Characteristics of reviewed studies: Structured psychosocial interventions

Comparisons Included in this Clinical Question

Counselling versus control
CRITSCHRISTOPH1999

12-step versus control
FINNEY1998

Case management versus standard care
COVIELLO2006
MARTIN1993
MEJTA1997
MORGENSTERN2006
NEEDELS2005
SALEH2002
SORENSEN2005

Family intervention versus control
DENNIS2004
FALSSTEWART1996
HENGGELER1999
KELLEY2002
LATIMER2003
LIDDLE2001
WALDRON2001
WINTERS2002

CBT versus control
BROWN2002
BUDNEY2006
CARROLL1991
CARROLL1994
CARROLL1998
CARROLL2006B
CRITSCHRISTOPH1999
KADDEN2006
MAUDEGRIFFIN1998
MCKAY2004
MONTI1997
RAWSON2006
SHOPTAW2005
STEPHENS1994
STEPHENS2000
STEPHENS2002
WALDRON2001

Intensive referral versus standard referral
STRATHDEE2006
ZANIS1996

Behavioural counselling versus facilitative counselling
MCKAY2004

Pre-vocational interventions versus control
HALL1977
ZANIS2001

CM versus CBT
BUDNEY2006
KADDEN2006
RAWSON2006
SHOPTAW2005

CM versus control
BUDNEY2006
CARROLL2006B
CRITSCHRISTOPH1999
HIGGINS1993
HIGGINS1994
JONES2004
KADDEN2006
PETRY2004
PETRY2005A
PETRY2005B
PETRY2006
RAWSON2006
ROLL2006
SHOPTAW2005
SHOPTAW2006

CM: high frequency versus low frequency
CHUTUAPE2001

CM: high reward versus low reward
PETRY2004

CM: qualitative contingency versus quantitative contingency
PETRY2002

Characteristics of Included Studies

Methods	Participants	Outcomes	Interventions	Notes
BROWN2002				
Study Type: RCT (randomised controlled trial) Type of Analysis: No mention Blindness: No mention Duration (days): Mean 70 Followup: 180 Setting: Three treatment centres in Canada Notes: RANDOMISATION: Computer-assisted urn randomisation with matching. Usual treatment group were self-selected. Info on Screening Process: 383 approached: 47 refused consent, 266 randomised, 70 refused randomisation but consented to subsequent assessment (= usual treatment group).	n= 131 Age: Mean 38 Sex: 90 males 41 females Diagnosis: 100% substance dependence (drug or alcohol) by DSM-III-R Exclusions: Severe psychosis or organic brain syndrome Notes: PRIMARY DIAGNOSIS: 71.4% had 'alcohol and drug dependence'. The remainder were dependent on only alcohol. REFERRALS: Newly-admitted patients at treatment centres Baseline: (GROUPS: 12-step / RP / treatment as usual) Days of use in past 90 days: 46.1 / 46.0 / 45.3 ASI (Addiction Severity Index) (alcohol): 0.31 / 0.33 / 0.42 ASI (drug): 0.16 / 0.14 / 0.12	**Data Used** B-PRPI Brown-Peterson Recovery Progress Inventory ASI : drug use ADUSE (Alcohol and Drug Use Self-Efficacy Scale) ASI: alcohol use Notes: FOLLOW-UPS: At intake for intensive treatment, at completion of intensive treatment, after 10 sessions of aftercare and 6 months' post-intensive treatment DROPOUTS: 41.4% 12-step / 41.4% RP / 44.3% usual treatment lost to follow-up after 10 sessions	**Group 1 N= 61** CBT: RP (relapse prevention) with residential rehabilitation - 90 minutes per week for 10 weeks; closed group format; assessing high-risk situations, initiating and maintaining change. **Group 2 N= 70** TSF (12-step facilitation) with residential rehabilitation - 90-minute session weekly for 10 weeks; closed group format; emphasis on working the first three steps.	Study quality: 1+
BUDNEY2006				
Study Type: RCT (randomised controlled trial) Type of Analysis: ITT (mixed models analysis)	n= 90 Age: Mean 33 Sex: 69 males 21 females	**Data Used** Abstinence at 6 months Abstinence: longest consecutive period	**Group 1 N= 30** CBT with outpatient - 50-minute sessions of individual	Study quality: 1++

Blindness: No mention

Duration (days): Mean 98

Followup: 12 months

Setting: US

Notes: RANDOMISATION: minimum likelihood allocation.

Info on Screening Process: 19 excluded (6 didn't meet DSM criteria, 6 alcohol dependent, 2 opioid dependent, 2 likely to be incarcerated in near future, 1 with active psychosis, 1 with head injury, 1 unable to provide address or phone number); 19 eligible but didn't return for study.

Diagnosis:
100% cannabis dependence by DSM-IV

Exclusions: - < 18 years of age
- lived further than 45 minutes from clinic
- current dependence on alcohol or any other drug except nicotine
- active psychosis or severe other psychiatric condition

Baseline: GROUPS: CBT / CBT + CM (Contingency Management) / CM
Years of use: 14.7 (9.3) / 11.3 (9.8) / 15.3 (8.7)
Use in past 30 days: 25.5 (7.4) / 25.3 (8.0) / 26.0 (6.2)

Drug use: days per month

CBT for 14 weeks. Sessions 1-2, motivational interviewing. Sessions 3-8 focused on skills directly related to achieving and maintaining abstinence. Sessions 9-14 focused on coping skills indirectly related to abstinence.

Group 2 N= 30

CM: vouchers with outpatient - $1.50 for first negative urine, increased by $1.50 for each subsequent negative urine, $10 bonus for two consecutive negative samples. Positive sample resulted in vouchers reset to $1.50.

CBT with outpatient - 50-minute sessions of individual CBT for 14 weeks. Sessions 1-2, motivational interviewing. Sessions 3-8 focused on skills directly related to achieving and maintaining abstinence. Sessions 9-14 focused on coping skills indirectly related to abstinence.

Group 3 N= 30

CM: vouchers with outpatient - $1.50 for first negative urine, increased by $1.50 for each subsequent negative urine, $10 bonus for two consecutive negative samples. Positive sample resulted in vouchers reset to $1.50.

CARROLL1991

Study Type: RCT (randomised controlled trial)

Type of Analysis: LOCF

Blindness: No mention

Duration (days): Mean 84

Followup: 0

Setting: US

Notes: RANDOMISATION: No details given.

Info on Screening Process: 42 enrolled.

n= 42

Age: Mean 27

Sex: 31 males 11 females

Diagnosis:
100% cocaine misuse by DSM-III

Exclusions: - cocaine not primary drug of misuse, dependence on another drug or use of any other psychotropic medication
- current or lifetime diagnosis of schizophrenia or mania
- suicidal ideation to the extent that hospitalisation is required
- pending drug-related legal proceedings or treatment stipulated as condition of probation

Notes: REFERRALS: People who applied for treatment at the SATU cocaine clinic

Baseline: (GROUP: IPT / RP)
Years of education: 12.8 / 12.6
Weekly cocaine use (g): 4.3 / 3.6
Months of regular cocaine use: 45.4 / 34.2
Any depressive disorder: 4% / 4%
Generalised anxiety disorder: 0 / 1%
Antisocial Personality Disorder: 5% / 7%
Alcoholism: 7% / 6%

Data Used

Abstinence: no use for any 3 consecutive weeks

ASI (Addiction Severity Index)

Cocaine craving: VAS (visual analogue scale)

Abstinence: no use for 3 consecutive weeks at end

Cocaine use: grams, self-report

Notes: FOLLOW-UPS: study weeks 1, 2, 4, 6, 8 and 12
DROPOUTS: 19/42 did not complete >=9 sessions. One subject (among completers?) removed from study because of 'no substantial reduction in cocaine use'

Study quality: 1+

Group 1 N= 21

IPT with outpatient. Mean dose 12 sessions - 50-60 minutes once a week; manual-guided and individualised; thought to be closely related to TAU (treatment as usual) at many cocaine programmes where supportive-expressive psychotherapy is used.

Group 2 N= 21

CBT: RP with outpatient. Mean dose 12 sessions - 50-60 minutes once a week; manual-guided and individualised; identifying high-risk situations and developing coping strategies.

CARROLL1994

Study Type: RCT (randomised controlled trial)

Study Description: Raters blind to treatment assignment. Double blinding for medication

Type of Analysis: Intention to treat (all randomised)

Blindness: Single blind

Duration (days): Mean 84

n= 110

Age: Mean 29

Sex: 80 males 30 females

Diagnosis:
100% cocaine dependence by DSM-III-R

Data Used

ASI (Addiction Severity Index)

Abstinence: longest consecutive period

Cocaine use: percentage of days

BDI (Beck Depression Inventory)

HRSD (Hamilton Rating Scale for Depression)

Group 1 N= 29

Control: clinical management with outpatient - Nonspecific elements of a psychotherapeutic relationship, medication management.

Demographic data available only for those who completed >=1 session
Study quality: 1+

Setting: US

Notes: RANDOMISATION: No further details.

Info on Screening Process: 191 screened, 139 eligible and randomised.

Exclusions: - Physical dependence on opioids, barbiturates or alcohol
- Primary drug of dependence not cocaine
- DSM-III-R Axis I disorder other than depressive or anxiety disorders
- Lifetime schizophrenia or mania
- Significant suicidal or homicidal ideation
- Contraindication for tricyclic antidepressants
- Treated for drug misuse in past 2 months or currently treated for any other psychiatric disorder
- Conditions of probation or parole

Notes: PRIMARY DIAGNOSIS: At least 12g cocaine used in past 3 months
ETHNICITY: Not given
REFERRALS: Seeking treatment, newspaper adverts and public service announcements

Baseline: (GROUPS: Clinical management+desipramine / RP +desipramine/clinical management+placebo/RP+placebo)
Unemployed: 40% / 41% / 63% / 45%
Cocaine use, g per week: 4.3 / 4.6 / 5.1 / 3.7
Years regular use: 3.6 / 4.1 / 4.6 / 4.5
Alcohol dependence: 45% / 52% / 40% / 57%

Notes: FOLLOWUP:
DROPOUTS: desipramine + RP 51%, desipramine + control 63%, placebo + RP 64%, Placebo + control 61%

Desipramine with outpatient - Initiated on 50mg at night, increasing to max. 300mg, adjusted on an individual basis as appropriate.

Group 2 N= 27

CBT: RP (relapse prevention) with outpatient - 12 weeks, individual format Identifying and coping with high risk situations.

Placebo - Yoked to dose changes for subjects receiving desipramine to maintain double blinding.

Group 3 N= 29

Control: clinical management with outpatient - Nonspecific elements of a psychotherapeutic relationship, medication management.

Placebo with outpatient - Yoked to dose changes for subjects receiving desipramine to maintain double blinding.

Group 4 N= 25

Desipramine with outpatient - Initiated on 50mg at night, increasing to max. 300mg, adjusted on an individual basis as appropriate.

CBT: RP (relapse prevention) with outpatient - 12 weeks, individual format Identifying and coping with high-risk situations.

CARROLL1998

Study Type: RCT (randomised controlled trial)

Study Description: Raters blind to treatment assignment

Type of Analysis: ITT (intention to treat)

Blindness: Single blind

Duration (days): Mean 96

Setting: US

Notes: RANDOMISATION: No further details.

Info on Screening Process: 187 screened, 55 excluded (failed to complete baseline evaluation, did not meet diagnostic criteria, contraindication for disulfiram, etc.); 122 randomised.

n= 122

Age: Mean 31

Sex: 89 males 33 females

Diagnosis:
100% alcohol misuse by DSM-III-R

100% cocaine dependence by DSM-III-R

Exclusions: - Physical dependence on opioids, barbiturates
- Primary drug of dependence not cocaine
- Lifetime DSM-III-R psychotic or bipolar disorder
- Significant suicidal or homicidal ideation
- Contraindication towards disulfiram
- Treated for substance use in past 2 months or current treatment for any other psychiatric disorder
- Conditions of probation or parole requiring drug reports to court

Notes: PRIMARY DIAGNOSIS: Cocaine with alcohol. 85% met criteria for alcohol dependence
ETHNICITY: White 39%
REFERRALS: Seeking treatment, newspaper adverts, public service announcements

Baseline: Employed: 43%
Cocaine: 4.0g per week, 14.1 days in past 30 days, 7.5 years' cocaine dependence
Alcohol: 11.6 drinks per drinking occasion, 17.2 drinking days in past 30 days, 7.3 years alcohol misuse
Previous treatment: 53%

Data Used
Alcohol use: drinking days per week
Alcohol use: drinks per week
Cocaine use: grams per week
Cocaine use: days per week
Abstinence: days drug free

Notes: FOLLOWUP: Baseline, post-treatment
DROPOUTS: 68% overall

Group 1 N= 25

Disulfiram with outpatient. Mean dose 261.5mg - Initiation on 200mg per day, adjusted (up to 500mg max.) on an individual basis as necessary.

TSF (12-step facilitation) with outpatient. Mean dose 16 sessions - Adapted from Project MATCH, emphasis on working the first five steps.

Group 2 N= 19

CBT: RP (relapse prevention) with outpatient. Mean dose 16 sessions - Twice weekly for first month, weekly for the next 2 months.
Identifying and coping with high-risk situations.

Group 3 N= 25

TSF (12-step facilitation) with outpatient. Mean dose 16 sessions - Adapted from Project MATCH, emphasis on working the first 5 steps.

Group 4 N= 27

Disulfiram with outpatient. Mean dose 261.5mg - Initiation on 200mg per day, adjusted (up to 500mg max.) on an individual basis as necessary.

Control: clinical management with outpatient - Nonspecific elements of a psychotherapeutic relationship, medication management.

Study quality 1+

Group 5 N= 26

Disulfiram with outpatient. Mean dose 261.5mg - Initiation on 200mg per day, adjusted (up to 500mg max.) on an individual basis as necessary.

CBT: RP (relapse prevention) - Twice weekly for first month, weekly for the next 2 months.
Identifying and coping with high-risk situations.

CARROLL2006B

Study Type: RCT (randomised controlled trial)

Type of Analysis: ITT (all randomised included in analyses)

Blindness: Open

Duration (days): Mean 56

Followup: 6 months

Setting: Connecticut, US

Notes: Randomisation procedure not reported.

Info on Screening Process: 208 screened; 174 eligible. 36 dropped out prior to randomisation, so 136 randomised.

n= 136

Age: Mean 21 Range 18-25

Sex: 122 males 14 females

Diagnosis:
100% cannabis dependence by DSM-IV

Exclusions: - age outside range 18-25
- opioid or alcohol dependence
- severe substance dependence requiring inpatient treatment or detoxification
- current psychotic disorder
- previous treatment for cannabis use in past 60 days
- current homicidal risk
- MMSE <2
- not referred by criminal justice system
- severe medical problems

Notes: ETHNICITY: 60% African American, 13% Latin American, 23% European American

Baseline: (CM / motivational enhancement therapy + CBT / standard counselling)
Lifetime arrests: 5.9 / 5.0 / 5.2
Age first alcohol use: 14.3 / 17.5 / 14.9
Age first cannabis use: 14.4 / 14.9 / 14.7
Days' cannabis use in past month: 13.7 / 12.4 / 12.5

Data Used
Urinalysis: positive for cannabis
Abstinence: longest consecutive period

Group 1 N= 33

CM: vouchers with outpatient. Mean dose 8 weeks - Two-track reward system: $25 for first session attended, increased by $5 per session thereafter; $50 for first cannabis negative urine (tested at each session), increased by $5 per negative thereafter. Non-attendance/missing/ postitive urine reset respective schedule.

Group 2 N= 34

AMI (adpated motivational interviewing): MET (motivational enhancement therapy).

CM: vouchers.

Group 3 N= 36

AMI: MET (motivational enhancement therapy) with outpatient. Mean of eight sessions - Motivational interviewing style (MTP) to address initial ambivalence, then continued as CBT/skills training techniques incorporated (coping with craving, problem solving, avoiding high-risk situations, decision making etc.).

Group 4 N= 33

Control: standard care with outpatient. Mean dose eight weekly sessions. Standard individual drug counselling (Baker, Mercer/Woody) with strong emphasis on cannabis and other drug abstinence, through use of self-help groups and concepts compatible with 12-step; education regarding cannabis use.

Study quality: 1+

CHUTUAPE2001

Study Type: RCT (randomised controlled trial)

Blindness: No mention

Duration (days): Mean 238

Setting: US

Info on Screening Process: 231 screened, 15 did not complete baseline phase, 9 were opioid and cocaine free, 144 submitted greater than 80% drug positive urines.

n= 53

Age: Not given

Sex: Not given

Diagnosis:
100% opioid dependence by eligibility for/receipt of MMT

Exclusions: - opioid-negative samples at intake
- no signs of intravenous use
- self-reported opioid use (<= 21 of 30 days) for 6 or more months of previous year
- history of addiction <1 year
- serious medical or psychiatric illness
- pregnancy

Baseline: GROUPS: CM weekly / CM monthly / non-contingent management (NCM)

Data Used
Response: abstinent >= 8 weeks
Abstinence: weeks drug free

Notes: DROPOUTS: Weekly CM = 6/16, monthly CM = 3/18, NCM = 1/19

Group 1 N= 19

NCM (non-contingent management) with outpatient - Received take-home doses based on individual weekly drawings rather than drug-free urine results -- probability of earning take homes was 50%.

Group 2 N= 18

CM: methadone with outpatient - Urinalysis results randomly selected monthly -- a negative sample resulted in three take-home doses till the next test. A positive sample resulted in cancellation of take-home doses.

Study quality: 1+

Lifetime heroin use (months)	89	82	113
Lifetime cocaine use (months)	23	23	28

Group 3 N= 16

CM: methadone with outpatient - Urinalysis results randomly selected weekly -- a negative sample resulted in three take-home doses till the next test. A positive sample resulted in cancellation of take-home doses.

COVIELLO2006

Study Type: RCT (randomised controlled trial)

Blindness: Open

Duration (days): Mean 42

Followup: 20 weeks after end of programme

Setting: Three MMT programmes in Philadelphia, US

Notes: Randomisation method not reported

Info on Screening Process: 409 discharged from MMT; 260 interviewed and 132 ineligible (102 already in treatment, 30 used no drugs in past 30 days). 128 randomised.

n= 128

Age: Mean 45

Sex: 111 males 17 females

Diagnosis:
100% opioid dependence by eligibility for/receipt of MMT

Exclusions: - reported using no drugs in past 30 days
- already in drug treatment
- not wishing to enrol in treatment

Notes: 56% African American, 41% Caucasian
POPULATION: Patients discharged from MMT

Baseline: (Case management / passive referral)
Years' heroin use: 17.4 / 18.0
Days' heroin use in past month: 17.9 / 16.2
Previous treatment episodes: 5.6 / 7.6
IDU (injection drug use): 68% / 65%

Data Used
Condom use
Urinalysis: positive for opioids
Urinalysis: positive for cocaine
Urinalysis: positive for benzodiazepines
Urinalysis: positive for cannabis
Drug use: days per month
Engagement in treatment

Notes: 6-week endpoint, 20-week post-intervention follow-up

Group 1 N= 76

Case management with outpatient. Mean dose 6 weeks - 45-minute initial session: assessment of needs and motivation, brief counselling and development of an action plan for treatment. Subsequent telephone contact, focused on actions and problem solving, over 6 weeks (and personal contact as necessary).

Group 2 N= 52

Control: standard care with outpatient - Passive referral: 10 minutes' advice and referral to re-enrolment; participants given an updated list of available treatment resources, with no further assistance or contact.

Study quality: 1+

CRITSCHRISTOPH1999

Study Type: RCT (randomised controlled trial)

Study Description: ASI interviewers blind to treatment condition

Type of Analysis: ITT for months' cocaine use

Blindness: Single blind

Duration (days): Mean 270

Followup: 9 months

Setting: Five hospitals in US

Notes: Computerised urn randomisation at coordinating centre.

Info on Screening Process: 2197 screened by telephone, 1777 eligible. Of these, 937 attended intake visit (13 ineligible, 54 didn't return). 870 attended orientation phase; 487 completed attendance and assessment requirements and randomised.

n= 487

Age: Mean 34

Sex: 374 males 113 females

Diagnosis:
100% cocaine dependence by DSM-IV

Exclusions: - age outside range 18-60
- no cocaine use in past 30 days

Notes: ETHNICITY: 58% White

Baseline: ASI drug-use composite: 0.24
Days' cocaine use in past 30 days: 10.4
Years' cocaine use: 6.9
Days' alcohol use past 30 days: 7.4

Data Used
ASI (Addiction Severity Index): drug use
Completion rate
Cannabis use: times in past month
Retention: sessions attended
Abstinence: no use for 3 months

Notes: DROPOUTS: High (77% individual drug counselling, 66% CBT, 67% supportive-expressive psychotherapy, 77% group drug counselling)

Group 1 N= 124

IDC (individual drug counselling) with outpatient - 50-min sessions twice weekly for first 12 weeks, weekly during weeks 10-24 and monthly during last 3 months. Manual with specific stages, tasks and goals based on 12-step philosophy.

Group therapy - 90 mins weekly for first 6 months of group drug counselling.

Group 2 N= 121

CBT: CT (cognitive therapy) with outpatient - 50-min sessions twice weekly for first 12 weeks, weekly during weeks 10-24 and monthly during last 3 months. Followed McLellan's manual for CT for substance misuse.

Group therapy - 90 minutes weekly for first 6 months of group drug counselling

Group 3 N= 123

Group therapy with outpatient - 90-min sessions weekly for first 6 months, 30 mins monthly during last 3 months. Group drug counselling following a manual designed to educate patients about stages of recovery and encourage 12-step participation.

Study quality: 1++

Group 4 N= 119

SE (supportive-expressive psychotherapy) with outpatient - 50-min sessions twice weekly for first 12 weeks, weekly during weeks 10-24 and monthly during last 3 months. Psychodynamic therapy following manual by Luborsky, adapted for cocaine treatment.

Group therapy - 90 minutes weekly for first 6 months of group drug counselling.

DENNIS2004

Study Type: RCT (randomised controlled trial)

Study Description: For each adolescent, the parent or other collateral asked to participate in study

Type of Analysis: ITT

Blindness: No mention

Duration (days): Range 42-98

Followup: 12 months from baseline

Setting: Two trials across four sites (N=300 in each trial)
Trial 1: Groups 1, 2 and 3
Trial 2: Groups 4, 5 and 6

Notes: RANDOMISATION: Occurred across sites in each trial.

Info on Screening Process: 85% of those eligible gave consent > 600 adolescents and their families enrolled and randomised.

n= 600

Age: Range 13-18

Sex: 498 males 102 females

Diagnosis:
100% cannabis misuse by DSM-IV

Exclusions: - Age outside range 12-18
- Not used cannabis in past 90 days, or 90 days prior to being in controlled environment
- Inappropriate for short-term outpatient treatment
- Use of alcohol on >=45 of past 90 days
- Use of other drugs on >=13 of past 90 days
- Acute medical or psychological condition likely to interfere with full participation
- History of repeated violent behaviour or severe conduct disorder

Notes: ETHNICITY: 61% white, 30% African American, 4% Hispanic, 6% Other

Baseline: Single parent family: 50%
Current criminal justice system (CJS) involvement: 62%
Age of first use under 18: 85%

Data Used

Completion rate

Retention: days remained in treatment

Abstinence: days drug free

Notes: FOLLOWUPS: Pre/post, 12 months from baseline
DROPOUTS: Trial 1 - CBT5 13%, CBT12 33%, FSN 21%; Trial 2 - CBT5 40%, CRA 39%, MDFT 30%

Group 1 N= 100

CBT: coping skills training - MET + 5 group sessions of CBT.

AMI: MET (motivational enhancement therapy) with outpatient.

Group 2 N= 96

CBT: coping skills training - 12 group sessions. Contents as per CBT5, with additional sessions addressing interpersonal problems, negative affect, problem solving, anger management, resisting craving, managing depression and thoughts about cannabis.

AMI: MET (motivational enhancement therapy) with outpatient.

Group 3 N= 100

Case management - Limited case management over a period of 12-14 weeks.

FI: MDFT (multidimensional family therapy) with outpatient - 12-15 sessions. three phases: engagement, working the themes and sealing the changes. Integrates drug use treatment into FT through improving communication, shifting from high conflict to affective issues, and developing positive experiences.

Group 4 N= 100

FI (family intervention) with outpatient - ten individual sessions with the adolescent, four sessions with caregivers (two of which the whole family). Core procedures are identification of antecedents and consequences, goals of treatment and further goal planning, communication and problem solving.

Case management - Limited case management over a period of 12-14 weeks.

Group 5 N= 102

CBT: coping skills training - 5 group sessions (CBT5). Teaches basic skills for cannabis refusal, establishing a social network, replacing cannabis use with pleasant nondrug related activities, coping with high-risk situations, recovering from relapse.

AMI: MET (motivational enhancement therapy) with outpatient - 2 individual sessions, aims to reduce adolescents' ambivalence about their drug use, and to motivate them to stop using cannabis.

Group 6 N= 102

Psychoeducation - Provided information on adolescent development and parents' role, substance abuse and dependence, recovery process and relapse signs, family development and organisation.

CBT: coping skills training - CBT12.

AMI: MET (motivational enhancement therapy) with outpatient.

Case management - Facilitate treatment attendance, assess family needs and referrals to other community services.

FI: FSN (family support network) - Family support groups.

FALSSTEWART1996

Study Type: RCT (randomised controlled trial)

Study Description: Husbands recruited alongside partners. Data given here for husbands only

Blindness: Open

Duration (days): Mean 168

Setting: US

Notes: RANDOMISATION: No details.

Info on Screening Process: 524 screened; 154 married or cohabiting recruited for interview. Of these, 51 refused consent and 17 met exclusion criteria (2 husbands alcohol dependent, 12 wives substance dependent, 3 had a psychiatric disorder). 86 couples were enrolled and randomised.

n= 86

Age: Mean 34

Sex: all males

Diagnosis:
100% drug misuse (non-alcohol) by DSM-III-R

Exclusions: Husbands:
- age range outside 20-60 years
- not married for >=1 year or not living with a significant other in a stable common-law relationship for >= 2 years
- seeking additional substance abuse treatment, except self-help meetings
- primary drug of misuse is alcohol

Couples:
- wife met criteria for DSM-III-R substance misuse in past 6 months
- either partner met DSM-III-R criteria for organic mental disorder, schizophrenia, delusional (paranoid disorder) or other psychotic disorders
- either partner in MMT

Notes: PRIMARY DIAGNOSIS: Husbands were non-alcohol drug misusing or dependent
ETHNICITY: 67% White, 10% African American, 3% Hispanic
REFERRALS: CJS: 85%, self: 10%, physician/mental healthcare provider etc: 5%

Baseline: (GROUPS: BCT (behavioural couples therapy) / CBT)
Primary drug
Cocaine: 24 / 20
Opioids: 10 / 16
Cannabis: 4 / 3
Other: 2 / 1

Data Used

ASI (Addiction Severity Index)

Abstinence: percentage of days

Abstinence: days drug free

Urinalysis: positive for any drug

Notes: FOLLOW-UPS: Weekly random urine screening
DROPOUTS: 3/43 couples from CBT group and 3/43 from BCT group failed to complete

Group 1 N= 40

CBT: coping skills training with outpatient - 60-minute individual sessions twice weekly. Goals: cognitive-behavioural restructuring, problem-solving for alternatives to drug use, relaxation training, anger management, refusal skills, assertiveness training and enhancing social support networks.

CBT: group with outpatient - Groups of 6-8 patients meeting for 90 minutess per week. Goals as above.

Group 2 N= 40

CBT: coping skills training with outpatient - 60-minute individual sessions once weekly

FI: BCT (behavioural couples therapy) with outpatient - Couples met therapist for for 60 minutes once a week for 12 weeks. Goal: rewarding abstinence, constructive communication for conflict resolution, coping with cravings, crisis intervention and positive behavioural exchanges.

CBT: group with outpatient - Groups of 6-8 patients meeting for 90 minutes once weekly. Goals as above.

Study quality: 1+

FINNEY1998

Study Type: Cohort

Blindness: Open

Duration (days): Range 21-28

Setting: 15 inpatient substance misuse programmes from 13 Veteran Affairs (VA) treatment centres in US

Info on Screening Process: 4659 screened, 4193 eligible, 494 refused consent; of 3699 intake sample 3278 completed intake evaluation.

n= 3228

Age: Not given

Sex: all males

Diagnosis:
100% substance misuse (drug or alcohol) by ICD-10

Exclusions: - not in a standard VA treatment programme
- female
- had not completed detoxification

Notes: PRIMARY DIAGNOSIS: 36% alcohol misuse/dependence only; 51% alcohol and drug misuse, 13% drug misuse only
ETHNICITY: 48% Black, 46% White

Baseline: 76% unemployed
Past month drug use: 48% cocaine/crack, 39% cannabis, 13% opioids

Group 1 N= 970

12-step with inpatient.

