(TLC) and EMT procedures for cocaine, alprazolam and clonazepam, and alcohol. Urine samples were included in the report only for subjects who remained active in the study (i.e., were in treatment and had not withdrawn consent or been removed from the evaluation).

2.2.3. Medication take-home doses. All subjects could earn methadone take-home doses after achieving 12 consecutive weeks of negative urine specimen and attendance to all scheduled counseling sessions. Employed subjects could also receive a second and a third weekly methadone take-home dose following additional 30-day periods of abstinence and attendance to scheduled counseling sessions. These incentives were available to all subjects independent of study assignment. Subjects could earn a range of 0–3 weekly take-homes of methadone during the study, although unemployed subjects could earn no more than one take-home per week.

2.2.4. Individual counseling. Individual drug abuse counseling was provided by the routine counseling staff with a bachelor’s degree in the behavioral sciences. Individual counseling sessions were approximately 30 min long (±10 min). Counselors completed a psychosocial assessment and master treatment plan for all subjects during the first 4 weeks of treatment (baseline period), and used cognitive-behavioral and motivational intervention approaches to help reduce drug and alcohol use and manage medical, occupational, and other psychosocial problems. Counselors were supervised weekly by masters-trained licensed professional counselors; all counselors worked with a similar number of subjects assigned to each of the four treatment conditions.

2.2.5. Intensified counseling sessions. Group-based counseling was primarily used to intensify the counseling schedule and overall care of subjects. Subjects were referred to one or more of the following groups based on assigned step of care: (1) chemical dependency education (CDEG; 1× per week), (2) coping skills (CSG; 2× per week), (3) community support (CST; 1× per week), (4) relapse control (RCG; 2× per week), and/or (5) cognitive-behavioral therapy (CBT; 2× per week). Each group was manual-guided, with the exception of the cognitive-behavioral therapy group. In general, subjects in Step 1 were assigned to attend CDEG, those advanced to Step 2 were referred to RCG, and those moved to Step 3 were assigned to attend CSG, CST, and CBT groups. Exceptions to this schedule were occasionally made to accommodate subjects with specific time constraints or other obstacles to attendance (e.g., previously scheduled appointments; work schedule). Groups were led by licensed professional counselors with a master’s degree in the behavioral sciences, licensed clinical psychologists, or board-certified psychiatrists; all staff had a minimum of 3 years of experience in the treatment program. The only group that was not manually guided (cognitive-behavioral therapy) was led by a licensed clinical psychologist or psychiatrist.

2.3. Description of study conditions

All subjects were administered the Structured Interview for the DSM-IV (SCID-IV; First et al., 1995a,b) and other study assessments during the 4-week baseline. They were stratified on three variables commonly associated with treatment outcome: current cocaine dependence (e.g., Kidof et al., 1998), antisocial personality disorder (APD; e.g., Woody et al., 1985; King et al., 2001), and current non-substance use Axis I or II psychiatric disorder other than APD (e.g., Rounsaville et al., 1986; Brooner et al., 1997), and then randomly assigned to one of four treatment conditions for 6 months.

2.3.1. Condition 1: motivated stepped care (MSC-only). MSC is an adaptive stepped care service delivery model that adapts intensity of service delivery to objective indices of treatment performance. Subjects with a partial or poor treatment response (i.e., missed counseling sessions and/or drug-positive urine samples) are advanced to more intensive steps of weekly counseling. These subjects are returned to less intensive weekly counseling schedules after achieving a good clinical response (i.e., attendance to scheduled counseling and drug-negative urine samples).

As shown in Fig. 1, subjects began at Step 1 and were scheduled to attend one individual drug abuse counseling session per week (30 min). Subjects who missed a scheduled counseling session or produced a drug-positive urine specimen (any tested substance) during any two consecutive weeks were advanced to Step 2 for 2–4 weeks. Subjects advanced to Step 2 were scheduled to attend one individual counseling session, and two group sessions per week. They returned to Step 1 after submitting drug-negative urine specimens and attending all scheduled counseling sessions for two consecutive weeks. Failure to meet the criterion for return to Step 1 within 4 weeks resulted in their movement to Step 3 for 8 weeks. Once in Step 3, subjects were scheduled to attend 2 individual counseling sessions and 5 h of group sessions. They returned to Step 1 by submitting drug-negative urine specimens and attending all scheduled counseling for four consecutive weeks. Those who failed to meet this criterion within 8 weeks were started a 30-day methadone dose taper in preparation for discharge.

Additional behavioral contingencies to reinforce counseling attendance and reduced drug use were introduced in Step 3. Subjects who missed scheduled counseling sessions within the first 4 weeks of Step 3 were placed on a series of...