The Contingency Management Competence Scale for Reinforcing Attendance

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Overview

Contingency management (CM) approaches are based on principles of operant conditioning. According to this theoretical framework, a behavior that is reinforced, such as attendance at treatment, will increase in frequency.

The primary goal of CM is to reinforce behaviors incompatible with substance use, such as treatment attendance. If behaviors inconsistent with drug use increase in frequency, substance use behaviors should decrease concomitantly. In general, there are four conditions that should be met for CM to be effective: 1) A specific target behavior (e.g., clinic attendance) must be selected; 2) The target behavior must be monitored frequently; 3) The target behavior must be reinforced with tangible reinforcement; and 4) Reinforcement must be withheld when the target behavior does not occur.

CM studies have utilized several different reinforcement systems. This manual focuses on prize-based CM approaches, in which patients earn the chance to win prizes varying in magnitudes of \$1 to \$100 for attending treatment. Patients may earn draws for each session attended, or the Name-in-the-hat prize CM approach for group attendance may be used. In individual CM for attendance, patients meet one-on-one with a CM therapist and receive draws, on an escalating scale, for attending consecutive sessions. Each draw relates to a chance of winning a prize.

In the Name-in-the-hat prize CM approach for group attendance, patients' names are written on pieces of paper, and these name slips are placed into a "hat." The number of name slips each patient places in the hat depends on the number of consecutive times he/she has attended group. For example, a patient who had attended for 6 group sessions in a row would receive 6 name slips, and a patient who has attended for only 1 session in a row would have 1 name slip. Each patient who is in attendance receives at least 1 name slip. A number of names are then drawn from the hat (usually half as many patients who are in attendance at the group). The patients whose names are selected then get to draw from a prize bowl, with a chance of winning prizes of varying magnitudes. Patients who attend more consecutive sessions have a greater chance of being selected for prize draws because they put more name slips into the hat.

In either individual or group CM, the number of draws earned (or times one's name goes in the hat, and hence chances of winning prizes), increases based upon consecutive sessions attended. Resets occur for missed sessions.

Clinical trials describe the efficacy of prize-based CM interventions in reducing substance use in a variety of substance abusing populations (Alessi et al., 2008; Ghitza et al 2007; Peirce et al., 2006; Petry et al., 2000, 2004, 2005abc, 2006, 2007; Preston et al., 2008; Roll et al., 2006) and for increasing attendance (Alessi et al., 2007, Ledgerwood et al., 2008; Petry et al., 2005a; Sigmon & Stitzer, 2005, 2007).

As with other forms of therapy, if CM is not designed or administered appropriately it will not have its intended effects of enhancing treatment attendance. In terms of design, the basic principles of CM as outlined above must be followed for CM to be effective. Although CM procedures can vary slightly from trial to trial depending on the questions of interest, CM protocols that have been developed and tested in clinical trials should be adhered to when

implemented in clinical settings. If the overall magnitude of reinforcement provided is substantially reduced, or if the monitoring and reinforcement frequency is decreased, CM will not be as effective in decreasing drug use or increasing treatment attendance (Lussier et al., 2006; Prendergast et al., 2006). This manual is not intended to address issues of CM protocol design, and original research articles and other CM manuals should be referred to when developing and implementing a CM protocol for clinical or research settings (Petry et al., 2000, 2004, 2005abc, 2006, 2007; Petry & Stitzer, 2003).

Even when utilizing CM protocols that have been found efficacious in clinical trials, CM may not always be administered in the intended manner. Therapists may not always follow the protocol guidelines, and therapists can have wide variability in their clinical skills, both of which can impact the delivery, and ultimately effectiveness, of CM. This manual describes procedures for rating competence in delivering prize CM for attendance.

It is often difficult to tell whether a treatment delivered by a therapist is consistent with the treatment as it was conceived in a manual. Objective assessment is needed to ascertain whether or not, and to what degree, interventions are delivered in the intended manner. Thus, interactions between therapists and patients should be audiotaped and reviewed by independent raters with expertise in CM delivery.

When training therapists to conduct a new treatment, it is essential that they be given guidance as to how to deliver specific interventions. Although this manual is not intended as a training manual, therapists should be encouraged to review this manual in conjunction with appropriate training materials when learning to deliver CM. This manual provides suggestions regarding optimal and suboptimal delivery of CM that may assist therapists in better administering CM in practice.

The CM rating scale described herein was adapted from Petry et al. (in press). Some elements of the scoring system are based on the Yale Adherence and Competency Scale (YACS; Corvino et al., 2000), which can be consulted for additional explanations.

Rating goals

Typically, delivery of therapies is assessed according to both adherence (or quantity) and competence (or quality). In the case of CM, adherence and competence appear to be highly correlated (Petry et al., in press), perhaps in part because of the brevity of CM sessions. Hence, we focus in this manual strictly on assessment of competence, which is a higher order skill. In other words, one cannot be competent without also being adherent.

To assess competence in CM principles, we typically have therapists audiotape their CM sessions. Independent raters, who are trained to rate CM sessions based on specific criteria, evaluate the taped therapy sessions (See rating form in Appendix). Ratings of sessions are initially conducted by at least two raters, so inter-rater reliability may be established. Once raters achieve inter-rater reliabilities of >.80 on each item of the scale, these raters may then independently evaluate CM sessions. However, inter-rater reliability should continue to be assessed regularly to ensure that drift does not occur.

Raters are specifically instructed to rate the therapist's behavior, rather than the patient's behavior or the patient's response to the therapist's intervention. In some cases, the therapist may accurately perform a specific intervention that the patient may misinterpret or be unwilling to accept. In this case, it is the therapist's delivery of the intervention that is rated, not its reception. An example may be a therapist who appropriately administers a reset in draw contingencies, but the patient expresses anger at the contingencies. So long as the therapist competently addresses the patient's anger and brings the discussion back to how draws can be earned in the future, this therapist should receive high ratings on the competence items, even when the patient may not be happy during the session.

On the other hand, raters might also be inclined to give higher ratings when an intervention is well received by a patient. For example, a therapist may inappropriately provide prize drawings to a patient (e.g., fail to reset draws after a missed session), but the patient may be very enthusiastic about winning prizes. In such a case, raters are again reminded that it is the therapist's delivery of the intervention that is to be rated, not how it was received.

Rating system

Initially, the rater assumes a score of '1' ("very poor") for each item, and adjusts the rating upward as the item occurs during the session, depending on the level of competent delivery. Raters are encouraged to note specific examples when the item occurred during the session when possible. In some cases, the item may be addressed more than once in a session, and then the rater would need to average overall ratings for that item across the different occurrences.

Each item is rated on the scale outlined below:

<u>Quality</u>

1 = Very Poor	The therapist's use of this skill was non-evident or unacceptable, incompatible with the CM approach, and potentially counterproductive or toxic.
2 = Poor	The therapist addressed the issue, but in a poor or cursory manner. The therapist handled the intervention in a manner that demonstrated a lack of competence, a failure to understand the issue or its context, or lack of expertise.
3 = Barely Acceptable	The therapist handled the issue in a manner somewhat consistent with the CM approach, but it was clearly not adequate for the situation.
4 = Adequate	The therapist handled the intervention in a way that could be considered acceptable and consistent with the CM approach, and administered it in an 'average' manner.
5 = Good	The therapist administered the intervention or addressed the item in a manner somewhat better than average.
6 = Very Good	The therapist's skill and expertise were very evident in delivering this intervention.
7 = Excellent	The therapist demonstrated mastery and excellence in delivering the intervention. This rating is reserved for truly outstanding implementation of CM approaches.