Group 2 N= 106

12-step with inpatient.

CBT with inpatient.

Group 3 N= 119

CBT with inpatient.

Content of interventions not reported - in secondary study?
Study quality: 2+

HALL1977

Study Type: RCT (randomised controlled trial)

Type of Analysis: Completers

Blindness: Single blind

Duration (days): Mean 14

Followup: 3 months

Setting: US
Outpatient (community)

Info on Screening Process: 49 MMT participants referred by vocational rehabilitation service, none excluded

n= 49

Age: Mean 30

Sex: 34 males 15 females

Diagnosis: Not given

Exclusions: - participants who were expected to serve prison time within 3 months
- psychotic
- illiterate

Notes: ETHNICITY: Caucasian (n=28) Black (n=13) Latin descent (n=8)

Data Used

Rating of written application

Rating of employability

Employment at follow-up

Notes: DROP OUT: 4/23 experimental group 3/26 control group
3 month follow-up - participants contacted and asked if they had found a job or been placed in a training programme.

Group 1 N= 23

Vocational training - two week workshop consisted 3-6 participants who met on 2 days for approximately 5 hours, and 1 day for 3 hours. Sessions videotaped. 10-15 minute relaxation technique training. Role play in interview situation. Exploration of difficulties with application forms. Simulation of real interview.

Group 2 N= 26

Control: TAU (treatment as usual) - Participants given appointment for assessment interview (chance to practice interviews and complete application forms). Written note sent day prior to day of interview to remind participants of appointment. No other intervention.

Study quality: 1+

HENGGELER1999

Study Type: RCT (randomised controlled trial)

Study Description: Families received intervention alongside youths

Type of Analysis: Per protocol

Blindness: No mention

Duration (days): No mention

Setting: US

Notes: RANDOMISATION: No details.

Info on Screening Process: 423 screened > 140 met inclusion criteria > 118 gave consent.

n= 118

Age: Mean 16

Sex: 93 males 25 females

Diagnosis:
100% substance misuse (drug or alcohol) by DSM-III-R

Exclusions: - Age outside range 12-17
- Not on probation
- Not in residence with a parent figure
- Already involved in substance abuse treatment, or is sibling of a study participant

Notes: PRIMARY DIAGNOSIS: 44% substance dependent; 60% polysubstance misuse; 87% alcohol misuse; 72% dual or multiple diagnoses
REFERRALS: Juvenile offenders
ETHNICITY: 50% African American, 47% Caucasian, 3% O ther

Baseline: Lived with two parents (of which >=1 biological parent): 50%
Lived with one parent: 40%

Data Used

Crime: engaging in criminal activities

Drug use: PEI-Personal Experience Inventory

Urinalysis: matching self-report

Group 1 N= 58

FI: MST (multisystemic therapy) with outpatient - Targets problem behaviour at the individual, family, school and community levels; treatment intensity titrated by clinical need. Home-based delivery with 24-7 availability. Integrated with pharmcological monitoring as necessary.

Group 2 N= 60

Day treatment: intensive (>60hr/wk) with outpatient - TAU condition: youths referred by probation officer to local substance abuse treatment services, typically weekly attendance of 12-step programme. Families received few substance abuse or mental health services.

Treatment and control groups significantly different in self-reported drug and alcohol usage (but favours control)

Previous arrests: 2.9
Received previous treatment: 25%
Had >=1 out of home placement: 33%

HIGGINS1993

Study Type: RCT (randomised controlled trial)

Blindness: No mention

Duration (days): Mean 168

Setting: US

Notes: RANDOMISATION: Balanced for gender, route of administration, residence with significant other, legal matters pending, employment status etc.

Info on Screening Process: 13 did not meet inclusion criteria.

n= 38

Age: Mean 29

Sex: Not given

Diagnosis:
100% cocaine dependence by DSM-III-R

55% alcohol dependence by DSM-III-R

42% cannabis dependence by DSM-III-R

Exclusions: - <18 years
- opioids or sedative dependence
- psychosis
- dementia
- medical condition precluding employment
- plans to leave area within 6 months

Baseline: GROUPS: Behavioural / 12-steps
Weekly cocaine use: 4.0g / 4.7g
ASI (drug): 0.22 / 0.27

Data Used
Abstinence: percentage of days

Group 1 N= 19

Day treatment: intensive (>60hr/wk) with outpatient - $5 for each urine sample provided. Counselling: one 2.5-hour group session and one 1-hour individual session/week for first 12 weeks. Then one group or individual therapy session per week for weeks 13-24. Based on a 12-step model.

Group 2 N= 19

CM: CRA (community reinforcement approach) with outpatient - CM: First 12 wks: $2.50 first -ve, increase of $1.25 for consecutive -ve, $10 bonus for 3 consecutive. Second 12 wks: $1 lottery tickets, CRA: 1hr x 2/wk for 12 wks, then 1hr/wk. CRA: skills training, relationship and employment counselling, recreation.

Study quality: 1+

HIGGINS1994

Study Type: RCT (randomised controlled trial)

Blindness: No mention

Duration (days): Mean 168

Setting: US

Notes: RANDOMISATION: groups balanced for gender, primary route of cocaine administration, ASI score etc.

n= 40

Age: Mean 31

Sex: 27 males 13 females

Diagnosis:
100% cocaine dependence by DSM-III-R

55% alcohol dependence by DSM-III-R

12% cannabis dependence by DSM-III-R

Exclusions: - <18 years of age
- no use of cocaine within previous 30 days
- opioid dependence
- sedative dependence
- psychosis
- pregnancy
- dementia
- recent inpatient treatment for cocaine
- medical condition precluding employment

Baseline: GROUPS: CRA + CM /CRA
ASI (drug): 0.25 / 0.23
BDI (Beck Depression Inventory): 21.1/19.4

Data Used
Abstinence: weeks drug free

Group 1 N= 20

CM: vouchers with outpatient - Weeks 1-12: started with $2.50, increase of $1.25 each consecutive negative sample, bonus of $10 for 3 consecutive negative samples. Weeks 13-24: $1 lottery ticket for negative sample.

CM: CRA (community reinforcement approach) with outpatient - 1hr twice a week for weeks 1-12 and 1hr/week for weeks 13-24. Sessions included relationship counselling, recognising antecedents and consequences of cocaine use, skills training, employment counselling and helping to develop new recreational activities.

Group 2 N= 20

CM: CRA (community reinforcement approach) - 1 hour twice a week for weeks 1-12 and 1 hour per week for weeks 13 -24. Sessions included relationship counselling, recognising antecedents and consequences of cocaine use, skills training, employment counselling and helping to develop new recreational activities.

CM control: no vouchers with outpatient - Weeks 1-12: slips of paper given with result for each urine sample. Weeks 13-24: $1 lottery ticket for each negative sample.

Study quality: 1+

JONES2004

Study Type: RCT (randomised controlled trial)

Blindness: No mention

Duration (days): Mean 112

Setting: US

Notes: RANDOMISATION: Modified dynamic balanced randomisation by computer; seven participants who were assigned to control were forced into voucher condition.

Info on Screening Process: 1174 screened, 200 signed consent, 199 randomised.

n= 183

Age: Mean 36

Sex: 102 males 81 females

Diagnosis:
100% cocaine dependence by DSM-IV

Exclusions: - no pre-admission cocaine-positive urine sample
- no self-reported cocaine use
- positive pregnancy test
- diagnosis of a medical or severe psychiatric illness requiring chronic medication
- breath test positive for alcohol
- urine sample positive for opioids or sedatives/hypnotics

Data Used

Abstinence: negative urinalysis

Cocaine use: self-report

Notes: SELF-REPORT MEASURES: Non-intravenous and intravenous questionnaires, safety data from Weekly Symptom Checklist DROPOUTS: Tryptophan + CM (31/42 = 68.9%), tryptophan + no CM (42/49 = 75%), placebo + CM (41/55 = 70.7%), placebo + no CM (29/37 = 72.5%)

Group 1 N= 49

Tryptophan with outpatient. Mean dose 8 g / day - 4-9 days in residential setting where stabilised on medication and achieved cocaine abstinence, then 16 weeks in outpatient setting. Participants received tryptophan plus 2 teaspoons of confectioner's sugar plus 4 grams of powdered cocoa mix.

NCM (non-contingent management) with outpatient - Received voucher schedule generated by a participant in the contingent condition -- to control for the amount and pattern of payments received.

Group 2 N= 37

Placebo with outpatient - Lactose monohydrate plus 0.14 mg of denatonium benzoate to mimic bitter taste of tryptophan, 4 grams of cocoa mix also added to produce equivalent taste, 5 mg diphenhydramine hydrochloride.

NCM (non-contingent management) with outpatient - Received voucher schedule generated by a participant in the contingent condition -- to control for the amount and pattern of payments received.

Group 3 N= 42

CM: vouchers with outpatient - Received $2.50 voucher for first cocaine-negative sample, vouchers for subsequent negative samples increased by $1.50, $10 bonus for three consecutive negative samples. A cocaine-positive sample reset payment schedule to initial value ($2.50). Maximum $1155.

Tryptophan with outpatient. Mean dose 8 g / day - 4-9 days in residential setting where stabilised on medication and achieved cocaine abstinence, then 16 weeks in outpatient setting. Participants received tryptophan plus 2 teaspoons of confectioner's sugar plus 4 grams of powdered cocoa mix.

Group 4 N= 55

CM: vouchers with outpatient - Received $2.50 voucher for first cocaine-negative sample, vouchers for subsequent negative samples increased by $1.50, $10 bonus for three consecutive negative samples. A cocaine-positive sample reset payment schedule to initial value ($2.50). Maximum $1155.

Placebo with outpatient - Lactose monohydrate + 0.14 mg of denatonium benzoate to mimic bitter taste of tryptophan, 4 grams of cocoa mix also added to produce equivalent taste, 5 mg diphenhydramine hydrochloride.

Placebo + CM versus placebo + non-contingent management only analysed

KADDEN2006

Study Type: RCT (randomised controlled trial)

Type of Analysis: Completers

n= 240

Age: Mean 32

Sex: 170 males 70 females

Data Used

ASI (Addiction Severity Index)

Abstinence: longest consecutive period

Cannabis use: times per day

Group 1 N= 62

Control: standard care with outpatient. Mean dose nine sessions - Case management (i.e. standard counselling):

Study quality: 1+

Blindness: Open

Duration (days): Mean 63

Followup: 1 year

Setting: Connecticut, US

Notes: Computerised urn randomisation

Info on Screening Process: 606 screened, 486 eligible. Of these, 246 lost to follow-up/refused consent. 240 randomised.

Diagnosis:
100% cannabis dependence by DSM-IV

Exclusions: - age < 18
- not cannabis dependent
- acute medical/psychiatric condition requiring inpatient treatment
- current dependence on alcohol/other drugs
- reading ability below fifth grade level

Baseline: (Case management / motivational enhancement therapy + CBT / CM)
Cannabis problems: 15.19 / 13.97 / 12.62
Joints per day: 5.2 / 4.67 / 3.24
Proportion days abstinent: 0.08 / 0.08 / 0.15

Abstinence: percentage of days

Notes: All groups had weekly urine tests and were informed of results, but only CM conditions provided rewards, and motivational enhancement therapy plus CBT conditions provided suggestions to improve drug-use behaviour.

supportive therapy to establish goals and address problems with participants' daily living (e.g. psychiatric referrals). Minimal motivational/skills-training/reinforcing techniques.

Group 2 N= 61

AMI: MET (motivational enhancement therapy) with outpatient. Mean dose nine sessions - two sessions MET plus nine sessions CBT skills from Project MATCH manual. MET addressed ambivalence to change and set goals; CBT provided functional analysis of problems, coping with craving, problem solving, avoiding high-risk situations, etc.

Group 3 N= 54

CM: vouchers with outpatient - Beginning week 3, $10 voucher for each negative urine increasing by $15 per week for each successive -ve urine (total possible, $385). +ve urines reset voucher value to $10, but two consecutive -ve urines would reinstate previous highest value.

Group 4 N= 63

CM: vouchers

AMI: MET (motivational enhancement therapy).

KELLEY2002

Study Type: RCT (randomised controlled trial)

Study Description: For missing data, last most distressed datapoint carried forward

Type of Analysis: Per protocol

Blindness: No mention

Duration (days): Mean 140

Followup: 12 months

Setting: Two clinics in US

Notes: RANDOMISATION: No details.

Info on Screening Process: 329 men approached: 64 refused consent, 31 couples met exclusion criteria, 99 had no children.

n= 64

Age: Mean 36

Sex: all males

Diagnosis:
100% substance misuse (drug or alcohol) by DSM-III-R

Exclusions: - outside age range 20-60
- not heterosexual
- not married for >=1 year or not living with significant other for >=2 years
- female partner met DSM-III-R criteria for substance misuse/dependence in past 6 months
- either partner met DSM-III-R criteria for an organic mental disorder or psychotic disorder
- seeking additional substance misuse treatment except self-help meetings, unless recommended by primary physician
- either partner in MMT

Notes: PRIMARY DIAGNOSIS: Alcohol and drug misusing samples recruited separately; drug misusing sample given here.
Men were recruited with their female partners as couples; data given above for men only.

Baseline: (GROUPS: BCT / CBT / psychoeducation)
Primary drug:
Cocaine: 8 / 8 / 8
Opioids: 10 / 10 /11
Cannabis: 1 / 1 / 1
Other: 3 / 2 / 1

Data Used
Abstinence: percentage of days

Notes: FOLLOW-UPS: Baseline, end of treatment and every 3 months thereafter for 1 year
DROPOUTS: Not reported

Group 1 N= 21

Psychoeducation with outpatient - Both partners attended 12 lectures about the epidemiology, aetiology and effects of substance misuse.

CBT (cognitive behavioural therapy) with outpatient - 20 weekly individual-based sessions, drawn from Project MATCH protocol.

Group 2 N= 22

CBT (cognitive behavioural therapy) with outpatient - 20 weekly individual-based sessions, drawn from Project MATCH protocol.

FI: BCT (behavioural couples therapy) with outpatient - Both partners attended 12 weekly sessions: reinforcing abstinence through verbal contract, teaching more effective communication skills, increasing positive behavioural exchange and reducing aggression between partners.

Group 3 N= 21

CBT: coping skills training with outpatient - 12 weekly individual sessions, modified from Monti et al (1989) for alcohol.

CBT (cognitive behavioural therapy) with outpatient - 20 weekly individual-based sessions, drawn from Project MATCH protocol.

LATIMER2003

Study Type: RCT (randomised controlled trial)

Type of Analysis: ITT

Blindness: No mention

Duration (days): Mean 102

Followup: 6 months

Setting: Drug dependence assessment clinic in US

Info on Screening Process: 159 screened - 24 met exclusion criteria > 104 referred to outpatient treatment and offered study participation > 58 consented and randomised - 1 cohort used for training purposes > 43 included in study.

n= 43

Age: Mean 16

Sex: 33 males 10 females

Diagnosis:
100% substance misuse (drug or alcohol) by DSM-IV

Exclusions: - age outside range 12-18
- required less or more intensive treatment than provided in this study
- acute psychosis
- acute suicidal or homicidal behaviour
- refused medication despite bipolar disorder

Notes: PRIMARY DIAGNOSIS: alcohol abuse/dependence 86%, cannabis abuse/dependence 98%, other drug abuse/dependence 21%
ETHNICITY: 86% White, 7% Native American, 5% Hispanic, 2% Asian

Data Used
Drug use: days in past 6 months
Alcohol use: days in past 6 months
Retention: sessions attended
Urinalysis: matching self-report
Cannabis use: days in past 6 months
Notes: Weekly random urinalyses

Group 1 N= 21

FI (family intervention) - 16 weekly 60-minute sessions. Aims to promote youth abstinence by fostering family communication, age-appropriate familial roles and effective parenting skills. Behavioural contracts among family members.

CBT (cognitive behavioural therapy) - 32 weekly 90-min group sessions. Rational-emotive and behaviour change principles, which aim to promote rational beliefs that are associated with psychiatric wellbeing and drug abstinence.

Group 2 N= 22

Psychoeducation - 16 weekly, 90 minute sessions delivered to groups of adolescents. Focus on physiological and negative consequences of drug use, incorporating info disseminated by NIDA.

LIDDLE2001

Study Type: RCT (randomised controlled trial)

Type of Analysis: Per protocol

Blindness: No mention

Duration (days): Mean 150

Followup: 12 months

Setting: US

Notes: RANDOMISATION: No details.

n= 182

Age: Mean 16

Sex: 146 males 36 females

Diagnosis:
100% drug misuse (non-alcohol) by self-report

Exclusions: - age outside range 13-18
- history of mental retardation or organic dysfunction
- requires inpatient detox
- involved in another form of psychotherapy oriented treatment, or 12-step groups

Notes: PRIMARY DIAGNOSIS: Any illegal drug >=three times per week
ETHNICITY: 51% White non-Hispanic, 18% African American, 15% Hispanic, 6% Asian, 10% Other
REFFERALS: CJS, clinical (schools, health and mental health agencies)

Baseline: Polydrug: 51%
Alcohol and cannabis only: 49%
Years of drug use: 2.5

Data Used
Completion rate
Drug use: clinically significant reduction
Notes: FOLLOWUPS: Pre/post, 6 months, 12 months
DROPOUTS: MDFT 30%, education 35%, group therapy 47%

Group 1 N= 52

Psychoeducation with outpatient - 90 minute sessions: multifamily groups (3 -4) families) with focused discussions, didactic presentations, skills-building, family problem solving and homework assignments.
Up to two crisis sessions available to families on request or in emergencies.

Group 2 N= 53

Group therapy with outpatient - 90 minute weekly sessions with groups of 6-8 adapted from Beck's group therapy model. Began with two family sessions to enlist cooperation. Developing social skills, self-control and acceptance, problem solving skills and building social support.

Group 3 N= 47

FI: MDFT (multidimensional family therapy) with outpatient - 16 weekly sessions over 5 months. Individual and family sessions used throughout
Focus on adolescent, parent, and parent-adolescent interaction.
Three phases: engagement, promoting change and transitioning changes into real world environments.

MARTIN1993

Study Type: RCT (randomised controlled trial)

Type of Analysis: Per protocol

Blindness: No mention

Duration (days): Mean 182

Followup: 12 months

Setting: Parole in Delaware, US

Notes: Details of randomisation procedure not reported

Info on Screening Process: 400 randomised;

n= 263

Age: Mean 29

Sex: 191 males 72 females

Diagnosis:
100% drug misuse (non-alcohol)

60% IDU (injection drug use)

Exclusions: - not an inmate released on parole
- no history of drug use associated with an HIV risk factor

Data Used
Urinalysis: positive for any drug
Drug use

Group 1 N= 130

ACT (assertive community treatment) with outpatient - Five stages: intake assessment, intensive treatment, moderate (educational treatment), relapse prevention and case management designed to support transition into normal community life.

Study quality: 1+

263 completed assessment and included.

Notes: ETHNICITY: 68% Black, 32% "non-Black"
All were ex-inmates on parole

Baseline: ACT ([Assertive community treatment] / control)
Health: excellent 33% / 41%, good 41% / 38%, fair or poor 26% / 21%
Delinquent activity: low 36% / 46%, medium 39% / 25%, high 25% / 29%
>one time in prison: 77% / 75%
Drug use in 6 months prior to incarceration: low 28% / 30%, medium 36% / 35%, high 36% / 35%

Notes: Urinalysis: proportion of parolees will have been reincarcerated by endpoint thus would have been expected to be likely to give a negative sample.

Group 2 N= 133

Control: standard care with outpatient - Standard parole: in practice, unless parolee actively seeks attention, there is little help offered or sanctions on the parolee. Referrals to treatment programmes may be voluntary or mandated, and may be more or less intensive than ACT.

MAUDEGRIFFIN1998

Study Type: RCT (randomised controlled trial)

Study Description: Missing or discrepant urine samples coded as positive

Type of Analysis: ITT

Blindness: No mention

Duration (days): Mean 84

Followup: 6 months from baseline

Setting: Three centres in US

Notes: RANDOMISATION: No further details.

Info on Screening Process: 159 screened, 31 excluded (6 refused consent, 25 ineligible).

n= 128

Age:

Sex: 126 males 2 females

Diagnosis:
100% cocaine misuse by DSM-III-R

Exclusions: - current or history of opioid dependence
- current or history of schizophrenia
- medical or psychiatric contraindication for outpatient treatment

Notes: PRIMARY DIAGNOSIS: 100% smoked crack cocaine as primary route of administration
REFERRALS: Recruited from 3 veterans programmes

Baseline: Age not reported (but all veterans)
82% had major depressive disorder, post-traumatic stress disorder or antisocial personality disorder
History of regular cocaine use: 19 months
Bingeing on cocaine: 64%
Alcohol use in past 30 days: 10 days (of which 6 to the point of intoxication)

Data Used

Abstinence: no use for any 4 consecutive weeks

Retention: sessions attended

Notes: FOLLOW-UP: Baseline and at weeks 4, 6, 8, 12 and 26
DROPOUTS: Not reported. 92% completed assessment at 12 weeks (end of treatment); 17/128 attended >=75% of treatment sessions.

Group 1 N= 59

CBT: group with outpatient - 3 group sessions and 1 individual session per week over 12 weeks; manual-guided: identifying and dealing with craving, irrational thoughts and negative moods, and preventing relapse.

Group 2 N= 69

TSF (12-step facilitation) with outpatient - 3 group sessions and 1 individual session per week over 12 weeks; manual-guided, encouraging working the first four steps.

Study quality: 1+

MCKAY2004

Study Type: RCT (randomised controlled trial)

Study Description: Rolling admissions policy

Blindness: No mention

Duration (days): Mean 90

Followup: 12 months

Setting: two sites: clinical research programme modelled on community substance abuse clinics and Veterans' Affairs programme

Notes: RANDOMISATION: Urn randomisation balanced on six factors.

Info on Screening Process: 602 screened, 243 excluded (refused consent, failed to meet inclusion criteria or failed to complete baseline assessment).

n= 359

Age: Mean 42

Sex: 297 males 62 females

Diagnosis:
75% cocaine dependence by DSM-IV

25% alcohol dependence by DSM-IV

Exclusions: - age outside 18-65 range
- psychiatric or medical condition precluding treatment (e.g. dementia, hallucinations)
- unstable living situation
- intravenous heroin use in past 12 months
- not having completed a first phase of treatment or not having been abstinent for the last week of that treatment

Notes: PRIMARY DIAGNOSIS: Cocaine or alcohol only
ETHNICITY: 77% African American

Baseline: Days cocaine abstinent in past 4 months: 39%

Data Used

Abstinence: percentage of days

Alcohol use: heavy drinking days

Abstinence: no use for 3 months

Notes: FOLLOW-UP: Baseline, 3, 6, 9 and 12 months post baseline
DROPOUTS: 37% standard care, 47% RP and 57% telephone did not complete >=75% of sessions

Group 1 N= 102

Telephone-based intervention with outpatient - One 15-minute phone call per week with counsellor; support group during first 4 weeks to ease transition from face-to-face counselling.

Group 2 N= 135

CBT: RP (relapse prevention) with outpatient - One individual session and one group session per week; manual guided: identifying and anticipating high-risk situations, improving coping responses.

Group 3 N= 122

Control: TAU (treatment as usual) with outpatient - Two sessions per week; group therapy with a mix of addictions counselling and 12-step practices.

Study quality: 1+

MEJTA1997

Study Type: RCT (randomised controlled trial)

Type of Analysis: Per protocol

n= 316

Age: Mean 41

Sex: 218 males 98 females

Data Used

Retention: days remained in treatment

Engagement in treatment

Group 1 N= 156

Control: standard care with outpatient - Patients given contact details of drug misuse clinics within their locality. They were primarily responsible for arranging

Study quality: 1+

Blindness: Open

Duration (days): Mean 1095

Followup: N/A

Setting: US

Notes: Randomisation procedures not reported.

Info on Screening Process: Not reported.

Diagnosis:
100% opioid dependence by current participation in treatment

Exclusions: None reported

Notes: PRIMARY DIAGNOSIS: Chronic intravenous opioid users
ETHNICITY: 91% 'minority'
POPULATION: IDU not in treatment and seeking treatment

Baseline: >=1 previous treatment episode: 75%
>=3 previous treatment episodes: 38%

Notes: Monthly follow-up for 3 years

their own appointments.

Group 2 N= 160

Case management with outpatient - Case manager performed initial assessment, identified treatment needs, located treatment provider and facilitated admission. Remained engaged with client throughout referral and admission process. Frequency of contact not reported.

MONTI1997

Study Type: RCT (randomised controlled trial)

Type of Analysis: ITT

Blindness: No mention

Duration (days): Mean 14

Followup: 3 months

Setting: US, one urban and one rural hospital

Notes: RANDOMISATION: random number selection.

n= 128

Age: Mean 28

Sex: 88 males 40 females

Diagnosis:
98% cocaine dependence by DSM-III-R

73% alcohol dependence by DSM-III-R

2% cocaine misuse by DSM-III-R

Exclusions: - did not use cocaine at least once in 6 months prior to treatment
- actively psychotic

Baseline: Route of drug use: smoking freebase = 72%, smoking crack = 21%, using intranasally = 51%, intravenous use = 12%
Days of use last 6 months: 56.9 (45.9) days

Data Used
Abstinence: no use for 3 months

Notes: DROPOUTS: post treatment = 21/128, follow-up = 36/128
Self-report data on abstinence confirmed by urinalysis

Group 1 N= 68

Control: enhanced TAU (treatment as usual) with inpatient - 8 x 1 hour sessions with 3-5 sessions per week based on length of stay. Manualised meditation and relaxation training. Participants assigned to this condition practiced full body relaxation using directed focus procedures and pleasant visual imagery.

Group 2 N= 60

CBT: RP (relapse prevention) with inpatient - 8 x 1 hour sessions with 3-5 sessions per week based on length of stay. Approach involved analysing the antecedent and consequent events surrounding use and developing a repertoire of alternative cognitive and behavioural skills to reduce risk of cocaine use.

Study quality: 1++

MORGENSTERN2006

Study Type: RCT (randomised controlled trial)

Study Description: Allocation sealed in envelope

Blindness: Not given

Duration (days): Mean 245

Followup: N/A

Setting: Welfare offices in New Jersey, US

Notes: Randomisation by random number generator.

Info on Screening Process: 595 screened, 293 excluded (13 refused consent, 56 no DSM-IV diagnosis, 135 on MMT, 89 other); 302 randomised.

n= 302

Age: Mean 36

Sex: all females

Diagnosis:
100% substance dependence (drug or alcohol) by DSM-IV

Exclusions: - not eligible for TANF (Temporary Assistance for Needy Families)
- not in New Jersey's welfare-to-work programme
- psychotic
- receiving or seeking MMT
- stably engaged in substance misuse treatment

Notes: ETHNICITY: 96% Black, 3% Hispanic
PRIMARY DIAGNOSIS: 35% cocaine, 36% heroin, 6% cannabis (remainder alcohol)
POPULATION: Drug-dependent women, not in drug treatment and receiving welfare benefits

Baseline: (Intensive case management / standard care)
Years on welfare since age of 18: 12.90 / 11.28
Number of children: 3.25 / 3.16

Data Used
Abstinence: negative urinalysis
Retention rate
Engagement in treatment
Completion rate

Group 1 N= 161

Case management: intensive with outpatient. Mean dose 15 months - Assessment of treatment plus other needs; motivational counselling; extensive outreach with regular weekly contact (up to daily during crisis periods). Vouchers for toys, cosmetics etc. for attending treatment.

Group 2 N= 141

Control: standard care with outpatient. Mean dose 15 months - Clinical coordinator reviewed substance misuse treatment needs, and initial appointments scheduled. Counsellors in contact with treatment staff but minimal case management of client. Outreach was limited to several calls/letters for missed appointments.

Study quality: 1++

NEEDELS2005

Study Type: RCT (randomised controlled trial)

Type of Analysis: Per protocol

Blindness: Open

Duration (days): Mean 365

Setting: Prisons and community of New York City, US

Notes: Randomisation procedures not reported.

