

Comparisons Included in this Clinical Question

			(Buprenorphine + CM) vs Control GROSS2006 KOSTEN2003 SCHOTTENFELD2005
(Desipramine + CBT) vs Control	(Desipramine + CM) vs Control KOSTEN2003	(Disulfiram + CBT) vs Control	(LAAM + DBT) vs (LAAM + CVT + 12 step)
(MMT + CBT) vs Control EPSTEIN2003 RAWSON2002 UKCBTMM2004 WOODY1983	(MMT + CM) vs Control CHUTUAPE2001 EPSTEIN2003 MCLELLAN1993 PEIRCE2006 PETRY2002 PETRY2005C PRESTON2000 RAWSON2002 SCHOTTENFELD2005 SILVERMAN1998 SILVERMAN2004 STITZER1992	(MMT + CRA) vs Control	(MMT + FT) vs Control CATALANO1999 FALSSTEWART2001
(MMT + intensive treatment) vs Control AVANTS1999 MCLELLAN1993	(MMT + IPT) vs Control	(MMT + SE) vs (MMT + CBT) WOODY1983	(MMT + SE) vs Control WOODY1983 WOODY1995
(Naltrexone + CBT) vs Control RAWSON2001 TUCKER2004B	(Naltrexone + CM) vs Control CARROLL2001B CARROLL2002 PRESTON1999	(Naltrexone + FT) vs Control CARROLL2001B FALSSTEWART2003	CBT vs Control
MMT+CM vs MMT+NCM			

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 Follow-up: 6 months	n= 291 Age: Mean 36 Sex: 205 males 86 females Diagnosis: 46% Cocaine dependence by DSM-III-R	Data Used Abstinence: % with negative urine sample per day	Group 1 N= 145 Structured day treatment with Outpatient. Mean dose 81.7mg/day - 5h/day, 5days/week manual guided program in 5 general areas: 1) substance abuse treatment 2) physical and emotional	Study quality: 1+

<p>Setting: US</p> <p>Info on Screening Process: 308 eligible > 291 enrolled</p>	<p>5% Cocaine misuse by DSM-III-R</p> <p>Exclusions: Not reported</p> <p>Baseline: Years of opiate use = 12.7 (8.3) Injection use = 74% Years of cocaine use = 8.9</p>	<p>Notes: DROPOUTS: CBT = 28/146 Day Treatment = 26/145</p>	<p>health 3) community development 4) development of alternative reinforcers 5) basic daily living skills</p> <p>Group 2 N= 146</p> <p>CBT: group with Outpatient. Mean dose 78.1mg - 2h/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.</p>							
<p>CARROLL2001B</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Blindness: No mention</p> <p>Duration (days): Mean 84</p> <p>Followup: 6 months</p> <p>Setting: US</p> <p>Notes: RANDOMISATION: Urn randomization programme</p> <p>Info on Screening Process: 70 screened, exclusions: 3 already receiving drug treatment, 6 did not complete detox, 2 needed inpatient hospitalization, 4 drop outs at screening stage; mean number of treatment weeks completed = 7.3: 1 completed 0 sessions, 32 completed <12 sessions,</p>	<p>n= 55</p> <p>Age: Mean 34</p> <p>Sex: 36 males 19 females</p> <p>Diagnosis: 100% Opiate dependence by DSM-IV</p> <p>Exclusions: Did not meet DSM-IV criteria for opioid dependence, did not complete detox, significant medical conditions (e.g. abnormal liver function, or active hepatitis), met DSM-IV criteria for schizophrenia or bipolar disorder, could not provide names and locator information of at least 3 individuals who would know whereabouts of participant during follow up</p> <p>Baseline: Group: Naltrexone / Naltrexone + low value vouchers / Naltrexone+high value vouchers</p> <table border="0"> <tr> <td>Years of opioid use:</td> <td>4.9 (5.0) / (6.2)</td> <td>7.5 / 4.9 (4.1)</td> </tr> <tr> <td>Previous opioid detoxs:</td> <td>2.7 (2.6) / (5.0)</td> <td>3.2 / 1.5</td> </tr> </table>	Years of opioid use:	4.9 (5.0) / (6.2)	7.5 / 4.9 (4.1)	Previous opioid detoxs:	2.7 (2.6) / (5.0)	3.2 / 1.5	<p>Data Used</p> <p>Abstinence: negative urinalysis</p>	<p>Group 1 N= 20</p> <p>Naltrexone maintenance with Outpatient. Mean dose 100 mg - Received naltrexone 3 times/week (Monday, 100mg; Wednesday, 100mg; Friday, 150mg), urine samples collected 3 times/week, and weekly group therapy sessions</p> <p>CM: vouchers with Outpatient - High value CM: received vouchers contingent on compliance with naltrexone maintenance and urine samples negative for opiates, cocaine and BZDs. Maximum earning of \$1,152 - increase in value for each negative sample but reset to minimum if positive sample</p> <p>Group 2 N= 17</p> <p>Naltrexone maintenance with Outpatient. Mean dose 100mg - Received naltrexone 3 times/week (Monday, 100mg; Wednesday, 100mg; Friday, 150mg), urine samples collected 3 times/week, and weekly group therapy sessions</p> <p>CM: vouchers with Outpatient - Low value CM: received vouchers contingent on compliance with naltrexone maintenance and urine samples negative for opiates, cocaine and BZDs. Maximum earning of \$561.60, increase in value for each negative sample but reset to minimum if positive sample</p> <p>Group 3 N= 18</p> <p>Naltrexone maintenance with Outpatient. Mean dose 100mg - Received naltrexone 3 times/week (Monday, 100mg; Wednesday, 100mg; Friday, 150mg), urine samples collected 3 times/week, and weekly group therapy sessions</p>	<p>Study quality: 1++</p>
Years of opioid use:	4.9 (5.0) / (6.2)	7.5 / 4.9 (4.1)								
Previous opioid detoxs:	2.7 (2.6) / (5.0)	3.2 / 1.5								
<p>CARROLL2002</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Type of Analysis: ITT (all those randomised were analysed)</p> <p>Blindness: Open</p> <p>Duration (days): Mean 84</p> <p>Followup: 1, 3 and 6 months</p> <p>Setting: New Haven, Connecticut, USA</p> <p>Notes: Urn randomisation</p> <p>Info on Screening Process: 70 screened - 11</p>	<p>n= 55</p> <p>Age: Mean 34</p> <p>Sex: 36 males 19 females</p> <p>Diagnosis: 100% Opiate dependence by DSM-IV</p> <p>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 >=3 individuals who</p>	<p>Data Used</p> <p>Abstinence: longest consecutive period</p> <p>Retention: weeks remained in treatment</p> <p>Abstinence: % with negative urine sample per day</p> <p>Compliance: naltrexone doses taken</p>	<p>Group 1 N= 18</p> <p>Naltrexone maintenance with Outpatient. Mean dose 100-150mg - 3 times weekly (100mg, 150mg on Fridays) naltrexone supervised by clinic nurse</p> <p>Group therapy with Outpatient - Weekly group therapy sessions at clinic</p>	<p>Study quality: 1+</p>						