Scoring Specific Items

There are 9 items on the Contingency Management Competence Scale for Reinforcing Attendance (CMCS-RA). Below, scoring instructions are provided for each item. For some items, the rating is similar for individualized reinforcement approaches and the Name-in-the-hat prize CM procedure for reinforcing group attendance. When scoring instructions are similar between approaches, general explanations are provided. When the methods for addressing an item on the CMCS-RA differ between the individual and group-based reinforcement approaches because of the slightly different reinforcement schedules in effect, scoring systems are detailed for each procedure separately.

CM Specific Items

1. To what extent did the therapist inform patients of reinforcement earned at this session?

According to CM principles, a patient should earn a reinforcer each time s/he exhibits the target behavior, in this case attendance. The reinforcer may, in the case of individual CM, be a draw with a chance to win a prize, or, in group CM, a slip of paper that goes in a hat that is in turn linked to the chance of getting to draw for a prize. These two somewhat different types of reinforcers are used depending on if the reinforcement is individual in nature or occurs in a group setting. Regardless of the reinforcement system in effect, an excellent therapist's response in the context of item would include:

- Providing the patient(s) a reminder slip denoting the number of chances or draws earned for attendance that day.
- A verbal statement reminding the patient(s) that increased attendance translates into increased chances of winning prizes.
- A statement of support and encouragement for attending treatment.

In a CM program in which patients are individually reinforced for attending sessions, the therapist might, for example, say, "Greg, I'm glad to see you today, and right on time as usual! Here is your attendance slip. As you can see, you earn 5 draws for attending treatment today because it's the fifth session in a row that you've attended."

Such a response is clear and informative and would receive a score of '7' (assuming that the number of draws provided was correctly stated, given the patient's attendance history and the CM protocol in effect).

A slightly lower rating of '6' may be given if the therapist is a bit less encouraging or links attendance somewhat less directly to the number of draws earned. For example, the therapist may say, "*Great to see you again, Sam! I'm glad you made it in, even with this cold weather. Here's your draw reminder form, and you are up to 5 draws for coming in today.*" The only missing link in this remark that prevents it from receiving a score of '7' is that the increasing draws are not linked explicitly to the behavior of attendance.

A slightly lower '5' rating may occur if the therapist states something to the effect of, "Glad to see you again today, Jim. As you know, by coming to treatment you get more draws, and you're

up to 5 today." In this case, the therapist does display encouragement, and attendance is linked to draws, but the number of draws is not tied directly to the times the patient has consecutively attended treatment. Ideally, the patient should also be provided a reminder form, indicating reinforcement earned and the rationale for that reinforcement.

A '4' or adequate rating would be given if the therapist stated, "You are here today, so let's have you draw 5 times." This statement is congruent with CM, states the number of draws, and to some extent links attendance with draws. However, it does not explicitly link the number of draws with past attendance or convey enthusiasm or support.

A below adequate score on this item of '3' would be, "*Since you're here, you should draw*." This statement does not indicate why explicitly the patient is drawing, state the number of draws, or link the draws earned with attendance, past or present.

A poor response receiving a score of '2' on this item might include some indication that the patient receives prize draws, but the therapist does not tell him/her the reason and does not relate the reinforcement back to attendance. An example might be, "Go ahead and draw so we can move on to the rest of the session."

On the extremely low end of the scale, an example of a very poor response—a '1'-- would be if the therapist does not address attendance or draws at all or merely states something like, "*Let's get on with this session.*"

When attendance is reinforced in a group setting, the scoring framework is similar, but instead of referring to the number of draws earned, the reinforcers are the times patients' names go into a hat, which in turn relate to chances of wining prizes. Thus, therapists need to make **both** of these links for the Name-in-the-hat prize CM group reinforcement approach. In addition, for a perfect score, the therapist should also link the number of name slips to weeks of continuous group attendance.

An example of a perfect score of 7 would be statements such as the following at the beginning of a group session. "*Hi everyone! I'm glad to see you all here today. You each got your envelope describing the number of times your name goes in the hat today based upon the how many times in a row you've come to group. Those envelopes also contain the same number of name slips as the number of weeks in a row you've come to group. So, let's have each of you put your name slips into this hat. As there are 9 people here today, we'll draw 5 names from the hat, and each of those people will win a prize.....(a few minutes later). Kim, why don't you draw the names for today? Draw 5 slips from the hat, and each person whose name is drawn will get one draw from the prize bowl. Let's see who gets the prizes for attendance today!"*

As noted in the above dialogue, the therapist explicitly provided patients with the reminder forms and name slips, indicated how increased attendance translates into increased chances of winning prizes, and provided enthusiasm both for attendance and the CM component of treatment. This therapist would have received the best possible score of 7 for the above remarks.

In the Name-in-the-hat for group attendance procedure, a therapist with the following dialogue would earn a score of 6: *"It's good to see everyone today. You each got your envelope describing the number of times your name goes in the hat today based on attendance. As there are 9 people*

here today, we'll draw 5 names from the hat, and each of those people will win a prize.....(a few minutes later). Kim, why don't you draw the names for today? Draw 5 slips from the hat, and each person whose name is drawn will get one draw from the prize bowl. Let's see who gets the prizes for attendance today!"

The above description contained many elements as the dialogue rated with a 7. However, it did not explicitly link times one's name goes in the hat to consecutive attendance. Thus, the rating was still very good, but a little lower than in the first example.

A score of 5 might be given to a dialogue such as this: "It's great to see you all today. Let's get started with our prize draws. I gave you all envelopes with your name slips and why you've earned them. We'll draw 5 names today as there are 9 people here, and each of you will win a prize.....(a few minutes later). Kim, why don't you draw the names for today? Draw 5 slips from the hat, and each person whose name is drawn will get one draw from the prize bowl."

This description did demonstrate that the therapist delivered the envelopes containing the appropriate information to patients. However, no verbal mention tying in name slips with consecutive attendance was made, rendering a lower, although still good score.

A score of 4 may be recorded when each important issue related to reinforcement is touched upon but more briefly. For example, "Welcome to group, everyone. You've each got your envelopes and name slips for attendance. With 9 people here, we'll draw 5 names today, for 5 prizes. Kim, why don't you draw the names for today?" In this case, the CM procedure is being implemented in the intended manner, with the appropriate number of slips and draws awarded. However, the link between name slips and consecutive attendance is not explicit, nor is the association made between names drawn and prizes won. In addition, there is little enthusiasm noted in the above example.

A score of 3 would be given if a critical element were missing completely from the dialogue. For example, "Welcome to group, everyone. You've each got your envelopes. Let's put the names slips here and we can start drawing for prizes. Kim, why don't you draw 5 names for today?" In this case, there is no mention of why or how name slips or prize draws are earned, and no indication that attendance is being the behavior targeted for reinforcement.

