rewards.

3. The youth and parents agree on multiple rewards when developing the contract. This allows the youth to have several rewards to choose from, decreasing the possibility of the reward system losing its value. If the youth receives the same reward every time they test negative for substance use, that reward is more likely to lose its value to the adolescent. On the other hand, if the youth can select from a number of rewards, the rewards are more likely to sustain their novelty and value to the youth over a greater period of time, thereby sustaining their motivation.

If the youth has difficulty identifying rewards s/he would like to earn, the therapist may want to ask the following questions to help the youth think more about potential rewards:

- What would you like to see happen if your tests are negative?
- What kinds of things does your mom/dad do for you now? Rides? Dinners? Money? Buy you things? Going out with friends? Would you see these activities as motivators?
- Are there any hobbies you would like to do more of? Any interests you would like to pursue?
- What kinds of things might you like to do with your family?

Rewards identified by the youth should be recorded so that the list may be presented later to the parents. If the youth cannot identify more than one reward during the second session, that is okay. The therapist records the reward and encourages the youth to think about additional rewards s/he would like to earn during the next week. It is very important that the therapist revisit this conversation about rewards at the next session. If the youth cannot identify any rewards, the therapist suggests potential ideas for rewards such as movie passes, gift certificates to retail stores and restaurants, or money towards a larger purchase such as a new bike or snowboard, etc. If the youth refuses to identify rewards, it is important that the therapist refrain from arguing with the youth about the importance of choosing rewards. Rather, the therapist simply reiterates, in a matter-of-fact manner, the rationale behind rewards and that while the youth will not be forced to choose rewards, s/he has the potential to earn them. In addition, the therapist informs the youth that her/his parents will be selecting and implementing consequences for substance use. In the box below are some examples of both social and tangible rewards.

Social rewards

praising	smiling	kissing	head nodding
attention	touching	hugging	do things together
brag about them [in front of them]		listening	spend time together

Tangible rewards

money	food	television	have friends over
use car	internet access	telephone	transportation
unsupervised time with friends			

In meeting with the parents, the therapist discusses the rationale behind the use of the Substance Monitoring Contract, reviews the list of rewards selected by the youth, and encourages the parents to develop a list of consequences they can implement should their youth test positive for substance use at urine testing appointments. In reviewing the youth's list of rewards, the therapist reviews the list of key principles described above as well. If parents indicate that they are unwilling or unable to implement the selected rewards, the therapist explores their reasons and attempts to problem solve with parents as to how they might be willing or able to implement them. If parents are unwilling to implement the selected rewards because they feel the rewards increase the youth's opportunities to engage in risky behaviors related to substance use or other conduct problems, the therapist engages in problem-solving with the parents to encourage them to identify rewards they feel their youth will enjoy and which they feel are safe and in conjunction with a goal of abstinence for the youth. Rewards developed by the parents and therapist during this process should be discussed with the youth towards the end of the session (discussed later in this chapter).

When discussing rewards with parents, we feel it is also important to highlight four additional principles:

1. Chosen rewards need to be items or privileges which the youth will not have access to should s/he test positive. In other words, if the youth will have access to the selected reward, regardless of the outcome of the urine drug screen, it is unlikely that the youth will be motivated to abstain from substance use to obtain that reward.

2. Parents and youth need to understand and expect that rewards and negative consequences may need to be changed periodically to sustain the youth's motivation. Any menu, if used long enough, can become boring or innocuous.

3. Rewards earned by the youth should be given immediately after the positive behavior has occurred. Thus, ideally, any rewards earned by the youth for negative urine and breathalyzer tests should be given on the same day as the urine testing appointment, preferably directly following the appointment. This strategy maximizes the youth's ability to connect her/his positive behavior choices to the rewards the youth is earning.

4. Once earned, rewards cannot be taken away from the youth. Oftentimes, it can be tempting for parents to remove the reward when their youth is noncompliant or engages in rule-breaking behavior. As tempting as this may be, it is important that the therapist works with parents to help them develop alternative consequences to removing earned rewards for misbehavior. If the youth does not feel s/he can count on receiving the reward after earning it, they may become less likely to sustain their efforts to remain substance free.