Info on Screening Process: Not reported.

n= 1416

Age: Range 17-34

Sex: 706 males 704 females

Diagnosis:
87% drug misuse (non-alcohol) by self-report

Exclusions: - not incarcerated
- not an adolescent male (16-18 years), or not an adult female
- did not show a commitment to receiving post-discharge case management services
- did not expect to be released into the community within 1 year

Notes: Data comprised of two samples: male adolescent prisoners and female prisoners
POPULATION: Discharged female/male-adolescent former inmates, not in drug treatment

Baseline: (Females / Males)
Homeless or stayed in shelter in past year: 35.7% / 8.2%
Primary source of income from illegal activities: 39% / 47%
Drug use in past 6 months: 88% / 85%
Received substance misuse treatment in 12 months prior to incarceration: 48% / 11%
HIV+: 17% / 0%

Data Used
Drug use
Reincarceration rates
Reduced risk behaviours
Crime: engaging in criminal activities
Retention rate

Notes: Follow-up interviews at 15 months; caseworkers reported only 6.5 hours (females) / 9.5 hours (male adolescents) of contact over 12 months

Group 1 N= 706

Control: standard care with outpatient - 'Less intensive' discharge services. Ineligible for Health Link's community care case management services.

Group 2 N= 704

Case management with outpatient - Case management to encourage use of drug/physical health treatment, engaging in social networks, and reducing drug use, rearrest and HIV risk behaviours. Voluntary empowerment groups; individual counselling; referrals to services and crisis interventions.

Study quality: 1++

PETRY2002

Study Type: RCT (randomised controlled trial)

Type of Analysis: ITT

Blindness: No mention

Duration (days): Mean 84

Followup: 6 months

Setting: US

Notes: RANDOMISATION: Probabilistic balancing techniques to control for gender, race, age etc.

Info on Screening Process: 5 excluded: 1 withdrew consent, 4 uncontrolled psychosis.

n= 42

Age: Mean 39

Sex: 12 males 30 females

Diagnosis:
cocaine dependence by DSM-IV

Exclusions: - not receiving a stable dose of methadone in past 3 months
- not English speaking
- MMSE <21
- active, uncontrolled psychosis or bipolar disorder

Notes: Standard treatment = 91.3%, CM = 100% cocaine dependence

Baseline: GROUPS: TAU / CM
Years of heroin use: 13.8 (1.9) / 14.9 (1.6)
Years of cocaine use: 12.0 (1.8) / 15.0 (1.7)

Data Used
Abstinence: longest consecutive period
Abstinence: days drug free

Notes: DROPOUTS: CM = 1/19, TAU (treatment as usual) = 2/23

Group 1 N= 23

Control: TAU (treatment as usual) with outpatient

Group 2 N= 19

CM: prizes with outpatient - Negative sample for opioids or cocaine earned a draw from the bowl, negative for opioids and cocaine earned four draws. Negative samples on consecutive days earned bonus draws. Bowl had 250 slips of paper, 1/2 non-winning, 109 small prizes, 15 large prizes.

Study quality: 1+

PETRY2004

Study Type: RCT (randomised controlled trial)

Type of Analysis: ITT

Blindness: Open

Duration (days): Mean 84

Setting: US, two outpatient centres

Info on Screening Process: 135 screened, 9 refused, 5 failed to return to clinic, 1 non-stabilised bipolar disorder.

n= 120

Age: Mean 35

Sex: 53 males 67 females

Diagnosis:
85% cocaine dependence by DSM-IV

60% alcohol dependence by DSM-IV

100% cocaine misuse by DSM-IV

Exclusions: - 18 years of age
- no cocaine use (self-report/urinalysis)
- not English speaking
- dementia (MMSE <21)

Data Used
ASI (Addiction Severity Index)
Retention: days remained in treatment
Abstinence: weeks drug free

Notes: DROPOUTS: Group therapy = 13.5%, CM: $80 = 20%, CM: $240 = 31.6%

Group 1 N= 45

CM: prizes with outpatient. Mean dose $80 - Drew slips from a bowl, 50% of slips said 'good job' but provided no prize, 50% of slips provided prizes: 43.6% mini prizes ($0.33), 6% medium prizes ($5), 0.4% jumbo prize ($100).

Group 2 N= 37

Group therapy with outpatient - 3-5 days/week for 3-4 weeks, then 2-3 days/week for weeks 4-6, 1 day/week for last 6 weeks. Sessions included 12-step oriented treatment, CBT, health education, AIDS prevention and life skills training.

Study quality: 1+

- opioid dependent
- active uncontrolled bipolar disorder
- pathological gambling

Notes: Ethnicity: African American = 64%, White = 23%, Hispanic = 10%, Other = 3%

Baseline: GROUP: Group therapy / $80 CM / $240 CM
Years of regular cocaine use: 11.0 / 9.8 / 11.9

Group 3 N= 38

CM: prizes with outpatient. Mean dose $240 - Drew slips from a bowl, 50% of slips said 'good job' but provided no prize, 50% of slips provided prizes: 43.6% mini prizes ($1), 6% medium prizes ($20), 0.4% jumbo prize ($100).

PETRY2005A

Study Type: RCT (randomised controlled trial)

Blindness: Open

Duration (days): Mean 84

Setting: US, eight different clinics

Info on Screening Process: 30 excluded before data analysis because didn't meet inclusion criteria.

n= 415

Age: Mean 35

Sex: 185 males 230 females

Diagnosis:
84% other stimulant misuse by DSM-IV

Exclusions: - did not report stimulant use and/or did not submit stimulant-positive urine sample within 2 weeks of study entry

Notes: PRIMARY DIAGNOSIS: Cocaine, amphetamine or methamphetamine
OTHER DIAGNOSES: alcohol 42%, cannabis 21%, opioids 9%

Baseline: (CM / usual care)
Unemployed: 67% / 63%
On probation or parole: 36% / 35%

Data Used
Retention: days remained in treatment
Abstinence: negative urinalysis

Notes: DROPOUTS: CM = 51%, TAU = 65%

Group 1 N= 209

CM: prizes with outpatient - Chances to win prizes for negative sample for cocaine, (meth)amphetamine and alcohol. Drew from container of 500 chips: 50% stated 'good job', 8% small ($1) prizes, 8% large ($20) prizes, 0.2% jumbo ($80-100) prizes. Draws increased by 1 each consecutive week.

Group 2 N= 206

Control: enhanced TAU (treatment as usual) with outpatient - Primarily group counselling but in some clinics also individual and family counselling. Also received immediate feedback on urinalysis results.

Study quality: 1+

PETRY2005B

Study Type: RCT (randomised controlled trial)

Type of Analysis: ITT

Blindness: Open

Duration (days): Mean 84

Followup: 3- and 6-month follow-up

Setting: Three community-based treatment centres in US

Notes: Urn randomisation

Info on Screening Process: 161 screened, 38 excluded (19 ineligible, 14 refused consent, 5 did not complete evaluation); 142 randomised.

n= 142

Age: Mean 36

Sex: 65 males 77 females

Diagnosis:
cocaine dependence by DSM-IV
opioid dependence by DSM-IV

Exclusions: - active psychotic/bipolar disorder that was not adequately controlled by medication
- current suicidality
- in recovery for pathological gambling

Notes: PRIMARY DIAGNOSIS: Cocaine or opioid dependence. 20% were on MMT.

Baseline: (TAU / CM vouchers / CM prizes)
HIV+ (%): 5.6 / 7.5 / 15.2
Full or part-time employed (%): 6 / 10 / 6
Years' cocaine use: 11.1 / 12.8 / 10.0
Years' heroin use (among users): 10.2 / 6.9 / 9.5
Substance dependence in past year (%):
Cocaine: 94.7 / 84.9 / 82.4
Heroin: 31.6 / 30.2 / 39.2
Alcohol: 55.3 / 56.6 / 39.2
Previous treatment attempts: 20.0 / 11.5 / 15.0

Data Used
Drug use
ASI (Addiction Severity Index)
Abstinence: longest consecutive period
Retention: weeks remained in treatment

Notes: All participants submitted breath and urine samples 3 days/week weeks 1-3 and 2 days/week weeks 4-6

Group 1 N= 38

Control: standard care with outpatient - Intensive outpatient: indiv/group therapy, RP, coping/life skills training, focus groups for depression/anxiety, AIDS education, 12-step. Up to 5hrs/day, 4days/wk lasting 2-4wks depending on need with gradual reductions. Aftercare: 1 grp/wk for 6-12 mths.

Control: enhanced TAU (treatment as usual) with outpatient - 15-min weekly contact with RA who provided educational materials on health and drugs, AIDS, family, the law, etc. Intended as an attentional control (cf CM conditions).

Group 2 N= 53

Control: standard care with outpatient - As per control group

CM (contingency management) with outpatient - Goods vouchers for breath and urine samples -ve for opioids, cocaine AND alcohol. Starting at $1, increased by $1.50 for each consecutive -ve sample. $10 bonus each week if all samples -ve that weeek. Any missing/+ve sample reset reward to $1.

CM: vouchers with outpatient - Vouchers for completing treatment-related activities, e.g.attending doctor's appointment or college course. $3 for each activity completed, $10 bonus + $1 increase for 3 activities completed within any week. Reset to $3 for any activity not completed.

Intensive standard care (but all groups received this)
Study quality: 1++

Group 3 N= 51

Control: standard care - As per control group.

CM (contingency management) with outpatient - one draw from prize draw for each set of -ve specimens. Increased by one draw for each successive -ve, with a bonus of five for samples -ve over entire week. Draws also awarded for completing treatment activities. 37% chance of winning prize in any one draw.

PETRY2006

Study Type: RCT (randomised controlled trial)

Blindness: No mention

Duration (days): Mean 84

Setting: US

Notes: RANDOMISATION: Computerised urn randomisation.

Info on Screening Process: 186 screened, 27 excluded.

n= 131

Age: Mean 37

Sex: 79 males 52 females

Diagnosis:
1% cocaine dependence by DSM-IV

22% opioid dependence by DSM-IV

Exclusions: - unable to comprehend study details
- active psychotic disorder
- currently suicidal
- recovery from pathological gambling

Baseline: Cocaine use = 11.3 years
Heroin use = 2.57 years

Data Used
Abstinence: longest consecutive period

Group 1 N= 44

CM: prizes with outpatient - Prize draws contingent on submitting urine samples negative for drug. 500 cards in a prize bowl - 55% no monetary value, 39.8% worth up to $1, 5% worth up to $20, 0.2% worth up to $100.

Group 2 N= 47

CM: prizes with outpatient - Prize draws contingent on completing scheduled activities. 500 cards in a prize bowl - 55% no monetary value, 39.8% worth up to $1, 5% worth up to $20, 0.2% worth up to $100.

Group 3 N= 40

Control: standard care with outpatient - Standard intensive outpatient treatment: RP, coping and life skill training, AIDS education, 12-step treatment.

Study quality: +1

RAWSON2006

Study Type: RCT (randomised controlled trial)

Blindness: Open

Duration (days): Mean 112

Followup: 26 weeks and 52 weeks

Setting: US

Info on Screening Process: 420 screened.

n= 177

Age: Mean 36

Sex: 135 males 42 females

Diagnosis:
10% other stimulant dependence by DSM-IV

90% cocaine dependence by DSM-IV

Exclusions: - no positive urine for cocaine or methamphetamine during 2-week screening period
- dependent on alcohol or benzodiazepines
- court-mandated to treatment

Notes: Other stimulant is methamphetamine

Data Used
ASI (Addiction Severity Index): drug use
Retention: weeks remained in treatment
Abstinence: negative urinalysis

Notes: DROPOUTS: CM = 15/60, CBT = 11/58, CM + CBT = 13/59

Group 1 N= 59

CM (contingency management) with outpatient - Voucher value started at $2.50, $1.25 increase for consecutive negative samples, $10 for three consecutive negative samples.

CBT: group with outpatient - Three 90-minute sessions per week guided by a worksheet from a manual.

Group 2 N= 60

CM: vouchers with outpatient - Voucher value started at $2.50, $1.25 increase for consecutive negative samples, $10 for three consecutive negative samples.

Group 3 N= 58

CBT: group with outpatient - Three 90-minute sessions a week guided by a worksheet from a manual.

Study quality: 1+

ROLL2006

Study Type: RCT (randomised controlled trial)

Study Description: Sub-sample of Clinical Trials Network study

Blindness: Open

Duration (days): Mean 84

Followup: 3 and 6 months

n= 113

Age: Mean 30

Sex: 56 males 57 females

Diagnosis:
100% other stimulant dependence by DSM-IV

Exclusions: None reported

Data Used
Abstinence: longest consecutive period
Retention rate

Group 1 N= 51

CM (contingency management) with outpatient - At each urine test -ve for all 4 target drugs (cocaine, meth/amphetamine & alcohol) allowed chance to draw chips denoting prizes of various values. Each -ve sample gained 1 extra chip, reset to 1 for any +ve. Large prize for first 2 consec

Fairly intensive control treatment
Study quality: 1+

Setting: Four sites in western US

Notes: Stratified randomisation.

Info on Screening Process: Not reported.

Notes: PRIMARY DIAGNOSIS: Methamphetamine dependence
ETHNICITY: 59% White, 20% Hispanic, 21% other

Baseline: (CM / TAU)
Unemployed: 53% / 47%
Probation/parole: 47% / 37%
DSM-IV misuse/dependence: alcohol 24% / 21%, cannabis 29% / 23%, opioid 8% / 7%

Notes: Twice weekly observed urine samples. Breath test (for alcohol) at each visit.

weeks' abstinence.

Group 2 N= 62

Control: TAU (treatment as usual) with outpatient - Varied between sites. Most participants received Matrix model, others received mix of CBT and RP. All sites encouraged 12-step participation.

SALEH2002

Study Type: RCT (randomised controlled trial)

Blindness: Open

Duration (days): Mean 365

Followup: N/A

Setting: Residential treatment centre providing treatment for two urban and one rural Iowa counties ,US

Info on Screening Process: 1109 invited, 662 consented, 278 followed up at 3 months.

n= 662

Age: Mean 33

Sex: 391 males 271 females

Diagnosis: Not given.

Exclusions: - not meeting any of following criteria: more than one drug/alcohol-related offence
- breathalyser test with blood alcohol content >0.2
- involved in drug or alcohol-related accident
- under 21 years of age

Notes: ETHNICITY: 83% White, 13% Black, 1% Hispanic, 2% Indian, 1% other
POPULATION: Individuals with substance problems, entering residential treatment

Data Used

Abstinence: days drug free

ASI (Addiction Severity Index)

Notes: Follow-ups at 3 and 6 months during intervention, and at 12 months (end of intervention)
Frequency of contact for case management not reported

Group 1 N= 167

Case management with residential rehabilitation - On-site strengths-based case management with social worker who met patients at the primary treatment facility.

Group 2 N= 160

Case management with residential rehabilitation - Off-site strengths-based case management with social worker who met patients at an off-site social services agency.

Group 3 N= 147

Case management with residential rehabilitation - Case management with one session of contact and rest of case management delivered over telecommunications system.

Group 4 N= 188

Control: standard care with residential rehabilitation - No case management.

Study quality: 1+

SHOPTAW2005

Study Type: RCT (randomised controlled trial)

Type of Analysis: ITT (those who have completed 2 weeks' baseline)

Blindness: No mention

Duration (days): Mean 102

Followup: 6 months postbaseline

Setting: US

Notes: RANDOMISATION: Urn randomisation based on level of drug use and ethnicity.

Info on Screening Process: 263 screened, 101 excluded (90% didn't complete 2-week baseline period and 10% required more intensive treatment); 162 randomised.

n= 162

Age: Mean 37

Sex: all males

Diagnosis:

100% other stimulant dependence by current participation in treatment

Exclusions: - age outside 18-65 range
- medical or psychiatric condition precluding safe participation
- methamphetamine dependence requiring more intensive intervention than outpatient treatment

Notes: PRIMARY DIAGNOSIS: Methamphetamine-dependent users seeking treatment
ETHNICITY: Caucasian 80%, Hispanic 13%, African American 5%, other 2%
REFERRALS: Community recruitment from gay-bisexual venues (bathhouses, sex clubs, dance clubs), media outlets

Baseline: (GROUPS: CBT / CM / CBT + CM / culture-specific CBT)
Years' amphetamine use: 4.9 / 4.2 / 5.5 / 5.6
Days' amphetamine use in past 30 days: 8.9 / 9.2 / 9.9 / 10.4
Days using >1 drug in past 30 days: 2.7 / 5.0 / 5.0 / 4.0
Intravenous methamphetamine use: 50% / 36% / 30% / 40%

Data Used

Unprotected anal intercourse: number of occasions

Urinalysis: TES (Treatment Effectiveness Score)

Urinalysis: positive for cocaine

Notes: FOLLOW-UP: baseline, 6 months, 12 months
DROPOUTS: Data for sessions attended only: CBT = 41%, CBT + CM = 74%, culture-specific CBT = 56%

Group 1 N= 40

CM: vouchers with outpatient - As per CM group.

CBT: matrix model with outpatient - As per CBT group.

Group 2 N= 42

CM: vouchers with outpatient - Contingencies placed on 3 weekly urine samples: each successive methamphetamine-negative sample yielded $2.50, with three consecutive negative samples yielding a $10 bonus. Vouchers exchanged for goods or services promoting a pro-social, non-dependent lifestyle.

Group 3 N= 40

CBT: matrix model with outpatient - Group format, 90 minutes three times per week. Based on Matrix model, with education on internal and external triggers, stages of recovery, identification of emotional states that can signal relapse, craving management and adoption of healthy lifestyles.

Study quality: 1+

Group 4 N= 40

CBT: culture-specific (gay/bisexual men) with outpatient - Manual guided. Integrated core concepts from standard CBT with culture-specific elements, addressing HIV sexual risk behaviours and gay referents associated with methamphetamine use (e.g. sex parties).

SHOPTAW2006

Study Type: RCT (randomised controlled trial)

Blindness: No mention

Duration (days): No mention

Setting: Clinical research unit, Los Angeles, US

Info on Screening Process: 414 screened: 185 excluded (169 lost to follow-up, 15 medical reasons, 1 referred to inpatient), 229 randomised.

n= 229

Age: No mention

Sex: No mention

Diagnosis:
100% other stimulant misuse by DSM-IV

Exclusions: - pregnant or lactating
- age outside range 18-65
- primary medical condition that might interfere with safe study participation
- contraindications to SSRI treatment
- SCID-diagnosed psychiatric condition that required pharmacological/behavioural treatment
- SCID-diagnosed dependence on other substances

Notes: PRIMARY DIAGNOSIS: Methamphetamine

Group 1 N= 54

CM (contingency management) with outpatient. Mean dose 12 weeks - 3 weekly urine tests, $2.50 vouchers for initial methamphetamine -ve sample, increasing by $1.25 per consecutive -ve. Each 3rd consecutive -ve earned $10 bonus. Missing/+ve urine reset value to $2.50, only reinstated to previous max after 3 -ve urines.

CBT: matrix model. Mean dose 36 sessions - Thrice weekly 90-min Matrix Model RP groups, based on social learning theory, CBT, psychological and HIV education to teach abstinence and relapse prevention skills.

Placebo.

Group 2 N= 55

Placebo with outpatient.

CBT: matrix model with outpatient. Mean dose 36 sessions - As per CM group.

Two treatment groups received sertraline - only placebo groups (with/without CM) reported in this analysis
'Treatment as usual' fairly intensive
Study quality: 1+

SORENSEN2005

Study Type: RCT (randomised controlled trial)

Blindness: Open

Duration (days): Mean 180

Followup: N/A

Setting: San Francisco General Hospital, US

Notes: Randomisation by computer-generated list

Info on Screening Process: 314 screened, 218 eligible, of whom 82 did not attend baseline interview and 10 were unwilling to participate for other reasons; 126 enrolled.

n= 126

Age: Mean 43

Sex: 97 males 29 females

Diagnosis:
100% opioid dependence by eligibility for/receipt of MMT

Exclusions: - outside age range 18-65
- not currently receiving medical treatment at study sites
- unwilling to enrol in case management or MMT
- less than 2 years' heroin dependence
- fewer than two prior treatment attempts that ended >7 days prior to screening date
- not currently injecting heroin (with confirmatory urinalysis), or used heroin <15 days out of past 30
- unable to provide consent due to psychosis, intoxication, sedation or medical complications
- in police custody or expecting incarceration
- scheduled for or currently engaging in case management or substance misuse treatment

Notes: ETHNICITY: 48% Caucasian, 29% African American, 10% Latino, 2% Asian, 13% other
POPULATION: Dependent opioid users not in treatment

Baseline: (Case management / usual care)
Age first heroin use: 28.7 / 25.0
Years' heroin use: 14.0 / 17.9
Previous treatment episodes: 10.4 / 9.0

Data Used

Reduced risk behaviours

Urinalysis: positive for heroin

Heroin use: times in past month

Engagement in treatment

Notes: Follow-ups at 3 months (during treatment) and 6 months (end of treatment)
Planned frequency of contact not reported

Group 1 N= 32

Case management - Linkage model encouraging client's use of a network of social, medical and drug misuse treatment services: needs assessment, monitoring, planning, accessing resources and advocacy. Variety of settings. Caseload of 15 patients per worker.

Group 2 N= 30

Opioid agonist: MMT (methadone maintenance) - Vouchers redeemable for free MMT for 6 months. Methadone dose titrated to individual needs; monthly drug testing and minimum of 50 minutes counselling per month.

Group 3 N= 32

Case management - As per case management group.

Opioid agonist: MMT (methadone maintenance) - As per voucher group.

Group 4 N= 32

Control: standard care - Interviewer offered to arrange for a consultant to meet participant for a counselling and referral session. Appointment slip for next research interview (3 months).

Study quality: 1+

STEPHENS1994

Study Type: RCT (randomised controlled trial)

Study Description: Therapists blind to contents of alternate treatment and study hypotheses

Type of Analysis: Follow-up completers

Blindness: No mention

Duration (days): Mean 84

Followup: 6 months

Setting: US

Notes: RANDOMISATION: Blocked on sex

Info on Screening Process: 382 screened, 85 excluded (73 recently misused alcohol or other drugs, 9 used cannabis fewer than 50 times in past 90 days, 2 currently in other treatment, 1 psychotic). Of 297 eligible, 85 failed to complete baseline assessment.

n= 212

Age: Mean 32 Range 18-65

Sex: 161 males 51 females

Diagnosis:
100% cannabis misuse

Exclusions: Self-reported dependence on alcohol or another drug, or reported adverse consequences and pathological symptoms of use

Notes: PRIMARY DIAGNOSIS: People 'seeking treatment' for cannabis use. Full details in Stephens (1993)
REFERRALS: Media announcements

Baseline: Age of first use: 16.2
Age of daily use: 20.0
Years of use: 15.4
Days of use, past 90 days: 80.7
DAST (drug abuse screening test): 8.88

Data Used
Cannabis use: days in past 3 months
Cannabis use: times per day
Drug and alcohol use: days in past 3 months

Notes: FOLLOW-UP: Baseline, completion, 3 months, 6 months
DROPOUTS: 31% failed to attend >5 sessions

Group 1 N= 106

CBT: RP (relapse prevention) with outpatient. Mean dose 20 sessions - Weekly for first 8 weeks, once per fortnight for next 4 weeks, booster session at 3 months and 6 months afterwards. Groups of 12-15 participants, manual-guided, problem-focused psychoeducational style.

Group 2 N= 106

Control: social support group with outpatient. Mean dose 20 sessions - Weekly for first 8 weeks, once per fortnight for next 4 weeks, booster session at 3 months and 6 months. Getting and giving support, dealing with mood swings, peer experiences. Therapists did not give advice or training but facilitated discussion.

Study quality: 1+

STEPHENS2000

Study Type: RCT (randomised controlled trial)

Blindness: No mention

Duration (days): No mention

Followup: 1, 4, 7 and 13 months

Setting: US

Info on Screening Process: 601 screened, 183 excluded (cannabis used <50 times in 90 days (n=24), alcohol or other drug misuse in last 90 days (n=149), severe psychological distress (n=8), other formal treatment (n=2)). Of eligible sample, 127 didn't complete pre-treatment session.

n= 291

Age: Mean 34

Sex: 224 males 67 females

Diagnosis: Not given

Exclusions: - cannabis used <50 times in last 90 days
- alcohol or other drug misuse in last 90 days
- severe psychological distress
- receiving other formal treatment

Baseline: Years of use = 17.35 (5.21), days of use past 90 days = 74.64 (18.54)

Data Used
Cannabis use: days in past 3 months

Notes: DROPOUTS: CBT = 19%, MI (motivational interviewing) = 8%, waitlist = 8%

Group 1 N= 117

CBT: group RP (relapse prevention) with outpatient - 14 x 2-hour CBT: RP group sessions over an 18-week period. Sessions 1-10 weekly, 11-14 every other week. Weeks 1-4 involved building motivation for change and high-risk situations identified, 5-10 building coping skills, 11-14 coping with rationalisations.

Group 2 N= 88

AMI (adapted motivational interviewing): MI with outpatient - Two 90-min individual sessions. Involved MI (e.g. reflective listening, affirmation and reframing) and CBT techniques (identifying high-risk situations). Second session (1 month after) reviewed previous session and feedback received.

Group 3 N= 86

Control: waitlist with outpatient - Waitlist of 4 months until treatment.

Study quality: 1+

STEPHENS2002

Study Type: RCT (randomised controlled trial)

Blindness: Not given

Duration (days): Not given

Followup: 4 and 9 months

Setting: Three US urban areas

Notes: RANDOMISATION: Conducted centrally at the the Center for Substance Abuse Treatment using urn randomisation programme.

Info on Screening Process: 1211 screened, 398 excluded (dependence on other drugs (31%), unwilling to accept random assignment (21%), currently receiving therapy (20%), did not provide contact person (20%), legal status (16%)); 363 eligible but did not complete assessment.

n= 450

Age: Mean 36

Sex: 306 males 144 females

Diagnosis:
100% cannabis dependence by DSM-IV

Exclusions: - <18 years
- dependence on other drugs or alcohol
- inability to provide a person who could assist in contact at follow-up
- legal status that would disrupt treatment
- currently receiving therapy

Notes: Ethnicity: White = 69.3%, Hispanic = 17.3%, African American = 12.2%, Other = 1.1%

Baseline: Proportion of days drug used in last 90 days = 0.88, hours high per day = 6.62, ounces of cannabis per

Data Used
Cannabis use: days in past 3 months
Abstinence: no use for 3 months

Notes: DROPOUTS: MI (motivational interviewing) = 18/146 (12.3%), CBT = 23/156 (15%), waitlist =11/148 (7.5%)

Group 1 N= 148

Control: waitlist with outpatient

Group 2 N= 146

AMI (adapted motivational interviewing): MI with outpatient - Two 1-hour sessions 1 and 5 weeks after randomisation. Discussed a personal feedback report to motivate participant to make changes -- attitudes favouring and opposing change, treatment goals etc; in second session efforts to reduce cannabis use reviewed.