An even lower score of 2 may be rated if the therapist failed to place the names in the hat correctly, drew an incorrect number of names, or was unenthusiastic about the process. For example, "*Let's get on with the prize draws. Put your name slips in the hat, and we'll draw 5 names today. Come on, we need to move ahead with this.*" In this case, the procedure may have technically been administered correctly, but the therapist expressed no enthusiasm for the procedure.

A score of 1 would be unusual but given if the therapist either completely failed to implement the procedure or did it incorrectly, and was unenthusiastic or demeaning about it. An example of the latter would be, "Look, let's get on with this. Put your names in the hat. I'm only going to draw 1 name today because most of you were late anyway."

2. To what extent did the therapist <u>inform patients of the reinforcement possible at the next</u> <u>session?</u>

To receive a perfect score on this item, the therapist should: (1) provide a written indication of the reinforcement possible at the next session (in terms of draws or number of times one's name goes into the hat), (2) remind patients verbally of reinforcement due depending on absence or attendance at the next session, (3) answer any questions patients may have regarding reinforcement at the next session, and (4) demonstrate enthusiasm and support for reinforcement. In the following examples, we provide descriptions of how to address the issue of subsequent reinforcement for both individualized reinforcement procedures and the Name-in-the-hat prize CM for group treatment approaches.

An example of a score of 7 would be: "You did take a look at the form indicating the number of draws/slips you will earn if you come to treatment next Friday, right? Great. You'll get one more draw/slip than you received today [give specific number of draws if individualized reinforcement] if you come on Friday. And, just let me remind you—even though I know we've talked about this before—that if you ever can't make it into treatment, it's really important that you let me know ahead of time. If you have an excused absence for something like a doctor's appointment, I won't have to reset your draws/slips, but an unexcused absence means a drop back down to one draw/slip. Are there any questions about how you can win more prizes? (No questions, or if a question arises, the therapist answers it correctly). Remember that the more you come to treatment, the greater your chances of winning prizes, and especially the big ones."

A score of 6 on this item might be awarded for the following exchange: "I gave you the form indicating the number of draws/slips due if you come to treatment next Friday, right? Do you have any questions? (No questions, or if a question, the therapist answers it correctly). Okay, keep in mind that the more you attend treatment, the greater your chances of winning prizes." This response was slightly less enthusiastic than the first, and it failed to mention what would happen in the case of absences. A score of 6 may also be appropriate if the therapist did not give a written reminder of reinforcement due, but did address the issue correctly and enthusiastically in a verbal manner. An example in a session in which attendance is reinforced individually may be, "You got 4 draws today for attendance, so next week you can get one more—5 draws if you attend treatment on Friday. Remember that your chances of winning prizes keep going up the more you attend treatment." For the group-based reinforcement approach, an example may be "You all got your name slips for attending this week, and remember the number of name slips will keep going up, increasing your chances of winning prizes, the more groups in a row you attend."

A score of 5 may be received if the connection was not made explicitly between attendance and prize winnings, but the form was provided to the patient, which linked the behavior and reinforcement. An example is: *"That form indicates the number of draws/slips due next Friday. Do you have any questions about how you can win more prizes?"* A score of 5 may also be given if the therapist did not give a written reminder of reinforcement due, but did address the issue correctly in a verbal manner. An example may be, *"You got 4 draws/slips today, so next week*

you can get 5 draws/slips if you come to treatment." This statement is less supportive than the previous one, receiving a slightly lower rating.

An adequate score of 4 may be awarded if the therapist gave the patient the form indicating subsequent reinforcement levels, but did not discuss it with the patient: "*Here is your form indicating reinforcement possible next week*." Alternatively, if the therapist failed to give the form but at least made some mention of reinforcement possible at the next session, the therapist may receive an adequate score of 4, e.g., "*You will get one more slip/draw next week*," or "*You will get 5 draws/slips next week*." In neither case was the subsequent reinforcement tied to the behavior (attendance).

Substandard scores of 3 may be used if the therapist did not give the reinforcement form and only briefly mentioned reinforcement possible at the next session. For example, "*Don't forget, we'll do prize draws next week too,*" or "*You can keep winning prizes next time.*" There is no indication of how much reinforcement is possible or that reinforcement is contingent upon attendance at the next session.

A score of 2 may result if mention of subsequent reinforcement was transitory and unenthusiastic, e.g., "Yeah, I think you've got a few more weeks of prizes."

Finally, a score of 1 occurs if there is no mention of reinforcement at the next session and the therapist failed to provide a slip indicating subsequent reinforcement due. Scores of 1 are also given if the therapist is demeaning or inappropriate, "*Come on, now. This is getting ridiculous. I'm giving you prizes and you still don't show up half the time.*"

3. How well did the therapist administer reinforcement?

This item refers to how appropriately and enthusiastically the therapist conducted the reinforcement procedure. If the patient were being reinforced individually for attendance, it would entail rating administration of the prize draws. If the Name-in-the-hat prize procedure for group attendance is being used, the therapist would be rated on how well s/he administered both the Name-in-the-hat draws and the prize draws. The ratings should encompass (1) awarding the correct number of draws (and drawing the correct number of names, in the case of group attendance), and (2) awarding reinforcement enthusiastically.

An example of a perfect score of 7 for an individual session would be, "*Great, Mike. You get seven draws today. Let's pull up your sleeves, and show me your hands. Perfect. Make those draws and I'm rooting for you!*" This therapist noted the number of draws and was very enthusiastic. (As noted in CM training manuals (Petry & Stitzer, 2003), patients should roll up their sleeves and show the palms of their hands prior to drawing to prevent cheating).

A score of 6 would be provided if the therapist were slightly less enthusiastic or informative about the drawing procedure(s) than noted above. In the case of individual reinforcement, a score of 6 may be given if the therapist stated: "*Mike, you're up to seven draws today..... Okay, go ahead and draw! We'll see what you win.*" Important elements are in the description, and the

therapist was somewhat enthusiastic, but less so that in the first example. (It's not clear whether or not the patient rolled up his sleeves or showed his hands, but the rater may give the therapist the benefit of the doubt that the patient did so without a reminder between the first and second sentence.)

Scores of 5 would be awarded to less extensive or less positive interactions surrounding the reinforcement procedures. For individually based reinforcement, it might be *"Mike, you get seven draws today. Go ahead!"* The correct number of draws was stated, and presuming the comments were stated in an encouraging tone, a score of 5 may be awarded.

Scores of adequate or 4 would be given it the reinforcement procedures were completed correctly, but with moderate to little enthusiasm or explanation. For individual reinforcement, a therapist who simple states, *"Seven draws today, Mike,"* might receive a score of 4.

Sub-adequate scores may be given if the therapist is not proactive about the reinforcement procedure or very cursorily explains it. In individual sessions, a score of 3 may be given to, *"Mike, go ahead and do your draws."* This statement does not remind the patient of the reinforcement amount (7 draws) and is not enthusiastic.