<p>excluded (3 already receiving treatment, 6 did not complete detox, 2 required hospitalisation) - 4 dropped out during screening phase > 55 randomised</p>	<p>would know of participant's whereabouts during 6 months followup</p> <p>Notes: ETHNICITY: 6% African American, 9% Hispanic, 84% Caucasian</p> <p>Baseline: (Control / Low CM / High CM) Days opiate use in past 28: 8.3 / 11.1 / 12.8 Years regular opiate 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%</p>	<p>Notes: 3 times weekly urine sample, coinciding with medication visits. DROPOUTS: 32/55</p>	<p>Group 2 N= 17</p> <p>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</p> <p>Group 3 N= 20</p> <p>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 -ve urine/naltrexone dose ingested.</p>	
<p>CATALANO1999</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Type of Analysis: ITT</p> <p>Blindness: No mention</p> <p>Duration (days): Mean 365</p> <p>Setting: Two methadone clinics in USA</p> <p>Notes: RANDOMISATION: Blocked on race, parents' age at first drug use, parents' partnership status and ages of children</p> <p>Info on Screening Process: 78% of those eligible participated</p>	<p>n= 132</p> <p>Age: Mean 35</p> <p>Sex: 42 males 102 females</p> <p>Diagnosis: 100% Opiate dependence by Eligible for/receiving MMT</p> <p>Exclusions: - Not been in MMT for >=90 days - Do not have >=1 child aged 3-14 who lived with them >=50% of the time</p> <p>Notes: ETHNICITY: 105/132 white, 25/132 African-American, 7/132 other</p> <p>Baseline: Age at first opiate use: 19.1 Previous mths in MMT: 15.0</p>	<p>Data Used</p> <p>Cocaine use: times in past month Cannabis use: times in past month Heroin use: times in past month</p>	<p>Group 1 N= 74</p> <p>FT: 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.</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient - Standard methadone dispensing with "some individual and group counselling"</p> <p>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)</p> <p>Group 2 N= 58</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient - Standard methadone dispensing with "some individual and group counselling"</p>	<p>Study quality: 1+</p>
<p>CHUTUAPE2001</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Blindness: No mention</p> <p>Duration (days): Mean 238</p> <p>Setting: US</p> <p>Info on Screening Process: 231 screened, 15 did not complete baseline phase, 9 were opioid and cocaine free, submitted greater than 80% drug positive urines</p>	<p>n= 53</p> <p>Age:</p> <p>Sex:</p> <p>Diagnosis: 100% Opiate dependence by Eligible for/receiving MMT</p> <p>Exclusions: - opiate negative samples at intake - no signs of intravenous use - self reported opioid use (<= 21 of 30 days) for 6 or months of previous year - history of addiction <1year - serious medical or psychiatric illness</p>	<p>Data Used</p> <p>Response: abstinent >= 8 weeks Abstinence: weeks drug-free</p> <p>Notes: DROPOUTS: CM:weekly =6/16 CM:monthly = 3/18 NCM =1/19</p>	<p>Group 1 N= 19</p> <p>NCM (noncontingent 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%</p> <p>Group 2 N= 18</p> <p>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</p>	<p>Study quality: 1+</p>

	<p>- pregnancy</p> <p>Baseline: GROUPS: CM:weekly / CM:monthly / NCM</p> <p>Lifetime heroin use (months) 89 82 113</p> <p>Lifetime cocaine use (months) 23 23 28</p>		<p>Group 3 N= 16</p> <p>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</p>	
<p>EPSTEIN2003</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Blindness: No mention</p> <p>Duration (days): Mean 84</p> <p>Followup: 12 months</p> <p>Setting: US</p> <p>Info on Screening Process: 286 screened</p>	<p>n= 193</p> <p>Age: Mean 39</p> <p>Sex: 110 males 83 females</p> <p>Diagnosis: 41% Cocaine dependence by DSM-III-R</p> <p>Exclusions: - <18 years >65 years - not intravenous opiate users - not cocaine user - current psychotic, bipolar, or major depressive disorders - current physical dependence on alcohol or sedatives - unstable medical illness - pregnancy and breast feeding</p> <p>Baseline: Mean years of cocaine use = 11 (7.5) years Mean cocaine use = 18.3 (10.1) of last 30 days</p>	<p>Data Used</p> <p>Cocaine use: days</p> <p>Notes: DROPOUTS: Control = 12/49 CM = 9/47 CBT = 10/48 CBT+CM = 15/49</p>	<p>Group 1 N= 49</p> <p>CM: vouchers with Outpatient - Earned vouchers for each urine specimen that was negative for cocaine. Vouchers began at \$2.50, increased by \$1.50 for each consecutive voucher earned. For 3 consecutive negative urines earned a \$1C bonus.</p> <p>CBT: RP (relapse prevention) with Outpatient - Combined elements of relapse prevention, coping methods, behavioural reinforcement methods and methods of generalising to the environment</p> <p>IDC (individual drug counselling) with Outpatient</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 70mg - Within first week participants stabilised on 70mg/day could request increase of up to 80mg/day</p> <p>Group 2 N= 47</p> <p>CM: vouchers with Outpatient - Earned vouchers for each urine specimen that was negative for cocaine. Vouchers began at \$2.50, increased by \$1.50 for each consecutive voucher earned. For 3 consecutive negative urines earned a \$1C bonus.</p> <p>IDC (individual drug counselling) with Outpatient</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 70mg - Within first week participants stabilised on 70mg/day could request increase of up to 80mg/day</p> <p>Control: social support group with Outpatient</p> <p>Group 3 N= 48</p> <p>CBT: RP (relapse prevention) with Outpatient - Combined elements of relapse prevention, coping methods, behavioural reinforcement methods and methods of generalising to the environment</p> <p>IDC (individual drug counselling) with Outpatient</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 70mg - Within first week participants stabilised on 70mg/day could request increase of up to 80mg/day</p> <p>NCM (noncontingent management) with Outpatient</p>	<p>Study quality: 1+</p>