In addition, the therapist reviews with parents other ways they should respond if their youth is negative for substance use. These include praising the youth's progress and asking how parents can help the youth keep up the good work.

Negative consequences for substance use

After reviewing rewards selected by the youth, the therapist introduces parents to the idea of implementing negative consequences based on urinalysis and breathalyzer testing. In the Substance Monitoring Contract, it states that if the youth's urine drug screen is positive or if the youth refuses the urine drug screen, and/or there were positive or refused alcohol breath tests, parents are to implement a negative consequence. We typically recommend that the process of selecting incentives follows six key principles suggested by Patterson and Forgatch (Patterson & Forgatch, 1987):

1. Even when negative consequences are used, behavior still changes slowly. We do not necessarily expect that the negative consequences parents select will work the first time they are used. In fact, problem behaviors, such as substance use and noncompliance, may actually increase when parents begin to implement negative consequences because youth may initially try to test their parents to see if they are going to be consistent and uphold the negative consequences they have given. Therefore, it is important that parents do not get discouraged during the initial weeks in which the Substance Monitoring Contract is implemented, and part of the role of the therapist is to support parents in this process to help them stay motivated about using the contract. Families typically begin to notice changes in youths' behavior after several weeks.

2. Parents need to be consistent, which means implementing one of the identified negative consequences **every time** youth test positive for substance use. Being consistent means refraining from threatening youth with negative consequences – in other words, promising youth they will receive a

consequence multiple times without actually implementing it. In addition, being consistent means that parents give the negative consequence each time the problem behavior, in this case substance use, occurs. If youth believe that there is a chance parents will not deliver the negative consequence, they are less likely to abstain from substance use to avoid the consequence because they believe there is a chance the consequence will never come.

3. Lectures do not change behavior. Oftentimes, parents may be tempted to lecture youth about substance use, the consequences of substance use, and their feelings about substance use. This all stems from parents' fear and concern about their youth's well-being. Unfortunately, lectures designed to make adolescents "wake up," feel guilty about their behavior, and ultimately, motivate youth to abstain from future substance use, often fall on deaf ears or have the potential to make youth feel badly about themselves. Rather, parents can be more effective, while keeping their youth's self-esteem intact, by consistently implementing the negative consequences outlined in the Substance Monitoring Contract.

4. Calmer is better. Upon learning, either through urinalysis or breathalyzer testing, that their youth has engaged in substance use, parents may feel frustrated, angry, and/or worried. Youth may also feel angry and upset because they are anticipating receiving a consequence. Parents should wait until they have control over their feelings before implementing a negative consequence. Using consequences when parents are calm provides parents with a greater sense of control and can make the task of using negative consequences less aversive because it decreases potential arguments between parents and youth.

5. Negative consequences do not have to be severe to be effective. Using brief negative consequences consistently over time has actually been found to be more effective than consequences which were longer and more severe in nature. For the purposes of the Substance Monitoring Contract, we recommend that the consequence last no longer than the time until an adolescent's next urine screen appointment. This time period was selected because it is brief (three to four days) and allows youth to feel optimistic about earning a reward instead of a consequence at their next urine screen appointment. On the other hand, if the youth knows s/he will be grounded from using the car for the next two weeks for example, s/he may become more discouraged and less motivated to abstain from substance use during the two week period because the youth might feel there is nothing s/he can do during those two weeks to earn a reward.

6. Negative consequences only work in a positive parent-teen relationship. There needs to be a balance between love and discipline. If there is little warmth between parents and youth, implementing negative consequences could result in greater resistance and conflict with youth. Thus, it is important that youth

understand that while their parents are giving them a consequence for problem behavior, the parents still love and respect them. Instilling a sense that one is loved, cared for, and respected is something which is done over time and should not be done at the time in which parents are giving negative consequences. Rather, love and respect should be communicated often, at other times within the parents and adolescent's relationship.

We also feel that the negative consequences parents choose should be ones which are meaningful to youth. For example, if parents select no computer/internet use and the youth is rarely home to use the computer because s/he is often out with friends, this consequence will hold little value to the youth. If the youth does not care about receiving the consequence, s/he is less likely to try to avoid it in the future by abstaining from substance use.