Even lower scores of 2 may be given in an individual session if the therapist says, "*Time to draw, then let's move on to what we're really here for.*"

Scores of 1 are given if the reinforcement procedure does not take place at all, or if the therapist awards the reinforcement but does so in a toxic manner. For example, in an individual session, a therapist might state, "*I don't even know why I'm giving you draws today. You didn't do your homework like I asked.*"

In the name-in-the-hat prize CM for group attendance procedure, a score of 7 in would be: "Great, we have 12 people here today, and we draw half as many names as there are people in attendance. That makes 6 names, and 6 prize winners for today. Let's go around this circle staring with Amy, and each of you draws one name from the hat. Read that name aloud, and that person will get one draw from the prize bowl. Go ahead and draw a name, Amy." Amy says, "Mike." The therapist says, "Congratulations, Mike. You'll get a prize draw today. Now, Sam, you draw a name....." After 6 names are drawn, "Okay, the people today who get to draw for prizes today are: Mike, Tom, Melissa, Sarah, John, and Pedro. We'll have each of you draw once from the prize bowl and see what category of prize you win today. We'll start with you Mike. Roll up your sleeves, show your hand, and good luck with the draw!" The above dialogue was completely consistent with administration of the Name-in-the-hat prize CM procedure. This therapist explained each step related to drawing names and prize draws. In addition, the therapist was enthusiastic about the procedure.

In a group CM procedure, a score of 6 may be given to: "There are 12 people here today, so we'll draw 6 names from the hat, and have 6 prize winners for today. Amy, let's start with you. Draw one name from the hat, and read that name aloud." Amy says, "Mike." The therapist says, "Congratulations, Mike. You'll get a prize draw today. Now, Sam, you draw a name....." After 6 names are drawn, "Okay, the people today who get to draw for prizes today are: Mike, Tom,

Melissa, Sarah, John, and Pedro. We'll have each of you draw once from the prize bowl and see what category of prize you win today. Mike, you can go first." This description was all technically correct and was quite enthusiastic, but not quite as detailed or enthusiastic as the one receiving a prefect score.

A score of 5 may be given to: "There are 12 people here today, so we'll draw 6 names from the hat. Amy, go ahead and draw one name from the hat." Amy says, "Mike." The therapist says, "Good. Now, Sam, you draw a name....." After 6 names are drawn, "The people today who get to draw for prizes today are: Mike, Tom, Melissa, Sarah, John, and Pedro. We'll have each of you draw once from the prize bowl and see what category of prize you win. Mike, you can go first." This description was all technically correct, but it did not connect all the procedures related to name drawings and prize drawings. It was also less enthusiastic than the previous dialogues.

A score of 4 may be provided to this description, "Six people will get to draw for prizes today. Amy, go ahead and draw one name from the hat." Amy says, "Mike." The therapist says, "Sam, now you draw a name....." After 6 names are drawn, "The people today who get to draw for prizes today are: Mike, Tom, Melissa, Sarah, John, and Pedro. Mike, go ahead and make a prize draw." This example is clearly less informative about the CM procedures than the previous ones. The therapist is also appropriate but not very encouraging.

For a group-based procedure, a score of 3 would be appropriate for this discussion, "*Amy, go ahead and draw one name from the hat.*" Amy says, "*Mike.*" The therapist says, "*Sam, now you draw a name.....*" After 6 names are drawn, "*Mike, Tom, Melissa, Sarah, John, and Pedro, you can draw from the prize bowl.*" This example does not link the name draws to the prize draws, and also fails to indicate why 6 person's names were drawn. Even patients who've been in a CM group for a while might not understand the nature of the reinforcement contingencies when presented in this manner.

In a group session, a score of 2 may be given if the therapist just draws names from the hat (or has patients draw the names) and then simply states, "*Okay, let's get to the prize draws now.*"

In a group setting, a therapist who fails to put names in the hat, or does not award prize draws to people whose names are drawn from the hat may receive a score of 1. An example may be: "You know what. You all are not working on your recovery appropriately. So, we're not doing any prize draws today." Another example may be if the therapist arbitrarily decides who gets prize draws, and doesn't follow the reinforcement protocol. For example, "All your names are in the hat, but the only person who's here today who is doing a good job in group is Amy. So, Amy is going to get the only prize draw today."

4. To what extent did the therapist assess patients' desire for prizes?

The effectiveness of CM depends on the ability to use positive reinforcement to change behavior. Therefore, the reinforcers offered to patients to encourage their behavior change must be appealing. At every CM session, the therapist should assess the patient's (or patients') desire for

the prize options offered in the prize cabinet, and ask the patient(s) if there are other items that they would like to have available in future sessions.

A perfect score (7) contains all the following elements:

- discussion of prize options
- visual showing of prize items
- active assessment of desire for items in the cabinet,
- solicitation of ideas for new prizes, and
- expression of enthusiasm over prize selections.

For individualized prize CM, an excellent intervention by a therapist, receiving a score of 7, might be something like...

"That's exciting that you won a large prize today. Tell me, do you see anything here that is appealing to you? [the patient selects] The camera? Great. Is there anything else in the cabinet you would like to work toward? Is there something else that you might like to see as a prize for the future? I'll write your suggestions down, and I'll try my best to get those items in. I'm always looking for new ideas, especially for the small and large prizes."

A score of 6 would be given for a slightly less enthusiastic interchange: "*That's great that you won a large prize today*. *Tell me, do you see anything here that is appealing to you today? I know you had interest in the tool kit. Do you want that today? Are there other prizes you'd like to see?*"

A score of 5 may be given to an individual exchange that contains most but not all of the elements outlined. For example, "*That's great that you won a large prize today*. *What would you like today? Do you see anything you want in the future?*" Although somewhat enthusiastic, this approach did not allow the patient a lot of opportunity to look through the prize options or solicit additional suggestions for prizes.

A score of 4 or adequate would be received in an individual session in which the therapist assesses the desire for prizes, but does not show prizes or discuss actual prizes. For example, in an individual session, a therapist who states simply, *"Here's your phone card. What else would you like to win?"* may receive a 4 on this item.

Scores of 3 would be given if little to no mention were made about patient's desire for prizes in the future. In an individual session, this may be something to the effect of, *"Here's your phone card for today,"* with no other discussion about future prizes the patient would like to win.

A score of 2 would be given to a response that limits the patient's choice or is indifferent, but not necessarily negative toward, to the patient's desires. An example from an individual session may be, "Yes, I know we haven't had those Target gift cards in recently, but unfortunately, I just haven't had time to go shopping. There are other things, though." This response is somewhat dismissive of the patient's wishes, although not entirely negative.

A very poor response, receiving a score of 1, would occur if the therapist did not mention prizes at all or was negative toward the patient's prize choices, e.g., "Why would you want that? It's been sitting in this cabinet forever."

In a group setting, the therapist may not have the entire prize cabinet into the group room (depending on the feasibility and security of storing the prize cabinet in the group room). However, the therapist ought to bring a variety of options in each category to the group. To receive a perfect score on this item, the therapist in a group setting must not only address the five issues outlined above, but also make clear to patients that they can take a prize now during group and exchange it right after group for something in the prize cabinet. In addition, in a group setting, the therapist should assess desire for prizes among the group members, even those who did not receive prize draws that day.