			<p>Group 4 N= 49</p> <p>IDC (individual drug counselling) with Outpatient</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 70mg - Within first week participants stabilised on 70mg/day could request increase of up to 80mg/day</p> <p>NCM (noncontingent management) with Outpatient</p> <p>Control: social support group with Outpatient</p>	
<p>FALSSTEWART2001</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Study Description: Male patients participated with female significant others</p> <p>Type of Analysis: Per protocol</p> <p>Blindness: No mention</p> <p>Duration (days): Mean 105</p> <p>Setting: Two MMT clinics in USA</p> <p>Notes: RANDOMISATION: No details</p> <p>Info on Screening Process: 371 applicants > 89 married or cohabiting interviewed - 19 refused consent - 27 met exclusion criteria > 43 enrolled and randomised</p>	<p>n= 43</p> <p>Age: Mean 38</p> <p>Sex: all males</p> <p>Diagnosis:</p> <p>100% Opiate dependence by Eligible for/receiving MMT</p> <p>Opiate misuse</p> <p>Exclusions: - Male partner's age outside 21-60 range - Not married for >=1 yr or living with a female significant other in a stable common-law relationship for >=2 yrs - Ineligible for MMT - Seeking additional substance abuse treatment other than self-help meetings, unless recommended by primary therapist - Female partner met DSM-III-R criteria for substance use in past 6 mths - Either partner met DSM-III-R criteria for an organic, schizophrenia, delusion or other psychotic disorder</p> <p>Notes: PRIMARY DIAGNOSIS: IV opiate users ETHNICITY: 18/36 white, 15/36 African American, 3/36 Hispanic</p> <p>Baseline: (GROUPS: BCT vs CBT) Problematic alcohol use (years): 8.2 / 7.8 Problematic opiate use (years): 10.0 / 10.6 Problematic cocaine use (years): 5.8 / 5.6</p>	<p>Data Used</p> <p>ASI (Addiction Severity Index)</p> <p>Urinalysis: positive for opiates</p> <p>Urinalysis: positive for cocaine</p> <p>Notes: DROPOUTS: 5/22 CBT, 2/21 BCT</p>	<p>Group 1 N= 21</p> <p>CBT: coping skills training - Once weekly 60-min individual sessions for males</p> <p>BCT (behavioural couples therapy) with Outpatient - One 60-min weekly session for 12 weeks: male and female partners met conjointly with therapist. Involved crisis intervention, sobriety trust discussion, reinforcing compliance, coping strategies for craving, communication skills, +ve behavioural exchanges</p> <p>Opiate agonist: MMT (methadone maintenance) - 60mg/day standard dose, increased at patient's request or opiate +ve urine sample. After 6 weeks of treatment, up to 2 take-home doses per week allowed if patient employed >=20 hours per week.</p> <p>Group 2 N= 22</p> <p>CBT: coping skills training with Outpatient - Twice weekly 60-min individual sessions for males: with the aim to develop skills that would assist in drug use reduction efforts through cognitive restructuring, problem-solving, alternatives to drug use, anger management, assertiveness training etc.</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient - 60mg/day standard dose, increased at patient's request or opiate +ve urine sample. After 6 weeks of treatment, up to 2 take-home doses per week allowed if patient employed >=20 hours per week.</p>	<p>Study quality: 1+</p>
<p>FALSSTEWART2003</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Type of Analysis: Missing data addressed. Unclear if ITT</p> <p>Blindness: No mention</p> <p>Duration (days): Mean 168</p> <p>Followup: 12 months</p> <p>Setting: Two outpatient clinics in USA</p> <p>Notes: RANDOMISATION: No details</p> <p>Info on Screening Process: 459 screened - 17</p>	<p>n= 124</p> <p>Age: Mean 33</p> <p>Sex: all males</p> <p>Diagnosis:</p> <p>100% Opiate dependence by DSM-III-R</p> <p>Exclusions: - Female - Did not demonstrate lack of "physiological" opiate dependence by naloxone challenge - Not living with a family member who's willing to participate, who also did not have substance use disorder,</p>	<p>Data Used</p> <p>TLFB (Timeline Followback)</p> <p>ASI (Addiction Severity Index)</p> <p>Urinalysis: positive for any drug</p> <p>Retention rate</p>	<p>Group 1 N= 62</p> <p>Naltrexone maintenance with Outpatient. Mean dose 50mg/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.</p>	<p>Study quality: 1+</p>

<p>met exclusion criteria - 318 refused to take naltrexone > 124 enrolled and randomised</p>	<p>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</p> <p>Notes: ETHNICITY: 66% white, 25% African American, 4% Hispanic, 6% other</p> <p>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%</p>		<p>CBT: coping skills training with Outpatient - Twice weekly 60min 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.</p> <p>Group therapy - 90min per week for first 16 weeks. No other details</p> <p>Group 2 N= 62</p> <p>Naltrexone maintenance. Mean dose 50mg/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</p> <p>CBT: coping skills training with Outpatient - Twice weekly 60min 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.</p> <p>Group therapy - 90min per week for first 16 weeks. No other details</p> <p>FBT (family behavioural therapy) - Behavioural family counselling. Patient and family member met jointly with counsellor 60min weekly for 16 sessions. Established behavioural contract, instructions and behavioural rehearsal to reduce conflict and improve communication</p>	
<p>GROSS2006</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Type of Analysis: ITT (missing urines as positive)</p> <p>Blindness: Open</p> <p>Duration (days): Mean 84</p> <p>Setting: USA?</p> <p>Notes: Randomisation by minimum likelihood allocation stratified on 5 variables</p> <p>Info on Screening Process: 95 enrolled - 35 failed to complete 8-week baseline phase > 60 randomised</p>	<p>n= 60</p> <p>Age: Mean 32</p> <p>Sex: 33 males 27 females</p> <p>Diagnosis: 100% Opiate dependence by DSM-IV</p> <p>Exclusions: - Age <18 - Not in good health - Acute psychosis or serious medical illness - Pregnant</p> <p>Notes: ETHNICITY: 91% white</p> <p>Baseline: (CM voucher / CM bupe / Control) Full-time employed: 65% / 60% / 35% Years regular opiate use: 9.34 / 7.16 / 12.39 Age at first opiate use: 21.4 / 19.32 / 20.25 Years cocaine use: 7.15 / 3.81 / 5.55</p>	<p>Data Used</p> <p>ASI (Addiction Severity Index) Abstinence: longest consecutive period Abstinence: weeks drug-free</p> <p>Notes: 3 times weekly buprenorphine dose and observed urine sample</p>	<p>Group 1 N= 20</p> <p>Opiate agonist: buprenorphine maintenance - Standard care as per control group</p> <p>CM:negative reinforcement with Outpatient - Participants received 2 half-doses of bupe each day (3 half-doses on Fridays). Whenever urine is cocaine/opiate +ve, only received 1 half-dose that day (or 2 half-doses on Fridays);</p> <p>Group 2 N= 20</p> <p>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.</p> <p>Opiate agonist: buprenorphine maintenance with Outpatient</p>	<p>2-week buprenorphine induction + 8-week stabilisation period preceded study</p> <p>Study quality: 1+</p>