Parents also need to identify negative consequences which they can monitor consistently and enforce immediately. For instance, if parents choose no visits to or from friends until the youth's next urine screen appointment, parents need to be able to restrict their youth's access to seeing friends. If the parents are not home at night because of work or obligations for other children, this would not be a good consequence because the parents are not there to ensure that the consequence is being followed. On the other hand, removing car use privileges is a consequence most parents can easily enforce by taking away the youth's access to car keys. In addition, parents need to be able to implement the consequence the same day as they receive the results. The more immediate the consequence, the greater the likelihood youth will try to avoid receiving a consequence in the future.

It is the therapist's role to guide parents in selecting negative consequences which follow the principles described above. Oftentimes, parents can come up with negative consequences easily. Similar to selecting rewards, parents should develop a list of consequences to choose from as some consequences may be more meaningful at different times depending on the time of year, the youth's activities, etc. Whenever a negative consequence needs to be used, it is always the parents' choice regarding which one they want to use. Listed below are several questions therapists can ask to generate ideas for negative consequences:

- What privileges does (adolescent's name) enjoy?
- Is there anything you currently give (adolescent's name) that is a privilege that could be used as a motivator?
- Are there any activities (adolescent's name) likes to do?

Below are listed several examples of negative consequences parents might try:

Negative Consequences

Work chores (length should vary with severity of problem behavior)
Fines
Privilege removal

Use of car/rides	Telephone
Television	Bike
Skateboard	Stereo/radio
Friends over	Curfew (making it earlier)
Grounding	

Negative consequences identified by parents are recorded on the Substance Monitoring Contract. If parents cannot identify more than one consequence during the second session, that is okay. The therapist records the consequence and encourages parents to think about additional consequences they could use during the next week. It is very important that the therapist revisit this conversation about consequences at the next session. If parents cannot identify any negative consequences which meet all of the principles described above, the therapist suggests potential ideas for consequences such as grounding, no use of car, no friends over, etc.

In rare cases, parents may refuse to identify negative consequences. Should this occur, the therapist reviews the rationale behind the treatment program, the Substance Monitoring Contract, and parents' role in changing their adolescent's substance use. It is equally important that the therapist explores parents' resistance to using contingency management strategies. The therapist also introduces the idea of parents engaging in a time-limited experiment involving the use of the Substance Monitoring Contract. In other words, the parents are asked to try using the Substance Monitoring Contract consistently for a limited period of time to determine whether the contract is an effective tool for them. If parents continue to refuse to implement negative consequences for problem behaviors, therapists can allow families to think about whether they feel they can commit to utilizing the Substance Monitoring Contract before the family's third session (when the contract will be in effect). Ultimately however, if parents are unwilling to engage in contingency management strategies, the therapist may need to refer them to another program as the use of behavioral parent training strategies such as those involved in the Substance Monitoring Contract serve as one of the central components of the intervention.

<u>Discussing the Substance Monitoring Contract as a family</u>

At the end of session three, the therapist meets with both the parents and the youth to review the Substance Monitoring Contract. The therapist begins by highlighting the ways in which youth can earn rewards. Rewards identified by the youth and agreed upon by the parents are presented as items or privileges to be earned with each negative urine screen appointment. If parents selected additional rewards not identified by the youth, those rewards are presented to the youth for discussion at this time. It is important to try to select rewards which the youth is excited about. However, occasionally youth refuse to or have difficulty identifying rewards and,

simultaneously, display apathy towards any rewards identified by their parents. Should this occur, it is acceptable for the parents to choose a reward they would like to give their teen. Ideally, it is more beneficial for everyone if the rewards are ones which the youth is enthusiastic about as they will motivate the youth to achieve abstinence. Realistically however, it is important that the youth earn some form of a reward for abstinence, even if they did not select the reward themselves. Once youth begin to earn rewards, they may later become more interested in identifying rewards that they are more interested in obtaining.