Study quality: 1+

	week = 0.40, number of joints per day = 2.89		**Group 3 N= 156** CBT: coping skills training with outpatient - nine sessions over a 12-week period. First 8 sessions weekly, 9th session four weeks after 8th session to review changes. Combined motivational aspects with CBT and case management.	
STRATHDEE2006				
Study Type: RCT (randomised controlled trial) Type of Analysis: ITT Blindness: Open Duration (days): Not given Followup: 7 days Setting: 10 needle exchange programme (NEP) sites in Baltimore, US Notes: Randomisation is by site but counterbalanced acrossed two recruitment phases. Info on Screening Process: 247 invited; 245 consented, completed baseline interview and randomised.	n= 245 Age: Mean 42 Sex: 169 males 76 females Diagnosis: 100% IDU (injection drug use) by current participation in treatment Exclusions: All except IDUs requesting referral at NEP Notes: 77% African American Baseline: (Control / case management) Prior treatment or detox: 25% / 22% Employed: 8% / 9% HIV+: 21% / 17% ASI composite score: 0.09 / 0.12	**Data Used** Engagement in treatment Notes: Followed up 7 days after referral session	**Group 1 N= 117** Control: standard care with outpatient - Received only a voucher printed with date/time of intake appointment in accordance with standard operating procedures at Baltimore NEP. **Group 2 N= 128** Case management with outpatient - Brief case management: developing collaborative relationship; assessment of client strengths and building upon them; identifying goals and linkage to services to address those goals. Duration/frequency of contact driven by client needs.	Study quality: 1+
WALDRON2001				
Study Type: RCT (randomised controlled trial) Type of Analysis: ITT, missing values estimated via regression Blindness: No mention Duration (days): Mean 120 Followup: 3 months Setting: US Notes: Urn randomisation balanced on sex, age, level of drug use, ethnicity, psychiatric severity and family constitution Info on Screening Process: 235 screened > 115 excluded > 120 randomised and completed >=1 session	n= 120 Age: Mean 16 Sex: 96 males 24 females Diagnosis: 100% drug misuse (non-alcohol) by DSM-IV Exclusions: - Age outside 13-17 range - Not living with a primary caretaker who's willing to participate - Need services other than outpatient treatment (e.g. dangerous to self or others, requires detox) - Evidence of a psychotic or organic state - Sibling taking part in study Notes: REFERRALS: Most mandated to treatment by court order, probation or schools Baseline: (GROUPS: FFT / CBT / FFT+CBT / Group ed) % days drug use: 56.3 / 55.6 / 59.9 / 68.1 Age at first use: 12.13 / 11.97 / 11.10 / 11.53 Number of offences: 1.18 / 0.97 / 0.93 / 1.48 Number of comorbid diagnoses: 0.75 / 1.59 / 1.76 / 1.33	**Data Used** Completion rate Drug use: clinically significant reduction Abstinence: percentage of days Abstinence: used on <10% of days Notes: FOLLOWUPS: Pre/post, 3 months	**Group 1 N= 30** FI: FFT (functional family therapy) - 12 sessions. Aims to alter dysfunctional family patterns contributing to adolescent drug use. Phase 1: engaging, motivating change Phase 2: behavioural changes in the family. **Group 2 N= 29** FI: FFT (functional family therapy) - 12 sessions. Aims to alter dysfunctional family patterns contributing to adolescent drug use. Phase 1: engaging, motivating change Phase 2: behavioural changes in the family. CBT: coping skills training - 10 sessions modelled on Project MATCH, designed to teach self-control and coping skills useful in avoiding drug use. Includes communication, problem solving, peer refusal, mood management, social support and relapse prevention. AMI: MET (motivational enhancement therapy) - two sessions at start. Nonconfrontational strategies to maximise motivation for change, prioritise and plan treatment goals, and enhance self-efficacy. **Group 3 N= 30** Psychoeducation - Information about drugs and alcohol, expectancies and consequences of substance use, alternatives. Some skills training; but more strucutured and focused on group participation and sharing of experiences, less on individual skill building in CBT.	All interventions manualised and videotaped

Group 4 N= 31

CBT: coping skills training - 10 sessions modelled on Project MATCH, designed to teach self-control and coping skills useful in avoiding drug use. Includes communication, problem solving, peer refusal, mood management, social support and relapse prevention

AMI: MET (motivational enhancement therapy) - two sessions at start. Nonconfrontational strategies to maximise motivation for change, prioritise and plan treatment goals, and enhance self-efficacy.

WINTERS2002

Study Type: RCT (randomised controlled trial)

Type of Analysis: ITT (missing data imputed)

Blindness: Open

Duration (days): Mean 168

Followup: Every 3 months for 12 months

Setting: Two outpatient clinics in northeastern US

Notes: Randomisation method not reported; women were randomised alongside their male partners.

Info on Screening Process: 277 couples screened; 246 agreed to be interviewed; 171 excluded (male partner also misused drugs); 75 couples randomised.

n= 75

Age: Mean 33

Sex: all females

Diagnosis:
100% drug misuse (non-alcohol) by DSM-IV

Exclusions: - age outside range 20-60
- not married >=1 year or stable cohabiting >=2 years
- primary substance was alcohol
- undergoing MMT and/or seeking treatment for adjunctive outpatient support
- male partner met DSM-IV criteria for psychoactive substance use disorder in past 6 months
- either partner met DSM-IV critera for an organic mental disorder, schizophrenia and other psychotic disorders

Notes: PRIMARY DRUG: 8% cannabis, 52% cocaine, 28% opioids, 12% other
ETHNICITY: 69% White, 24% African American, 7% Hispanic

Baseline: Groups: BCT / CBT
Years' problematic alcohol use: 8.0 (5.0) / 7.7 (4.3)
Years' cannabis use: 6.0 (2.8) / 6.2 (4.4)
Years' cocaine use: 5.1 (3.6) / 5.4 (2.1)
Years' opioid use: 4.5 (3.9) / 5.0 (4.2)
Years' cocaine use: 5.1 (3.6) / 5.4 (2.1)
Years' opioid use: 4.5 (3.9) / 5.0 (4.2)

Data Used

Abstinence: % with negative urine sample per day

Urinalysis: positive for any drug

Notes: FOLLOW-UPS: 3, 6, 9 and 12 months
DROPOUTS: 3% BCT, 5% CBT

Group 1 N= 37

CBT: coping skills training with outpatient. Mean dose 24 weeks - Weekly 60-minute individual and 90-min group counselling sessions which did not include partners, based on Carroll model: avoiding exposure, understanding consequences, identifying high-risk situations, coping with craving, refusal skills etc.

FI: BCT (behavioural couples therapy) with outpatient. Mean dose 24 weeks - Couples met conjointly with therapist for weekly 60-min sessions, focusing on the woman's drug use: sobriety contract, effective communication skills, increasing positive behavioural exchanges. O'Farrell & Fals-Stewart model.

Group 2 N= 38

CBT: coping skills training with outpatient. Mean dose 24 weeks - 24 weekly 60-min individual and 90-min group counselling sessions which did not include partners, based on Carroll model: avoiding exposure, understanding consequences, identifying high-risk situations, coping with craving, refusal skills etc.

Study quality: 1+

ZANIS1996

Study Type: RCT (randomised controlled trial)

Blindness: Open

Duration (days): Not given

Followup: 2 weeks

Setting: Veterans Adminstration methadone clinic, Philadelphia, US

Info on Screening Process: 85 interviewed, 37 already re-enrolled onto MMT, 7 reported no drug use in past month, 41 randomised

n= 41

Age: Mean 41 Range 26-67

Sex: all males

Diagnosis:
100% opioid dependence by eligibility for/receipt of MMT

Exclusions: - did not previously drop out of MMT
- currently in MMT

Notes: ETHNICITY: 51% African American, 44% Caucasian, 5% Latino
POPULATION: Patients discharged from MMT programme, relapsed into drug use and not currently in treatment

Baseline: 83% used opioids at least 25 days in previous month

Data Used

Engagement in treatment

Group 1 N= 27

Case management with outpatient. Mean dose 2 weeks - 15-min session to assess problems and needs, establish rapport, motivate clients into engaging in treatment, identify & refer clients to services, cover brief problem solving strategies and plan treatment. Ongoing support phone calls over following 2 weeks.

Group 2 N= 14

Control: standard care with outpatient - Clients given contact details of treatment admissions coordinator and instructed to walk to next building to register for services. No further contact over next 2 weeks.

Study quality: 1+

ZANIS2001

Study Type: RCT (randomised controlled trial)

Study Description: Randomisation: 3:2 ratio experimental to control

Type of Analysis: completers

Blindness: No mention

Duration (days): Not given

Followup: 6 month

Setting: US
Outpatient

Info on Screening Process: 109 voluntarily recruited from two MMT programs recruited

n= 109

Age: Mean 43 Range 24-67

Sex: 66 males 43 females

Diagnosis: Not given

Exclusions: - Currently employed/working more than 10 hours per week
- Not stabilised on methadone
- Currently enrolled on MMT programme less than 3 months
- no interest or capacity to workat least 20 hours per week
- not actively seeking treatment as defined by Bureau of Labour Statistics

Notes: ETHNICITY: White 37.5%; Black 61.5%; Hispanic 2%

Baseline:

	Experimental	Control
High School diploma	66%	53%
Employed	25%	19%
Married	20%	13%
Divorced	36%	38%
Single	34%	43%
Widowed	10%	6%
Previous hospitalisation	37%	47%
Incarcerated>30 days	50%	49%
Currently on probation	10%	9%
Illegal activity in past 30 days	23%	21%

Data Used

Employment at follow-up

ASI (Addiction Severity Index)

Data Not Used

TSR (Treatment services review)

VEA (Vocational/Educational assessement

Notes: All participants rec'd 30-min counseling session each week as part of standard treatment services, focused on generic drug counselling issues
Outcomes taken at baseline, biweekly for 12 weeks and at 6 months post baseline plus independent urine samples

Group 1 N= 62

Vocational problem solving - Ten 30-60 minute session over 12 weeks. Aims 1) help participants understand why they want to work 2) how to overcome barriers 3) set realistic vocational goals 4) help locate job opportunities 5) take appropriate actoions to obtain work

Group 2 N= 47

IPT: interpersonal problem solving - Ten 30-60 minute session over 12 weeks. Aim: 1) reduce/eliminate illicit drug use/maintain abstinence plan 2) understand utility of social supports in recovery 3) examine un/successful attempts at recovery 4) get realistic recovery plans 5) do activities.

Study quality 1+

Characteristics of Excluded Studies

Reference ID	Reason for Exclusion
AZRIN1994	Did not meet criteria for adequate study quality
BARROWCLOUGH2001A	No indication that drug misuse is primary focus
BOWMAN1996	No drug-use outcomes
BUDNEY2000	n<10 per group
CHUTUAPE1999	n<10 per group
CONRAD1998	No extractable data
COVI2002	Not required comparison
COVIELLO2004	No drug-use outcomes
CZUCHRY1995	Not required outcomes
DANSEREAU1995	No relevant outcomes
EISEN2000	Not an RCT
ELK1998	n <10 per arm
FISHER1996A	Sample sizes not reported (appears to be <10 in each group)
FRIEDMAN1989	No extractable outcome data
GAINEY1995	Sample size not reported No relevant outcomes
GOTTHEIL2002	Not required comparison
HALL1999	No extractable outcomes
HENGGELER1991	Unclear what proportion of sample were misusing drugs Intervention not specifically targeted at drug misuse
HENGGELER2006	Mean age < 15.5
HIEN2004A	Comorbid PTSD

HIGGINS1991	Not relevant intervention; poor-quality study
HIGGINS2000	No extractable outcomes
HOFFMAN1996	No details of how many participants assigned to each group
HUBER2003	No relevant drug-use outcomes
JANSSON2005	Pregnant women
JOE1994	Analysis performed on subgroup only
JOE1997	sub-group analysis only
KAMINER2002	Mean age = 15
KANG1991	Data not broken down by group
KASHNER2002	No work outcomes reported
KATZ2002	Not required comparison
KIDORF1994	Small sample size
KIRBY1998	Not required comparison
KIRBY1999	n in each group not reported
LEWIS1990	Unlikely that majority of sample were drug users
LIDDLE2004	Mean age <= 15.5
LINEHAN1999A	Primary focus not drug misuse (borderline personality disorder)
MCCOLLUM2003	No extractable outcome data
MCKAY1997	Alcohol misuse primary problem
MEYERS2002	Intervention not for service users
MILBY1979	Pre-1980
MILBY1980A	Not applicable to current treatment
NURCO1995	Not required outcomes
ONEILL1996	No drug use outcomes
PETRY1998	No relevant outcomes
POLLACK2002	Women and men analysed separately - not extractable
PRESTON2001B	Not relevant comparison
ROHSENOW2004	Outcomes not reported by assigned groups
ROOZEN2003	Not an RCT
ROSENBLUM2005A	Not required comparison
ROSENBLUM2005B	Not required comparison
ROWANSZAL1994	No extractable outcomes
SANTISTEBAN2003	Drug misuse not a specific inclusion criterion - only 52% of sample used drugs or alcohol, only only 30% used cannabis in past month
SCHMITZ2005A	No placebo group therefore cannot use CBT comparison
SIEGAL1996	No drug-use outcomes
SIEGAL1997	Only case management outcomes reported (cluster analysis)
SIGMON2004	Control group data not extractable
SILVERMAN1999	Comparing different schedules of CM
SLESNICK2005	Young age group 12-17 years old, no extractable outcome data
SOSIN1995	Regression analysis - not extractable
STAINES2004	No drug-use outcomes
STEPHENS2000	Brief versus standard comparison
SZAPOCZNIK1983	No extractable outcome data
THORNTON1987	Not relevant intervention

THORNTON1998	Subgroup analysis
THORNTON2003	No extractable data
TRIFFLEMAN2000	No treatment comparison data
VAUGHANSARRAZIN2000	No extractable outcomes
VAUGHANSARRAZIN2004	No extractable outcomes
WASHINGTON1999	Not an RCT
WASHINGTON2001	No drug-use outcomes
WONG2003	Not required outcomes
ZIEGLERDRISCOLL1977	Insufficient reporting of methdology

References of Included Studies

BROWN2002 (Published Data Only)

Brown, T.G., Seraganian, P., Tremblay, J., et al. (2002) Matching substance abuse aftercare treatments to client characteristics. Addictive Behaviors, 27, 585-604.

*Brown, T.G., Seraganian, P., Tremblay, J., et al. (2002) Process and outcome changes with relapse prevention versus 12-step aftercare programs for substance abusers. Addiction, 97, 677-689.

BUDNEY2006 (Published Data Only)

Budney, A.J., Moore, B.A., Rocha, H.L., et al. (2006) Clinical trial of abstinence-based vouchers and cognitive-behavioral therapy for cannabis dependence. Journal of Consulting and Clinical Psychology, 74, 307-316.

CARROLL1991 (Published Data Only)

Carroll, K.M., Rounsaville, B.J. & Gawin, F.H. (1991) A comparative trial of psychotherapies for ambulatory cocaine abusers: relapse prevention and interpersonal psychotherapy. American Journal of Drug and Alcohol Abuse, 17, 229-247.

CARROLL1994 (Published Data Only)

Carroll, K. M., Rounsaville, B. J., Nich, C., et al. (1995) Integrating psychotherapy and pharmacotherapy for cocaine dependence: results from a randomized clinical trial. NIDA Research Monograph, 150, 19-35.

Carroll, K. M., Nich, C. & Rounsaville, B. J. (1997) Contribution of the therapeutic alliance to outcome in active versus control psychotherapies. Journal of Consulting and Clinical Psychology, 65, 510-514.

Carroll, K. M., Rounsaville, B. J., Nich, C., et al. (1994) One-year follow-up of psychotherapy and pharmacotherapy for cocaine dependence. Delayed emergence of psychotherapy effects. Archives of General Psychiatry, 51, 989-997.

*Carroll, K. M., Rounsaville, B. J., Gordon, L. T., et al. (1994) Psychotherapy and pharmacotherapy for ambulatory cocaine abusers. Archives of General Psychiatry, 51, 177-187.

CARROLL1998 (Published Data Only)

*Carroll, K. M., Nich, C., Ball, S. A., et al. (1998) Treatment of cocaine and alcohol dependence with psychotherapy and disulfiram. Addiction, 93, 713-727.

Carroll, K. M., Nich, C., Ball, S. A., et al. (2000) One-year follow-up of disulfiram and psychotherapy for cocaine-alcohol users: sustained effects of treatment. Addiction, 95, 1335-1349.

CARROLL2006B (Published Data Only)

Carroll, K.M., Easton, C.J., Nich, C., et al. (2006) The use of contingency management and motivational/skills-building therapy to treat young adults with marijuana dependence. Journal of Consulting and Clinical Psychology, 74, 955-966.

CHUTUAPE2001 (Published Data Only)

Chutuape, M.A., Silverman, K. & Stitzer, M.L. (2001) Effects of urine testing frequency on outcome in a methadone take-home contingency program. Drug and Alcohol Dependence, 62, 69-76.

COVIELLO2006 (Published Data Only)

Coviello, D.M., Zanis, D.A., Wesnoski, S.A., et al. (2006) The effectiveness of outreach case management in re-enrolling discharged methadone patients. Drug and Alcohol Dependence, 85, 56-65.

CRITSCHRISTOPH1999 (Published Data Only)

Weiss, R.D., Griffin, M.L., Gallop, R.J., et al. (2005) The effect of 12-step self-help group attendance and participation on drug use outcomes among cocaine-dependent patients. Drug and Alcohol Dependence, 77, 177-184.

*Crits-Christoph, P., Siqueland, L., Blaine, J., et al. (1999) Psychosocial treatments for cocaine dependence: National Institute on Drug Abuse Collaborative Cocaine Treatment Study. Archives of General Psychiatry, 56, 493-502.

DENNIS2004 (Published Data Only)

Dennis, M., Titus, J. C., Diamond, G., Donaldson, J., et al. (2002) The Cannabis Youth Treatment (CYT) experiment: rationale, study design and analysis plans. Addiction, 97, Suppl 1, 16-34.

**Dennis, M., Godley, S. H., Diamond, G., et al. (2004) The Cannabis Youth Treatment (CYT) Study: main findings from two randomized trials. Journal of Substance Abuse Treatment, 27, 197-213.

FALSSTEWART1996 (Published Data Only)

Fals-Stewart, W., Birchler, G.R. & O'Farrell, T.J. (1996) Behavioral couples therapy for male substance-abusing patients: effects on relationship adjustment and drug-using behavior. Journal of Consulting and Clinical Psychology, 64, 959-972.

FINNEY1998 (Published Data Only)

Finney, J.W., Noyes, C.A., Coutts, A. I., et al. (1998) Evaluating substance abuse treatment process models: I. Changes on proximal outcome variables during 12-step and cognitive-behavioral treatment. Journal of Studies on Alcohol, 59, 371-380.

HALL1977 (Published Data Only)

Hall, S. M., Loeb, P., Norton, J. & Yang, R. (1977) Improving vocational placement in drug treatment clients: a pilot study. Addictive Behaviors, 2, 227-234.

HENGGELER1999 (Published Data Only)

*Henggeler, S. W., Pickrel, S. G. & Brondino, M. J. (1999) Multisystemic treatment of substance-abusing and dependent delinquents: outcomes, treatment fidelity, and transportability. Mental Health Services Research, 1, 171-184.

Henggeler, S. W., Pickrel, S. G., Brondino, M. J., et al. (1996). Eliminating (almost) treatment dropout of substance abusing or dependent delinquents through home-based multisystemic therapy. American Journal of Psychiatry, 153, 427-428.

HIGGINS1993 (Published Data Only)

*Higgins, S.T., Budney, A.J., Bickel, W.K., et al. (1993) Achieving cocaine abstinence with a behavioral approach. American Journal of Psychiatry, 150, 763-769.

Higgins, S.T., Budney, A.J., Bickel, W.K., et al. (1995) Outpatient behavioral treatment for cocaine dependence: one-year outcome. Experimental and Clinical Psychopharmacology, 3, 205-212

HIGGINS1994 (Published Data Only)

Higgins, S.T., Badger, G.J. & Budney, A.J. (2000) Initial abstinence and success in achieving longer term cocaine abstinence. Experimental and Clinical Psychopharmacology, 8, 377-386.

*Higgins, S.T., Budney, A.J., Bickel, W.K., et al. (1994) Incentives improve outcome in outpatient behavioral treatment of cocaine dependence. Archives of General Psychiatry, 51, 568-576.

JONES2004 (Published Data Only)

Jones, H.E., Johnson, R.E., Bigelow, G.E., et al. (2004) Safety and efficacy of L-tryptophan and behavioral incentives for treatment of cocaine dependence: a randomized clinical trial. American Journal on Addictions, 13, 421-437.

KADDEN2006 (Published Data Only)

Kadden, R.M., Litt, M.D., Kabela-Cormier, E., et al. (2006) Abstinence rates following behavioral treatments for marijuana dependence. Addictive Behaviors, 20 Sept 2006 (Epub ahead of print].

KELLEY2002 (Published Data Only)

Kelley, M.L. & Fals-Stewart, W. (2002) Couples- versus individual-based therapy for alcohol and drug abuse: effects on children's psychosocial functioning. Journal of Consulting & Clinical Psychology, 70, 417-427.

LATIMER2003 (Published Data Only)

Latimer, W. W., Winters, K. C., D'Zurilla, T., et al. (2003) Integrated family and cognitive-behavioral therapy for adolescent substance abusers: a stage I efficacy study. Drug and Alcohol Dependence, 71, 303-317.

LIDDLE2001 (Published Data Only)

Liddle, H. A., Dakof, G. A., Parker, K., et al. (2001) Multidimensional family therapy for adolescent drug abuse: results of a randomized clinical trial. American Journal of Drug and Alcohol Abuse, 27, 651-688.

MARTIN1993 (Published Data Only)

Martin, S.S. & Scarpitti, F.R. (1993) An intensive case management approach for paroled IV drug users. Journal of Drug Issues, 23, 43-59.

MAUDEGRIFFIN1998 (Published Data Only)

Maude-Griffin, P.M., Hohenstein, J.M., Humfleet, G.L., et al. (1998) Superior efficacy of cognitive-behavioral therapy for urban crack cocaine abusers: main and matching effects. Journal of Consulting and Clinical Psychology, 66, 832-837.

MCKAY2004 (Published Data Only)

McKay, J.R., Lynch, K.G., Shepard, D.S., et al. (2005) The effectiveness of telephone-based continuing care for alcohol and cocaine dependence: 24-month outcomes. Archives of General Psychiatry, 62, 199-207.

McKay, J.R., Lynch, K.G., Shepard, D.S., et al. (2005) Do patient characteristics and initial progress in treatment moderate the effectiveness of telephone-based continuing care for substance use disorders? Addiction, 100, 216-226.

*McKay, J.R., Lynch, K.G., Shepard, D.S., et al. (2004) The effectiveness of telephone-based continuing care in the clinical management of alcohol and cocaine use disorders: 12-month outcomes. Journal of Consulting and Clinical Psychology, 72, 967-979.

MEJTA1997 (Published Data Only)

Mejta, C.L., Bokos, P.J., Mickenberg, J., et al. (1997) Improving substance abuse treatment access and retention using a case management approach. Journal of Drug Issues, 27, 329-340.

MONTI1997 (Published Data Only)

Monti, P.M., Rohsenow, D.J., Michalec, E., et al. (1997) Brief coping skills treatment for cocaine abuse: substance use outcomes at three months. Addiction, 92, 1717-1728.

Rohsenow, D.J., Monti, P.M., Martin, R.A., et al. (2000) Brief coping skills treatment for cocaine abuse: 12-month substance use outcomes. Journal of Consulting and Clinical Psychology, 68, 515-520.

*Monti, P.M., Rohsenow, D.J., Michalec, E., et al. (1997) Brief coping skills treatment for cocaine abuse: substance use outcomes at three months. Addiction, 92, 1717-1728.

MORGENSTERN2006 (Published Data Only)

Morgenstern, J., Blanchard, K.A., McCrady, B.S., et al. (2006) Effectiveness of intensive case management for substance-dependent women receiving temporary assistance for needy families. American Journal of Public Health, 96, 2016-2023.

NEEDELS2005 (Published Data Only)

Needels, K., James-Burdumy, S. & Burghardt, J. (2005) Community case management for former jail inmates: its impacts on rearrest, drug use, and HIV risk. Journal of Urban Health, 82, 420-433.

PETRY2002 (Published Data Only)

Petry, N.M. & Martin, B. (2002) Low-cost contingency management for treating cocaine- and opioid-abusing methadone patients. Journal of Consulting and Clinical Psychology, 70, 398-405.

PETRY2004 (Published Data Only)

Lewis, M. W. & Petry, N. M. (2005). Contingency management treatments that reinforce completion of goal-related activities: participation in family activities and its association with outcomes. Drug and Alcohol Dependence, 79, 267-271.

*Petry, N.M., Tedford, J., Austin, M., et al. (2004) Prize reinforcement contingency management for treating cocaine users: how low can we go, and with whom? Addiction, 99, 349-360.

PETRY2005A (Published Data Only)

Petry, N.M., Peirce, J.M., Stitzer, M.L., et al. (2005) Effect of prize-based incentives on outcomes in stimulant abusers in outpatient psychosocial treatment programs: a national drug abuse treatment clinical trials network study. Archives of General Psychiatry, 62, 1148-1156.

PETRY2005B (Published Data Only)

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

PETRY2006 (Published Data Only)

Petry, N.M., Alessi, S.M., Carroll, K.M., et al. (2006) Contingency management treatments: reinforcing abstinence versus adherence with goal-related activities. Journal of Consulting and Clinical Psychology, 74, 592-601.

RAWSON2006 (Published Data Only)

Rawson, R.A., McCann, M.J., Flammino, F., et al. (2006) A comparison of contingency management and cognitive-behavioral approaches for stimulant-dependent individuals. Addiction, 101, 267-274.

ROLL2006 (Published Data Only)

Roll, J.M., Petry, N.M., Stitzer, M.L., et al. (2006) Contingency management for the treatment of methamphetamine use disorders. American Journal of Psychiatry, 163, 1993-1999.

SALEH2002 (Published Data Only)

Saleh, S.S., Vaughn, T., Hall, J., et al. (2002) Effectiveness of case management in substance abuse treatment. Care Management Journals: Journal of Case Management, The Journal of Long Term Home Health Care, 3, 172-177.

SHOPTAW2005 (Published Data Only)

Shoptaw, S., Reback, C.J., Peck, J.A., et al. (2005) Behavioral treatment approaches for methamphetamine dependence and HIV-related sexual risk behaviors among urban gay and bisexual men. Drug and Alcohol Dependence, 78, 125-134.

SHOPTAW2006 (Published Data Only)

Shoptaw, S., Huber, A., Peck, J., et al. (2006) Randomized, placebo-controlled trial of sertraline and contingency management for the treatment of methamphetamine dependence. Drug and Alcohol Dependence, 85, 12-18.

SORENSEN2005 (Published Data Only)

Sorensen, J.L., Masson, C.L., Delucchi, K., et al. (2005) Randomized trial of drug abuse treatment-linkage strategies. Journal of Consulting and Clinical Psychology, 73, 1026-1035.

STEPHENS1994 (Published Data Only)

*Stephens, R.S., Roffman, R.A., & Simpson, E.E. (1994) Treating adult marijuana dependence: a test of the relapse prevention model. Journal of Consulting and Clinical Psychology, 62, 92-99.

Stephens, R.S., Wertz, J.S. & Roffman, R.A. (1995) Self-efficacy and marijuana cessation: a construct validity analysis. Journal of Consulting and Clinical Psychology, 63, 1022-1031.

STEPHENS2000 (Published Data Only)

Stephens, R.S., Roffman, R.A. & Curtin, L. (2000) Comparison of extended versus brief treatments for marijuana use. Journal of Consulting and Clinical Psychology, 68, 898-908.

STEPHENS2002 (Published Data Only)

Stephens, R.S., Babor, T.F., Kadden, R., et al. (2002) The Marijuana Treatment Project: rationale, design and participant characteristics. Addiction, 97, Suppl 1, 109-124.

STRATHDEE2006 (Published Data Only)

Strathdee, S.A., Ricketts, E.P., Huettner, S., et al. (2006) Facilitating entry into drug treatment among injection drug users referred from a needle exchange program: results from a community-based behavioral intervention trial. Drug and Alcohol Dependence, 83, 225-232.

WALDRON2001 (Published Data Only)

Waldron, H. B., Slesnick, N., Brody, J. L., et al.. (2001) Treatment outcomes for adolescent substance abuse at 4- and 7-month assessments. Journal of Consulting and Clinical Psychology, 69, 802-813.

WINTERS2002 (Published Data Only)

Winters, J., Fals-Stewart, W., O'Farrell, T.J., et al. (2002) Behavioral couples therapy for female substance-abusing patients: effects on substance use and relationship adjustment. Journal of Consulting and Clinical Psychology, 70, 344-355.

ZANIS1996 (Published Data Only)

Zanis, D.A., McLellan, A.T., Alterman, A.I., et al. (1996) Efficacy of enhanced outreach counseling to reenroll high-risk drug users 1 year after discharge from treatment. American Journal of Psychiatry, 153, 1095-1096.

ZANIS2001 (Published Data Only)

Zanis, D. A., Coviello, D., Alterman, A. I., et al. (2001) A community-based trial of vocational problem-solving to increase employment among methadone patients. Journal of Substance Abuse Treatment, 21, 19-26.

References of Excluded Studies

AZRIN1994 (Published Data Only)

Azrin, N.H., McMahon, P.T., Donohue, B., et al. (1994) Behavior therapy for drug abuse: a controlled treatment outcome study. Behaviour Research and Therapy, 32, 857-866.

BARROWCLOUGH2001A

Barrowclough, C., Haddock, G., Tarrier, N., et al. (2001) Randomized controlled trial of motivational interviewing, cognitive behavior therapy, and family intervention for patients with comorbid schizophrenia and substance use disorders. American Journal of Psychiatry, 158, 1706-1713.

BOWMAN1996

Bowman, V., Ward, L.C., Bowman, D., et al. (1996) Self-examination therapy as an adjunct treatment for depressive symptoms in substance abusing patients. Addictive Behaviors, 21, 129-133.

BUDNEY2000 (Published Data Only)

Budney, A.J., Higgins, S.T., Radonovich, K.J., et al. (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.

CHUTUAPE1999 (Published Data Only)

Chutuape, M.A., Silverman, K. & Stitzer, M. (1999) Contingent reinforcement sustains post-detoxification abstinence from multiple drugs: a preliminary study with methadone patients. Drug and Alcohol Dependence, 54, 69-81.