			<p>Group 3 N= 20</p> <p>Control: standard care with Outpatient - Behavioural counselling 1hr/week. Discussion of personal relationships, causes and effects of opiate use, developing recreational activities, HIV education. Counsellors also provided assistance in job-finding, stable housing and other treatment needs</p> <p>Opiate agonist: buprenorphine maintenance with Outpatient</p>													
<p>KOSTEN2003</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Study Description: Intention to treat analysis up to 12 weeks, then completers analysis 13-24 weeks when CM was reduced.</p> <p>Blindness: Double blind</p> <p>Duration (days): Mean 168</p> <p>Setting: US</p>	<p>n= 160</p> <p>Age: Mean 37</p> <p>Sex: 105 males 55 females</p> <p>Diagnosis:</p> <p>100% Opiate dependence by DSM-IV</p> <p>100% Cocaine dependence by DSM-IV</p> <p>Exclusions: - Medical reasons for not taking desipramine (e.g. pregnancy, cardiac problems, acute hepatitis)</p> <ul style="list-style-type: none"> - 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 interact with study medications <p>Notes: Ethnicity: white = 84 african american = 58 hispanic = 11 native american = 2</p> <table border="0"> <tr> <td>Baseline: GROUP:</td> <td>DMI+CM /</td> </tr> <tr> <td>DMI+NCM / PLA + CM / PLA + NCM</td> <td></td> </tr> <tr> <td>Heroin use(#days/month):</td> <td>28.8 27.2</td> </tr> <tr> <td>29.1 27.0</td> <td></td> </tr> <tr> <td>Cocaine use(#days/month):</td> <td>13.8 13.4</td> </tr> <tr> <td>16.5 14.0</td> <td></td> </tr> </table>	Baseline: GROUP:	DMI+CM /	DMI+NCM / PLA + CM / PLA + NCM		Heroin use(#days/month):	28.8 27.2	29.1 27.0		Cocaine use(#days/month):	13.8 13.4	16.5 14.0		<p>Data Used</p> <p>Urinalysis: positive for heroin</p> <p>Urinalysis: positive for cocaine</p> <p>Notes: DROPOUTS = 85/160 53% after 12 week</p>	<p>Group 1 N= 40</p> <p>Desipramine with Outpatient - Started in week 2 at 50mg daily and increased 50mg every 2 days up to 150mg total dosage</p> <p>NCM (noncontingent management) with Outpatient - Received vouchers not contingent with illicit cocaine and opiate use. Their vouchers were worth the average value of the contingency subject for the previous week.</p> <p>Opiate agonist: buprenorphine maintenance with Outpatient - All participants stabilized on a median dose of 16mg before randomisation. Sublingua buprenorphine started at 4mg daily shifting to 8mg then 12mg by week 1, and to 16mg by week 2</p> <p>Group 2 N= 40</p> <p>CM: vouchers with Outpatient - 1-12 weeks: First cocaine and opiate negative urine received \$3, increased by \$1 with every consecutive negative urine, but reset after a positive sample. 13-16 weeks: each negative sample \$3, 17-20 weeks: 2 negative samples for \$6, 21-24 weeks: 3 for \$9</p> <p>Placebo with Outpatient</p> <p>Opiate agonist: buprenorphine maintenance with Outpatient - All participants stabilized on a median dose of 16mg before randomisation. Sublingua buprenorphine started at 4mg daily shifting to 8mg then 12mg by week 1, and to 16mg by week 2</p> <p>Group 3 N= 40</p> <p>Placebo with Outpatient</p> <p>NCM (noncontingent management) with Outpatient - Received vouchers not contingent with illicit cocaine and opiate use. Their vouchers were worth the average value of the contingency subject for the previous week.</p> <p>Opiate agonist: buprenorphine maintenance with Outpatient - All participants stabilized on a median dose of 16mg before randomisation. Sublingua buprenorphine started at 4mg daily shifting to 8mg then 12mg by week 1, and to 16mg by week 2</p>	<p>All participants received weekly individual and group CBT (RP)</p> <p>Only placebo groups included in meta-analysis</p> <p>Study quality: 1+</p>
Baseline: GROUP:	DMI+CM /															
DMI+NCM / PLA + CM / PLA + NCM																
Heroin use(#days/month):	28.8 27.2															
29.1 27.0																
Cocaine use(#days/month):	13.8 13.4															
16.5 14.0																

			<p>Group 4 N= 40</p> <p>CM: vouchers with Outpatient - 1-12 weeks: First cocaine and opiate negative urine received \$3, increased by \$1 with every consecutive negative urine, but reset after a positive sample. 13-16 weeks: each negative sample \$3, 17-20 weeks: 2 negative samples for \$6, 21-24 weeks: 3 for \$9</p> <p>Desipramine with Outpatient - Started in week 2 at 50mg daily and increased 50mg every 2 days up to 150mg total dosage</p> <p>Opiate agonist: buprenorphine maintenance with Outpatient - All participants stabilized on a median dose of 16mg before randomisation. Sublingua buprenorphine started at 4mg daily shifting to 8mg then 12mg by week 1, and to 16mg by week 2</p>	
<p>MCLELLAN1993</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Type of Analysis: Per protocol</p> <p>Blindness: Open</p> <p>Duration (days): Mean 180</p> <p>Setting: US Veterans</p> <p>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</p>	<p>n= 92</p> <p>Age: Mean 41</p> <p>Sex: all males</p> <p>Diagnosis: 100% Opiate dependence by Eligible for/receiving MMT</p> <p>Exclusions: - serious medical/psychiatric disorder - plans for immediate move from area near clinic</p> <p>Notes: All were IV users</p> <p>Baseline: Years of substance use: Opiates = 11 Cocaine = 3 Problematic Alcohol =7</p>	<p>Data Used</p> <p>ASI (Addiction Severity Index)</p>	<p>Group 1 N= 29</p> <p>CM: methadone with Outpatient - Combination of take home methadone doses contingent on negative urines and CBT. First month weekly counselling, the 2-6 months could reduce number of sessions (biweekly) if client showed signs of positive change</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 60-90mg</p> <p>Group 2 N= 31</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 60-90mg</p> <p>Structured day treatment with Outpatient - Consisted of contingent take home doses, CBT counselling, and access to extra professional resources: family therapy, employment counselling, psychiatrist</p> <p>Group 3 N= 32</p> <p>Control: TAU (treatment as usual) with Outpatient - Minimal treatment - 15min session/month</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 60-90mg</p>	<p>Study quality: 1+</p>
<p>PEIRCE2006</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Study Description: Research staff "unaware" of allocation assignment</p> <p>Type of Analysis: Missing urine samples as positive</p> <p>Blindness: Open</p> <p>Duration (days): Mean 84</p> <p>Followup: 1, 3, 6 months</p> <p>Setting: 6 MMT programmes across USA</p>	<p>n= 388</p> <p>Age: Mean 42</p> <p>Sex: 211 males 177 females</p> <p>Diagnosis: 100% Opiate dependence by Eligible for/receiving MMT</p> <p>100% Other stimulant misuse by Urinalysis</p> <p>Exclusions: - Not enrolled in MMT for 30 days - 3 years</p>	<p>Data Used</p> <p>Abstinence: longest consecutive period</p> <p>Retention rate</p> <p>Notes: Twice weekly urine and breath samples on nonconsecutive days</p>	<p>Group 1 N= 198</p> <p>CM (contingency management) with Outpatient - Prize draw for each sample - ve for cocaine, amph/meth AND alcohol. For each week with all samples -ve, +1 draw. Any +ve sample reset to 1 draw. Bonus prize for first 2 weeks consecutive ve samples. Max \$400 prizes + \$20 bonu:</p>	<p>Study quality: 1+</p>