After reviewing the conditions for earning rewards and creating a consensual list of rewards, the therapist then highlights the ways in which the youth receives negative consequences. Negative consequences identified by the parents are presented as consequences to be administered after each positive urine screen appointment. If, in between urine screen appointments, parents administer a breathalyzer and it is either positive for alcohol use or the youth refuses to take the breathalyzer, parents are instructed to immediately implement one of the consequences from the Substance Monitoring Contract as well. Parents do not need to wait until the urine screen appointment under these circumstances.

Upon hearing the consequences, youth may become angry and attempt to argue with parents about the consequences, they may say they do not care what the consequences are, or they may say that the consequences will not work because they will not change. Parents should be instructed to anticipate any or even all of these reactions prior to meeting with the youth and instructed to respond to the youth's outbursts in a calm, matter-of-fact way. In presenting the consequences, the therapist informs the youth that no one expects the youth to like the consequences as the idea is that the youth will want to avoid receiving any consequences. In addition, the therapist also informs the youth that choosing which consequences to administer should the youth earn a negative consequences is entirely at the discretion of the youth's parents. The youth does not need to like the consequences, nor does it matter whether the youth feels the consequences will be effective. The youth is reminded that it is in their control whether s/he receives a reward or a negative consequence as the Substance Monitoring Contract is entirely based upon the youth's decisions around substance use. After hearing this, the youth may remain angry. That is okay. Neither the therapist, nor the parents, should engage in an argument with the youth. The adults should remain calm and matter-of-fact in the face of the youth's distress about potential consequences. The youth is attempting to adjust to having their freedom restricted because there will now be immediate consequences should s/he engage in substance use.

The next step involves having all family members sign the contract stating that they have read and understand it. It is very important that the youth understand that regardless of whether s/he signs the contract, the contract will be implemented. Signing the contract primarily acknowledges that all family members have reviewed the contract and are aware of what it entails.

Finally, the therapist reminds families that the Substance Monitoring Contract begins that session. Thus, if the youth has abstained from substance use, s/he will earn a reward. However, if the youth has engaged in substance use or refuses urine or breath tests, the youth will be given a consequence. If the youth has engaged in substance use, it is important that the therapist work

individually with the parent(s) to select a consequence and discuss the way in which the parent(s) will implement the consequence.

Troubleshooting – using back-up consequences

Some youth, determined to continue engaging in substance use, refuse to accept the negative consequences administered by their parents. For instance, a youth who is grounded might sneak out of the house in the middle of the night after his/her parents are asleep. Another example may be that a youth who has been given an early curfew of 8:00 pm arrives home at midnight regardless of the parents' instructions. In cases like these, it is important for parents to have what we refer to as "back-up" consequences. Back-up consequences are negative consequences which can be used to gain compliance with the original consequence given. Take the example of the youth sneaking out at midnight, a back-up consequence to that behavior might be to refuse to allow friends over or removal of phone privileges. With the curfew example, if the youth arrives home at midnight one night after being told to be home at 8:00 pm, the back-up consequence might be that s/he cannot go out at all the following night. The main idea behind back-up consequences is that as the youth escalates his/her behavior, parents respond by administering a negative consequence for each problematic behavior. IF parents have to implement a back-up consequence, the back-up consequence should last no longer than the original consequence. In addition, it is important that the back-up consequence be more aversive than the original consequence. If the back-up consequence is more aversive than the original consequence, the likelihood is greater that the teen will comply with the original, less aversive consequence in an effort to avoid the more aversive, back-up consequence.

Parent Incentives

We recognize that parents are expected to perform multiple tasks weekly for the duration of the program. While some parents engage in these tasks willingly, other parents may have difficulty as they may be frustrated with their teen and feel they should not have to participate in treatment. To further encourage parents' full participation in treatment, we offer parents weekly incentives for participating in the program.

At the end of the second session, we provide parents with an entertainment booklet that includes discounts and free passes to various social and recreational activities, and restaurants in the local geographic area. This incentive is designed to reinforce participation, but more importantly to provide encouragement and the means to increase families' participation in prosocial activities. Therapists encourage parents to model prosocial recreation and social activity, to increase engagement in such activities with their teen, and to help provide opportunities for more of these types of activities for their teen and peers.