A perfect score of 7 for this item in a group context would be:

Therapist: "Great—so Mike, Tom, Melissa, John, and Pedro each won small prizes today, and Sarah got a large. Mike, since you drew first, you can choose from the small prizes that I brought with me today. I've got a package of pens, chapstick, toothpaste, deodorant, a bus token, and a Dunkin Donut gift card. Which of these would you like, and remember that you can exchange it immediately after group with anything that's a small in the prize cabinet. I've got a lot more gift cards, food and other toiletry items there, too. What would you like, Mike?

Mike chooses a chapstick, and signs for his prize.

Therapist: "Great, a chapstick for you. Now, Tom, you were next. What would you like?"

Tom chooses and signs for his prize.

Therapist: "Deodorant, there you go. And, Melissa, it's your turn to select a prize. Do you want one of these that I have remaining-- or you can take one for now and exchange it with the cabinet after group?"

Melissa: "I'll take the bus token."

Therapist: "Perfect, here you go. John, I have pens, toothpaste or a Dunkin Donut coupon remaining here as smalls."

John: "I don't really want any of those. I want a token."

Therapist: "That's no problem. Just choose from these three for now, and we can go to the prize cabinet for an exchange for a bus token right after group. The pens—here you go, just sign here. And, Pedro, how about you?"

Pedro: "I'll take the toothpaste now, but I want to see what's in the cabinet in case there is something better."

Therapist: "Of course you can. Anyone who wants to exchange the prizes they won today can do so right after group. And, all the group members are welcome to visit the cabinet also. I'm always taking suggestions in case there is something new that people want me to make available. Any ideas from anyone in the group?"

Tiffany: "How about a flashlight? Maybe you can get cheap ones for small prizes and a good heavy duty one for a large?"

Therapist: "Sure, that sounds like a great idea. I'm going shopping later this week, and I'll try to pick some up, and maybe more batteries too, as I know they are popular small prizes. Other suggestions? Okay, Sarah is our big winner today—she drew a large. I brought two larges with me today—new things that I don't think you've seen before. I have a hairdryer and this fishing tackle set. Sarah, do you want to pick one of these?"

Sarah: "I already have a hairdryer and I sure don't want to go fishing! But, do you still have that soft towel set in the cabinet?"

Therapist: "Yes, I saw that this morning. We can certainly do an exchange for that. Which of these do you want in the meantime?"

As noted in the above example, the therapist addresses all the important elements of prize descriptions including discussing prize options, visually showing prize items, active assessment of patients' desire for items, and expression of enthusiasm over prize selections. She also invited all group participants to view the prize cabinet and make prize suggestions.

A score of 6 would be used if the exchange were somewhat less enthusiastic than in the above example. For example, consider the following exchange:

Therapist: "Mike, Tom, Melissa, John, and Pedro each won small prizes today, and Sarah got a large. Mike, since you drew first, you can choose from the small prizes that I brought with me today. I've got a package of pens, chapstick, toothpaste, deodorant, a bus token, and a Dunkin Donut gift card. Which of these would you like?

Mike chooses a chapstick and signs for it.

Therapist: "Great, a chapstick for you. Now, Tom, you were next. What would you like?

Tom selects deodorant and signs for it.

Therapist: "Deodorant, there you go. And, Melissa, it's your turn to select a prize. Do you want one of these that I have remaining-- or you can take one for now and exchange it with anything that's a small in the cabinet after group?"

Melissa says, "I'll take the bus token."

Therapist: "Here you go, Melissa. Just sign here. Thanks. John, I have pens, toothpaste or a Dunkin Donut coupon remaining here as smalls."

John: "I don't really want any of those. I want a token."

Therapist: "That's no problem. Just choose from these three for now, and we can go to the prize cabinet for an exchange for a bus token right after group. The pens—here you go. Sign here for now, and we'll do the exchange after group, and you can let me know if there are other things you'd like to see in the cabinet then as well. And, Pedro, how about you?"

Pedro: "I'll take the toothpaste now, but I want to see what's in the cabinet in case there is something better."

Therapist: "Of course you can. Anyone who wants to exchange the prizes they won today can do so right after group. Sarah is our big winner today—she drew a large. I brought two larges with me today—a hairdryer and this fishing tackle set. Sarah, do you want to pick one of these?"

Sarah: "I already have a hairdryer and I sure don't want to go fishing! But, do you still have that soft towel set in the cabinet?"

Therapist: "Yes, I saw that this morning. We can certainly do an exchange for that. Which of these do you want in the meantime?"

In the above example, the therapist was less enthusiastic than in the first example, and she did not invite all group participants to view or make suggestions for prizes.

In a group context, a dialogue in which little (although some) mention was made about the opportunity to exchange prizes and in which suggestions were not solicited would receive a score of 5. It may go like this:

Therapist: "Mike, Tom, Melissa, John, and Pedro each won small prizes today, and Sarah got a large. Mike, since you drew first, you can choose from the small prizes that I brought with me today. I've got a package of pens, chapstick, toothpaste, deodorant, a bus token, and a Dunkin Donut gift card. Which of these would you like?

Mike chooses a chapstick and signs for it.

Therapist: "Great, a chapstick for you. Now, Tom, you were next. What would you like?

Tom selects deodorant and signs for it.

Therapist: "Deodorant, there you go. And, Melissa, it's your turn to select a prize."

Melissa: "I'll take the bus token."

Therapist: "Here you go. John, I have pens, toothpaste or a Dunkin Donut coupon remaining here as smalls."

John: "I don't really want any of those. I want a token."

Therapist: "Okay, we can exchange these pens for a token after group because I didn't bring any more tokens with me. And, Pedro, how about you?"

Pedro: "I'll take the toothpaste now."

Therapist: "Sure, and Sarah is our big winner today—she drew a large. I brought two larges with me today—a hairdryer and this fishing tackle set. Sarah, do you want one of these, or something else in the cabinet?"

Sarah: "I already have a hairdryer and I sure don't want to go fishing! But, do you still have that soft towel set in the cabinet?"

Therapist: "Yes, I saw that this morning. We can certainly do an exchange for that, and you can let me know of other prize suggestions you'd like for the future. You can take the dryer for now."

In this case, the therapist just handed prizes to patients, without having them choose, when the patient suggested looking in the cabinet. It is always better to let patients make their own selections, even if they are going to exchange a prize later. In addition, there was little discussion about desired prizes, and no mention of assessing desire for prizes among patients who didn't get a prize that day. Despite these issues, the therapist still did a better than adequate job of awarding prizes and assessing desire for items.

A therapist may earn the score of a 4 if it is clear they brought prizes to the group and awarded them to the patients who won them, but failed to encourage (but did not hinder) exchange of prizes after group to ensure patients received desired prizes. A 4 would also be appropriate when there was no discussion of desired or alternate prizes other than those brought to the group room.

In a group CM session, no mention at all about options in the prize cabinet, and no solicitation of prize requests from group members, would result in a 3. In other words, if the therapist simply gave out the prizes brought to the session, and no patient was encouraged to consider other options, the therapist may receive a 3.