<p>Notes: Computerised stratified randomisation</p> <p>Info on Screening Process: 402 randomised - 14 later found to be ineligible > 388 in final study sample</p>	<p>- No stimulant +ve urine sample within 2 weeks of study entry - Not currently recovering from a gambling problem</p> <p>Notes: PRIMARY DIAGNOSIS: 74.9% cocaine abuse/dependence, 3.6% amph/methamphetamine abuse/dependence, 3.9% both drugs</p> <p>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</p>		<p>Opiate agonist: MMT (methadone maintenance) - Daily methadone dose with standard indiv/group counselling, ranging from 3 times per week to once per month</p> <p>Group 2 N= 190</p> <p>Opiate agonist: MMT (methadone maintenance) - Daily methadone dose with standard indiv/group counselling, ranging from 3 times per week to once per month</p>	
<p>PETRY2002</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Type of Analysis: ITT</p> <p>Blindness: No mention</p> <p>Duration (days): Mean 84</p> <p>Followup: 6months</p> <p>Setting: US</p> <p>Notes: RANDOMISATION: Probabilistic balancing techniques to control for gender, race, age etc</p> <p>Info on Screening Process: 5 excluded:1 withdrew consent, 4 uncontrolled psychosis</p>	<p>n= 42</p> <p>Age: Mean 39</p> <p>Sex: 12 males 30 females</p> <p>Diagnosis: Cocaine dependence by DSM-IV</p> <p>Exclusions: - not receiving a stable dose of methadone in past 3 months - not english speaking - MMSE <21 - active, uncontrolled psychosis or bipolar disorder</p> <p>Notes: Standard treatment = 91.3% CM = 100% cocaine dependence</p> <p>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)</p>	<p>Data Used</p> <p>Abstinence: longest consecutive period Abstinence: days drug-free</p> <p>Notes: DROPOUTS: CM = 1/19 TAU = 2/23</p>	<p>Group 1 N= 23</p> <p>Control: TAU (treatment as usual) with Outpatient</p> <p>Group 2 N= 19</p> <p>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 nonwinning, 109 small prizes, 15 large prizes</p>	<p>Study quality: 1+</p>
<p>PETRY2005C</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Blindness: No mention</p> <p>Duration (days): Mean 84</p> <p>Followup: 6 Months</p> <p>Setting: US</p> <p>Notes: RANDOMISATION: Minimum likelihood allocation balanced by age, gender etc</p> <p>Info on Screening Process: 5 excluded</p>	<p>n= 77</p> <p>Age: Mean 40</p> <p>Sex: 21 males 56 females</p> <p>Diagnosis: Cocaine dependence by DSM-IV</p> <p>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</p> <p>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)</p>	<p>Data Used</p> <p>Abstinence: longest consecutive period</p> <p>Notes: DROPOUTS: CM = 5/40 TAU = 6/37</p>	<p>Group 1 N= 40</p> <p>Control: TAU (treatment as usual) with Outpatient - 1h/week, rotating schedule of 12 topics: facts about cocaine, HIV education, stress management etc.</p> <p>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 slips nonwinning, 219 slips small prizes (e.g. \$1 coupon), 30 large prizes (e.g. walkmans, watches), 1 jumbo prize (TV)</p> <p>Group 2 N= 37</p> <p>Control: TAU (treatment as usual) with Outpatient - 1h/week, rotating schedule of 12 topics: facts about cocaine, HIV education, stress management etc.</p>	<p>Study quality: 1+</p>
<p>PRESTON1999</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Blindness: No mention</p> <p>Duration (days): Mean 84</p> <p>Setting: US</p> <p>Info on Screening Process: 60 gave informed consent, 1 did not return after giving consent, 1</p>	<p>n= 57</p> <p>Age: Mean 33</p> <p>Sex: 36 males 21 females</p> <p>Diagnosis: 100% Opiate dependence by DSM-III-R</p> <p>Exclusions: - <18 >65years of age - current major psychiatric disorder</p>	<p>Data Used</p> <p>Retention: days remained in treatment Abstinence: negative urinalysis</p>	<p>Group 1 N= 19</p> <p>Naltrexone maintenance with Outpatient - Received naltrexone 3 days a week under staff observation. Doses were 100mg on Monday and Wednesday and 150mg on Friday</p>	<p>all received weekly 'interpersonal/cognitive/behavioral' counselling for cocaine misuse Study quality: 1+</p>

<p>experienced withdrawal symptoms after naloxone challenge</p>	<ul style="list-style-type: none"> - severe current medical illness - pregnant or lactating - in an institutional residence (e.g. jail) - know allergy to naltrexone or naloxone <p>Notes: within the past 60 days but not currently dependent on opiates</p> <p>Baseline: GROUPS: CM / NCM / No Voucher</p> <p>Self reported years of drug use: Heroin 7.5 5.3 7.8</p> <p>Self reported years of drug use: Cocaine 2.6 4.0 5.1</p> <p>% Marijuana dependence (DSM-III-R) 26 0 0</p> <p>% Cocaine dependence (DSM-III-R) 47 32 50</p> <p>% Alcohol dependence (DSM-III-R) 37 21 60</p>	<p>Notes: DROPOUTS: contingent group = 50% non-contingent group = 80% no voucher group = 95%</p>	<p>Group 2 N= 19</p> <p>Naltrexone maintenance with Outpatient - Received naltrexone 3 days a week under staff observation. Doses were 100mg on Monday and Wednesday and 150mg on Friday</p> <p>CM: vouchers with Outpatient - value of vouchers began at \$2.50 for dose of naltrexone, increased 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.</p> <p>Group 3 N= 19</p> <p>Naltrexone maintenance with Outpatient - Received naltrexone 3 days a week under staff observation. Doses were 100mg on Monday and Wednesday and 150mg on Friday</p> <p>NCM (noncontingent management) with Outpatient - Each participant randomly linked to participant in contingent group. Had to attend clinic and provide urine sample to receive voucher. The value of voucher was equal to that received by the linked contingent participant.</p>	
<p>PRESTON2000</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Study Description: Blindness for methadone dosing</p> <p>Type of Analysis: ITT</p> <p>Blindness: Double blind</p> <p>Duration (days): Mean 56</p> <p>Setting: USA</p> <p>Notes: RANDOMISATION: First 10 participants manually assigned to CM group to allow NCM yoking. Remaining participants randomised using random number table.</p> <p>Info on Screening Process: 285 enrolled, 253 completed baseline; 219 met criteria for opiate use, 120 randomised (exclusion reasons not given)</p>	<p>n= 120</p> <p>Age: Mean 38</p> <p>Sex: 81 males 39 females</p> <p>Diagnosis: 100% Opiate dependence by Eligible for/receiving MMT</p> <p>Exclusions: - Age outside 18-65 range - Not qualified for MMT under FDA guidelines - No history of IV drug use - Current major psychiatric or unstable serious medical illness - Alcohol or BDZ dependence - <3 opiate positive urine samples out of 15 during 5-week baseline period</p> <p>Notes: PRIMARY DIAGNOSIS: Opiates ETHNICITY: 42% African American, 58% White REFERRALS: Admission to MMT</p> <p>Baseline: (GROUP: MMT+NCM / MMT+CM / MMT-Hi+NCM / MMT-Hi+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</p>	<p>Data Used</p> <p>Urinalysis: positive for benzodiazepenes Urinalysis: positive for opiates Abstinence: longest consecutive period Retention: weeks remained in treatment Urinalysis: positive for cocaine Urinalysis: positive for cannabis</p> <p>Data Not Used</p> <p>Urinalysis: positive for alcohol</p> <p>Notes: FOLLOWUP: Baseline, endpoint DROPOUTS: 4% / 7% / 13% / 3%</p>	<p>Group 1 N= 32</p> <p>CM: vouchers with Outpatient - Vouchers contingent on opiate-negative urine specimens from 3 times weekly urine test. Vouchers exchangeable for goods and services (requested via and purchased by staff) that would support a drug-free lifestyle</p> <p>Opiate agonist maintenance with Outpatient. Mean dose 70mg - High dose 60mg on days 1-3, 70mg from day 4</p> <p>Group 2 N= 31</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 70mg - High dose 60mg on days 1-3, 70mg from day 4</p> <p>NCM (noncontingent management) with Outpatient - Received vouchers independent of urine samples, randomly linked a participant in CM group.</p> <p>Group 3 N= 28</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 50% - Standard dose</p> <p>NCM (noncontingent management) with Outpatient - Received vouchers independent of urine samples, randomly linked a participant in CM group.</p>	<p>Study quality: 1+</p>

