Further appendices

Rapid Evidence Review: Alcohol Interventions and the Criminal Justice System

August 2019

Dr Geoff Page
University of York

Contents

Appendix 2. Summary table of reviewed papers. Comparative studies

Table 1 (of 3). Intervention details.

Study	Country	Year	Setting	Design	Intervention vs comparison
Andersson et al., 2012	Sweden	2012	Probation	RCT	Daily automated risk assessments by telephone. Intervention group received brief feedback (better / worse; if worse, call someone trusted). Control received no brief feedback. Brief summaries also emailed to all probation officers.
Averill et al., 2018	Canada	2018	Courts	RCT	All: $5 per day CM in weeks 1 and 6. I1: plus $5 per day, +$1 per day Mon-Sun (resets each week) with successive clear readings, and daily feedback emails / texts; I2: daily feedback, but a flat $5 per day. I3: no feedback, and $5 per day irrespective of alcohol.
Begun, Rose and LeBel, 2011	US	2011	Prison	RCT	Control: treatment as usual (no additional jail services, resources, or guidance). Intervention: screening, brief intervention (MI), and referral. Women also received a resource folder tailored to their local community, with information about support, housing, health, and a 3-month calendar for tracking appointments.
Boit et al., 2018	US	2018	Courts	Case control	Control: residents accessing residential alcohol treatment; intervention: residents of the same treatment service, required to attend by courts for between 6 months and 3 years
Bowen et al., 2006	US	2006	Prison	Case control	Control: 'treatment as usual.' with over 50% attending drug treatment and harm reduction (plus other prison groups); intervention: segregated treatment for 10 days, spent in silence, with 11 hours per day of learning meditation techniques.

Chan et al., 2005	US	2005	Probation	Case control	Control: treatment as usual. Standard probation. Mostly officers carrying caseloads of 100-150, though high risk teams as low as 60. Reports, supervision, enforcing conditions, and supporting treatment access. Intervention: caseloads of 50, uniform screening and assessment, therapeutic and advocacy focus, and referrals to services. Home visits and gender-specific education / support included
Chassin et al., 2009	US	2009	Prison	Case control	Retrospective analysis of case files. Control: juvenile prisoners who received no drug treatment. Intervention: those who did receive documented substance treatment over 2 years, including day programmes, court-ordered treatment, one-to-one counselling, NA and AA.
Courtright, Berg and Mutchnick, 2000	US	2000	Probation	Case control	Control: jail plus mandated treatment. Intervention: home detention, electronic monitoring and mandated treatment
D'Amico et al., 2013	US	2013	Youth courts	RCT	Control: 'usual care,' 6 sessions centred on 12-step abstinence-based principles. Intervention: 'Free Talk,' six sessions based on MI principles with discussions of pros and cons of drug use, and 'willingness and confidence rulers' to assess desire for change. Also contained educational content
Davis et al., 2003	US	2003	Prison	RCT	Control: 'standard VA jail assessment battery (lasting approximately 60 min) including: the ASI …, the Form-90… and a checklist with DSM-IV SUD criteria.' Plus the Short Inventory of Problems, Readiness to Change Questionnaire, and others. Intervention. As control, but assessment followed by a one-hour MI-structured feedback session, with educational / general population comparative data
Dembo et al., 2000	US	2000	Courts	RCT	Extended Services Intervention (C): monthly phone contacts from research assistants. Family Empowerment Intervention (FEI): monthly home visits from a 'field consultant' (paraprofessional), providing support related to 9 domains of family-related need / broader support.

Dembo et al., 2000	US	2000	Courts	RCT	Extended Services Intervention (C): monthly phone contacts from research assistants. Family Empowerment Intervention (FEI): monthly home visits from a 'field consultant' (paraprofessional), providing support related to 9 domains of family-related need / broader support.
Dembo et al., 2001	US	2001	Courts	RCT	Extended Services Intervention (C): monthly phone contacts from research assistants. Family Empowerment Intervention (FEI): monthly home visits from a 'field consultant' (paraprofessional), providing support related to 9 domains of family-related need / broader support.
Dienes, Coulton and Heather, 2017	UK	2017	Probation	RCT	Information leaflet plus brief feedback from screening results; control plus 5 minutes of structured advice; previous plus 20 minutes of lifestyle counselling
Forsberg et al., 2011	Sweden	2011	Prison	RCT	Control: Usual Planning Interview (UP), structured across 5 sessions. Intervention 1: 5 sessions of manualised MI, based on the transtheoretical model and some speech pattern identification (NLP-ish). Staff received no supervision after initial training. Intervention 2: as I1, but staff received ongoing peer support meetings and supervision.
Friedman, Terras and Glassman, 2002	US	2002	Courts	RCT	Control: 'basic residential treatment,' intervention: up to 55 sessions of cognitive behavioural social learning treatment centred on substance misuse and behaviour; social learning re: violence; and social learning re: values (self and others)
Friedmann et al., 2011	US	2011	Parole	RCT	Control: 'standard parole'. Intervention: initial multi-agency session plus 12 weekly contacts focused on specifying roles, negotiating contracted targets, tracking adherence, and responds with reinforcement and sanctions.