CONRAD1998 (Published Data Only)

Conrad, K.J., Hultman, C.I., Pope, A.R., et al. (1998) Case managed residential care for homeless addicted veterans. Results of a true experiment. Medical Care, 36, 40-53.

COVI2002 (Published Data Only)

Covi, L., Hess, J.M., Schroeder, J.R., et al. (2002) A dose response study of cognitive behavioral therapy in cocaine abusers. Journal of Substance Abuse Treatment, 23, 191-197.

COVIELLO2004 (Published Data Only)

Coviello, D.M., Zanis, D.A. & Lynch, K. (2004) Effectiveness of vocational problem-solving skills on motivation and job-seeking action steps. Substance Use and Misuse, 39, 2309-2324.

CZUCHRY1995

Czuchry, M., Dansereau, D.F., Dees, S.M., et al. (1995) The use of node-link mapping in drug abuse counseling: the role of attentional factors. Journal of Psychoactive Drugs, 27, 161-166.

DANSEREAU1995 (Published Data Only)

Dansereau, D.F., Joe, G.W. & Simpson, D.D. (1995) Attentional difficulties and the effectiveness of a visual representation strategy for counseling drug-addicted clients. International Journal of the Addictions, 30, 371-386.

EISEN2000

Eisen, M., Keyser-Smith, J., Dampeer, J., et al. (2000) Evaluation of substance use outcomes in demonstration projects for pregnant and postpartum women and their infants: findings from a quasi-experiment. Addictive Behaviors, 25, 123-129.

ELK1998 (Published Data Only)

Elk, R., Mangus, L., Rhoades, H., et al. (1998) Cessation of cocaine use during pregnancy: effects of contingency management interventions on maintaining abstinence and complying with prenatal care. Addictive Behaviors, 23, 57-64.

FISHER1996A (Published Data Only)

Fisher, M.S.S. & Bentley, K.J. (1996) Two group therapy models for clients with a dual diagnosis of substance abuse and personality disorder. Psychiatric Services, 47, 1244-1250.

FRIEDMAN1989

Friedman, A. S. (1989). Family therapy vs parent groups: effects on adolescent drug abusers. American Journal of Family Therapy, 17, 335-347.

GAINEY1995 (Published Data Only)

Gainey, R.R., Catalano, R.F., Haggerty, K.P., et al. (1995) Participation in a parent training program for methadone clients. Addictive Behaviors, 20, 117-125.

GOTTHEIL2002 (Published Data Only)

Gottheil, E., Thornton, C. & Weinstein, S. (2002) Effectiveness of high versus low structure individual counseling for substance abuse. American Journal on Addictions, 11, 279-290.

HALL1999 (Published Data Only)

Hall, J.A., Vaughan, M.S., Vaughn, T., et al. (1999) Iowa Case Management for Rural Drug Abuse: preliminary results. Care Management Journals: Journal of Case Management, The Journal of Long Term Home Health Care, 1, 232-243.

HENGGELER1991

Henggeler et al. (1991) Effects of multisystemic therapy on drug use and abuse in juvenile offenders: a progress report from two outcome studies. Family Dynamics of Addiction Quarterly, 1, 40-51.

HENGGELER2006

Henggeler, S. W., Halliday-Boykins, C. A., Cunningham, P. B., Randall, J., Shapiro, S. B., & Chapman, J. E. (2006). Juvenile drug court: enhancing outcomes by integrating evidence-based treatments. Journal of Consulting & Clinical Psychology., 74, 42-54.

HIEN2004A (Published Data Only)

Hien, D.A., Cohen, L.R., Miele, G.M., et al. (2004) Promising treatments for women with comorbid PTSD and substance use disorders. American Journal of Psychiatry, 161, 1426-1432.

HIGGINS1991 (Published Data Only)

Higgins, S.T., Delaney, D.D., Budney, A.J., et al. (1991) A behavioral approach to achieving initial cocaine abstinence. American Journal of Psychiatry, 148, 1218-1224.

HIGGINS2000 (Published Data Only)

Higgins, S.T., Wong, C.J., Badger, G.J., et al. (2000) Contingent reinforcement increases cocaine abstinence during outpatient treatment and 1 year of follow-up. Journal of Consulting and Clinical Psychology, 68, 64-72.

HOFFMAN1996

Hoffman, J.A., Caudill, B.D., Koman, J.J., et al. (1996) Psychosocial treatments for cocaine abuse. 12-month treatment outcomes. Journal of Substance Abuse Treatment, 13, 3-11.

HUBER2003

Huber, D.L., Sarrazin, M.V., Vaughn, T., et al. (2003) Evaluating the impact of case management dosage. Nursing Research, 52, 276-288.

JANSSON2005 (Published Data Only)

Jansson, L.M., Svikis, D.S., Breon, D., et al. (2005) Intensity of case management services: does more equal better for drug-dependent women and their children? Social Work in Mental Health, 3, 63-78.

JOE1994 (Published Data Only)

Joe, G.W., Dansereau, D.F. & Simpson, D.D. (1994) Node-link mapping for counseling cocaine users in methadone treatment. Journal of Substance Abuse, 6, 393-406.

JOE1997 (Published Data Only)

Joe, G.W., Dansereau, D.F., Pitre, U., et al. (1997) Effectiveness of node-link mapping enhanced counseling for opiate addicts: a 12-month posttreatment follow-up. Journal of Nervous and Mental Disease, 185, 306-313.

KAMINER2002 (Published Data Only)

Kaminer, Y., Burleson, J.A. & Goldberger, R. (2002) Cognitive-behavioral coping skills and psychoeducation therapies for adolescent substance abuse. Journal of Nervous and Mental Disease, 737-745.

KANG1991 (Published Data Only)

Kang, S.Y., Kleinman, P.H., Woody, G.E., et al. (1991) Outcomes for cocaine abusers after once-a-week psychosocial therapy. American Journal of Psychiatry, 148, 630-635.

KASHNER2002

Kashner, T. M., Rosenheck, R., Campinell, A. B., et al. (2002) Impact of work therapy on health status among homeless, substance-dependent veterans: a randomized controlled trial. Archives of General Psychiatry., 59, 938-944.

KATZ2002 (Published Data Only)

Katz, E.C., Chutuape, M.A., Jones, H.E., et al. (2002) Voucher reinforcement for heroin and cocaine abstinence in an outpatient drug-free program. Experimental and Clinical Psychopharmacology, 10, 136-143.

KIDORF1994 (Published Data Only)

Kidorf, M., Stitzer, M.L., Brooner, R.K., et al. (1994) Contingent methadone take-home doses reinforce adjunct therapy attendance of methadone maintenance patients. Drug and Alcohol Dependence, 36, 221-226.

KIRBY1998 (Published Data Only)

Kirby, K.C., Marlowe, D.B., Festinger, D.S., et al. (1998) Schedule of voucher delivery influences initiation of cocaine abstinence. Journal of Consulting and Clinical Psychology, 66, 761-767.

KIRBY1999 (Published Data Only)

Kirby, K.C., Marlowe, D.B., Festinger, D.S., et al. (1999) Community reinforcement training for family and significant others of drug abusers: a unilateral intervention to increase treatment entry of drug users. Drug and Alcohol Dependence, 56, 85-96.

LEWIS1990

Lewis, R. A., Piercy, F. P., Sprenkle, D. H., et al. (1990) Family-based interventions for helping drug-abusing adolescents. Journal of Adolescent Research, 5, 82-95.

LIDDLE2004 (Published Data Only)

Liddle, H. A., Rowe, C. L., Dakof, G. A., et al. (2004) Early intervention for adolescent substance abuse: pretreatment to posttreatment outcomes of a randomized clinical trial comparing multidimensional family therapy and peer group treatment. Journal of Psychoactive Drugs, 36, 49-63.

LINEHAN1999A (Published Data Only)

Linehan, M.M., Schmidt, H., Dimeff, L.A., et al. (1999) Dialectical behavior therapy for patients with borderline personality disorder and drug-dependence. American Journal on Addictions, 8, 279-292.

MCCOLLUM2003

McCollum, E. E., Lewis, R. A., Nelson, T. S., et al. (2003) Couple treatment for drug abusing women: effects on drug-use and need for treatment. Journal of Couple and Relationship Therapy, 2, 1-18.

MCKAY1997 (Published Data Only)

McKay, J.R., Alterman, A.I., Cacciola, J.S., et al. (2000) Prognostic significance of antisocial personality disorder in cocaine-dependent patients entering continuing care. Journal of Nervous and Mental Disease, 188, 287-296.

McKay, J.R., Merikle, E., Mulvaney, F.D., et al. (2001) Factors accounting for cocaine use two years following initiation of continuing care. Addiction, 96, 213-225.

McKay, J.R., Alterman, A.I., Cacciola, J.S., et al. (1999) Continuing care for cocaine dependence: comprehensive 2-year outcomes. Journal of Consulting and Clinical Psychology, 67, 420-427.

*McKay, J.R., Alterman, A.I., Cacciola, J. S., et al. (1997) Group counseling versus individualized relapse prevention aftercare following intensive outpatient treatment for cocaine dependence: initial results. Journal of Consulting and Clinical Psychology, 65, 778-788.

McKay, J.R., Pettinati, H.M., Gallop, R., et al. (2002) Relation of depression diagnoses to 2-year outcomes in cocaine-dependent patients in a randomized continuing care study. Psychology of Addictive Behaviors, 16, 225-235.

MEYERS2002 (Published Data Only)

Meyers, R.J., Miller, W.R., Smith, J.E., et al. (2002) A randomized trial of two methods for engaging treatment-refusing drug users through concerned significant others. Journal of Consulting and Clinical Psychology, 70, 1182-1185.

MILBY1979

Milby, J.B., Toro, C., Thronton, S., et al. (1979) Some urine surveillance effects on drug abusers in psychotherapy. British Journal of Addiction to Alcohol and Other Drugs, 74, 199-200.

MILBY1980A

Milby, J.B., Clarke, C., Toro, C., et al. (1980) Effectiveness of urine surveillance as an adjunct to outpatient psychotherapy for drug abusers. International Journal of the Addictions, 15, 993-1001.

NURCO1995 (Published Data Only)

Nurco, D.N., Primm, B.J., Lerner, M., et al. (1995) Changes in locus-of-control attitudes about drug misuse in a self-help group in a methadone maintenance clinic. International Journal of the Addictions, 30, 765-778.

ONEILL1996 (Published Data Only)

O'Neill, K., Baker, A., Cooke, M., et al. (1996) Evaluation of a cognitive-behavioural intervention for pregnant injecting drug users at risk of HIV infection. Addiction, 91, 1115-1125.

PETRY1998 (Published Data Only)

Petry, N.M., Bickel, W.K., Tzanis, E., et al. (1998) A behavioral intervention for improving verbal behaviors of heroin addicts in a treatment clinic. Journal of Applied Behavior Analysis, 31, 291-297.

POLLACK2002 (Published Data Only)

Pollack, M.H., Penava, S.A., Bolton, E., et al. (2002) A novel cognitive-behavioral approach for treatment-resistant drug dependence. Journal of Substance Abuse Treatment, 23, 335-342.

PRESTON2001B (Published Data Only)

Preston, K.L., Umbricht, A., Wong, C.J., et al. (2001) Shaping cocaine abstinence by successive approximation. Journal of Consulting and Clinical Psychology, 69, 643-654.

ROHSENOW2004 (Published Data Only)

Rohsenow, D.J., Monti, P.M., Martin, R.A., et al. (2004) Motivational enhancement and coping skills training for cocaine abusers: effects on substance use outcomes. Addiction, 99, 862-874.

ROOZEN2003 (Published Data Only)

Roozen, H.G., Kerkhof, A.J.F.M. & Van Den Brink, W. (2003) Experiences with an outpatient relapse program (community reinforcement approach) combined with naltrexone in the treatment of opioid-dependence: effect on addictive behaviors and the predictive value of psychiatric comorbidity. European Addiction Research, 9, 53-58.

ROSENBLUM2005A (Published Data Only)

Rosenblum, A., Magura, S., Kayman, D.J., et al. (2005) Motivationally enhanced group counseling for substance users in a soup kitchen: a randomized clinical trial. Drug and Alcohol Dependence, 80, 91-103.

ROSENBLUM2005B (Published Data Only)

Rosenblum, A., Foote, J., Cleland, C., et al. (2005) Moderators of effects of motivational enhancements to cognitive behavioral therapy. [Erratum appears in American Journal of Drug and Alcohol Abuse (2005), 31, 357]. American Journal of Drug and Alcohol Abuse, 31, 35-58.

ROWANSZAL1994 (Published Data Only)

Rowan-Szal, G., Joe, G.W., Chatham, L.R., et al. (1994) A simple reinforcement system for methadone clients in a community-based treatment program. Journal of Substance Abuse Treatment, 11, 217-223.

SANTISTEBAN2003

Santisteban, D. A., Coatsworth, J. D., Perez-Vidal, A., et al. (2003) Efficacy of brief strategic family therapy in modifying Hispanic adolescent behavior problems and substance use. Journal of Family Psychology, 17, 121-133.

SCHMITZ2005A (Published Data Only)

Schmitz, J., Averill, P., Sayre, S., et al. (2002) Cognitive-behavioral treatment of bipolar disorder and substance abuse: a preliminary randomized study. Addictive Disorders and Their Treatment, 1, 17-24.

SIEGAL1996 (Published Data Only)

Siegal, H.A., Fisher, J.H., Rapp, R.C., et al. (1996) Enhancing substance abuse treatment with case management. Its impact on employment. Journal of Substance Abuse Treatment, 13, 93-98.

SIEGAL1997

Siegal, H.A., Rapp, R.C., Li, L., et al. (1997) The role of case management in retaining clients in substance abuse treatment: an exploratory analysis. Journal of Drug Issues, 27, 821-831.

SIGMON2004 (Published Data Only)

Sigmon, S.C., Correia, C.J. & Stitzer, M.L. (2004) Cocaine abstinence during methadone maintenance: effects of repeated brief exposure to voucher-based reinforcement. Experimental and Clinical Psychopharmacology, 12, 269-275.

SILVERMAN1999 (Published Data Only)

Silverman, K., Chutuape, M.A., Bigelow, G.E., et al. (1999) Voucher-based reinforcement of cocaine abstinence in treatment-resistant methadone patients: effects of reinforcement magnitude. Psychopharmacology, 146, 128-138.

SLESNICK2005 (Published Data Only)

Slesnick, N. & Prestopnik, J.L. (2005) Ecologically based family therapy outcome with substance abusing runaway adolescents. Journal of Adolescence, 28, 277-298.

SOSIN1995 (Published Data Only)

Sosin, M.R., Bruni, M. & Reidy, M. (1995) Paths and impacts in the progressive independence model: a homelessness and substance abuse intervention in Chicago. Journal of Addictive Diseases, 14, 1-20.

STAINES2004 (Published Data Only)

Staines, G.L., Blankertz, L., Magura, S., et al. (2004) Efficacy of the customized employment supports (CES) model of vocational rehabilitation for unemployed methadone patients: preliminary results. Substance Use and Misuse, 39, 2261-2285.

STEPHENS2000 (Published Data Only)

Stephens, R.S., Roffman, R.A. & Curtin, L. (2000) Comparison of extended versus brief treatments for marijuana use. Journal of Consulting and Clinical Psychology, 68, 898-908.

SZAPOCZNIK1983 (Published Data Only)

*Szapocznik, J., Kurtines, W. M., Foote, F. H., Perez-Vidal, A., et al. (1983) Conjoint versus one-person family therapy: some evidence for the effectiveness of conducting family therapy through one person. Journal of Consulting and Clinical Psychology, 51, 889-899.

Szapocznik, J., Kurtines, W. M., Foote, F., et al. (1986) Conjoint versus one-person family therapy: further evidence for the effectiveness of conducting family therapy through one person with drug-abusing adolescents. Journal of Consulting and Clinical Psychology, 54, 395-397.

THORNTON1987 (Published Data Only)

Thornton, P.I., Igleheart, H.C. & Silverman, L.H. (1987) Subliminal stimulation of symbiotic fantasies as an aid in the treatment of drug abusers. International Journal of the Addictions, 22, 751-765.

THORNTON1998

Thornton, C.C., Gottheil, E., Weinstein, S.P., et al. (1998) Patient-treatment matching in substance abuse. Drug addiction severity. Journal of Substance Abuse Treatment, 15, 505-511.

THORNTON2003 (Published Data Only)

Thornton, C.C., Patkar, A.A., Murray, H.W., et al. (2003) High- and low-structure treatments for substance dependence: role of learned helplessness. American Journal of Drug and Alcohol Abuse, 29, 567-584.

TRIFFLEMAN2000

Triffleman, E. (2000) Gender differences in a controlled pilot study of psychosocial treatments in substance dependent patients with post-traumatic stress disorder: design considerations and outcomes. Alcoholism Treatment Quarterly, 18, 113-126.

VAUGHANSARRAZIN2000 (Published Data Only)

Vaughan Sarrazin, M.S., Hall, J.A. & Rick, G.S. (2000) Impact of case management on use of health services by rural clients in substance abuse treatment. Journal of Drug Issues, 30, 435-463.

VAUGHANSARRAZIN2004

Vaughan Sarrazin, M.S. & Hall, J.A. (2004) Impact of Iowa case management on provisions of social support for substance abuse clients. Care Management Journals, 5, 3-11.

WASHINGTON1999 (Published Data Only)

Washington, O.G M. (2000) Effects of group therapy on chemically dependent women's self-efficacy. Journal of Nursing Scholarship, 32, 347-352.

*Washington, O. (1999) Effects of cognitive and experiential group therapy on self-efficacy and perceptions of employability of chemically dependent women. Issues in Mental Health Nursing, 20, 181-198.

WASHINGTON2001

Washington, O.G. (2001) Using brief therapeutic interventions to create change in self-efficacy and personal control of chemically dependent women. Archives of Psychiatric Nursing, 15, 32-40.

WONG2003 (Published Data Only)

Wong, C.J., Sheppard, J M., Dallery, J., et al. (2003) Effects of reinforcer magnitude on data-entry productivity in chronically unemployed drug abusers participating in a Therapeutic Workplace. Experimental and Clinical Psychopharmacology, 11, 46-55.

ZIEGLERDRISCOLL1977

Ziegler-Driscoll, G. (1977) Family research study at Eagleville Hospital and Rehabilitation Center. Family Process, 16, 175-189.

Characteristics of reviewed studies: Structured psychosocial plus pharmacological interventions

Comparisons Included in this Clinical Question

(MMT + CM) versus control
CARROLL2002
CHUTUAPE2001
EPSTEIN2003
MCLELLAN1993
PEIRCE2006
PETRY2002
PETRY2005C
PRESTON1999
PRESTON2000
RAWSON2002
SCHOTTENFELD2005
SILVERMAN1998
SILVERMAN2004
STITZER1992

(MMT + family therapy) versus control
CATALANO1999
FALSSTEWART2001

(MMT + intensive treatment) versus control
AVANTS1999
MCLELLAN1993

(MMT + supportive-expressive pschotherapy) versus control
WOODY1983
WOODY1995

(Buprenorphine + CM) versus control
DOWNEY2000
GROSS2006
KOSTEN2003
SCHOTTENFELD2005

(MMT + CBT) versus control
EPSTEIN2003
RAWSON2002
UKCBTMM2004
WOODY1983

(MMT + supportive-expressive pschotherapy) versus (MMT + CBT)
WOODY1983

(Naltrexone + CBT) versus control
RAWSON2001
TUCKER2004B

(Naltrexone + family therapy) versus control
FALSSTEWART2003

(Naltrexone + CM) versus control
CARROLL2001B

Characteristics of Included Studies

Methods	Participants	Outcomes	Interventions	Notes
AVANTS1999 Study Type: RCT (randomised controlled trial) Type of Analysis: Per protocol Blindness: Open Duration (days): Mean 84 Followup: 6 months Setting: US Info on Screening Process: 308 eligible, 291 enrolled	n= 291 Age: Mean 36 Sex: 205 males 86 females Diagnosis: 46% cocaine dependence by DSM-III-R 5% cocaine misuse by DSM-III-R Exclusions: Not reported Baseline: Years of opioid use = 12.7 (8.3); injection use =	**Data Used** Abstinence: % with negative urine sample per day Notes: DROPOUTS: CBT = 28/146, day treatment = 26/145	**Group 1 N= 145** Structured day treatment with outpatient. Mean dose 81.7 mg/day methadone - 5 hours per day, 5 days per week; manual guided programme in 5 general areas: 1) substance abuse treatment 2) physical and emotional health 3) community development 4) development of alternative reinforcers 5) basic daily living skills.	Study quality: 1+

	74%; years of cocaine use = 8.9		**Group 2 N= 146** CBT: group with outpatient. Mean dose 78.1 mg/day methadone - 2 hours per week; manual-guided group CBT intervention. Used 9 sessions from Monti's manual and 3 additional sessions on physical health, vocational skills and community resources.	
CARROLL2001B Study Type: RCT (randomised controlled trial) Blindness: No mention Duration (days): Mean 84 Followup: 6 months Setting: US Notes: RANDOMISATION: Urn randomisation programme Info on Screening Process: 70 screened, 11 excluded (3 already receiving drug treatment, 6 didn't complete detox, 2 needed inpatient hospitalisation). 4 dropped out at screening stage. Mean number of treatment weeks completed = 7.3; 1 completed 0 sessions, 32 completed <12 sessions	n= 55 Age: Mean 34 Sex: 36 males 19 females Diagnosis: 100% opioid dependence by DSM-IV Exclusions: Not meeting DSM-IV criteria for opioid dependence, not completing detox, significant medical conditions (e.g. abnormal liver function or active hepatitis), meeting DSM-IV criteria for schizophrenia or bipolar disorder, inability to provide names and locator information of at least 3 individuals who would know whereabouts of participant during follow-up. Baseline: Group: naltrexone / naltrexone + low-value vouchers / naltrexone + high-value vouchers Years of opioid use: 4.9 (5.0) / 7.5 (6.2) / 4.9 (4.1) Previous opioid detoxes: 2.7 (2.6) / 3.2 (5.0) / 1.5	**Data Used** Abstinence: negative urinalysis	**Group 1 N= 20** Naltrexone maintenance with outpatient. Mean dose 100 mg - Received naltrexone 3 times/week (Monday, 100 mg; Wednesday, 100 mg; Friday, 150 mg), urine samples collected 3 times/week, and weekly group therapy sessions CM: vouchers with outpatient - High-value CM: received vouchers contingent on compliance with naltrexone maintenance and urine samples negative for opioids, cocaine and BDZs. Maximum earning of $1,152 (increase in value for each negative sample but reset to minimum if positive sample). **Group 2 N= 17** Naltrexone maintenance with outpatient. Mean dose 100 mg - Received naltrexone 3 times/week (Monday, 100 mg; Wednesday, 100 mg; Friday, 150 mg), urine samples collected 3 times/week, and weekly group therapy sessions CM: vouchers with outpatient - Low-value CM: received vouchers contingent on compliance with naltrexone maintenance and urine samples negative for opioids, cocaine and BZDs. Maximum earning of $561.60 (increase in value for each negative sample but reset to minimum if positive sample). **Group 3 N= 18** Naltrexone maintenance with outpatient. Mean dose 100 mg - Received naltrexone 3 times/week (Monday, 100 mg; Wednesday, 100 mg; Friday, 150 mg), urine samples collected 3 times/week, and weekly group therapy sessions	Study quality: 1++
CARROLL2002 Study Type: RCT (randomised controlled trial) Type of Analysis: ITT (all those randomised were analysed) Blindness: Open Duration (days): Mean 84 Followup: 1, 3 and 6 months Setting: New Haven, Connecticut, US Notes: Urn randomisation Info on Screening Process: 70 screened, 11 excluded (3 already receiving treatment, 6 did not complete detox, 2 required hospitalisation) and 4 dropped out during screening phase. 55	n= 55 Age: Mean 34 Sex: 36 males 19 females Diagnosis: 100% opioid dependence by DSM-IV Exclusions: - did not complete detoxification - significant medical conditions (e.g. of the liver, or any condition that contraindicates naltrexone) - DSM-IV lifetime schizophrenia or bipolar disorder - could not provide contact details of at least 3 individuals who would know of participant's whereabouts during 6-month follow-up	**Data Used** Abstinence: longest consecutive period Retention: weeks remained in treatment Abstinence: % with negative urine sample per day Compliance: naltrexone doses taken Notes: 3 times weekly urine sample, coinciding with medication visits DROPOUTS: 32/55	**Group 1 N= 18** Naltrexone maintenance with outpatient. Mean dose 100-150 mg - Naltrexone 3 times weekly (100 mg, 150 mg on Fridays) supervised by clinic nurse Group therapy with outpatient - Weekly group therapy sessions at clinic	Study quality: 1+

randomised.	84% Caucasian Baseline: (Control / Low CM / High CM) Days' opioid use in past 28: 8.3 / 11.1 / 12.8 Years' regular opioid use: 4.9 / 7.5 / 4.9 Previous detox attempts: 2.7 / 3.2 / 1.5 Unemployed: 61.1% / 70.6% / 55.0% Receiving public assistance: 16.7% / 11.8% / 5.0% On probation/parole: 27.8% / 41.2% / 25.0% Previous MMT: 5.6% / 29.4% / 15.0% Previous naltrexone: 22.2% / 23.5% / 20.0% Lifetime DSM-IV cocaine dependence: 66.7% / 58.8% / 65.0% Lifetime DSM-IV alcohol dependence: 50.0% / 64.7% / 40.0%		**Group 2 N= 17** Naltrexone maintenance - As per control group Group therapy - As per control group CM: vouchers with outpatient - Two-track contingency: first -ve urine or naltrexone ingestion earned $0.80, increased by $0.40 for each successive reward. Any +ve/missing urine or missed naltrexone visit reset reward to $0.80. Earnings exchanged for goods supporting drug-free lifestyle **Group 3 N= 20** Naltrexone maintenance with outpatient - As per control group Group therapy - As per control group CM: vouchers with outpatient - As per low CM group but with $2.00 initial voucher value and $0.80 addition for each negative urine/naltrexone dose ingested.	
CATALANO1999 Study Type: RCT (randomised controlled trial) Type of Analysis: ITT Blindness: No mention Duration (days): Mean 365 Setting: Two methadone clinics in US Notes: RANDOMISATION: Blocked on race, parents' age at first drug use, parents' partnership status and ages of children Info on Screening Process: 78% of those eligible participated	n= 144 Age: Mean 35 Sex: 42 males 102 females Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT Exclusions: - had not been in MMT for >=90 days - did not have >=1 child aged 3-14 who lived with them >=50% of the time Notes: ETHNICITY: 105/132 White, 25/132 African American, 7/132 other Baseline: Age at first opioid use: 19.1 Previous months in MMT: 15.0	**Data Used** Cocaine use: times in past month Cannabis use: times in past month Heroin use: times in past month	**Group 1 N= 74** FI: family training with outpatient - Initial 5-hour family retreat and 32 twice-weekly 90-min sessions, in groups of 6-10 families; children attended 12 sessions. Skills training in relapse prevention and coping, anger management, child development, communication, refusal skills etc. Opioid agonist: MMT (methadone maintenance) with outpatient - Standard methadone dispensing with 'some individual and group counselling' Case management - Home-based case management to help parents and children generalise and maintain the skills learned in group sessions, for about 9 months (beginning 1 month before group training period) **Group 2 N= 58** Opioid agonist: MMT (methadone maintenance) with outpatient - Standard methadone dispensing with 'some individual and group counselling'	Study quality: 1+
CHUTUAPE2001 Study Type: RCT (randomised controlled trial) Blindness: No mention Duration (days): Mean 238 Setting: US Info on Screening Process: 231 screened, 15 did not complete baseline phase, 9 were opioid and cocaine free, 144 submitted greater than 80% drug positive urines	n= 53 Age: No mention Sex: No mention Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT Exclusions: - opioid-negative samples at intake - no signs of intravenous use - self-reported opioid use (<= 21 of 30 days) for 6 or more months of previous year - history of addiction <1 year - serious medical or psychiatric illness	**Data Used** Response: abstinent >= 8 weeks Abstinence: weeks drug free Notes: DROPOUTS: Weekly CM = 6/16, monthly CM = 3/18, NCM (non-contingent management) = 1/19	**Group 1 N= 19** NCM (non-contingent management) with outpatient - Received take-home doses based on individual weekly drawings rather than drug-free urine results -- probability of earning take homes was 50% **Group 2 N= 18** CM: methadone with outpatient - Urinalysis results randomly selected monthly -- a negative sample resulted in 3 take-home doses till the next test. A positive sample resulted in cancellation of take-home doses.	Study quality: 1+