To further encourage parents' participation with all aspects of the treatment program, we also offer parents an opportunity to take part in a prize-drawing activity referred to as the Fishbowl Prize Draw. The use of a "Fishbowl" was developed by Dr. Nancy Petry at the University of Connecticut Health Center (Petry, Martin, Cooney, & Kranzler, 2000). It is a low-cost way to reinforce individuals for completing therapeutic tasks.

The Fishbowl contains 250 slips of paper, each with a message written on it describing a prize or indicating that it is a "no win" slip. There are 188 winning slips and 62 non-winning slips. Among the winning slips are three prize categories: 169 $1.00 to $2.00 value prizes, 17 $20.00 value prizes, and 1 $100.00 value prize. Examples of prizes in the first category include $1.00 gift certificates for local fast food restaurants or for lottery tickets. Examples of prizes in the second category include gift certificates to grocery stores, fitness centers, movie passes, and local restaurants. The last category containing the $100.00 prize involves a recreation package which parents can design themselves. In other words, if a parent draws the $100.00 prize, s/he can select their incentive and a member of our staff will obtain it for him/her.

At the end of each session, parents earn a number of "draws" from the Fishbowl based on their weekly completion of the activities listed below.

Parents' Weekly Activities	Week 1	Week 2	Weeks 3 – 14
✓ Come to each session on time and stay the full time	X	X	X
✓ Bring teen to mid-week urine screen		X	X
✓ Complete homework assignments		X	X
✓ Use a breathalyzer at home		X	X
✓ Implement a reward or consequence for each urine result (2 draws – one for each urine screen)			X

As some treatment components are introduced gradually during the first three weeks of treatment, parents are not asked to complete all five activities during sessions one and two. In the table above, the "X's" in columns titled "Week 1", "Week 2", and "Weeks 3 – 14" indicate that the activity has been introduced and that parents can earn a draw for that activity. In the first session, each parent is eligible for one draw if they arrive for the session on time and remain for the full time. In the second session, each parent can potentially earn four draws for session attendance, bringing their teen to the mid-week urine screen, completing homework, and administering breathalyzers. By the third session, each parent is eligible to earn two additional draws if they implement the Substance Monitoring Contract at each urine screen (both the session and mid-week urine screen; see chapter on "Parent-Directed Contingency Management"). Throughout weeks three through fourteen, each parent is eligible for up to 6 draws from the fishbowl. If there are two parents involved in parenting the youth, each parent can earn their own draws, which encourages participation of both parents both inside and outside of the weekly therapy sessions.

As mentioned above, at the end of each session, the therapist adds up the number of draws earned for each parent based upon their completion of the above-referenced activities. Each parent then pulls out 1 slip of paper from the Fishbowl for each draw they earned at the current session.

Reference List

1. Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for ASEBA School-Age Forms and Profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, and Families.

2. Achenbach, T. M., & Rescorla, L. A. (2003). *Manual for the ASEBA Adult Forms & Profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth & Families.

3. American Psychiatric Association. (1995). *DSM-IV Diagnostic and Statistical Manual of Mental Disorders* (4 ed.). Washington DC: American Psychiatric Association.

4. Anderson, A. R., & Henry, C. S. (1994). Family system characteristics and parental behaviors as predictors of adolescent substance use. *Adolescence, 29*, 405-420.

5. Bickel, W. K., Amass, L., Higgins, S. T., Badger, G. J., & Esch, R. A. (1997). Effects of adding a behavioral treatment to opioid detoxification with buprenorphine. *Journal of Consulting and Clinical Psychology, 65*, 803-810.

6. Borduin, C. M. (1999). Multisystemic treatment of criminality and violence in adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry, 38*, 242-249.

7. Braithwaite, R. A., Jarvie, D. R., Minty, P. S., Simpson, D., & and Widdop, B. (1995). Screening for drugs of abuse. I: Opiates, amphetamines, and cocaine. *Annals of Clinical Biochemistry, 32*, 123-153.

8. Brook, J., Nomura, C., & Cohen, P. (1989). A network of influences on adolescent drug involvement: Neighborhood, school, peer and family. *Genetic, Social, and General Psychological Monographs, 115*, 123-145.