			<p>Group 4 N= 29</p> <p>CM: vouchers with Outpatient - Vouchers contingent on opiate-negative urine specimens from 3 times weekly urine test. Vouchers exchangeable for goods and services (requested via and purchased by staff) that would support a drug-free lifestyle.</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 50mg - Standard dose</p>	
<p>RAWSON2001</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Study Description: Randomisation code generated independently offsite</p> <p>Type of Analysis: Per protocol</p> <p>Blindness: Open</p> <p>Duration (days): Mean 365</p> <p>Setting: 2 outpatient clinics, LA, USA</p> <p>Notes: RANDOMISATION: Sealed envelopes</p> <p>Info on Screening Process: 183 successfully detoxified > 81 induced onto naltrexone and randomised</p>	<p>n= 81</p> <p>Age: Mean 33</p> <p>Sex: 49 males 32 females</p> <p>Diagnosis: 100% Opiate dependence by DSM-IV</p> <p>Exclusions: - Did not complete opiate detoxification - Liver enzyme values 5x above normal - If female: pregnant, lactating or not using effective method of birth control</p> <p>Notes: ETHNICITY: Caucasian 79%, Hispanic 10%, African American 3.7%, Other 7%</p> <p>Baseline: (GROUPS: Enhanced / Standard) Years opioid use: 9.4 / 10.1 Days opioid use in past 30 days: 21.5 / 23.4 IV opioid use: 52.5% / 58.5% Previous treatment: 80% / 75.6% Previous methadone treatment: 55% / 58.5%</p>	<p>Data Used</p> <p>ASI (Addiction Severity Index)</p> <p>Urinalysis: TES (Treatment Effectiveness Score)</p> <p>Abstinence: no use for 3 consecutive weeks at end</p> <p>Urinalysis: positive for opiates</p> <p>Retention: weeks remained in treatment</p> <p>Compliance: naltrexone doses taken</p> <p>Retention: sessions attended</p>	<p>Group 1 N= 41</p> <p>Control: standard care with Outpatient - Weekly data/urine collection; study physician every 30 days to collect naltrexone, with additional appointments allowed for discussing side effects or other medication issues. Provision of booklet which provided info about local drug treatment resources</p> <p>Group 2 N= 40</p> <p>CBT: Matrix model with Outpatient - CBT approach with specific behavior techniques, educational materials and encourages 12 Step involvement. 60min individual session + 2x90min group sessions + 60min cue exposure session wks 1-12; individual session semi weekly and group sessions wks 13-26.</p>	<p>Study quality: 1++</p>
<p>RAWSON2002</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Type of Analysis: No evidence of ITT</p> <p>Blindness: Open</p> <p>Duration (days): Mean 102</p> <p>Followup: 36 weeks</p> <p>Setting: 2 methadone clinics in USA</p> <p>Info on Screening Process: 180 volunteered > 120 eligible, enrolled and randomised</p>	<p>n= 120</p> <p>Age: Mean 44</p> <p>Sex: 66 males 54 females</p> <p>Diagnosis: 100% Opiate dependence by Eligible for/receiving MMT</p> <p>100% Cocaine misuse by DSM-IV</p> <p>Exclusions: - Not in MMT for >=90 days - No evidence of cocaine use in past month - Alcohol or BDZ dependence requiring medical withdrawal - Court mandated treatment</p> <p>Notes: ETHNICITY: White 39%, African American 32%, Hispanic 26%, other 3%</p> <p>Baseline: (GROUPS: CBT / CM / CBT+CM / Control) ASI Drug: 0.37 / 0.31 / 0.33 / 0.36 Methadone dosage (mg): 82 / 78 / 83 / 82</p>	<p>Data Used</p> <p>ASI: drug use</p> <p>Urinalysis: positive for opiates</p> <p>Retention: weeks remained in treatment</p> <p>Urinalysis: positive for cocaine</p> <p>Abstinence: no use for 3 consecutive weeks at end</p>	<p>Group 1 N= 30</p> <p>CM (contingency management) - As per CM group</p> <p>Opiate agonist: MMT (methadone maintenance) - As per MMT group</p> <p>CBT: group - As per CBT group</p> <p>Group 2 N= 30</p> <p>CM (contingency management) with Outpatient - 3 urine samples/week. Voucher value starting at \$2.50 for a -ve sample, increasing by \$1.25 per successive -ve sample (up to \$20 max). \$10 bonus for 3 consecutive -ve samples. +ve or missing sample reset schedule to \$2.50</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient - As per MMT group</p> <p>Group 3 N= 30</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 82mg - Standard MMT: daily clinic visits for methadone, twice-monthly counselling, medical care and case management as needed. 3 urine samples/week</p>	<p>Study quality: 1+</p>

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

			<p>Group 3 N= 39</p> <p>IDC (individual drug counselling) with Outpatient - Manualised individual sessions with CRA approach (behavioura skills, engaging in non-drug activities): twice weekly weeks 1-12, weekly weeks 13-24</p> <p>Opiate agonist: buprenorphine maintenance - 4mg sublingual buprenorphine, increased to 12mg by end of week 2. Up to max 16mg for remaining of study</p> <p>CM: vouchers - Monetary voucher for each opiate&cocaine -ve urine. Escalating schedule weeks 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). Weeks 13-24, fixed \$1 per -ve sample. Max total reward \$1033.50</p> <p>Group 4 N= 43</p> <p>IDC (individual drug counselling) with Outpatient - Manualised individual sessions with CRA approach (behavioura skills, engaging in non-drug activities): twice weekly weeks 1-12, weekly weeks 13-24. Daily observed dispensing.</p> <p>Opiate 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.</p> <p>Control: TAU (treatment as usual) - Received piece of paper at each urine test as to whether sample was +ve or -ve</p>	
<p>SILVERMAN1998</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Type of Analysis: Per protocol</p> <p>Blindness: No mention</p> <p>Duration (days): Mean 84</p> <p>Followup: 12 months</p> <p>Setting: USA</p> <p>Notes: RANDOMISATION: Incomplete due to yoking for CM conditions</p> <p>Info on Screening Process: 94 enrolled in MMT, 90 completed baseline assessment; 59 eligible (used cocaine) and randomised</p>	<p>n= 59</p> <p>Age: Mean 38</p> <p>Sex: 39 males 20 females</p> <p>Diagnosis:</p> <p>100% Opiate dependence by Eligible for/receiving MMT</p> <p>100% Cocaine misuse by Urinalysis</p> <p>Exclusions: - Age outside 18-65 range - Not qualified for MMT under FDA guidelines - No history of IV opiate use - Current major psychiatric or unstable serious medical illness - Alcohol or BDZ dependence - <3 cocaine positive urine samples out of 15 during 5-week baseline period</p> <p>Notes: PRIMARY DIAGNOSIS: MMT patients who have misused cocaine in past 5 weeks ETHNICITY: black 63%, white 37% REFERRALS: MMT admissions</p> <p>Baseline: (GROUPS: CM with bonus / CM / NCM) Employed: 15% / 20% / 5% Drug use (past 30 days): Heroin 95% / 100% / 95%,</p>	<p>Data Used</p> <p>Abstinence: % with negative urine sample per day</p> <p>Abstinence: longest consecutive period</p> <p>Retention: weeks remained in treatment</p> <p>Cocaine craving: VAS (visual analogue scale)</p> <p>Notes: FOLLOWUP: Baseline, endpoint (12 months)</p> <p>DROPOUTS: ?</p>	<p>Group 1 N= 19</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose Up to 80mg - Daily methadone and 45min per week individual counselling and medication monitoring</p> <p>NCM (noncontingent management) with Outpatient - Vouchers yoked to reinforcement schedule of another participant in CM group (only available when participant attended clinic)</p> <p>Group 2 N= 20</p> <p>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</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose Up to 80mg - Daily methadone and 45min per week individual counselling and medication monitoring</p>	<p>Study quality: 1+</p>