Hser et al., 2013	China	2013	Prison	RCT	Control: standard care. Monthly contact with social workers plus urinalysis. Bolstered by a strengths assessment plus planning for release. Intervention: recovery management, including a strengths assessment and post-release recovery management. Weekly sessions, accompanied by urine testing - results not fed back to the police, but used to structure advice and feedback. Each contact involved a review of major life domains, and offered referrals
Jason et al., 2017	US	2017	Resettlement	Case control	Control: 'what occurred naturally after completing treatment or jail (e.g. living with a relative, outpatient treatment). Intervention: living in a self-run, abstinent accommodation. Women stayed for a mean of 131 days (SD 14)
Johnson et al., 2011	US	2011	Parole	RCT	Control: standard parole, with some face-to-face contacts and drug testing. 1-4 contacts per month. Intervention: 12-week strengths-focused multi-agency intervention, with contracted / agreed target behaviours. With monitoring and reinforcement.
Lanza and Gonzalez Menendez, 2013	Spain	2013	Prison	RCT	Control: waiting list, able to access intervention after the conclusion of the 6-month follow-up; intervention: a 16-week programme of 90-minute groups (4 women per group). Programme focuses on challenging notions of 'control,' and building understanding of acceptance (of cravings etc) and commitment to goals. 'Now you know how to drive')
Lanza et al., 2014	Spain	2014	Prison	RCT	Control: waiting list, able to access intervention after the conclusion of the 6-month follow-up; intervention 1: a 16-week programme of 90-minute groups (4 women per group). Programme focuses on challenging notions of 'control,' and building understanding; intervention 2: 16-week CBT programme, 90 mins per week
Kutin and Koutroulis, 2003	Australia	2003	Probation	Retrospective case file analysis	Exploring whether cohorts matched to treatment outperformed those unmatched to treatment (because of deviation from protocol / routine practice).

Study	Country	Year	Setting	Design	Description
Lee et al., 2016	US	2016	Unclear	RCT	Control: counselling focused on reducing relapse and overdose, and support for community treatment involvement. Intervention: treatment as usual plus 380mg naltrexone every four weeks, plus medical management counselling (focused on side effects).
Marlowe et al., 2005	US	2005	Courts	RCT	Control: judicial status hearings 'as needed'; intervention: biweekly status hearings. Intervention group received far more contacts (M6.54 SD3.64 vs M1.89 SD1.82 $F(1,176)=123.47$, $p<0.0001$)
Marlowe et al., 2007	US	2007	Courts	RCT	Control: unmatched, receiving judicial status hearings at a constant rate (4-6 weekly). Intervention: matched, with low-risk attending 'fewer hearings than the participants in the unmatched control conditions,' and high-risk attending bi-weekly.
Mathias et al., 2018	US	2018	Police	Case control	4 patterns of contingency management compared. (1) Total abstinence, escalating rewards ($20 first week, increasing by +$10 each continuous subsequent week); 2) 'no heavy drinking,' $50/wk rewards; 3) as 2), but with an additional $70 unconditional payment for wearing a monitor; 4) no drinking or device tampering, $50/wk reward)
McKendrick et al., 2006	US	2006	Prison	Case control	Intervention: prison-based TC with additional components to support serious mental illness. Individual treatment plans, flexible programming, and less intensive relational aspects. Control: a mental health programme, based on a segregated prison unit. Medication, a robust CBT programme (including 72hrs of substance misuse), weekly therapy, and groups.
Naeem et al., 2005	UK	2005	Courts	Case control	Control: people presenting at treatment services 'who had displayed offending behaviour,' receiving treatment as usual. Intervention: people sentenced to a Drug Treatment and Testing Order comprising mandated treatment (6 months to 3 years), drug testing, and court reviews.