Something to the effect of "I know I didn't bring in a lot of prizes today, but this stuff gets heavy. You already know what other things I've got available" might receive a score of 2.

Negative remarks toward patients' prize choices would result in a score of 1. Also, if a therapist brought no prizes to the group room, the therapist should receive a very low score of 1. Simply telling patients whose names are drawn that they can go to the prize cabinet after group is insufficient. If prizes are not brought into group, the reinforcement will not be tangible to the group members, and in these cases the therapist should receive a score of 1 on this item.

5. To what extent did the therapist <u>compliment or praise</u> patients' efforts toward attending treatment?

Positive reinforcement does not only come in the form of tangible items or prizes. Acknowledgement of a patient's efforts to attend treatment is important as well. In all CM sessions, whether individual or group-based, therapists are expected to encourage the patients to continue to work hard by praising their efforts, especially in regards to the behavior that they are intending to change with CM—in this case attendance itself.

In previous scale items, top scores are achieved when the therapist is enthusiastic about the CM process and encourages patients to fully engage in the session. This item differs from the others in that the focus is explicitly on the patient's overall effort and success in attending treatment.

An excellent intervention, deserving a score of 7, might be:

"I'm so glad to see you here in session today. I know it isn't always easy to come, especially when the weather is so bad. It really shows that recovery is very important to you."

OR

"It's good to see you today. I know there are a lot of other things going on in your life(lives), but I'm glad you're making treatment a priority."

OR

"Coming to treatment is a very important thing. I am glad you are making it to all of your sessions. You obviously have a real commitment to staying clean."

OR

"I missed you/some of you last week. It's great you made it back today. I know it can be really hard to come back after missing a session. You guys are working really hard and deserve a pat on the back."

Such responses incorporate both praise of the patient's efforts, and a message that the therapist cares that the patient(s) attended treatment. Consistent with the CM paradigm, verbal praise is used as behavioral reinforcement in addition to the tangible rewards associated with the prize procedures.

A score of 6 may be given to a somewhat less encouraging or direct response, but one in which the therapist still recognizes and acknowledges the patient's work. For example, "*I know things get in the way of coming to treatment, but you are trying really hard to make it here.*"

A slightly lower although still good score (5) may entail the therapist conveying some enthusiasm and support throughout the session. For example, "*You/some of you have been attending treatment regularly. I think that is a good thing.*" This response is not as specific as the example of an excellent response presented earlier. However, it is still positive and reassuring.

Adequate scores (4) should be given if the therapist was only modestly encouraging, or offered just a brief amount of praise for the patient's efforts. For example, if the therapist states, "*It's good that you/some of you have been attending treatment fairly regularly*," such a statement might be coded as a 4, because this response provides some level of encouragement.

Barely adequate scores of 3 may be given if, during the session, the therapist offered no praise of the patient's efforts toward attendance, but also was not overly critical. "You/some of you have been attending treatment fairly regularly."

Exchanges in which the therapist was moderately discouraging or somewhat dismissive of the patients' efforts toward attendance, without being toxic or critical, might receive a score of 2 (poor). Examples of poor responses may be: "You/some of you didn't show up last week. I do wish you'd get back on track." or "You have been attending treatment, but it would be better if you could make it on time."

On the other hand, a very poor response of 1 might be...

"I don't understand why you keep coming to treatment when you and I both know you are using."

OR

"You might show up for treatment, but there's a lot more you need to be doing. You really need to start working harder on your recovery."

Such responses would receive scores of 1 (very poor) because they are highly negative and convey none of the enthusiasm and support required to encourage behavior change. Similarly, if the therapist did not mention treatment attendance at all, a score of 1 should be given.

6. To what extent did the therapist <u>tie attendance and the CM program to abstinence and other</u> <u>treatment goals</u>?

A CM intervention that reinforces attendance does so because patients should be better able to achieve and maintain abstinence if they come to treatment, which in turn ought to improve other aspects of daily functioning. Thus, in reinforcing patients for attending treatment sessions, it is also important to tie attendance to other positive behaviors such as abstinence and treatment goals (e.g., improving family situations, reducing psychiatric symptoms, improving health, finding employment, etc.). Although much of an individual or group session is likely devoted to these issues, the therapist should make explicit the link between the attendance-based reinforcement system and abstinence (along with other treatment goals as appropriate given the clinical situation). Whereas item #5 is specifically focused on praise and encouragement around attending treatment, this item rates how well the therapist made explicit connections between attendance and CM to abstinence and broader recovery goals.

It is especially important to make connections between the CM program and attendance and between the attendance and abstinence, along with other treatment goals, when a patient had relapsed. Coming to treatment after a slip can be challenging for patients.

A statement that would lead to a perfect score on this item would explicitly tie attendance and the reinforcement patients are receiving for attendance to abstinence and other goal-related activities. In addition, a score of 7 would entail a genuinely caring and enthusiastic stance. An example is: "By coming to treatment regularly you are not only earning the chance to win more prizes, but you are also actively working on your recovery. This is so important because I also can see you are making lots of positive changes—you have gotten a few job interviews, your legal difficulties are almost behind you, and your relationship with your mother is improving. These were all the things you told me in the beginning were important to you. I think it's great you're sticking with the treatment program and making real progress on your goals." As this example shows, praise can be integrated in defining connections between target behaviors, contingencies, and broader treatment goals associated with recovery.

If a patient had recently used and come to treatment (so long as he was not overtly intoxicated in which case standard clinic policies would be followed and most likely the session cancelled), a conversation such as the following may earn a top rating, "I know how hard it is to come to treatment after you've used. By coming here today and telling me about this slip, you are making a major step in your recovery. You have been coming regularly to treatment for 6 weeks now, and that is great. You've earned a lot of great prizes, and your chances of winning keep increasing so long as you keep attending. It's also so important that you come here even if you do slip, because then we can talk about it and work it through, and figure out what went wrong last Friday night. By staying involved in treatment, you will be more likely to resist those temptations in the future." Here, again, the first part of the dialogue focuses on praise and encouragement (which would be scored high on item #5), but the subsequent discussion of

connections between attendance, reinforcement and outcomes is necessary to receive top scores on item #6.

In a group setting, the specifics may not be so personal or detailed, but a score of 7 would be achieved by a statement such as the following: "*I just want to remind you all that by coming to treatment regularly, you not only earn more and more chances to get prizes, but you also are working on your recovery. You all are doing really good work in this group. I know you are learning a lot about recovery and yourselves, and that you are not alone.*"

A score of 6 on this item may be recorded if association between reinforcement, attendance, and recovery/treatment goals were either not so specific or not as caring as described above. An example may be, "By coming to treatment regularly, you get to earn more and more chances for prizes. I know you are actively working on your recovery in treatment, and that is great." Although these statements seem quite genuine and caring, the link is not as explicit between attendance at treatment and recovery as in the earlier example.

A slightly lower score of 5 may be given for these types of remarks: "*By attending treatment regularly, you are getting more and more chances to win prizes, and I know you like the prizes. You also get to work on your recovery when you come to group/sessions. This is important too.*" Although these statements contain the same elements as the prior, they are less enthusiastic or empathetic.