	<p>Cocaine 100% / 100% / 95%, Alcohol 50% / 65% / 68% Alcohol dependence: 20% / 20% / 21% Cocaine dependence: 65% / 45% / 42%</p>		<p>Group 3 N= 20</p> <p>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</p> <p>Opiate agonist: MMT (methadone maintenance) - Daily methadone and 45min per week individual counselling and medication monitoring</p>	
<p>SILVERMAN2004</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Type of Analysis: ITT and Completers</p> <p>Blindness: No mention</p> <p>Duration (days): Mean 365</p> <p>Followup: 9 weeks</p> <p>Setting: US</p> <p>Notes: RANDOMISATION: computer program</p>	<p>n= 78</p> <p>Age: Mean 39</p> <p>Sex: 43 males 35 females</p> <p>Diagnosis: 100% Opiate dependence by DSM-III-R</p> <p>81% Cocaine dependence by DSM-III-R</p> <p>Exclusions: - <18 >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 IDU - pregnant - medical condition which contraindicated MMT - serious psychiatric condition (e.g. schizophrenia)</p> <p>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)</p>	<p>Data Used</p> <p>Abstinence at 6 months</p> <p>Retention: weeks remained in treatment</p> <p>Abstinence: weeks drug-free</p> <p>Notes: DROPOUTS: CM take home + vouchers =7/26 CM take home =10/26 TAU=12/26</p>	<p>Group 1 N= 26</p> <p>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</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 60mg - 10 weeks stabilisation period before main intervention: starting dose of 20mg increased to 60mg per day. If participant provided opiate positive urine sample during weeks 3,4,5 of baseline period dose increased to 100mg.</p> <p>Group 2 N= 26</p> <p>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.</p> <p>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.</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 60mg - 10 weeks stabilisation period before main intervention: starting dose of 20mg increased to 60mg per day. If participant provided opiate positive urine sample during weeks 3,4,5 of baseline period dose increased to 100mg.</p>	<p>Study quality: 1+</p>

			<p>Group 3 N= 26</p> <p>Control: TAU (treatment as usual) with Outpatient - Standard services including weekly individual and group counselling.</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient - 10 weeks stabilisation period before main intervention: starting dose of 20mg increased to 60mg per day. If participant provided opiate positive urine sample during weeks 3,4,5 of baseline period dose increased to 100mg.</p>	
<p>STITZER1992</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Blindness: Open</p> <p>Duration (days): Mean 180</p> <p>Setting: US</p> <p>Info on Screening Process: 1 dropped out before randomization</p>	<p>n= 53</p> <p>Age: Mean 34</p> <p>Sex: 38 males 15 females</p> <p>Diagnosis: 100% Opiate dependence by Eligible for/receiving MMT</p> <p>Exclusions: - no evidence of intravenous drug use - did not provide 3 consecutive opiate positive urines</p> <p>Baseline: Participants had an average of 15 years of opiate use Mean methadone dose: 51.4mg/day</p>	<p>Data Used</p> <p>Response: abstinent >=4 weeks</p> <p>Retention: weeks remained in treatment</p> <p>Abstinence: negative urinalysis</p> <p>Notes: DROPOUTS: CM = 10/26, NCM = 7/27</p>	<p>Group 1 N= 26</p> <p>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</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 51.4mg</p> <p>Group 2 N= 27</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient. Mean dose 51.4mg</p> <p>NCM (noncontingent 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</p>	<p>Study quality: 1+</p>
<p>TUCKER2004B</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Blindness: Single blind</p> <p>Duration (days): Mean 84</p> <p>Followup: 3 months</p> <p>Setting: Australia</p> <p>Notes: RANDOMISATION: computer randomized at a central site outside of treatment centre</p> <p>Info on Screening Process: 316 screened, 44 excluded, 147 did not return for study</p>	<p>n= 97</p> <p>Age: Mean 30</p> <p>Sex: 62 males 35 females</p> <p>Diagnosis: 100% Opiate dependence by DSM-IV</p> <p>Exclusions: - <18 years - < 5 days abstinence from opioids - severe medical or psychiatric illness - dependence on another substance (other than tobacco, cannabis, and prescribed BZDs) - pregnant or breastfeeding - 3-fold elevation of serum transaminases - likely incarceration or surgery in next 3 months - currently receiving naltrexone from another source</p> <p>Baseline: GROUPS: Naltrexone + CBT / Naltrexone + Control Heroin days (0-28): 13.46(5.8) / 13.62(5.74) Poly drug use (0-9): 4.87(1.01) / 5.40(1.44)</p>	<p>Data Used</p> <p>Dug use: days</p>	<p>Group 1 N= 45</p> <p>Control: enhanced TAU with Outpatient - Case management and option of participating in voluntary psychosocial interventions e.g. individual counselling, self help groups</p> <p>Group 2 N= 52</p> <p>Naltrexone maintenance with Outpatient. Mean dose 50mg - Initial dose of 25mg, daily dose of 50mg under supervision week1, then given enough naltrexone to self administer on a weekly basis</p> <p>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 program</p>	<p>Study quality: 1+</p>
UKCBTMM2004				