	- pregnancy Baseline: GROUPS: CM weekly / CM monthly / non-contingent management Lifetime heroin use (months) 89 82 113 Lifetime cocaine use (months) 23 23 28		**Group 3 N= 16** CM: methadone with outpatient - Urinalysis results randomly selected weekly -- a negative sample resulted in 3 take-home doses till the next test. A positive sample resulted in cancellation of take-home doses.	
DOWNEY2000 Study Type: RCT (randomised controlled trial) Blindness: No mention Duration (days): Mean 84 Setting: US Notes: RANDOMISATION: problematic first 4 participants to reach week 6 entered treatment group thereafter participants randomly assigned Info on Screening Process: 120 screened, 24 did not meet inclusion criteria, 29 dropped out before starting medication, 22 dropped out before CM, 3 excluded because they were random halves of couples	n= 41 Age: Mean 40 Range 18-55 Sex: 25 males 16 females Diagnosis: opioid dependence by DSM-IV Exclusions: <18 years >55 years, people with schizophrenia, bipolar disorder, dementia and delirium Baseline: Group: CM / Control ASPD: 15% / 24% Alcohol abuse/dependence 80% / 50% Cocaine abuse/dependence 80% / 86%	**Data Used** ASI (Addiction Severity Index) Abstinence: negative urinalysis Notes: DROP OUTS: 7/20 (35%) in CM group 13/21 (62%) in non-contingent group	**Group 1 N= 20** CM (contingency management) with outpatient - At week 6 intervention commenced. Received voucher worth $2.50 for first negative urine (for all drugs) and breathalyzer samples. Each negative sample resulted in increase of $1.25, and $10 bonus for 3 consecutive negative. Positive samples reset to $2.50 Opioid agonist: buprenorphine-naloxone with outpatient - Used the combined Buprenorphine-Naloxone tablet (4:1 ratio). Participants were maintained on doses up to 32mg sublingually visits spaced 48hrs apart and 48mg visits 72hrs apart. Initially maintained on 16-16-24 mg M-W-F schedule and increased before CM. **Group 2 N= 21** NCM (non-contingent management) with outpatient - Each participant linked to CM participant and received sample value and frequency as that individual but independent of their own urinalysis results Opioid agonist: buprenorphine-naloxone - Used the combined Buprenorphine-Naloxone tablet (4:1 ratio). Participants were maintained on doses up to 32mg sublingually visits spaced 48hrs apart and 48mg visits 72hrs apart. Initially maintained on 16-16-24 mg M-W-F schedule and increased before CM.	All participants received weekly individual CBT+ MET and 12 sessions of group therapy (based on relapse prevention)
EPSTEIN2003 Study Type: RCT (randomised controlled trial) Blindness: No mention Duration (days): Mean 84 Followup: 12 months Setting: US Info on Screening Process: 286 screened	n= 193 Age: Mean 39 Sex: 110 males 83 females Diagnosis: 41% cocaine dependence by DSM-III-R Exclusions: - <18 years or >65 years - not intravenous opioid user - not cocaine user - current psychotic, bipolar or major depressive disorder - current physical dependence on alcohol or sedatives - unstable medical illness - pregancy and breastfeeding Baseline: Mean years of cocaine use = 11 (7.5) Mean cocaine use = 18.3 (10.1) of last 30 days	**Data Used** Cocaine use: days Notes: DROPOUTS: Control = 12/49, CM = 9/47, CBT = 10/48, CBT + CM = 15/49	**Group 1 N= 49** CM: vouchers with outpatient - Earned vouchers for each urine specimen that was negative for cocaine. Vouchers began at $2.50, increasing by $1.50 for each consecutive voucher earned. For three consecutive negative urines a $10 bonus was earned. CBT: RP (relapse prevention) with outpatient - Combined elements of relapse prevention, coping methods, behavioural reinforcement methods and methods of generalising to the environment IDC (individual drug counselling) with outpatient Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 70 mg - Within first week participants stabilised on 70 mg/day could request increase of up to 80 mg/day	Study quality: 1+

			Group 2 N= 47 CM: vouchers with outpatient - Earned vouchers for each urine specimen that was negative for cocaine. Vouchers began at $2.50, increasing by $1.50 for each consecutive voucher earned. For three consecutive negative urines a $10 bonus was earned. IDC (individual drug counselling) with outpatient Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 70 mg - Within first week participants stabilised on 70 mg/day could request increase of up to 80 mg/day Control: social support group with outpatient **Group 3 N= 48** CBT: RP (relapse prevention) with outpatient - Combined elements of relapse prevention, coping methods, behavioural reinforcement methods and methods of generalising to the environment IDC (individual drug counselling) with outpatient Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 70 mg - Within first week participants stabilised on 70 mg/day could request increase of up to 80 mg/day NCM (non-contingent management) with outpatient **Group 4 N= 49** IDC (individual drug counselling) with outpatient Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 70 mg - Within first week participants stabilised on 70 mg/day could request increase of up to 80 mg/day NCM (non-contingent management) with outpatient Control: social support group with outpatient	
FALSSTEWART2001 Study Type: RCT (randomised controlled trial) Study Description: Male patients participated with female significant others Type of Analysis: Per protocol Blindness: No mention Duration (days): Mean 105 Setting: Two MMT clinics in US Notes: RANDOMISATION: No details Info on Screening Process: 371 applicants (89 married or cohabiting) interviewed, 19 refused consent and 27 met exclusion critera. 43 enrolled and were randomised.	n= 42 Age: Mean 38 Sex: all males Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT opioid misuse Exclusions: - Male partner's age outside 21-60 range - Not married for >=1 year or living with a female significant other in a stable common-law relationship for >= 2 years - Ineligible for MMT - Seeking additional substance misuse treatment other than	**Data Used** ASI (Addiction Severity Index) Urinalysis: positive for opioids Urinalysis: positive for cocaine Notes: DROPOUTS: CBT = 5/22, BCT = 2/21	**Group 1 N= 21** CBT: coping skills training - Once weekly 60-min individual sessions for males FI: BCT (behavioural couples therapy) with outpatient - One 60-min wkly session for 12 wks: male and female partners met jointly with therapist. Involved crisis intervention, sobriety trust discussion, reinforcing compliance, coping strategies for craving, communication skills, positive behavioural exchanges.	Study quality: 1+

	self-help meetings, unless recommended by primary therapist - Female partner meeting DSM-III-R criteria for substance use in past 6 months - Either partner meeting DSM-III-R criteria for an organic, schizophrenic, delusional or other psychotic disorder Notes: PRIMARY DIAGNOSIS: Intravenous opioid users ETHNICITY: 18/36 White, 15/36 African American, 3/36 Hispanic Baseline: (GROUPS: BCT [behavioural couples therapy] versus CBT) Problematic alcohol use (years): 8.2 / 7.8 Problematic opioid use (years): 10.0 / 10.6 Problematic cocaine use (years): 5.8 / 5.6		Opioid agonist: MMT (methadone maintenance) - 60 mg/day standard dose, increased at patient's request or opioid-positive urine sample. After 6 weeks of treatment, up to 2 take-home doses per week allowed if patient employed >=20 hours per week. **Group 2 N= 22** CBT: coping skills training with outpatient - Twice weekly 60-min individual sessions for males with the aim of developing skills that would assist in drug-use reduction efforts through cognitive restructuring, problem-solving, alternatives to drug use, anger management, assertiveness training etc. Opioid agonist: MMT (methadone maintenance) with outpatient - 60 mg/day standard dose, increased at patient's request or opioid positive urine sample. After 6 weeks of treatment, up to 2 take-home doses per week allowed if patient employed >= 20 hours per week.	
FALSSTEWART2003 Study Type: RCT (randomised controlled trial) Type of Analysis: Missing data addressed. Unclear if ITT Blindness: No mention Duration (days): Mean 168 Followup: 12 months Setting: Two outpatient clinics in US Notes: RANDOMISATION: No details Info on Screening Process: 459 screened, 17 met exclusion criteria and 318 refused to take naltrexone. 124 were enrolled and randomised.	n= 124 Age: Mean 33 Sex: all males Diagnosis: 100% opioid dependence by DSM-III-R Exclusions: - female - did not demonstrate lack of 'physiological' opioid dependence by naloxone challenge - not living with a family member willing to participate, who also did not have substance use disorder, schizophrenia, bipolar disorder or psychosis by DSM-III-R - physical condition which would make participation hazardous (e.g. acute hepatitis) - suicidal or homicidal - in MMT within past 30 days Notes: ETHNICITY: 66% White, 25% African American, 4% Hispanic, 6% other Baseline: (GROUPS: family / individual) Opioid use (years): 6.6 / 5.9 Problematic substance use: 12.7 / 11.3 Cocaine dependence: 61% / 56% Alcohol dependence: 65% / 60%	**Data Used** TLFB (Timeline follow-back) ASI (Addiction Severity Index) Urinalysis: positive for any drug Retention rate	**Group 1 N= 62** Naltrexone maintenance with outpatient. Mean dose 50 mg/day - For first 2 weeks, 2 brief weekly visits with physician (also for first 3 weeks, 3 visits to agency nurse); biweekly thereafter. Nurse and physician encouraged compliance and asked about side effects. No family involvement or compliance contract. CBT: coping skills training with outpatient - Twice weekly 60-min individual sessions for first 16 weeks, weekly for last 8 weeks. Cognitive behavioural restructuring, problem solving, anger management, refusal skills, enhancing social support networks etc. Adapted from CBT programmes for alcoholism. Group therapy - 90 mins per week for first 16 weeks. No other details.	Study quality: 1+

			Group 2 N= 62 Naltrexone maintenance. Mean dose 50 mg/day - For first 2 weeks, 2 brief weekly visits with physician (also for first 3 weeks, 3 visits to agency nurse); biweekly thereafter. Nurse and physician encouraged compliance and asked about side effects. Naltrexone taken under supervision of family member. CBT: coping skills training with outpatient - Twice weekly 60-min individual sessions for first 16 weeks, weekly for last 8 weeks. Cognitive behavioural restructuring, problem solving, anger management, refusal skills, enhancing social support networks etc. Adapted from CBT programmes for alcoholism. Group therapy - 90 mins per week for first 16 weeks. No other details. FBT (family behavioural therapy) - Behavioural family counselling. Patient and family member met jointly with counsellor for 16 weekly sessions of 60 mins. Established behavioural contract, instructions and behavioural rehearsal to reduce conflict and improve communication.	
GROSS2006 Study Type: RCT (randomised controlled trial) Type of Analysis: ITT (missing urines as positive) Blindness: Open Duration (days): Mean 84 Setting: US Notes: Randomisation by minimum likelihood allocation stratified on 5 variables Info on Screening Process: 95 enrolled, 35 failed to complete 8-week baseline phase; 60 randomised.	n= 60 Age: Mean 32 Sex: 33 males 27 females Diagnosis: 100% opioid dependence by DSM-IV Exclusions: - age <18 - not in good health - acute psychosis or serious medical illness - pregnant Notes: ETHNICITY: 91% White Baseline: (CM voucher / CM buprenorphine / control) Full-time employed: 65% / 60% / 35% Years' regular opioid use: 9.34 / 7.16 / 12.39 Age at first opioid use: 21.4 / 19.32 / 20.25 Years' cocaine use: 7.15 / 3.81 / 5.55	**Data Used** ASI (Addiction Severity Index) Abstinence: longest consecutive period Abstinence: weeks drug free Notes: 3 times weekly buprenorphine dose and observed urine sample	**Group 1 N= 20** Opioid agonist: buprenorphine maintenance - Standard care as per control group CM: negative reinforcement with outpatient - Participants received 2 half-doses of buprenorphine each day (3 half-doses on Fridays). Whenever urine was cocaine/opioid positive, only received 1 half-dose that day (or 2 half-doses on Fridays). **Group 2 N= 20** CM: vouchers with outpatient - Participants received vouchers for each negative urine sample. The first voucher was worth $3.63 and increased in value for each consecutive negative urine. Opioid agonist: buprenorphine maintenance with outpatient **Group 3 N= 20** Control: standard care with outpatient - Behavioural counselling 1 hour/week. Discussion of personal relationships, causes and effects of opioid use, developing recreational activities & HIV education. Counsellors also provided assistance in job-finding, stable housing and other treatment needs. Opioid agonist: buprenorphine maintenance with outpatient	2-week buprenorphine induction + 8-week stabilisation period preceding study Study quality: 1+
KOSTEN2003				

Study Type: RCT (randomised controlled trial) Study Description: ITT analysis up to 12 weeks, then completers analysis 13-24 weeks when CM was reduced. Blindness: Double blind Duration (days): Mean 168 Setting: US	n= 160 Age: Mean 37 Sex: 105 males 55 females Diagnosis: 100% opioid dependence by DSM-IV 100% cocaine dependence by DSM-IV Exclusions: - medical reasons for not taking desipramine (e.g. pregnancy, cardiac problems, acute hepatitis) - current suicidality or psychosis - inability to read or understand the symptom checklists - current alcohol or sedative dependence - use of non-diuretic anti-hypertensives or other medications that would interact with study medications Notes: Ethnicity: White = 84, African American = 58, Hispanic = 11, Native American = 2 Baseline: GROUP: desipramine + CM / desipramine + NCM / placebo + CM / placebo + NCM Heroin use (no. days/month): 28.8 / 27.2 / 29.1 / 27.0 Cocaine use(no. days/month): 13.8 / 13.4 / 16.5 / 14.0	**Data Used** Urinalysis: positive for heroin Urinalysis: positive for cocaine Notes: DROPOUTS = 85/160 (53%) after 12 weeks	**Group 1 N= 40** Desipramine with outpatient - Started in week 2 at 50 mg daily and increased by 50 mg every 2 days up to 150 mg total dosage NCM (non-contingent management) with outpatient - Received vouchers not contingent on illicit cocaine and opioid use. Vouchers were worth the average value of the contingency subjects for the previous week. Opioid agonist: buprenorphine maintenance with outpatient - All participants stabilised on a median dose of 16 mg before randomisation. Sublingual buprenorphine started at 4 mg daily, shifting to 8 mg then 12 mg by week 1, and to 16 mg by week 2. **Group 2 N= 40** CM: vouchers with outpatient - 1-12 wks: received $3 for first cocaine- and opioid-negative urine, increased by $1 with every consecutive negative urine, but reset after a positive sample. 13-16 wks: each negative sample $3. 17-20 wks: $6 for 2 negative samples. 21-24 wks: $9 for 3 Placebo with outpatient Opioid agonist: buprenorphine maintenance with outpatient - All participants stabilised on a median dose of 16 mg before randomisation. Sublingual buprenorphine started at 4 mg daily, shifting to 8 mg then 12 mg by week 1, and to 16 mg by week 2. **Group 3 N= 40** Placebo with outpatient NCM (non-contingent management) with outpatient - Received vouchers not contingent on illicit cocaine and opioid use. Vouchers were worth the average value of the contingency subjects for the previous week. Opioid agonist: buprenorphine maintenance with outpatient - All participants stabilised on a median dose of 16 mg before randomisation. Sublingual buprenorphine started at 4 mg daily, shifting to 8 mg then 12 mg by week 1, and to 16 mg by week 2.	All participants received weekly individual and group CBT (RP) Only placebo groups included in meta-analysis Study quality: 1+

			Group 4 N= 40 CM: vouchers with outpatient - 1-12 wks: received $3 for first cocaine- and opioid-negative urine, increased by $1 with every consecutive negative urine, but reset after a positive sample. 13-16 wks: $3 each negative sample. 17-20 wks: $6 for 2 negative samples. 21-24 wks: $9 for 3. Desipramine with outpatient - Started in week 2 at 50 mg daily and increased 50 mg every 2 days up to 150 mg total dosage Opioid agonist: buprenorphine maintenance with outpatient - All participants stabilised on a median dose of 16 mg before randomisation. Sublingual buprenorphine started at 4 mg daily, shifting to 8 mg then 12 mg by week 1, and to 16mg by week 2.	
MCLELLAN1993 Study Type: RCT (randomised controlled trial) Type of Analysis: Per protocol Blindness: Open Duration (days): Mean 180 Setting: US veterans Info on Screening Process: 144 screened; 13 excluded (medical or psychiatric conditions (n=6), did not follow through initial study procedures (n=7)); 29 refused to participate; 2 dropped out after <2 weeks' treatment; 5 could not be contacted for follow-up.	n= 92 Age: Mean 41 Sex: all males Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT Exclusions: - serious medical/psychiatric disorder - plans for immediate move from area near clinic Notes: All were intravenous users Baseline: Years of substance use: opioids = 11, cocaine = 3, problematic alcohol = 7	**Data Used** ASI (Addiction Severity Index)	**Group 1 N= 29** CM: methadone with outpatient - Combination of take-home methadone doses contingent on negative urines and CBT. First month weekly counselling, then over 2-6 months could reduce number of sessions (biweekly) if client showed signs of positive change. Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 60-90 mg **Group 2 N= 31** Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 60-90 mg Structured day treatment with outpatient - Consisted of contingent take-home doses, CBT counselling and access to extra professional resources: family therapy, employment counselling, psychiatrist. **Group 3 N= 32** Control: TAU (treatment as usual) with outpatient - Minimal treatment -- 15-min session/month Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 60-90 mg	Study quality: 1+
PEIRCE2006 Study Type: RCT (randomised controlled trial) Study Description: Research staff 'unaware' of allocation assignment Type of Analysis: Missing urine samples as positive Blindness: Open Duration (days): Mean 84 Followup: 1, 3 and 6 months Setting: 6 MMT programmes across US Notes: Computerised stratified randomisation	n= 388 Age: Mean 42 Sex: 211 males 177 females Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT 100% other stimulant misuse by urinalysis Exclusions: - enrolled in MMT for <30 days or > 3 years	**Data Used** Abstinence: longest consecutive period Retention rate Notes: Twice weekly urine and breath samples on non-consecutive days	**Group 1 N= 198** CM (contingency management) with outpatient - Prize draw for each sample -ve for cocaine, amph/methamphetamine AND alcohol. For each week with all samples -ve, 1 additional draw. Any positive sample reset to 1 draw. Bonus prize for first 2 weeks' consecutive -ve samples. Max $400 prizes + $20 bonus.	Study quality: 1+

Info on Screening Process: 402 randomised, 14 later found to be ineligible. 388 in final study sample.	- no stimulant-positive urine sample within 2 weeks of study entry - not currently recovering from a gambling problem Notes: PRIMARY DIAGNOSIS: 74.9% cocaine misuse/dependence, 3.6% amph/methamphetamine misuse/dependence, 3.9% both drugs Baseline: (CM / usual care) Unemployed: 69% / 68% DSM abuse/dependence diagnosis for past 90 days: stimulant: 84.3% / 80.5%, alcohol: 16.7% / 17.4%, cannabis: 7.9% / 8.7% Days in treatment: 269 / 274 Methadone dose (mg): 86.6 / 85.1		Opioid agonist: MMT (methadone maintenance) - Daily methadone dose with standard individual/group counselling, ranging from 3 times per week to once per month. **Group 2 N= 190** Opioid agonist: MMT (methadone maintenance) - Daily methadone dose with standard individual/group counselling, ranging from 3 times per week to once per month	
PETRY2002 Study Type: RCT (randomised controlled trial) Type of Analysis: ITT Blindness: No mention Duration (days): Mean 84 Followup: 6 months Setting: US Notes: RANDOMISATION: Probabilistic balancing techniques to control for gender, race, age etc Info on Screening Process: 5 excluded: 1 withdrew consent, 4 uncontrolled psychosis	n= 42 Age: Mean 39 Sex: 12 males 30 females Diagnosis: cocaine dependence by DSM-IV Exclusions: - not receiving a stable dose of methadone in past 3 months - not English speaking - MMSE <21 - active, uncontrolled psychosis or bipolar disorder Notes: Standard treatment = 91.3%, CM = 100% cocaine dependence Baseline: GROUPS: TAU / CM Years of heroin use: 13.8 (1.9) / 14.9 (1.6) Years of cocaine use: 12.0 (1.8) / 15.0 (1.7)	**Data Used** Abstinence: longest consecutive period Abstinence: days drug free Notes: DROPOUTS: CM = 1/19, TAU (treatment as usual) = 2/23	**Group 1 N= 23** Control: TAU (treatment as usual) with outpatient **Group 2 N= 19** CM: prizes with outpatient - Negative sample for opioids or cocaine earned a draw from the bowl, negative for opioids and cocaine earned 4 draws. Negative samples on consecutive days earned bonus draws. Bowl had 250 slips of paper, 1/2 non-winning, 109 small prizes, 15 large prizes.	Study quality: 1+
PETRY2005C Study Type: RCT (randomised controlled trial) Blindness: No mention Duration (days): Mean 84 Followup: 6 months Setting: US Notes: RANDOMISATION: Minimum likelihood allocation balanced by age, gender etc Info on Screening Process: 5 excluded	n= 77 Age: Mean 40 Sex: 21 males 56 females Diagnosis: cocaine dependence by DSM-IV Exclusions: - unstable methadone dose: changes in dose in last 3 months - not English speaking - MMSE <21 - in recovery fom pathological gambling - inability to attend groups Baseline: GROUPS: CM / TAU Years of heroin use: 15.9 (1.2) / 17.7 (1.2) Years of cocaine use: 13.2 (1.5) / 12.7 (1.3)	**Data Used** Abstinence: longest consecutive period Notes: DROPOUTS: CM = 5/40, TAU (treatment as ususal) = 6/37	**Group 1 N= 40** Control: TAU (treatment as usual) with outpatient - 1 hour/week, rotating schedule of 12 topics: facts about cocaine, HIV education, stress management etc. CM: prizes with outpatient - Draw earned for each group therapy session attended and for cocaine-negative samples. Prize bowl contained 500 slips of paper, half of slips non-winning, 219 slips small prizes (e.g. $1 coupon), 30 large prizes (e.g. walkmans, watches), 1 jumbo prize (TV) **Group 2 N= 37** Control: TAU (treatment as usual) with outpatient - 1 hour/week, rotating schedule of 12 topics: facts about cocaine, HIV education, stress management etc.	Study quality: 1+
PRESTON1999 Study Type: RCT (randomised controlled trial) Blindness: No mention Duration (days): Mean 84 Setting: US	n= 57 Age: Mean 33 Sex: 36 males 21 females Diagnosis: 100% opioid dependence by DSM-III-R	**Data Used** Retention: days remained in treatment Abstinence: negative urinalysis	**Group 1 N= 19** Naltrexone maintenance with outpatient - Received naltrexone 3 days a week under staff observation. Doses were 100 mg on Monday and Wednesday and 150 mg on Friday.	All received weekly 'interpersonal/cognitive/behavioural' counselling for cocaine misuse Study quality: 1+

consent, 1 did not return after giving consent, 1 experienced withdrawal symptoms after naloxone challenge	Exclusions: - <18 or >65 years of age - current major psychiatric disorder - severe current medical illness - pregnant or lactating - in an institutional residence (e.g. jail) - know allergy to naltrexone or naloxone Notes: Used within the past 60 days but not currently dependent on opioids Baseline: GROUPS: CM / NCM / no voucher Self-reported years' drug use: heroin 7.5 / 5.3 / 7.8 Self-reported years' drug use: cocaine 2.6 / 4.0 / 5.1 % marijuana dependence (DSM-III-R) 26 / 0 / 0 % cocaine dependence (DSM-III-R) 47 / 32 / 50 % alcohol dependence (DSM-III-R) 37 / 21 / 60	Notes: DROPOUTS: CM = 50%, NCM = 80%, no voucher group = 95%	**Group 2 N= 19** Naltrexone maintenance with outpatient - Received naltrexone 3 days a week under staff observation. Doses were 100 mg on Monday and Wednesday and 150 mg on Friday. CM: vouchers with outpatient - Value of vouchers began at $2.50 for a dose of naltrexone, increasing in value by $1.50 for each consecutive dose; $10 bonus for 3 consecutive doses, if did not receive dose did not get voucher and next voucher reset to $2.50. Maximum of $1155. **Group 3 N= 19** Naltrexone maintenance with outpatient - Received naltrexone 3 days a week under staff observation. Doses were 100 mg on Monday and Wednesday and 150 mg on Friday. NCM (non-contingent management) with outpatient - Each participant randomly linked to participant in contingent group. Had to attend clinic and provide urine sample to receive a voucher. The value of the voucher was equal to that received by the linked contingent participant.	
PRESTON2000 Study Type: RCT (randomised controlled trial) Study Description: Blindness for methadone dosing Type of Analysis: ITT Blindness: Double blind Duration (days): Mean 56 Setting: US Notes: RANDOMISATION: First 10 participants manually assigned to CM group to allow NCM yoking. Remaining participants randomised using random number table. Info on Screening Process: 285 enrolled, 253 completed baseline; 219 met criteria for opioid use, 120 randomised (exclusion reasons not given)	n= 120 Age: Mean 38 Sex: 81 males 39 females Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT Exclusions: - age outside 18-65 range - not qualified for MMT under FDA guidelines - no history of intravenous drug use - Current major psychiatric or unstable serious medical illness - Alcohol or benzodiazepine dependence - <3-opioid positive urine samples out of 15 during 5-week baseline period Notes: PRIMARY DIAGNOSIS: Opioids ETHNICITY: 42% African American, 58% White REFERRALS: Admission to MMT Baseline: (GROUP: MMT+ NCM / MMT+ CM / MMT-high + NCM / MMT-high + CM) Employed: 44% / 38% / 55% / 33% Years of heroin use: 13.3 / 12.6 / 13.3 / 11.8 Days' heroin use in past 30: 25.9 / 28.8 / 26.4 / 26.9	**Data Used** Urinalysis: positive for benzodiazepines Urinalysis: positive for opioids Abstinence: longest consecutive period Retention: weeks remained in treatment Urinalysis: positive for cocaine Urinalysis: positive for cannabis **Data Not Used** Urinalysis: positive for alcohol Notes: FOLLOW-UP: Baseline, endpoint DROPOUTS: 4% / 7% / 13% / 3%	**Group 1 N= 32** CM: vouchers with outpatient - Vouchers contigent on opioid-negative urine specimens from 3 times weekly urine tests and exchangeable for goods and services (requested via and purchased by staff) that would support a drug-free lifestyle. Opioid agonist maintenance with outpatient. Mean dose 70 mg - High dose. 60 mg on days 1-3, 70 mg from day 4. **Group 2 N= 31** Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 70 mg - High dose. 60 mg on days 1-3, 70 mg from day 4. NCM (non-contingent management) with outpatient - Received vouchers not contingent on urine samples; randomly linked to a participant in CM group. **Group 3 N= 28** Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 50% - Standard dose NCM (non-contingent management) with outpatient - Received vouchers not contingent on urine samples; randomly linked a participant in CM group.	Study quality: 1+