An adequate score of 4 would be appropriate for the following statements: "Coming to treatment regularly is important for getting more and more chances in win prizes. You are also actively working on your recovery." Here, the link between prizes, attendance and recovery is even less direct, and again the statements are not very empathetic.

A score of 3 may be given if the link is made between attendance and recovery or other treatment goals, but the concept of reinforcement being tied to attendance is missing. For example, "*I'm glad you're coming to treatment regularly, because this is important for your recovery*." Although there is nothing wrong with this type of statement, if the therapist made no connection between the prizes and attendance, and between attendance and recovery throughout the session, then the item was not adequately addressed. Indeed, this response is more in line with the spirit of providing praise and encouragement as in item #5, but it does not address the contingent relationships between attendance, reinforcement, and treatment goals.

A score of 2 would be appropriate for statements that make no links at all between the CM program, attendance and recovery/treatment goals, but that addresses one of the issues in isolation. Examples include: "Attending treatment is important," or "Winning prizes is one reason why you are here," without any mention of other reasons why attending treatment is important.

A score of 1 would be given if the therapist never addressed the issues of attendance and CM, or attendance and recovery/treatment goals, throughout the session. In addition, if a therapist were demeaning or negative in describing such relationships, a score of 1 would be rated. For example, "I know you are only coming to treatment for the prizes and you don't seem to care about recovery or anything important at all."

General Items Scale

Whereas the CM-specific items (#1-6) in the CMCS-RA cover discrete interventions and conversations that ought to occur during CM sessions in some logical sequences, the General Items are broader. These items cover the therapist's skills and competence throughout the entire CM session, and they are not unique to CM approaches. Without overall therapeutic skills, CM interventions may have less effect, because the timing and manner of delivery may be very important to the intervention and the patient's desire to continue in it. Further, general skills contribute to development and maintenance of the therapeutic alliance, which also affects treatment outcomes (Petry et al., in press).

7. General skillfulness/effectiveness (demonstrates expertise, competence and commitment, engages patient in discussion, interventions made at appropriate times—not missed or made too early).

A score of 7 should be given if, throughout the CM session, the therapist demonstrated a mastery of clinical skills in general. Thus, if the therapist consistently and appropriately engaged the patient(s) in discussion, made interventions at optimal times, and showed commitment to the patient(s), the session should be rated a 7 with regard to general skillfulness.

On the opposite end of the spectrum, if the therapist made interventions that were entirely inappropriate, confrontational, callous or unprofessional, the session should be rated a 1 (very poor) or 2 (poor) depending on the level of inappropriateness. An example of a score of 1 might be if the therapist berated a patient for being late for session. Such instances are rare in clinical care, but it is important to consider it possible that a session may receive such a score. Similarly, if a therapist made very unhelpful or inappropriate interventions, seemed distracted or disinterested, or did not engage the patient in discussion, the rater should give a relatively low rating ranging from 1 to 3, depending on the degree to which the poor interventions pervaded the session and contributed to an atmosphere lacking in clinical value.

Scores of 4 would be warranted if the therapist's skills were average. Thus, if the therapist seemed reasonably engaged and made more accurate interventions than inaccurate ones, the session should be rated as adequate. Higher scores (5 or 6) would be reasonable if the therapist went beyond the minimum standards of care, creating an environment in which the patient felt secure, and interventions were clinically useful and made at appropriate times most of the time. As described above, excellent scores (7) should be given if the therapist clearly demonstrated mastery during the session, if all of his/her interventions were skillfully made at appropriate times, and no obvious clinical issues were missed or misinterpreted during the session.

8. Maintaining session structure (maintains session focus, sets appropriate tone and structure, appropriate level of therapist activity/directiveness, appropriate duration).

CM sessions are quite structured. There are several behavioral interventions that must be delivered within the confines of specific behavioral principles during a treatment session. Thus, the structure and focus of the CM session is very important. Sessions that meander and do not adequately focus on the issues at hand will not successfully develop a connection between treatment attendance and the behavioral consequences (the reinforcers).

Because most sessions will include other therapeutic aspects beyond CM, the CM component should be clearly and logically integrated into the rest of the session to earn high scores on this item. Lower scores on this item would reflect CM components that were fragmented or disjointed throughout longer session.

Exceptional sessions (scoring 7) are those in which the therapist incorporates all of the CM interventions described above (items #1 - #6), maintains focus on the CM protocol throughout the session, appropriately guides the patient(s) through the session, and keeps the session (or the CM component of a longer session) to an appropriate length (usually under 10 minutes).

Sessions that are inadequately structured (scored 1 through 3, depending on the level of inappropriateness) will have none or few of these characteristics. For example, a session that includes most of the CM interventions above, but goes on for 20 minutes because the therapist and patient(s) frequently digress into discussions of extraneous issues, might receive a score of 3 (barely acceptable). If the CM component of the session generally incorporates most of the required CM interventions, and perhaps goes a bit over time because of a couple occasional digressions, the session should be considered adequate (score of 4). Better scores of 5 or 6 should be provided if nearly all CM elements are present, they are presented in an appropriate order and given an appropriate amount of time and attention, and there are few if any digressions.

9. Empathy (conveys warmth and sensitivity, demonstrates genuine concern and a nonjudgmental stance, understands and expresses clients' feelings and concerns).

A key element to any psychosocial intervention is empathy. Empathy may be defined as the ability to identify with the feelings of another person. Although behavioral interventions are fairly structured with a focus more on behavior change than on internal emotional states, a non-empathic relationship between the CM therapist and patient may result in less behavior change because the patient(s) will not be able to develop adequate trust with his/her therapist. For this item, raters assess the quality of the therapist's sensitivity and warmth, display of concern, non-judgmental approach, and ability to validate the feelings and concerns of the patient(s).

Sessions that are excellent (score 7) in terms of empathy are those during which the therapist demonstrates mastery in all of the empathy skills. That is, his/her approach flawlessly demonstrates warmth, sensitivity, concern, non-judgmental discussions and ability to relate to the patient's concerns.

Inadequate sessions (scoring between 1 and 3) are those during which the therapist's approach is the opposite of that described above. Thus, a session during which the therapist seems cold and distant, is judgmental of the patient's actions or is indifferent to the patient's current desires or concerns is one that, depending on its level of toxicity, would be rated between a 1 and 3. Sessions during which the therapist truly approached the client in a manner that is toxic (e.g., ridiculing or confronting the patient) would be rated very poor (1). Sessions during which the therapist's empathy was clearly lacking, but the session could not be considered toxic would be rated poor (2). Sessions during which the therapist shifts between being empathetic and lacking empathy may be rated as poor, barely acceptable (3) or adequate (4), depending on the quality and frequency of empathic responses. Higher scores of 5 or 6 are reserved for cases when empathy is clearly evident throughout most of the session.

References

Alessi, S.M., Hanson, T., Tardif, M. & Petry, N.M. (2007). Low-cost contingency management in community substance abuse treatment settings: A transition to delivering incentives in group therapy. Experimental & Clinical Psychopharmacology, 15, 293-300.