Newbury-Birch et al., 2014	UK	2014	Probation	Cluster RCT	Control: screening plus information leaflet. Intervention 1: as previous, plus 5 minutes of structured advice. Intervention 2: as previous, plus a request to return for a 20 min appointment with an alcohol health worker for lifestyle counselling
Nyamanthi et al., 2017	US	2017	Parole	RCT	Control: health promotion. 6 small-group sessions over 12 weeks focused on chronic health conditions, with some 1-1 work. Intervention: 6 weekly group and 6 weekly 1-1 sessions with a program focused on moving away from substance use
Owens and McRady, 2017	US	2017	Prison	RCT	Control: one hour spent watching two videos, with quizzes. Self-disclosure shut down, with participants (re-)focused on the treatment as usual material. Intervention: one-hour brief intervention, using manualised MI to focus on alcohol and drug use, social networks, and treatment engagement. Open ended questions, but no normative feedback
Polcin et al., 2018	US	2018	Probation	Cluster RCT	Control: 'SLH services as usual along with a list of resources that could be used to address a variety of problems'. Intervention: MI case management. 3 sessions in month 1; monthly thereafter. Initially face to face, then potentially telephone. Standard support plus crisis management. Needs-led.
Polcin, 2006	US	2006	Parole	Case control	Control: voluntarily accessing sober living houses; intervention: accessing as a condition of parole
Prendergast et al., 2011	US	2011	Parole	RCT	Control: standard planning and referral, including a referral to community treatment. Links made to release area. Intervention: control conditions plus strengths-focused case management, structured by solution-focused therapy. 3 phases: 1) assessment; 2) follow-up (1-month pre-release, by phone); 3) weekly meetings for 3 months, thereafter 3 monthly.

Prendergast et al., 2017	US	2017	Prison	RCT	Control - baseline ASSIST assessment, feedback, and literature on reducing drug and alcohol use with a list of providers. Intervention - Baseline ASSIST, referral to a health educator. Low risk for drug and alcohol use (ASSIST) -> control intervention; moderate risk -> control plus 20-minute MI brief intervention, plus referral to treatment if requested; high risk -> as control, plus MI focused on encouraging treatment attendance. Referral made to release treatment service, with offer of full engagement or brief treatment on attendance.
Sacks et al., 2006	US	2006	Prison	RCT	Control: intensive outpatient (available to all women prisoners) consisting of in-prison CBT totalling 90 hours delivered across 15 weeks. Women also retained access to other prison services (including trauma-centred work, art, resettlement). Intervention: 'Challenge to Change' therapeutic community. Four stages of progression, trauma aware, and adapted to ensure that mutual respect rather than authoritarianism structures relationships. 72 beds. Groups focus on drugs, relationships, mental health, crime, trauma, parenting, relationships.
Scott and Dennis, 2012	US	2012	Resettlement	RCT	Recovery Management Check-ups. Face-to-face MI @ 30-day intervals. Consist of feedback re: substance use; discussing barriers to progress; and motivation to change. Also offered treatment referrals when need was identified. Once in treatment, maintained contact; linkage managers were called and sought to intervene if women wanted to leave treatment.
Springer et al., 2017	US	2017	Resettlement	RCT	Control: placebo injections. Intervention: 380mg Naltrexone slow release injected every 28 days for 6 months.
Stein et al., 2010	US	2010	Prison	RCT	Control: baseline assessment only. Intervention: control conditions, plus two 30-45-minute MI brief interventions at baseline and one-month (post release). Session one - setting goals; session 2 - follow-up, assessment of progress, barriers and goals, review of recovery strategies

Stuart et al., 2014	US	2014	Courts	RCT	control: standard batterer intervention (SBI - 40 hours, including one session on substance use); intervention: SBI plus MI-based brief alcohol intervention (90 mins, administered by doctoral level therapists)
Sullivan et al., 2007	US	2007	Prison	RCT	Intervention: prison-based TC with additional components to support serious mental illness. Individual treatment plans, flexible programming, and less intensive relational aspects. Control: a mental health programme, based on a segregated prison unit. Medication, a robust CBT programme (including 72hrs of substance misuse), weekly therapy, and groups.
Utter et al., 2013	US	2013	Police	RCT	Control: assessment of demographics, AUDIT, history of treatment seeking and 'escorted back to the communal cell for release.' Intervention: assessment, plus a 30-45-minute MI BI. Provided with a list of alcohol treatment services on release and sent each a handwritten letter of appreciation and support within 1 month.
Van Stelle et al., 2004	US	2004	Prison	Case control	Intervention: prison-based TC with additional components to support serious mental illness. Individual treatment plans, flexible programming, and less intensive relational aspects. Control: a mental health programme, based on a segregated prison unit. Medication, a robust CBT programme (including 72hrs of substance misuse), weekly therapy, and groups.
Watt, Shepherd and Newcombe, 2008	UK	2008	Courts	RCT	Control: usual care; intervention: a brief intervention, taking 10-15 minutes. Based on MI / FRAMES with information on drinking guidelines, information about consequences, strategies for cutting down, and contact details for support