9. Brook, J. E., & Brook, J. S. (1988). A developmental approach examining social and personal correlates in relation to alcohol use over time. *Journal of Genetic Psychology, 149*, 93-110.

10. Brook, J. S., Whiteman, M., Cohen, P., Shapiro, J., & Balka, E. B. (1995). Longitudinally predicting late adolescent and young adult drug use: Child hood and adolescent predictors. *Journal of the American Academy of Child & Adolescent Psychiatry, 34*, 1230-1238.

11. Budney, A. J., Higgins, S. T., Radonovich, K. J., & Novy, P. L. (2000). Adding voucher-based incentives to coping skills and motivational enhancement improves outcomes during treatment for marijuana dependence. *Journal of Consulting and Clinical Psychology, 68*, 1051-1061.

12. Budney, A. J., Novy, P., & Hughes, J. R. (1999). Marijuana withdrawal among adults seeking treatment for marijuana dependence. *Addiction, 94*, 1311-1322.

13. Carroll, K. M., Rounsaville, B. J., & Bryant, K. J. (1993). Alcoholism in treatment-seeking cocaine abusers: Clinical and prognostic significance. *Journal of Studies on Alcohol, 54*, 657-665.

14. CASAA Research Division University of New Mexico. (1998). The readiness to change ruler.

15. Catalano, R. F., Hawkins, J. D., Krenz, C., Gillmore, M., Morrison, D., Wells, E., & Abbott, R. (1993). Using research to guide culturally appropriate drug abuse prevention. *Journal of Consulting and Clinical Psychology, 61*, 804-811.

16. Chamberlain, P., & Reid, J. B. (1987). Parent observation and report of child symptoms. *Behavioral Assessment, 9*, 97-109.

17. Chamberlain, P. C., & Reid, J. B. (1998). Comparison of two community alternatives to incarceration for chronic juvenile offenders. *Journal of Consulting and Clinical Psychology, 66*, 624-633.

18. Chilcoat, H. D., & Anthony, J. C. (1996). Impact of parent monitoring on initiation of drug use through late childhood. *Journal of the American Academy of Child & Adolescent Psychiatry, 35*, 91-100.

19. Chilcoat, H. D., Dishion, T. J., & Anthony, J. C. (1995). Parent monitoring and the incidence of drug sampling in urban elementary school children. *American Journal of Epidemiology, 141*, 25-31.

20. Conduct Problems Prevention Research Group. (1999). Initial impact of the Fast Track Prevention Trial for conduct problems: I. The high-risk sample. *Journal of Consulting and Clinical Psychology, 67, No. 5*, 631-647.

21. Dennis, M., Godley, S. H., Diamond, G., Tims, F. M., Babor, T., Donaldson, J., Liddle, H., Titus, J. C., Kaminer, Y., Webb, C., Hamilton, N., & Funk, R. (2004). The Cannabis youth treatment (CYT) study: Main findings from two randomized trials. *Journal of Substance Abuse Treatment, 27*, 197-213.

22. Dimeff, L. A., Baer, J. S., Kivlahan, D. R., & Marlatt, G. A. (1999). Brief alcohol screening and intervention for college students (BASICS): A harm reduction approach. New York, NY: The Guilford Press.

23. Dishion, T., & Kavanagh, K. (2003). *Intervening in Adolescent Problem Behavior: A Family-Centered Approach.* New York, NY: Guilford Press.

24. Dishion, T., Patterson, G., & Reid, J. (1988). Parent and peer factors associated with drug sampling in early adolescence: Implications for treatment. In E. Rahdert, & J. Grabowski (Eds.), *Adolescent drug abuse: Analyses of treatment research* (pp. 69-93). Rockville, MD: NIDA.

25. Dishion, T. J., & Andrews, D. W. (1995). Preventing escalation in problem behaviors with

high-risk young adolescents: Immediate and 1-year outcomes. *Journal of Consulting and Clinical Psychology, 63*, 538-548.

26. Farrington, D. P. (1991). Longitudinal research strategies: Advantages, problems, and prospects. *Journal of the American Academy of Child & Adolescent Psychiatry, 30*, 369-374.