<p>Study Type: RCT (randomised controlled trial)</p> <p>Study Description: Not true ITT - 6 month and 12 month analysis only included those available to followup</p> <p>Type of Analysis: ITT</p> <p>Blindness: Single blind</p> <p>Duration (days): Mean 365</p> <p>Setting: 10 community clinics offering MMT in England</p> <p>Notes: RANDOMISATION: Concealed (remote randomisation service). Stratified by SDS severity, DTTO status and treatment centre</p> <p>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: unabelto approach, not interested, lack of time; 60 randomised</p>	<p>n= 60</p> <p>Age: Mean 32</p> <p>Sex: 45 males 15 females</p> <p>Diagnosis: 100% Opiate dependence by ICD-10</p> <p>Exclusions: - Age outside 18-70 range - Current severe mental or physical illness - Not on stable dose MMT >=30mg - No MMT or opiate 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</p> <p>Notes: PRIMARY DIAGNOSIS: Opiates ETHNICITY: White 93%, Bangladeshi 2%, black 3%, other 2%</p> <p>REFERRALS:</p> <p>Baseline: (GROUPS: MMT / MMT+CBT) E-ASI Overall: 0.27 / 0.31 Days heroin use in past 30 days: 9.0 / 14.6 £ spent on heroin in past 6 mths: 2052 / 2367 Polydrug use in past 30 days: 7.4 / 8.1 IDU in past 30 days: 7.2 / 8.6 £ spent on drugs in past 30 days: 154.84 / 350.17</p>	<p>Data Used</p> <p>E-ASI (European Addiction Severity Index)</p> <p>Notes: FOLLOWUP: Baseline, 6 months, 12 months</p> <p>DROPOUTS: 7% MMT+CBT and 16% MMT unavailable to followup at 6 months</p>	<p>Group 1 N= 29</p> <p>CBT (cognitive behavioural therapy) with Outpatient. Mean dose Max 24 sessions - 40min individual weekly sessions over 6 months</p> <p>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</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient - Fortnightly (at a minimum) 30 minute manual guided sessions with keyworker Focused on identifying specific needs and giving advice in areas of health, housing, relationships, legal problems, with individualised care plan Prescription of oral methadone</p> <p>Group 2 N= 31</p> <p>Opiate agonist: MMT (methadone maintenance) with Outpatient - Fortnightly (at a minimum) 30 minute manual guided sessions with keyworker Focused on identifying specific needs and giving advice in areas of health, housing, relationships, legal problems, with individualised care plan Prescription of oral methadone</p>	<p>Study quality: 1++</p>
<p>WOODY1983</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Type of Analysis: Per protocol</p> <p>Blindness: Open</p> <p>Duration (days): Mean 168</p> <p>Followup: 7 and 12 months</p> <p>Setting: US</p> <p>Notes: RANDOMISATION: not reported</p>	<p>n= 110</p> <p>Age: Mean 33 Range 18-55</p> <p>Sex: all males</p> <p>Diagnosis: 100% Opiate dependence by Eligible for/receiving MMT</p> <p>Exclusions: psychosis - persistent or clinically significant organic brain syndrome - <2 weeks >6 months MMT during current treatment episode</p> <p>Baseline: GROUPS: SE / CBT / DC Years of regular heroin use: 7 / 10 / 11 Years of regular stimulant use: 2 / 1 / 1</p>	<p>Data Used</p> <p>ASI: drug use</p>	<p>Group 1 N= 39</p> <p>Control: TAU (treatment as usual) with Outpatient - Major focus on providing external services and not dealing with psychological processes.</p> <p>Group 2 N= 39</p> <p>CBT: CT (cognitive therapy) with Outpatient - Focused on changing participants beliefs, and feelings of helplessness or worthlessness.</p> <p>Group 3 N= 32</p> <p>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 attaches to the drug dependence.</p>	<p>Study quality: 1+</p>
<p>WOODY1995</p> <p>Study Type: RCT (randomised controlled trial)</p> <p>Blindness:</p> <p>Duration (days): Mean 180</p> <p>Followup: 6months</p> <p>Setting: US</p> <p>Info on Screening Process: 350 screened, 178 excluded; 172 more formal screening, 23</p>	<p>n= 84</p> <p>Age: Mean 41</p> <p>Sex: 89 males 34 females</p> <p>Diagnosis: Drug misuse (non-alcohol)</p> <p>Exclusions: - severe medical or psychiatric disorders - pending incarceration or move from area - BDI <40</p>	<p>Data Used</p> <p>ASI: drug use</p> <p>Abstinence: % with negative urine sample per day</p>	<p>Group 1 N= 57</p> <p>SE (supportive-expressive psychotherapy) with Outpatient - Analytically oriented focal psychotherapy adapted to drug dependent people. Supportive techniques aim to help participants feel comfortable in discussing personal problems. Expressive techniques aim to help identify core relationship pattern and themes.</p>	<p>Study quality: 1+</p>

excluded; third stage of screening 149, 26 excluded	- SCL-90 <40 - ASI:Psychiatry <5 Baseline: GROUPS: SE / TAU mean years opiate use: 7(6)/ 11(7) longest period in months of abstinence:13 (22)/6(9)	Notes: DROPOUTS: SE = 5/62 Standard Care = 4/31	Group 2 N= 27 Control: standard care with Outpatient - Drug counselling - exploring current problems and providing support, referral to medical, social and legal services.	
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Characteristics of Excluded Studies

Reference ID	Reason for Exclusion
ABBOTT1998	CRA and CRA+RP combined no break down of results for both groups
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
DOWNEY2000	first 4 participants not randomly assigned; no extractable outcomes
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
MONTROYA2005	No psychotherapy comparator
RAWSON1984	No extractable data
RHODES2003	not required outcomes
ROSENBLUM1999	poor methodological rigor
ROUNSAVILLE1983A	No extractable data
SCHERBAUM2005	no required outcomes
SCHMITZ2001A	No extractable data
SCHOTTENFELD2000	not RCT
SIMPSON1997	no extractable data
STEIN2005	Antidepressant with psychological vs minimal control: primary focus is depression
STITZER1980	n< 10 per arm
STITZER1983	n <10

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CARROLL2001B (Published Data Only)

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Carroll, K. M., Ball, S. A., Nich, C., O'Connor, P. G., Eagan, D. A., Frankforter, T. L. 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.

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

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Schroeder, J. R., Epstein, D. H., Umbricht, A., & Preston, K. L. (2006). Changes in HIV risk behaviors among patients receiving combined pharmacological and behavioral interventions for heroin and cocaine dependence. *Addict.Behav.*, 31, 868-879.

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GROSS2006 (Published Data Only)

Gross, A., Marsch, L. A., Badger, G. J., & Bickel, W. K. (2006). A comparison between low-magnitude voucher and buprenorphine medication contingencies in promoting abstinence from opioids and cocaine. *Experimental & Clinical Psychopharmacology*, 14.

KOSTEN2003 (Published Data Only)

Gonzalez, G., Feingold, A., Oliveto, A., Gonsai, K., & Kosten, T. R. (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 & Alcohol Abuse*, 29, 497-514.

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Peirce, J. M., Petry, N. M., Stitzer, M. L., Blaine, J., Kellogg, S., Satterfield, F. et al. (2006). Effects of lower-cost incentives on stimulant abstinence in methadone maintenance treatment: a National Drug Abuse Treatment Clinical Trials Network study. *Archives of General Psychiatry*, 63, 201-208.
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Petry, N. M. & Martin, B. (2002). Low-cost contingency management for treating cocaine- and opioid-abusing methadone patients. *Journal of Consulting & Clinical Psychology*, 70, 398-405.
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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 & Clinical Psychology*, 71, 320-329.
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