			Group 4 N= 29 CM: vouchers with outpatient - Vouchers contingent on opioid-negative urine specimens from 3 times weekly urine tests. Exchangeable for goods and services (requested via and purchased by staff) that would support a drug-free lifestyle. Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 50 mg - Standard dose	
RAWSON2001 Study Type: RCT (randomised controlled trial) Study Description: Randomisation code generated independently off site Type of Analysis: Per protocol Blindness: Open Duration (days): Mean 365 Setting: 2 outpatient clinics, LA, US Notes: RANDOMISATION: Sealed envelopes Info on Screening Process: 183 successfully detoxified; 81 induced onto naltrexone and randomised	n= 81 Age: Mean 33 Sex: 49 males 32 females Diagnosis: 100% opioid dependence by DSM-IV Exclusions: - did not complete opioid detoxification - liver enzyme values 5 times above normal - if female: pregnant, lactating or not using effective method of birth control Notes: ETHNICITY: Caucasian 79%, Hispanic 10%, African American 3.7%, Other 7% Baseline: (GROUPS: enhanced / standard) Years' opioid use: 9.4 / 10.1 Days' opioid use in past 30: 21.5 / 23.4 Intravenous opioid use: 52.5% / 58.5% Previous treatment: 80% / 75.6% Previous methadone treatment: 55% / 58.5%	**Data Used** ASI (Addiction Severity Index) Urinalysis: TES (Treatment Effectiveness Score) Abstinence: no use for 3 consecutive weeks at end Urinalysis: positive for opioids Retention: weeks remained in treatment Compliance: naltrexone doses taken Retention: sessions attended	**Group 1 N= 41** Control: standard care with outpatient - Weekly data/urine collection; visit to study physician every 30 days to collect naltrexone, with additional appointments allowed for discussing side effects or other medication issues. Provision of booklet giving info about local drug treatment resources. **Group 2 N= 40** CBT: matrix model with outpatient - CBT approach with specific behav. techniques, educational materials and encouraging 12-step involvement. 60-min individual session + 2 x 90-min group sessns + 60-min cue exposure sessn wks 1-12; individual sessn semi-weekly and group sessns wks 13-26.	Study quality: 1++
RAWSON2002 Study Type: RCT (randomised controlled trial) Type of Analysis: No evidence of ITT Blindness: Open Duration (days): Mean 102 Followup: 36 weeks Setting: 2 methadone clinics in US Info on Screening Process: 180 volunteered; 120 eligible, enrolled and randomised	n= 120 Age: Mean 44 Sex: 66 males 54 females Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT 100% cocaine misuse by DSM-IV Exclusions: - not in MMT for >=90 days - no evidence of cocaine use in past month - alcohol or benzodiazepine dependence requiring medical withdrawal - Court-mandated treatment Notes: ETHNICITY: White 39%, African American 32%, Hispanic 26%, other 3% Baseline: (GROUPS: CBT / CM / CBT+CM / control) ASI drug: 0.37 / 0.31 / 0.33 / 0.36 Methadone dose (mg): 82 / 78 / 83 / 82	**Data Used** ASI (Addiction Severity Index): drug use Urinalysis: positive for opioids Retention: weeks remained in treatment Urinalysis: positive for cocaine Abstinence: no use for 3 consecutive weeks at end	**Group 1 N= 30** CM (contingency management) - As per CM group Opioid agonist: MMT (methadone maintenance) - As per MMT group CBT: group - As per CBT group **Group 2 N= 30** CM (contingency management) with outpatient - 3 urine samples/week. Voucher value starting at $2.50 for a negative sample, increasing by $1.25 per successive negative sample (up to $20 max). $10 bonus for 3 consecutive negative samples. Positive or missing sample reset schedule to $2.50. Opioid agonist: MMT (methadone maintenance) with outpatient - As per MMT group **Group 3 N= 30** Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 82 mg - Standard MMT: daily clinic visits for methadone, twice-monthly counselling, medical care and case management as needed. 3 urine samples/week.	Study quality: 1+

			Group 4 N= 30 Opioid agonist: MMT (methadone maintenance) - As per standard MMT group CBT: group - Three 90-min group sessions (4-8 people) per week for 16 weeks, guided by Rawson CBT manual. Each worksheet/exercise explained or illustrated an aspect of CBT. **Group 5 N=**	
SCHOTTENFELD2005 Study Type: RCT (randomised controlled trial) Study Description: Medications were double-blind/double-dummy, CM was not. Researchers and subjects aware of allocation at time of randomisation. Blindness: Double blind Duration (days): Mean 168 Setting: New Haven, CT, US Notes: Computerised urn randomisation Info on Screening Process: 169 referred, 6 excluded (primarily failed to attend admission session). 163 randomised (1 participant received one dose of medication but provided no addition data and was excluded from analysis).	n= 162 Age: Mean 36 Sex: 107 males 55 females Diagnosis: 100% opioid dependence by DSM-IV 100% cocaine misuse by DSM-IV Exclusions: - less than 1 year's history of DSM-IV opioid dependence and cocaine misuse/ dependence, or current alcohol or sedative dependence - significant medical condition - current psychotic/bipolar disorder or major depression/suicidality - pregnancy Notes: ETHNICITY: 21% White Baseline: (MMT+ CM / MMT / buprenorphine + CM / buprenorphine) Employed full-time: 40% / 45% / 41% / 41.9% IDU: 62.5% / 52.5% / 43.6% / 32.6% Years' heroin use: 9.4 / 9.6 / 9.7 / 8.3 Years' cocaine use: 8.0 / 10.1 / 11.2 / 9.4 Days' cocaine use (past 30 days): 7.6 / 11.6 / 14.5 / 10.7	**Data Used** Abstinence: longest consecutive period Abstinence: % with negative urine sample per day Notes: Three times weekly urine testing	**Group 1 N= 40** IDC (individual drug counselling) with outpatient - Manualised individual sessions with CRA (community reinforcement approach) (behavioural skills, engaging in non-drug activities): twice weekly weeks 1-12, weekly weeks 13-24. Opioid agonist: MMT (methadone maintenance) with outpatient - 35 mg increased to 65 mg over weeks 1-2, increased further to max 85 mg over rest of study. Daily observed dispensing. CM: vouchers with outpatient - Monetary voucher for each opioid & cocaine -ve urine. Escalating schedule wks 1-12 ($2.50 initial + $1.25 per consec. -ve sample; reset to $2.50 for a +ve; $10 bonus for 3 consec -ve samples). Wks 13-24, fixed $1 per -ve sample. Max total reward $1033.50. **Group 2 N= 40** IDC (individual drug counselling) with outpatient - Manualised individual sessions with CRA (behavioural skills, engaging in non-drug activities): twice weekly weeks 1-12, weekly weeks 13-24 Opioid agonist maintenance - 35 mg increased to 65 mg over weeks 1-2, increased further to max 85 mg over rest of study. Daily observed dispensing. Control: TAU (treatment as usual) with outpatient - Received piece of paper at each urine test indicating whether sample was positive or negative	Study quality: 1+

			Group 3 N= 39 IDC (individual drug counselling) with outpatient - Manualised individual sessions with CRA approach (behavioural skills, engaging in non-drug activities): twice weekly weeks 1-12, weekly weeks 13-24 Opioid agonist: buprenorphine maintenance - 4 mg sublingual buprenorphine, increasing to 12 mg by end of week 2. Up to max 16 mg for remainder of study. CM: vouchers - Monetary voucher for each opioid & cocaine -ve urine. Escalating schedule wks 1-12 ($2.50 initial + $1.25 per consec -ve sample; reset to $2.50 for a +ve; $10 bonus for 3 consec. -ve samples). Wks 13-24, fixed $1 per -ve sample. Max total reward $1033.50 **Group 4 N= 43** IDC (individual drug counselling) with outpatient - Manualised individual sessions with CRA approach (behavioural skills, engaging in non-drug activities): twice weekly weeks 1-12, weekly weeks 13-24. Daily observed dispensing. Opioid agonist: buprenorphine maintenance with outpatient - 4mg sublingual buprenorphine, increased to 12mg by end of week 2. Up to max 16mg for remaining of study. Daily observed dispensing. Control: TAU (treatment as usual) - Received piece of paper at each urine test indicating whether sample was positive or negative	
SILVERMAN1998 Study Type: RCT (randomised controlled trial) Type of Analysis: Per protocol Blindness: No mention Duration (days): Mean 84 Followup: 12 months Setting: US Notes: RANDOMISATION: Incomplete due to yoking for CM conditions Info on Screening Process: 94 enrolled in MMT, 90 completed baseline assessment; 59 eligible (used cocaine) and randomised	n= 59 Age: Mean 38 Sex: 39 males 20 females Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT 100% cocaine misuse by urinalysis Exclusions: - age outside 18-65 range - not qualified for MMT under FDA guidelines - no history of intravenous opioid use - current major psychiatric or unstable serious medical illness - alcohol or benzodiazepine dependence - <3 cocaine-positive urine samples out of 15 during 5-week baseline period Notes: PRIMARY DIAGNOSIS: MMT patients who had misused cocaine in past 5 weeks ETHNICITY: Black 63%, White 37% REFERRALS: MMT admissions Baseline: (GROUPS: CM with bonus / CM / NCM) Employed: 15% / 20% / 5% Drug use (past 30 days): heroin: 95% / 100% / 95%,	**Data Used** Abstinence: % with negative urine sample per day Abstinence: longest consecutive period Retention: weeks remained in treatment Cocaine craving: VAS (visual analogue scale) Notes: FOLLOW-UP: Baseline, endpoint (12 months) DROPOUTS: ?	**Group 1 N= 19** Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose Up to 80 mg - Daily methadone and 45 mins per week individual counselling and medication monitoring NCM (non-contingent management) with outpatient - Vouchers yoked to reinforcement schedule of another participant in CM group (only available when participant attended clinic) **Group 2 N= 20** CM: vouchers with outpatient - Identical to CM condition except $1.50 is rewarded for each successive negative sample. Additionally, $50 bonus for each of the first 6 negative samples provided, and each time 2 consecutive negative samples provided. Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose Up to 80 mg - Daily methadone and 45 mins per week individual counselling and medication monitoring	Study quality: 1+

	cocaine: 100% / 100% / 95%, alcohol: 50% / 65% / 68% Alcohol dependence: 20% / 20% / 21% Cocaine dependence: 65% / 45% / 42%		**Group 3 N= 20** CM: vouchers with outpatient. Mean dose Max $1950 - Schedule of escalating reinforcement for each successive cocaine-negative urine sample ($2.50 initial, +$2.96 per sample up to 6). Vouchers exchangeable for goods/services considered consistent with the participant's goals. Total value of vouchers: $1950. Opioid agonist: MMT (methadone maintenance) - Daily methadone and 45 mins per week individual counselling and medication monitoring	
SILVERMAN2004 Study Type: RCT (randomised controlled trial) Type of Analysis: ITT and completers Blindness: No mention Duration (days): Mean 365 Followup: 9 weeks Setting: US Notes: RANDOMISATION: Computer program	n= 78 Age: Mean 39 Sex: 43 males 35 females Diagnosis: 100% opioid dependence by DSM-III-R 81% cocaine dependence by DSM-III-R Exclusions: - <18 or >50 years of age - opioid-negative sample at intake - did not report regular use in 30 days before intake and for 6 months before intake - <1 year of regular MMT - participated in a CM study before - did not have objective signs of injection drug use - pregnant - medical condition that contraindicated MMT - serious psychiatric condition (e.g. schizophrenia) Baseline: GROUPS: CM: take home + voucher / CM: take home / TAU Days used heroin in last 30 days: 28 (5.7) / 29 (2.3) / 29 (3.5) Days used cocaine in last 30 days:15 (11.6) / 14 (12.3) /11 (11.3)	**Data Used** Abstinence at 6 months Retention: weeks remained in treatment Abstinence: weeks drug free Notes: DROPOUTS: CM take home + vouchers = 7/26, CM take home = 10/26, TAU = 12/26	**Group 1 N= 26** CM: methadone with outpatient - After 3 consecutive negative urine samples, a take-home dose for following day was given; after that, take-home dose given for each consecutive urine sample. If positive urine provided, required 3 consecutive negative urines for next take-home dose. Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 60 mg - 10-week stabilisation period before main intervention: starting dose of 20 mg increased to 60 mg per day. If participant provided opioid-positive urine sample during weeks 3, 4 and 5 of baseline period dose increased to 100 mg **Group 2 N= 26** CM: vouchers with outpatient - $2.50 for first cocaine-negative urine, increase of $1.50 for each consecutive cocaine-negative urine up to maximum of $40 for each negative urine, $10 bonus for 3 consecutive negative urines. Cocaine-positive sample led to voucher reset to $2.50. CM: methadone with outpatient - After 3 consecutive negative urine samples a take-home dose for following day was given; after that, take-home dose given for each consecutive urine sample. If positive urine provided, 3 consecutive negative urines required for next take-home dose. Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 60 mg - 10-week stabilisation period before main intervention: starting dose of 20 mg increased to 60 mg per day. If participant provided opioid-positive urine sample during weeks 3, 4 and 5 of baseline period dose increased to 100 mg	Study quality: 1+

			Group 3 N= 26 Control: TAU (treatment as usual) with outpatient - Standard services including weekly individual and group counselling Opioid agonist: MMT (methadone maintenance) with outpatient - 10-week stabilisation period before main intervention: starting dose of 20 mg increased to 60 mg per day. If participant provided opioid-positive urine sample during weeks 3, 4 and 5 of baseline period dose increased to 100 mg.	
STITZER1992 Study Type: RCT (randomised controlled trial) Blindness: Open Duration (days): Mean 180 Setting: US Info on Screening Process: 1 dropped out before randomisation	n= 53 Age: Mean 34 Sex: 38 males 15 females Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT Exclusions: - no evidence of intravenous drug use - did not provide 3 consecutive opioid-positive urines Baseline: Participants had an average of 15 years of opioid use Mean methadone dose: 51.4 mg/day	**Data Used** Response: abstinent >=4 weeks Retention: weeks remained in treatment Abstinence: negative urinalysis Notes: DROPOUTS: CM = 10/26, NCM (non-contingent management) = 7/27	**Group 1 N= 26** CM: methadone with outpatient - Could earn a maximum of 3 take-home doses per week. First take-home methadone after 6 consecutive drug-free urines, additional take-home day authorized after 2 weeks drug free, then a further take-home day authorized after 2 more weeks drug free. Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 51.4 mg **Group 2 N= 27** Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 51.4 mg NCM (non-contingent management) with outpatient - Randomly assigned to receive 0, 1, 2 or 3 take-home doses per week for the month, delivered independent of test results	Study quality: 1+
TUCKER2004B Study Type: RCT (randomised controlled trial) Blindness: Single blind Duration (days): Mean 84 Followup: 3 months Setting: Australia Notes: RANDOMISATION: Computer randomised at a central site outside of treatment centre Info on Screening Process: 316 screened, 44 excluded; 147 did not return for study	n= 97 Age: Mean 30 Sex: 62 males 35 females Diagnosis: 100% opioid dependence by DSM-IV Exclusions: - <18 years - <5 days' abstinence from opioids - severe medical or psychiatric illness - dependence on another substance (other than tobacco, cannabis and prescribed benzodiazepines) - pregnant or breastfeeding - 3-fold elevation of serum transaminases - likely incarceration or surgery in next 3 months - currently receiving naltrexone from another source Baseline: GROUPS: naltrexone + CBT / naltrexone + control Heroin days (0-28): 13.46 (5.8) / 13.62 (5.74) Polydrug use (0-9): 4.87 (1.01) / 5.40 (1.44)	**Data Used** Dug use: days	**Group 1 N= 45** Control: enhanced TAU (treatment as usual) with outpatient - Case management and option of participating in voluntary psychosocial interventions e.g. individual counselling and self-help groups **Group 2 N= 52** Naltrexone maintenance with outpatient. Mean dose 50 mg - Initial dose of 25 mg, daily dose of 50 mg under supervision in week 1, then given enough naltrexone to self-administer on a weekly basis CBT: group RP (relapse prevention) with outpatient - Based on 4 modules (3 sessions each): 1) preventing relapse, 2) emotions, 3) relationships, 4) naltrexone and global lifestyle change. Participants could begin at any of the sessions and rotated through all 12 to successfully complete programme.	Study quality: 1+
UKCBTMM2004				

Study Type: RCT (randomised controlled trial) Study Description: Not true ITT-- 6-month and 12-month analysis only included those available to follow-up Type of Analysis: ITT Blindness: Single blind Duration (days): Mean 365 Setting: 10 community clinics offering MMT in England Notes: RANDOMISATION: Concealed (remote randomisation service). Stratified by SDS severity, Drug Treatment and Testing Order status and treatment centre. Info on Screening Process: 842 screened, 369 eligible. Main reasons for exclusion: too low/unstable methadone dose, not engaged in treatment and unstable housing. 309 not enrolled: main reasons: unable to approach, not interested, lack of time. 60 randomised.	n= 60 Age: Mean 32 Sex: 45 males 15 females Diagnosis: 100% opioid dependence by ICD-10 Exclusions: - age outside 18-70 range - current severe mental or physical illness - not on stable dose; MMT >=30 mg - no MMT or opioid detoxification in past 3 months - did not attend >=3 of past 6 MMT keyworker sessions - pending imprisonment - severe brain damage or mental impairment - unstable residence Notes: PRIMARY DIAGNOSIS: Opioids ETHNICITY: White 93%, Bangladeshi 2%, Black 3%, other 2% Baseline: (GROUPS: MMT / MMT+ CBT) European ASI overall: 0.27 / 0.31 Days' heroin use in past 30 days: 9.0 / 14.6 £ spent on heroin in past 6 months: 2052 / 2367 Polydrug use in past 30 days: 7.4 / 8.1 Injection drug use in past 30 days: 7.2 / 8.6 £ spent on drugs in past 30 days: 154.84 / 350.17	**Data Used** E-ASI (European Addiction Severity Index) Notes: FOLLOW-UP: Baseline, 6 months and 12 months DROPOUTS: 7% MMT + CBT and 16% MMT unavailable to follow-up at 6 months	**Group 1 N= 29** CBT (cognitive behavioural therapy) with outpatient. Mean dose Max 24 sessions - 40min individual weekly sessions over 6 months. Consisted of core (identifying negative thoughts that maintain drug use, high-risk situations and coping strategies) and elective (addressing other problems such as depression, anxiety, criminality) sessions Opioid agonist: MMT (methadone maintenance) with outpatient - Fortnightly (as minimum) 30-min manual guided sessions with keyworker. Focused on identifying specific needs and giving advice in areas of health, housing, relationships and legal problems, with individualised care plan. Prescription of oral methadone. **Group 2 N= 31** Opioid agonist: MMT (methadone maintenance) with outpatient - Fortnightly (as minimum) 30-min manual guided sessions with keyworker. Focused on identifying specific needs and giving advice in areas of health, housing, relationships and legal problems, with individualised care plan. Prescription of oral methadone.	Study quality: 1++
WOODY1983 Study Type: RCT (randomised controlled trial) Type of Analysis: Per protocol Blindness: Open Duration (days): Mean 168 Followup: 7 and 12 months Setting: US Notes: RANDOMISATION: Not reported	n= 110 Age: Mean 33 Range 18-55 Sex: all males Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT Exclusions: - psychosis - persistent or clinically significant organic brain syndrome - <2 weeks or >6 months MMT during current treatment episode Baseline: GROUPS: SE (supportive-expressive therapy) / CBT / DC Years of regular heroin use: 7 / 10 / 11 Years of regular stimulant use: 2 / 1 / 1	**Data Used** ASI (Addiction Severity Index): drug use	**Group 1 N= 39** Control: TAU (treatment as usual) with outpatient - Major focus on providing external services and not dealing with psychological processes **Group 2 N= 39** CBT: CT (cognitive therapy) with outpatient - Focused on changing participant's beliefs, and feelings of helplessness or worthlessness **Group 3 N= 32** SE (supportive-expressive psychotherapy) with outpatient - Analytically oriented focal psychotherapy. Aimed to help participant identify and work through problematic relationship themes. Special attention was paid to the meanings that the patient attached to the drug dependence.	Study quality: 1+
WOODY1995 Study Type: RCT (randomised controlled trial) Blindness: Duration (days): Mean 180 Followup: 6 months Setting: US Info on Screening Process: Initially 350 screened, 178 excluded; 172 underwent more formal screening and 23 were excluded; at third stage of screening, 26 out of 149 were excluded	n= 84 Age: Mean 41 Sex: 89 males 34 females Diagnosis: drug misuse (non-alcohol) Exclusions: - severe medical or psychiatric disorders - pending incarceration or move from area - BDI <40 - Symptom Checklist-90 <40	**Data Used** ASI (Addiction Severity Index): drug use Abstinence: % with negative urine sample per day Notes: DROPOUTS: SE = 5/62, standard care = 4/31	**Group 1 N= 57** SE (supportive-expressive psychotherapy) with outpatient - Analytically oriented focal psychotherapy adapted to drug dependent people. Supportive techniques aim to help participants feel comfortable discussing personal problems; expressive techniques aim to help identify core relationship pattern and themes.	Study quality: 1+

	- ASI: Psychiatry <5 Baseline: GROUPS: SE (supportive-expressive psychotherapy)/ TAU Mean years' opioid use: 7 (6) / 11 (7) Longest period in months of abstinence: 13 (22) / 6 (9)		**Group 2 N= 27** Control: standard care with outpatient - Drug counselling - exploring currrent problems and providing support; referral to medical, social and legal services	

Characteristics of Excluded Studies

Reference ID	Reason for Exclusion
ABBOTT1998	CRA (community reinforcement approach) and CRA + RP combined; no breakdown of results for each group
BROONER1998A	No relevant outcomes
BROONER2004	Poor quality
CALLAHAN1976	No extractable data
CALLAHAN1980	No extractable data
CALSYN1994	No extractable outcomes
CARROLL2004	Data not extractable
CHUTUAPE1999B	n <10 for control group
COVI1995	No control condition for counselling group
DEES1997	No useful outcome data
FARABEE2002	No extractable outcomes
GOLDSTEIN2002	No drug-use outcomes
HAVASSY1979	Pre-1980
HOUSTON1983	Intervention does not meet inclusion criteria
IGUCHI1988	n<10 per arm
IGUCHI1996	Does not compare CM with a different intervention/control; urine data not extractable
IGUCHI1997	Required outcomes not extractable
JONES2001A	Pregnant women; no extractable data
KIDORF1995	Not an intervention
MILBY1978	Pre-1980
MONTOYA2005	No psychotherapy comparator
RAWSON1984	No extractable data
RHODES2003	Not required outcomes
ROSENBLUM1999	Poor methodological rigour
ROUNSAVILLE1983A	No extractable data
SCHERBAUM2005	No required outcomes
SCHMITZ2001A	No extractable data
SCHOTTENFELD2000	Not an RCT
SIMPSON1997	No extractable data
STEIN2005	Anti-depression with psychological versus minimal control: primary focus is depression
STITZER1980	n <10 per arm
STITZER1983	n <10

References of Included Studies

AVANTS1999 (Published Data Only)

Avants, S.K., Margolin, A., Kosten, T.R., et al. (1998) When is less treatment better? The role of social anxiety in matching methadone patients to psychosocial treatments. Journal of Consulting and Clinical Psychology, 66, 924-931.

*Avants, S.K., Margolin, A., Sindelar, J.L., et al. (1999) Day treatment versus enhanced standard methadone services for opioid-dependent patients: a comparison of clinical efficacy and cost. American Journal of Psychiatry, 156, 27-33.

CARROLL2001B (Published Data Only)

*Carroll, K.M., Sinha, R., Nich, C., et al. (2002) Contingency management to enhance naltrexone treatment of opioid dependence: a randomized clinical trial of reinforcement magnitude. Experimental and Clinical Psychopharmacology, 10, 54-63.

Carroll, K.M., Ball, S.A., Nich, C., et al. (2001) Targeting behavioral therapies to enhance naltrexone treatment of opioid dependence: efficacy of contingency management and significant other involvement. Archives of General Psychiatry, 58, 755-761.

CARROLL2002 (Published Data Only)

Carroll, K.M., Sinha, R., Nich, C., et al. (2002) Contingency management to enhance naltrexone treatment of opioid dependence: a randomized clinical trial of reinforcement magnitude. Experimental and Clinical Psychopharmacology, 10, 54-63.

CATALANO1999 (Published Data Only)

Catalano, R.F., Gainey, R.R., Fleming, C.B., et al. (1999) An experimental intervention with families of substance abusers: one-year follow-up of the focus on families project. Addiction, 94, 241-254.

CHUTUAPE2001 (Published Data Only)

Chutuape, M.A., Silverman, K. & Stitzer, M.L. (2001) Effects of urine testing frequency on outcome in a methadone take-home contingency program. Drug and Alcohol Dependence, 62, 69-76.

DOWNEY2000 (Published Data Only)

Downey, K.K., Helmus, T.C. & Schuster, C.R. (2000) Treatment of heroin-dependent poly-drug abusers with contingency management and buprenorphine maintenance. Experimental and Clinical Psychopharmacology, 8, 176-184.

EPSTEIN2003 (Published Data Only)

*Epstein, D.H., Hawkins, W.E., Covi, L., et al. (2003) Cognitive-behavioral therapy plus contingency management for cocaine use: findings during treatment and across 12-month follow-up. Psychology of Addictive Behaviors, 17, 73-82.

Schroeder, J.R., Epstein, D.H., Umbricht, A., et al. (2006) Changes in HIV risk behaviors among patients receiving combined pharmacological and behavioral interventions for heroin and cocaine dependence. Addictive Behaviours, 31, 868-879.

FALSSTEWART2001 (Published Data Only)

Fals-Stewart, W., O'Farrell, T.J. & Birchler, G.R. (2001) Behavioral couples therapy for male methadone maintenance patients: effects on drug-using behavior and relationship adjustment. Behavior Therapy, 32, 391-411.

FALSSTEWART2003 (Published Data Only)

Fals-Stewart, W. & O'Farrell, T.J. (2003) Behavioral family counseling and naltrexone for male opioid-dependent patients. Journal of Consulting & Clinical Psychology, 71, 432-442.

GROSS2006 (Published Data Only)

Gross, A., Marsch, L.A., Badger, G.J., et al. (2006) A comparison between low-magnitude voucher and buprenorphine medication contingencies in promoting abstinence from opioids and cocaine. Experimental and Clinical Psychopharmacology, 14, 148-156.

KOSTEN2003 (Published Data Only)

Gonzalez, G., Feingold, A., Oliveto, A., et al. (2003) Comorbid major depressive disorder as a prognostic factor in cocaine-abusing buprenorphine-maintained patients treated with desipramine and contingency management. American Journal of Drug and Alcohol Abuse, 29, 497-514.

Sofuoglu, M., Gonzalez, G., Poling, J., et al. (2003) Prediction of treatment outcome by baseline urine cocaine results and self-reported cocaine use for cocaine and opioid dependence. American Journal of Drug & Alcohol Abuse, 29, 713-727.

*Kosten, T., Oliveto, A., Feingold, A., Poling, J., et al. (2003) Desipramine and contingency management for cocaine and opiate dependence in buprenorphine-maintained patients. Drug and Alcohol Dependence, 70, 315-325.

Kosten, T., Poling, J. & Oliveto, A. (2003) Effects of reducing contingency management values on heroin and cocaine use for buprenorphine- and desipramine-treated patients. Addiction, 98, 665-671.

MCLELLAN1993 (Published Data Only)

Kraft, M.K., Rothbard, A.B., Hadley, T.R., et al. (1997) Are supplementary services provided during methadone maintenance really cost-effective? American Journal of Psychiatry, 154, 1214-1219.

*McLellan, A.T., Arndt, I.O., Metzger, D.S., et al. (1993) The effects of psychosocial services in substance abuse treatment. The Journal of the American Medical Association, 269, 1953-1959.

PEIRCE2006 (Published Data Only)

Peirce, J.M., Petry, N.M., Stitzer, M.L., 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.

PETRY2002 (Published Data Only)

Petry, N.M. & Martin, B. (2002) Low-cost contingency management for treating cocaine- and opioid-abusing methadone patients. Journal of Consulting and Clinical Psychology, 70, 398-405.

PETRY2005C (Published Data Only)

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

PRESTON1999 (Published Data Only)

Preston, K.L., Umbricht, A. & Epstein, D.H. (2001) Abstinence reinforcement maintenance contingency and one-year follow-up. Drug and Alcohol Dependence, 67, 125-137.

*Preston, K.L., Silverman, K., Umbricht, A., et al. (1999) Improvement in naltrexone treatment compliance with contingency management. Drug and Alcohol Dependence, 54, 127-135.

PRESTON2000 (Published Data Only)

*Schroeder, J.R., Gupman, A.E., Epstein, D.H., et al. (2003) Do noncontingent vouchers increase drug use? Experimental and Clinical Psychopharmacology, 11, 195-201.

Preston, K.L., Umbricht, A. & Epstein, D.H. (2000) Methadone dose increase and abstinence reinforcement for treatment of continued heroin use during methadone maintenance. Archives of General Psychiatry, 57, 395-404.

RAWSON2001 (Published Data Only)

Rawson, R.A., McCann, M.J., Shoptaw, S.J., et al. (2001) Naltrexone for opioid dependence: evaluation of a manualized psychosocial protocol to enhance treatment response. Drug and Alcohol Review. 20, 67-78.

RAWSON2002 (Published Data Only)

Messina, N., Farabee, D. & Rawson, R. (2003) Treatment responsivity of cocaine-dependent patients with antisocial personality disorder to cognitive-behavioral and contingency management interventions. Journal of Consulting and Clinical Psychology, 71, 320-329.

*Rawson, R.A., Huber, A., McCann, M., et al. (2002) A comparison of contingency management and cognitive-behavioral approaches during methadone maintenance treatment for cocaine dependence. Archives of General Psychiatry, 59, 817-824.

SCHOTTENFELD2005 (Published Data Only)

Schottenfeld, R.S., Chawarski, M.C., Pakes, J. R., et al. (2005) Methadone versus buprenorphine with contingency management or performance feedback for cocaine and opioid dependence. American Journal of Psychiatry, 162, 340-349.

SILVERMAN1998 (Published Data Only)

Silverman, K., Wong, C.J., Umbricht-Schneiter, A., et al. (1998) Broad beneficial effects of cocaine abstinence reinforcement among methadone patients. Journal of Consulting and Clinical Psychology, 66, 811-824.