27. Fergusson, D. M., & Horwood, L. J. (1996). The role of adolescent peer affiliations in the continuity between childhood behavioral adjustment and juvenile offending. *Journal of Abnormal Child Psychology, 24*, 205-221.

28. Forehand, R. L., Furey, W. M., & McMahon, R. J. (1984). The role of maternal distress in a parent training program to modify child noncompliance. *Behavioral Psychotherapy, 12*, 93-108.

29. Forgatch, M. S., & DeGarmo, D. S. (1999). Parenting through change: An effective prevention program for single mothers. *Journal of Consulting and Clinical Psychology , 67*, 711-724.

30. Frick, P. J. (1991). *The Alabama Parenting Questionnaire.* Birmingham, AL: University of Alabama.

31. Frick, P. J., & Hare, R. D. (2001). *Antisocial process screening device: Technical manual*. North Tonawanda, NY: Multi-Health Systems, Inc.

32. Goldman, M., Brown, S., & Christiansen, B. (1982). *Alcohol Expectancy Questionnaire.*

33. Heatherton, T. F., Kozlowski, L. T., Frecker, R. C., & Fagerstrom, K. O. (1991). The Fagerstrom test for nicotine dependence: A revision of the Fagerstrom Tolerance Questionnaire. *British Journal of Addiction, 86*, 1119-1127.

34. Higgins, S. T., Budney, A. J., & Bickel, W. K. (1994). Applying behavioral concepts and principles to the treatment of cocaine dependence. *Drug and Alcohol Dependence, 34*, 87-97.

35. Higgins, S. T., Budney, A. J., Bickel, W. K., Hughes, J. R., Foerg, F., & Badger, G. (1993). Achieving cocaine abstinence with a behavioral approach. *American Journal of Psychiatry,* 763-769.

36. Higgins, S. T., Delaney, D. D., Budney, A. J., Bickel, W. K., Hughes, J. R., Foerg, F., & Fenwick, J. W. (1991). A behavioral approach to achieving initial cocaine abstinence. *American Journal of Psychiatry, 148*, 1218-1224.

37. Higgins, S. T., Roll, J. M., & Bickel, W. K. (1996). Alcohol pretreatment increases preference for cocaine over monetary reinforcement. *Psychopharmacology, 123*, 1-8.

38. Higgins, S. T., Wong, C. J., Badger, G. J., Haug Ogden, D. E., & Dantona, R. L. (2000).

Contingent reinforcement increases cocaine abstinence during outpatient treatment and 1 year follow-up. *Journal of Consulting and Clinical Psychology, 68*, 64-72.

39. Huizinga, D., Loeber, R., & Thornberry, T. (1993). Longitudinal study of delinquency, drug use, sexual activity, and pregnancy among children and youth in three cities. *Public Health Reports, 108*, 90-96.

40. Irvine, A. B., Biglan, A., Smolkowski, K., Metzler, C. W., & Ary, D. V. (1999). The effectiveness of a parenting skills program for parents of middle school students in small communities. *Journal of Consulting and Clinical Psychology, 67*, 811-825.

41. Johnston, L. D., O'Malley, P. M., Bachman, J. G., & & Schulenberg, J. E. (2004) *Overall teen drug use continues gradual decline; but use of inhalants rises*. Retrieved from www.monitoringthefuture.org

42. Kandel, D. B. (1985). On processes of peer influences in adolescent drug use: A developmental perspective. *Advances in Alcohol & Substance Abuse, 4*, 139-163.

43. Kandel, D. B. (1988). Issues of sequencing of adolescent drug use and other problem behaviors. *Drugs and Society, 3*, 55-76.

44. Kazdin, A. E., & Wassell, G. (2000). Therapeutic changes in children, parents, and families resulting from treatment of children with conduct problems. *Journal of the American Academy of Child & Adolescent Psychiatry, 39*, 414-420.

45. Larzelere, R. E., & Patterson, G. R. (1990). Parental management: Mediator of the effect of socioeconomic status on early delinquency. *Criminology, 28*, 301-323.