Alessi, S.M., Petry, N.M., & Urso, J. (2008). Contingency management with prize incentives promotes smoking abstinence in residential substance abuse treatment patients. Journal of Applied Behavior Analysis, 41, 617-622.

Corvino, J., Carroll, K., Nuro, K., Nich, C., Sifry, R., Frankforter, T., Ball, S., Fenton, L., & Rounsaville, B. (2000). Yale Adherence and Competency Scale (YACS) Guidelines. West Haven, CT: Yale Psychotherapy Development Center.

Ghitza, U.E., Epstein, D.H., Schmittner, J., Vahabzadeh, M., Lin, J.L., & Preston, K.L. (2007). Randomized trial of prize-based reinforcement density for simultaneous abstinence from cocaine and heroin. Journal of Consulting and Clinical Psychology, 75, 765-774.

Ledgerwood, D.M., Alessi, S.M., Hanson, T., Godley, M., & Petry, N.M. (2008). Contingency management for group substance abuse treatment attendance administered by community clinicians. Journal of Applied Behavior Analysis, 41, 517-526.

Lussier, J.P., Heil, S.H., Mongeon, J.A., Badger, G.L., & Higgins, S.T. (2006). A meta-analysis of voucher-based reinforcement therapy for substance use disorders. Addiction, 101, 192-203.

Peirce, J.M., Petry, N.M., Stitzer, M.L. Blaine, J., Kellogg, S., Satterfield, F., et al. (2006). Effects of lower-cost incentives on stimulant abstinence in methadone maintenance treatment: A National Drug Abuse Treatment Clinical Trials Network study. Archives of General Psychiatry, 63, 201-208.

Petry, N.M., Alessi, S.M., Carroll, K.M., Hanson, T., MacKinnon, S., Rounsaville, B., & Sierra, S. (2006). Contingency management treatments: Reinforcing abstinence versus adherence with goal-related activities. Journal of Consulting and Clinical Psychology, 74, 592-601.

Petry, N.M., Alessi, S.M., Hanson, T., & Sierra, S. (2007). Randomized trial of contingent prizes versus vouchers in cocaine-using methadone patients. Journal of Consulting and Clinical Psychology, 75, 983-991.

Petry, N.M., Alessi, S.M., Ledgerwood, D.M., & Sierra, S. (in press). Psychometric properties of the Contingency Management Competence Scale. Drug and Alcohol Dependence.

Petry, N.M., Alessi, S.M., Marx, J., Austin, M., & Tardiff, M. (2005b). Vouchers versus prizes: Contingency management treatment of substance abusers in community settings. Journal of Consulting and Clinical Psychology, 73, 1005-1014.

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.

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

Petry, N.M., Peirce, J.M., Stitzer, M.L., Blaine, J., Roll, J.M., Cohen, A., Obert, J., Killeen, T., Saladin, M.E., Cowell, M., Kirby, K.C., Sterling, R., Royer-Malvestuto, C., Hamilton, J., Booth, R.E., Macdonald, M., Liebert, M., Rader, L., Burns, R., DiMaria, J., Copersino, M., Stabile, P.Q., Kolodner, K., & Li, R. (2005a). Effects of prize-based incentives on outcomes in stimulant abusers in outpatient psychosocial treatment program: A National Drug Abuse Treatment Clinical Trials Network Study. Archives of General Psychiatry, 62, 1148-1156.

Petry, N.M., & Stitzer, M.L. (2003). Contingency management: Using motivational incentives to improve drug abuse treatment. Treatment Manual, Yale University Psychotherapy Development Center: West Haven, CT.

Petry, N.M., Tedford, J., Austin, M., Nich, C., Carroll, K.M., & Rounsaville, B.J. (2004). Prize reinforcement contingency management for treating cocaine users: How low can we go, and with whom? Addiction, 99, 349-360.

Prendergast, M., Podus, D., Finney, J., Greenwell, L., Roll, J.M. (2006). Contingency management for treatment of substance use disorders: A meta-analysis. Addiction, 101, 1546-60.

Preston, K.L., Ghitza, U.E., Schmittner, J.P., Schroeder, J.R., & Epstein, D.H. (2008). Randomized trial comparing two treatment strategies using prize-based reinforcement of abstinence in cocaine and opiate users. Journal of Applied Behavior Analysis, 41, 551-563.

Roll, J.M., Petry, N.M., Stitzer, M.L., Brecht, M.L., Peirce, J.M., McCann, M.J., Blaine, J., Macdonald, M., Dimaria, J., Lucero, L. & Kellogg, S. (2006). Contingency management for the treatment of methamphetamine use disorders. American Journal of Psychiatry, 163, 1993-1999.

Sigmon, S.C. & Stitzer M.L. (2005). Use of a low-cost incentive intervention to improve counseling attendance among methadone-maintained patients. Journal of Substance Abuse Treatment, 29, 253-258.

Sigmon, S.C. & Stitzer, M.L. (2007). Low-cost incentives to improve counseling attendance. Counselor Magazine, 8, 32-38.

Contingency Management Competence Scale for Reinforcing Attendance

Таре #	Session #	Rater:
Date://		Start time:
Therapist:		Stop time:
Group:		CM duration: min.

1 = Very Poor *The therapist's skill was non-evident (item not addressed) or unacceptable, incompatible with the CM approach, and potentially counterproductive or toxic.*

- 3= Barely Acceptable The therapist handled the issue in a manner somewhat consistent with the CM approach.
- 4 = Adequate The therapist handled the issue in an acceptable way, consistent with CM, and in an average manner.
- 5 = Good The therapist addressed the issue in a manner somewhat better than average.

6 = Very Good *The therapist's skill and expertise were very evident in delivering the intervention.*

7 = Excellent *The therapist demonstrated exceptional mastery and excellence in delivering the intervention.*

1. To what extent did the therapist inform patients of	1	2	3	4	5	6	7
reinforcement earned at this session?							
2. To what extent did the therapist inform patients of the		2	3	4	5	6	7
reinforcement possible at the next session?							
3. How well did the therapist administer reinforcement ?		2	3	4	5	6	7
4. To what extent did the therapist assess patients' desire for		2	3	4	5	6	7
prizes?							
5. To what extent did the therapist compliment or praise	1	2	3	4	5	6	7
patients' efforts toward attending treatment?							
6. To what extent did the therapist tie attendance and the	1	2	3	4	5	6	7
CM program to abstinence and other treatment goals?							
General items							
7. General skillfulness/effectiveness (demonstrates expertise,		2	3	4	5	6	7
competence and commitment, engages patients in discussion,							
interventions made at appropriate times—not missed or too							
early).							
8. Maintaining sessions structure (maintains session focus,	1	2	3	4	5	6	7
sets appropriate tone and structure, appropriate level of							
therapist activity/directiveness, appropriate duration)							
9. Empathy (conveys warmth and sensitivity, demonstrates		2	3	4	5	6	7
genuine concern and a non-judgmental stance, understands							
and expresses clients' feelings and concerns).							

^{2 =} Poor The therapist addressed the issue, but in a poor or cursory manner; the therapist demonstrated a lack of competence, a failure to understand the issue or its context, or lack of expertise.