SILVERMAN2004 (Published Data Only)

Silverman, K., Robles, E., Mudric, T., et al. (2004) A randomized trial of long-term reinforcement of cocaine abstinence in methadone-maintained patients who inject drugs. Journal of Consulting and Clinical Psychology, 72, 839-854.

STITZER1992 (Published Data Only)

Stitzer, M.L., Iguchi, M.Y. & Felch, L.J. (1992) Contingent take-home incentive: effects on drug use of methadone maintenance patients. Journal of Consulting and Clinical Psychology, 60, 927-934.

TUCKER2004B (Published Data Only)

Tucker, T., Ritter, A., Maher, C., et al. (2004) A randomized control trial of group counseling in a naltrexone treatment program. Journal of Substance Abuse Treatment, 27, 277-288.

UKCBTMM2004 (Published Data Only)

UKCBTMM Project Group (2004) The effectiveness and cost effectiveness of cognitive behaviour therapy for opiate misusers in methadone maintenance treatment: a multicentre, randomised, controlled trial. Final report to the funding organisation: R&D Directorate of the Department of Health as part of the Drug Misuse Research Initiative.

WOODY1983 (Published Data Only)

Woody, G.E., Luborsky, L., McLellan, A.T., et al. (1983) Psychotherapy for opiate addicts. Does it help? Archives of General Psychiatry, 40, 639-645.

Woody, G.E., Luborsky, L., McLellan, A.T., et al. (1983) Psychotherapy for opiate addicts. NIDA Research Monograph, 43, 59-70.

Woody, G.E., McLellan, A.T., Luborsky, L., et al. (1984) Severity of psychiatric symptoms as a predictor of benefits from psychotherapy: the Veterans Administration-Penn study. American Journal of Psychiatry, 141, 1172-1177.

Woody, G.E., O'Brien, C.P., McLellan, A.T., et al. (1981) Psychotherapy for opiate addiction: some preliminary results. Annals of the New York Academy of Sciences, 362, 91-100.

WOODY1995 (Published Data Only)

Woody, G.E., McLellan, A.T., Luborsky, L., et al. (1995) Psychotherapy in community methadone programs: a validation study. American Journal of Psychiatry, 152, 1302-1308.

References of Excluded Studies

ABBOTT1998 (Published Data Only)

Abbott, P.J., Weller, S.B., Delaney, H.D., et al. (1998) Community reinforcement approach in the treatment of opiate addicts. American Journal of Drug and Alcohol Abuse, 24, 17-30.

BROONER1998A (Published Data Only)

Brooner, R.K., Kidorf, M., King, V.L., et al. (1998) Preliminary evidence of good treatment response in antisocial drug abusers. Drug and Alcohol Dependence, 49, 249-260.

BROONER2004 (Published Data Only)

Brooner, R.K., Kidorf, M.S., King, V.L., et al. (2004) Behavioral contingencies improve counseling attendance in an adaptive treatment model. Journal of Substance Abuse Treatment, 27, 223-232.

CALLAHAN1976 (Published Data Only)

Callahan, E., Rawson, R., Glazer, M., et al. (1976) Comparison of two naltrexone treatment programs: naltrexone alone versus naltrexone plus behavior therapy. NIDA Research Monograph.

CALLAHAN1980 (Published Data Only)

Callahan, E.J., Rawson, R.A. & McCleave, B. (1980) The treatment of heroin addiction: naltrexone alone and with behavior therapy. International Journal of the Addictions. 15, 795-807.

CALSYN1994 (Published Data Only)

Calsyn, D.A., Wells, E.A., Saxon, A.J., et al. (1994) Contingency management of urinalysis results and intensity of counseling services have an interactive impact on methadone maintenance treatment outcome. Journal of Addictive Diseases, 13, 47-63.

CARROLL2004 (Published Data Only)

Carroll, K.M., Fenton, L.R., Ball, S.A., et al. (2004) Efficacy of disulfiram and cognitive behavior therapy in cocaine-dependent outpatients: a randomized placebo-controlled trial. Archives of General Psychiatry, 61, 264-272.

CHUTUAPE1999B (Published Data Only)

Chutuape, M. A., Silverman, K., & Stitzer, M. L. (1999). Use of methadone take-home contingencies with persistent opiate and cocaine abusers. Journal of Substance Abuse Treatment., 16, 23-30.

COVI1995

Covi, L., Hess, J.M., Kreiter, N.A., et al. (1995) Effects of combined fluoxetine and counseling in the outpatient treatment of cocaine abusers. American Journal of Drug and Alcohol Abuse, 21, 327-344.

DEES1997

Dees, S.M., Dansereau, D.F. & Simpson, D.D. (1997) Mapping-enhanced drug abuse counseling: urinalysis results in the first year of methadone treatment. Journal of Substance Abuse Treatment, 14, 45-54.

FARABEE2002 (Published Data Only)

Farabee, D., Rawson, R. & McCann, M. (2002) Adoption of drug avoidance activities among patients in contingency management and cognitive-behavioral treatments. Journal of Substance Abuse Treatment, 23, 343-350.

GOLDSTEIN2002 (Published Data Only)

Goldstein, M.F., Deren, S., Kang, S.Y., et al. (2002) Evaluation of an alternative program for MMTP drop-outs: impact on treatment re-entry. Drug and Alcohol Dependence, 66, 181-187.

HAVASSY1979 (Published Data Only)

Havassy, B. & Hargreaves, W. (1979) Self-regulation of dose in methadone maintenance with contingent privileges. Addictive Behaviors, 4, 31-38.

HOUSTON1983 (Published Data Only)

Houston, C.C. & Milby, J.B. (1983) Drug-seeking behavior and its mediation: effects of aversion therapy with narcotic addicts on methadone. International Journal of the Addictions, 18, 1171-1177.

IGUCHI1988 (Published Data Only)

Iguchi, M.Y., Stitzer, M.L., Bigelow, G.E., et al. (1988) Contingency management in methadone maintenance: effects of reinforcing and aversive consequences on illicit polydrug use. Drug and Alcohol Dependence, 22, 1-7.

IGUCHI1996 (Published Data Only)

Iguchi, M.Y., Lamb, R.J., Belding, M.A., et al. (1996) Contingent reinforcement of group participation versus abstinence in a methadone maintenance program. Experimental and Clinical Psychopharmacology, 4, 315-321

IGUCHI1997 (Published Data Only)

Belding, M.A., Iguchi, M.Y., Morral, A.R., et al. (1997) Assessing the helping alliance and its impact in the treatment of opiate dependence. Drug and Alcohol Dependence, 48, 51-59.

*Iguchi, M.Y., Belding, M.A., Morral, A.R., et al. (1997) Reinforcing operants other than abstinence in drug abuse treatment: an effective alternative for reducing drug use. Journal of Consulting and Clinical Psychology, 65, 421-428.

JONES2001A

Jones, H.E., Haug, N.A., Stitzer, M.L., et al. (2000) Improving treatment outcomes for pregnant drug-dependent women using low-magnitude voucher incentives. Addictive Behaviors, 25, 263-267.

*Jones, H.E., Haug, N., Silverman, K., et al. (2001) The effectiveness of incentives in enhancing treatment attendance and drug abstinence in methadone-maintained pregnant women. Drug and Alcohol Dependence, 61, 297-306.

KIDORF1995 (Published Data Only)

Kidorf, M., Stitzer, M.L. & Griffiths, R.R. (1995) Evaluating the reinforcement value of clinic-based privileges through a multiple choice procedure. Drug and Alcohol Dependence, 39, 167-172.

MILBY1978 (Published Data Only)

Milby, J.B, Garrett, C., English, C., et al. (1978). Take-home methadone: contingency effects on drug-seeking and productivity of narcotic addicts. Addictive Behaviors, 3, 215-220.

MONTOYA2005

Montoya, I., Schroeder, J., Preston, K., et al. (2005) Influence of psychotherapy attendance on buprenorphine treatment outcome. Journal of Substance Abuse Treatment, 28, 247-254.

RAWSON1984 (Published Data Only)

Rawson, R.A. & Tennant, F.S., Jr. (1984) Five-year follow-up of opiate addicts with naltrexone and behavior therapy. NIDA Research Monograph, 49, 289-295.

RHODES2003 (Published Data Only)

Rhodes, G.L., Saules, K.K., Helmus, T.C., et al. (2003) Improving on-time counseling attendance in a methadone treatment program: a contingency management approach. American Journal of Drug and Alcohol Abuse, 29, 759-773.

ROSENBLUM1999

Rosenblum, A., Magura, S., Palij, M., et al. (1999) Enhanced treatment outcomes for cocaine-using methadone patients. Drug and Alcohol Dependence, 54, 207-218.

ROUNSAVILLE1983A (Published Data Only)

Rounsaville, B.J., Glazer, W., Wilber, C.H., et al. (1983) Short-term interpersonal psychotherapy in methadone-maintained opiate addicts. Archives of General Psychiatry, 40, 629-636.

SCHERBAUM2005 (Published Data Only)

Scherbaum, N., Kluwig, J., Specka, M., et al. (2005) Group psychotherapy for opiate addicts in methadone maintenance treatment - a controlled trial. European Addiction Research, 11, 163-171.

SCHMITZ2001A (Published Data Only)

Schmitz, J.M., Stotts, A.L., Rhoades, H.M., et al. (2001) Naltrexone and relapse prevention treatment for cocaine-dependent patients. Addictive Behaviors, 26, 167-180.

SCHOTTENFELD2000 (Published Data Only)

Schottenfeld, R.S., Pantalon, M.V., Chawarski, M.C., et al. (2000) Community reinforcement approach for combined opioid and cocaine dependence. Patterns of engagement in alternate activities. Journal of Substance Abuse Treatment, 18, 255-261.

SIMPSON1997

Simpson, D.D., Joe, G.W., Rowan-Szal, G.A., et al. (1997) Drug abuse treatment process components that improve retention. Journal of Substance Abuse Treatment, 14, 565-572.

STEIN2005

Stein, M.D., Anderson, B.J., Solomon, D.A., et al. (2005) Reductions in HIV risk behaviors among depressed drug injectors. American Journal of Drug and Alcohol Abuse, 31, 417-432.

STITZER1980 (Published Data Only)

Stitzer, M.L., Bigelow, G.E. & Liebson, I. (1980) Reducing drug use among methadone maintenance clients: contingent reinforcement for morphine-free urines. Addictive Behaviors, 5, 333-340.

STITZER1983 (Published Data Only)

Stitzer, M.L., McCaul, M.E., Bigelow, G.E., et al. (1983) Oral methadone self-administration: effects of dose and alternative reinforcers. Clinical Pharmacology and Therapeutics, 34.

Characteristics of reviewed studies: Multimodal interventions

Comparisons Included in this Clinical Question

Day treatment versus standard outpatient
AVANTS1999
MARLOWE2003

Intensive outpatient versus standard outpatient
COVIELLO2001
MCLELLAN1993
VOLPICELLI2000
WEINSTEIN1997

Intensive outpatient with reinforcement-based work therapy versus standard care
JONES2005
SILVERMAN2001
SILVERMANinpress

Characteristics of Included Studies

Methods	Participants	Outcomes	Interventions	Notes
AVANTS1999 Study Type: RCT (randomised controlled trial) Type of Analysis: Per protocol Blindness: Open Duration (days): Mean 84 Followup: 6 months Setting: US Info on Screening Process: 308 eligible, 291 enrolled.	n= 291 Age: Mean 36 Sex: 205 males 86 females Diagnosis: 46% cocaine dependence by DSM-III-R 5% cocaine misuse by DSM-III-R Exclusions: Not reported Baseline: Years of opioid use = 12.7 (8.3); injection use = 74%; years of cocaine use = 8.9	**Data Used** Abstinence: % with negative urine sample per day Notes: DROPOUTS: CBT = 28/146, day treatment = 26/145	**Group 1 N= 145** Structured day treatment with outpatient. Mean dose 81.7 mg/day methadone - 5 hours per day, 5 days per week; manual guided programme in five general areas: 1) substance abuse treatment 2) physical and emotional health 3) community development 4) development of alternative reinforcers 5) basic daily living skills. **Group 2 N= 146** CBT: group with outpatient. Mean dose 78.1 mg/day methadone - 2 hours per week; manual-guided group CBT intervention. Used nine sessions from Monti's manual and three additional sessions on physical health, vocational skills and community resources.	Study quality: 1+
COVIELLO2001 Study Type: RCT (randomised controlled trial) Type of Analysis: ITT: missing urines as positive Blindness: Open Duration (days): Mean 28 Setting: Addictions unit for veterans, Philadelphia, US Info on Screening Process: 26% of those screened were excluded due to no cocaine use in past 3 months.	n= 94 Age: Mean 40 Sex: all males Diagnosis: 100% cocaine dependence by DSM-III-R Exclusions: - psychiatrically or medically unstable - no cocaine use in past 3 months - literacy problems - unable to provide follow-up locator information - not living in the metropolitan area Notes: ETHNICITY: 92% African American Baseline: Addiction Severity Index drug score: 0.18 Days' cocaine use in past 30: 9.9 Years' cocaine use: 8.4 Previous treatment attempts: 2.7	**Data Used** ASI Abstinence: negative urinalysis Abstinence: no use for any 4 consecutive weeks Engagement in treatment Retention: days remained in treatment Completion rate Notes: Supervised urines at baseline, during treatment (twice weekly), 4 months' and 6 months' follow-up DROPOUTS: 40% day programme, 40% outpatient	**Group 1 N= 46** Intensive outpatient treatment (~10hr/wk) with outpatient - 12 hours per week at day hospital: 7 hours' group therapy, 3 hours' education, 2 hours' counselling/ case management over 5 week days. **Group 2 N= 48** Group therapy with outpatient - 6 hours per week over 3 weekdays: 4 hours' group therapy, 1 hour's education, 1 hour's counselling/case management.	Study quality: 1+
JONES2005 Study Type: RCT (randomised controlled trial) Type of Analysis: ITT: GEE (generalised estimated equation) analysis.	n= 130 Age: Mean 38 Sex: 76 males 54 females Diagnosis: 100% opioid dependence by DSM-IV	**Data Used** ASI (Addiction Severity Index) Heroin use: times in past month Cocaine use: times in past month	**Group 1 N= 66** Day treatment (>20hr/wk) with inpatient and outpatient - Group counselling with skills building, job club, recreational activities, social club, option of living in recovery house. All contingent on daily	Study quality: 1++

Blindness: Open Duration (days): Mean 180 Followup: For 1 year after detox Setting: Baltimore, US Notes: RANDOMISATION: Stratified on five variables for modified dynamic balanced randomisation; performed by staff with no participant contact. Info on Screening Process: 268 referred; 199 gave consent; 25 dropped out of detoxification; 44 dropped out prior to randomisation; 130 randomised.	Exclusions: - currently prescribed or discharged with a prescription for opoid medication - diagnosis of serious medical or psychiatric illness - pregnant Notes: PRIMARY DIAGNOSIS: Just completed opioid detoxification Baseline: GROUPS: RBT / TAU Current probation/parole: 23% / 31% Cocaine-positive urine sample at detox intake: 70% / 66% 40% entered after completing a 3-day detox, the remaining 60% after a 7-14 day detox	Abstinence: % with negative urine sample per day	negative urine samples. Positive sample resulted in individual RP sessions and withdrawal of housing/other activities. **Group 2 N= 64** Control: standard care with outpatient - Referral and initiation (where possible) to aftercare and other services available in the community.	
MARLOWE2003 Study Type: RCT (randomised controlled trial) Type of Analysis: ITT (intention to treat) Blindness: Open Duration (days): Mean 120 Setting: Poor, urban outpatient population, Philadelphia, US Notes: No details on randomisation procedures. Info on Screening Process: 94 screened; 79 eligible.	n= 79 Age: Mean 34 Sex: 62 males 17 females Diagnosis: 100% cocaine dependence by DSM-III-R Exclusions: - cocaine not primary drug misused - no use of cocaine in past 30 days Notes: Primary route of administration: 87% smoking crack Baseline: 44% homeless, 19% probation or parole	**Data Used** Abstinence: negative urinalysis Abstinence: longest consecutive period Retention rate	**Group 1 N= 39** CBT: RP (relapse prevention) with outpatient - Twice weekly individual sessions based on Bux (1992) manual. CBT: group - Weekly groups sessions on 'training in interpersonal problem solving' (TIPS). Case management - Initial evaluation session with social worker with further sessions, as needed, for referrals and aftercare planning. **Group 2 N= 40** Day treatment (>20 hours per week) - As per standard outpatient group, plus: 20 hours per week psychoeducational and recreational groups (manualised RP, drug eduction, HIV/AIDS education, art and recreational therapy, manualised vocational training and other didactic groups). Free breakfast and lunch.	Study quality: 1+
MCLELLAN1993 Study Type: RCT (randomised controlled trial) Type of Analysis: Per protocol Blindness: Open Duration (days): Mean 180 Setting: US veterans Info on Screening Process: 144 screened; 13 excluded (medical or psychiatric conditions (n=6), did not follow through initial study procedures (n=7)); 29 refused to participate; 2 dropped out after <2 weeks' treatment; 5 could not be contacted for follow-up.	n= 92 Age: Mean 41 Sex: all males Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT (methadone mainteance treatment) Exclusions: - serious medical/psychiatric disorder - plans for immediate move from area near clinic Notes: All were intravenous users Baseline: Years of substance use: opioids = 11, cocaine = 3, problematic alcohol = 7	**Data Used** ASI (Addiction Severity Index)	**Group 1 N= 29** CM: methadone with outpatient - Combination of take-home methadone doses contingent on negative urines and CBT. First month weekly counselling, then over 2-6 months could reduce number of sessions (biweekly) if client showed signs of positive change. Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 60-90 mg. **Group 2 N= 31** Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 60-90 mg. Structured day treatment with outpatient - Consisted of contingent take-home doses, CBT counselling and access to extra professional resources: family therapy, employment counselling, psychiatrist.	Study quality: 1+

			Group 3 N= 32 Control: TAU (treatment as usual) with outpatient - Minimal treatment -- 15-min session/month Opioid agonist: MMT (methadone maintenance) with outpatient. Mean dose 60-90 mg	
SILVERMAN2001 Study Type: RCT (randomised controlled trial) Type of Analysis: ITT: missing urine samples as positive Blindness: Open Duration (days): Mean 180 Setting: Baltimore, US Notes: Urn randomisation	n= 40 Age: Mean 31 Sex: all females Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT Exclusions: - men and non-pregnant women - age outside range 18-50 - employed - not receiving MMT - no opioid- or cocaine-positive urine sample in past 6 weeks - suicide risk might disrupt workplace functioning Notes: ETHNICITY: 83% Black, 17% White POLYDRUG (dependence): 75% cocaine, 13% alcohol, 8% cannabis, 3% sedatives, 3% other Baseline: Full-time employed: 0% 12 years of education: 65%	**Data Used** Abstinence: % with negative urine sample per day Retention: sessions attended Completion rate Notes: Three times weekly urine samples, $3.50 paid per sample regardless of result	**Group 1 N= 20** Opioid agonist: MMT (methadone maintenance) with outpatient - Center for Addiction and Pregnancy (CAP): MMT programme for pregnant women, with individual + group therapy for drug misuse, and on-site obstetric, gynaecological and family planning services. Certified nurse/midwives and obstetricians available 24 hours. **Group 2 N= 20** Opioid agonist: MMT (methadone maintenance) - As per usual care group. CM: RBT (reinforcement-based work therapy) - Therapeutic workplace 3 hours per day, contingent on opioid and cocaine negative urine sample that day. Additional voucher reinforcement contingencies for abstinence and workplace attendance, punctuality and professional demeanour.	Study quality: 1+
SILVERMANinpress Study Type: RCT (randomised controlled trial) Study Description: Allocation by study coordinator, who had no direct contact with participants Type of Analysis: ITT; missing urines assumed positive Blindness: Open Duration (days): Mean 182 Followup: 6 months Setting: Treatment research unit, Baltimore, US Notes: Computerised, stratified randomisation	n= 56 Age: Mean 45 Sex: Not given Diagnosis: 100% opioid dependence by eligibility for/receipt of MMT 100% IDU (injection drug use) by self-report 100% cocaine misuse by self-report Exclusions: - age < 18 - in any taxable part- or full-time employment - not currently enrolled in MMT - not a heroin or cocaine injector - no visible 'track' marks - did not use cocaine or crack cocaine in past 30 days - reported suicidal ideation or hallucinations Notes: ETHNICITY: 91% Black, 7% White, 2% other Baseline: (Work only / RBT + work) HIV+: 25.0% / 21.4% Usually unemployed in past 3 years: 42.9% / 60.7% Living in poverty: 100% / 100% Days used in past 30 days: cocaine 16.1 / 22.3, heroin 8.5 / 9.5 Previous drug treatment attempts: 6.5 / 5.3 Current parole or probation: 14.3 / 17.9	**Data Used** Abstinence at 6 months Engagement: sessions attended **Data Not Used** Abstinence: negative urinalysis	**Group 1 N= 28** CM: RBT (reinforcement-based work therapy) with outpatient - Attended workplace 4 hours per weekday for 26 weeks, with base ($8/hour) and performance pay. 3x weekly urinalysis; if cocaine positive, not allowed to work that day and pay dropped to $1/hour. This was increased by $1 per day (up to $8) for each negative urine provided. **Group 2 N= 28** Control: standard care with outpatient - Allowed to work regardless of urinalysis results.	Workplace involved computerised typing, keypad and data entry programmes. Payments were by electronic vouchers exchangeable for goods and services in the community, as well as food from cafeteria. Study quality: 1+
VOLPICELLI2000				

Study Type: RCT (randomised controlled trial) Type of Analysis: Per protocol Blindness: Open Duration (days): Not given Setting: Outpatient, US Notes: No details on randomisation procedures. Info on Screening Process: 205 phone-screened as eligible; 109 attended intake; 16 failed to complete intake forms; 6 ineligible, 3 elected to go into other treatment programmes; 84 randomised.	n= 84 Age: Mean 32 Sex: all females Diagnosis: 100% cocaine dependence by DSM-IV Exclusions: - not currently pregnant or in custody of child aged <4 - psychotic, homicidal or suicidal - unstable medical condition - opioid dependent Baseline: Groups: Contingency management (CM) / Psychosocially enhanced treatment (PET) Days' cocaine use in past 30 days: 13.1 / 10.6 Years' cocaine use: 6.52 / 6.29 ASI composite score: 0.25 / 0.25	**Data Used** ASI (Addiction Severity Index) Cocaine use: days Abstinence: negative urinalysis Retention: weeks remained in treatment	**Group 1 N= 42** Intensive outpatient treatment (~10hr/wk) with outpatient - Twice wkly group drug counselling; on-site childcare & women-only group therapy sessions available 5 days per week. Additional access to parenting classes, General Educational Devpt classes & staff psychiatrist, & unlimited access to individual therapist. **Group 2 N= 42** Case management with outpatient - Twice weekly group drug counselling; on-site childcare and women-only group therapy sessions available 5 days per week. Social worker as case manager; single 15-min appointment per week for check-up and making external referrals as needed.	Study quality: 1+
WEINSTEIN1997 Study Type: RCT (randomised controlled trial) Blindness: Open Duration (days): Mean 84 Followup: 6 months post treatment Setting: Outpatient cocaine clinic, Philadelphia Notes: RANDOMISATION: No details. Info on Screening Process: 450 randomised; 448 admitted to treatment; 423 admitted in time to complete 3 months in study programme.	n= 423 Age: Not given Sex: Not given Diagnosis: 100% cocaine dependence by DSM-III-R Exclusions: - not first admission - age <18 - 'overly' psychotic or actively suicidal - cognitive impairment precluding informed consent or programme participation Notes: Demographic data not reported Baseline: ASI drug: 6.3 Number of prior treatments: 1.0 Most common secondary drug: alcohol (33%) Current intravenous cocaine use: 3.3%	**Data Used** ASI (Addiction Severity Index) Urinalysis: positive for cocaine Cocaine use: times in past month Retention: days remained in treatment Completion rate	**Group 1 N= 144** IDC (individual drug counselling) - 1 hour weekly individual counselling for 3 months. Problem focused, exploratory, supportive, expressive as needed. Adhered to no single therapeutic model. **Group 2 N= 142** IDC (individual drug counselling) - 1 hour weekly individual counselling for 3 months. Problem focused, exploratory, supportive, expressive as needed. Adhered to no single therapeutic model. Group therapy - Once weekly group session. Problem focused, exploratory, supportive, expressive as needed. Adhered to no single therapeutic model. **Group 3 N= 137** Group therapy - Intensive group treatment involving group meetings and educational activities, for 3 hours on 3 days per weel for 3 months. Post-treatment referral to continuing care.	Study quality: 1+

Characteristics of Excluded Studies

Reference ID	Reason for Exclusion
BELL1997	No comparison data
GRUBER2000	Not relevant intervention
MARLOWE1997A	No extractable outcome data
SCHUMACHER1995	No extractable outcomes

References of Included Studies

AVANTS1999 (Published Data Only)

Avants, S.K., Margolin, A., Kosten, T.R., et al. (1998) When is less treatment better? The role of social anxiety in matching methadone patients to psychosocial treatments. Journal of Consulting and Clinical Psychology, 66, 924-931.

*Avants, S.K., Margolin, A., Sindelar, J.L., et al. (1999) Day treatment versus enhanced standard methadone services for opioid-dependent patients: a comparison of clinical efficacy and cost. American Journal of Psychiatry, 156, 27-33.

COVIELLO2001 (Published Data Only)

Coviello, D.M., Alterman, A.I., Rutherford, M.J., et al. (2001) The effectiveness of two intensities of psychosocial treatment for cocaine dependence. Drug and Alcohol Dependence, 61, 145-154.

JONES2005 (Published Data Only)

Jones, H.E., Wong, C.J., Tuten, M., et al. (2005) Reinforcement-based therapy: 12-month evaluation of an outpatient drug-free treatment for heroin abusers. Drug and Alcohol Dependence, 79, 119-128.

MARLOWE2003 (Published Data Only)

Marlowe, D.B., Kirby, K.C., Festinger, D.S., et al. (2003) Day treatment for cocaine dependence: incremental utility over outpatient counseling and voucher incentives. Addictive Behaviors, 28, 387-398.

MCLELLAN1993 (Published Data Only)

Kraft, M.K., Rothbard, A.B., Hadley, T.R., et al. (1997) Are supplementary services provided during methadone maintenance really cost-effective? American Journal of Psychiatry, 154, 1214-1219.

*McLellan, A.T., Arndt, I.O., Metzger, D.S., et al. (1993) The effects of psychosocial services in substance abuse treatment. The Journal of the American Medical Association, 269, 1953-1959.

SILVERMAN2001 (Published Data Only)

Silverman, K., Svikis, D., Robles, E., et al. (2001) A reinforcement-based therapeutic workplace for the treatment of drug abuse: six-month abstinence outcomes. Experimental and Clinical Psychopharmacology, 9, 14-23.

SILVERMANinpress (Unpublished Data Only)

Silverman, K., Wong, C.J., Needham, M., et al. A randomized trial of employment-based reinforcement of cocaine abstinence in injection drug users. Journal of Applied Behavior Analysis, in press.

VOLPICELLI2000 (Published Data Only)

Volpicelli, J.R., Markman, I., Monterosso, J., et al. (2000) Psychosocially enhanced treatment for cocaine-dependent mothers: evidence of efficacy. Journal of Substance Abuse Treatment, 18, 41-49.

WEINSTEIN1997 (Published Data Only)

Weinstein, S.P., Gottheil, E. & Sterling, R.C. (1997) Randomized comparison of intensive outpatient vs. individual therapy for cocaine abusers. Journal of Addictive Diseases, 16, 41-56.

References of Excluded Studies

BELL1997

Bell, K., Cramer-Benjamin, D. & Anastas, J. (1997) Predicting length of stay of substance-using pregnant and postpartum women in day treatment. Journal of Substance Abuse Treatment, 14, 393-400.

GRUBER2000 (Published Data Only)

Gruber, K., Chutuape, M.A. & Stitzer, M.L. (2000) Reinforcement-based intensive outpatient treatment for inner city opiate abusers: a short-term evaluation. Drug and Alcohol Dependence, 57, 211-223.

MARLOWE1997A

Marlowe, D.B., Kirby, K.C., Festinger, D.S., et al. (1997) Impact of comorbid personality disorders and personality disorder symptoms on outcomes of behavioral treatment for cocaine dependence. Journal of Nervous and Mental Disease, 185, 483-490.

SCHUMACHER1995

Schumacher, J.E., Milby, J.B., Caldwell, E., et al. (1995) Treatment outcome as a function of treatment attendance with homeless persons abusing cocaine. Journal of Addictive Diseases, 14, 73-85.