46. Locke, H. J. , & Wallace, K. M. (1959). Short marital adjustment and prediction tests: Their reliability and validity. *Marriage and Family Living, 21*, 251-255.

47. Lynskey, M. T., & Fergusson, D. M. (1995). Childhood conduct problems, attention deficit behaviors, and adolescent alcohol, tobacco, and illicit drug use. *Journal of Abnormal Child Psychology, 23*, 281-302.

48. McDermott, D. (1984). The relationship of parental drug use and parent's attitude concerning adolescent drug use to adolescent drug use. *Adolescence, 19*, 89-97.

49. McGillicuddy, N., Rychtarik, R., Duquette, J., & Morsheimer, E. (2001). Development of a skill training program for parents of substance-abusing adolescents. *Journal of Substance Abuse Treatment, 20*, 59-68.

50. Meyers, K., McLellan, A. T., Jaeger, J. L., & Pettinati, H. M. (1995). The development of the Comprehensive Addiction Severity Index for Adolescents (CASI-A): An interview for assessing multiple problems of adolescents. *Journal of Substance Abuse Treatment, 12*, 181-193.

51. Myers, M. G., & Brown, S. A. (1996). The adolescent relapse coping questionnaire:

Psychometric validation. *Journal of Studies on Alcohol, 57*, 40-46.

52. Patterson, G. R., & Forgatch, M. S. (1987). *Parents and adolescents living together: Part 1. The basics*. Eugene, OR: Castalia.

53. Patterson, G. R., & Reid, J. B. (1973). Intervention for families of aggressive boys: A replication study. *Behaviour Research and Therapy, 11*, 383-394.

54. Petry, N. M., Martin, B., Cooney, J. L., & Kranzler, H. R. (2000). Give them prizes, and they will come: Contingency management for treatment of alcohol dependence. *Journal of Consulting and Clinical Psychology, 68*, 250-257.

55. Rey, J. M., Martin, A., & Krabman, P. (2004). Is the party over? Cannabis and juvenile psychiatric disorder: The past 10 years. *Journal of the American Academy of Child & Adolescent Psychiatry, 43*, 1194-1205.

56. SAMHSA. (2004). *Treatment Episode Data Set (TEDS): 1992-2002. National Admissions to Substance Abuse Treatment Services* (DASIS Series: S-23: DHHS Publication No. (SMA) 04-3965). Rockville, MD: Office of Applied Studies.

57. Sampl, S., & Kadden, R. (2001). *Motivational Enhancement Therapy and Cognitive Behavioral Therapy for Adolescent Cannabis Users: 5 Sessions.* Rockville, MD: Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment.

58. Selzer, M. L. (1971). The Michigan Alcohol Screening Test: The quest for a new diagnostic instrument. *American Journal of Psychiatry, 127*, 1653-1658.

59. Skinner, H. A. (1982). The Drug Abuse Screening Test. *Addictive Behaviors, 7*, 363-371.

60. Stephens, R. S., & Roffman, R. A. (in press). The marijuana check-up for adolescents.

61. Tims, F. M., Dennis, M. L., Hamilton, N., Buchan, B. J., Diamond, G., Funk, R., & Brantley, L. B. (2002). Characteristics and problems of 600 adolescent cannabis abusers in outpatient treatment. *Addiction, 97*, 46-57.

62. Tolan, P. H., Gorman-Smith, D., Huesmann, L. R., & Zelli, A. (1997). Assessment of family relationship characteristics: A measure to explain risk for antisocial behavior and depression among urban youth. *Psychological Assessment, 9*, 212-223.

63. White, H. R., & Labouvie, E. W. (1989). Towards the assessment of adolescent problem drinking. *Journal of Studies on Alcohol, 50*, 30-37.

64. Wills, T. A., Vaccaro, D., & McNamara, G. (1992). The role of life events, family support, and competence in adolescent substance use: A test of vulnerability and protective factors. *American Journal of Community Psychology, 20*, 349-374.

65. Windle, M. (1990). A longitudinal study of antisocial behaviors in early adolescence as

predictors of late adolescent substance use: Gender and ethnic group differences. *Journal of Abnormal Psychology, 99*, 86-91.