					Control: 28 days of detention, combined with therapeutic / educational components and aftercare. Intervention: control, plus a Victim Impact Panel chaired by a reformed drink driver, with panel members including those who are victims of their own drunk driving. Strong American Indian / Navajo component, reflecting the local population. VIPs followed by group discussions about death and loss.
Wheeler et al., 2004	US	2004	Prison	RCT	
Woodall et al., 2007	US	2007	Prison	RCT	Control: 28 days imprisonment; intervention: 28 days imprisonment plus a package of treatment - 1-1 counselling (MI-focused) and groups covering 10 areas, culturally appropriate in-patient treatment (e.g. sweat lodges), 3-12 months post-discharge monitoring
Zlotnick, Johnson and Najavits	US	2009	Prison	RCT	Control: treatment as usual (180-240 hours of individual and group treatment over 6-8 weeks); intervention: treatment as usual plus 3*90-minute small-group sessions (c.5 women) per week of 'seeking safety' (CBT, PTSD and SUD)

Table 2 (of 3). Comparative papers. Samples, follow-up and analysis.

Study	Sample	Follow up	Measure of alcohol use	Method of analysis
Andersson et al., 2012	N=56 control; N=53 intervention	30 days, 100%	Any alcohol use yesterday	Logistic regression based on ITT. Per protocol also undertaken
Averill et al., 2018	N=13 I1; N=13 I2; N=11 I3	6 weeks.	Transdermal alcohol anklet, and timeline followback	Mixed-effects logistic regression; ITT analyses
Begun, Rose and LeBel, 2011	N=790; 'About two-thirds' in intervention	2 months post-release; 20.4% (149 of 729 randomised and consented women). 40% intervention 60% control by this point	Texas Christian University Drug Screen, and AUDIT 12	Linear regression (continuous), logistic (dichotomous).
Boit et al., 2018	N=60 intervention; N=60 control	Not specified. Sobriety 'up to five years' apparently measured	Not specified. Seemingly self-reported days of sobriety post-release	Regression (nonspecific)
Bowen et al., 2006	N=242 control; N=63 intervention	post-course (86% I, 48% C), 3 month post-release (46% I, 24% C), 6 months (43% I, 21% C)	Daily drinking questionnaire, with a weekly calendar for 'typical weeks'	Multivariate path modelling. Testing the influence of the course on pre-incarceration peak substance use as a predictor 3-month post-release.
Chan et al., 2005	N=44 control, N=65 intervention	6 and 12 months, 77% and 84%	ASI	Generalised estimating equation, with dichotomised high / low ASI composites as the outcome measure.
Chassin et al., 2009	N=429. N=283 control; N=146 treated	12 months (retrospective)	5 frequency options. Never, 1 to 5 times last 6 months, 1-3 times / month, 1-3 times / week, 4+ days / week	Multilevel modelling, looking for within-individual change (before / after treatment)

Courtright, Berg and Mutchnick, 2000	N=57 intervention; N= 57 control	3 months, 100%	Urine tests	Generalised estimation equations.
D'Amico et al., 2013	N=193. N=80 control; N=113 intervention	3 months; 97%	Questions from the RAND Adolescent / Young Adult Panel Study, with questions about frequency of alcohol use and binge drinking (>5 drinks within a couple of hours)	Multilevel modelling - a multiple membership model
Davis et al., 2003	N=40 intervention, N=40 control.	N=37 control; N=36 intervention. (PP - shortfalls from N=40 were protocol failures and 2 deaths). At 2 months, 35.1% control, 47.2% intervention	ASI, timeline followback (90 days)	Generalised linear regression, and Bayesian modelling
Dembo et al., 2000	N=315	1-year (reported here). 84% of t1 sample reinterviewed	Complex Likert-type frequency scale	stepwise regression to predict 'very drunkenness'
Dembo et al., 2000	N=315	1-year (reported here). 84% of t1 sample reinterviewed	Complex Likert-type frequency scale	stepwise regression to predict 'very drunkenness'
Dembo et al., 2001	N=315	4 years. 93.5% (year 2), 93.4% (year 3), 91% (year 4)	Complex Likert-type frequency scale	stepwise regression to predict 'very drunkenness'
Dienes, Coulton and Heather, 2017	Not presented here	6 and 12 months; % FU not given	AUDIT - using 'hazardous drinking' cutoff. Does SIPS reduce hazardous drinking.	Not stated. Appears likely that t-tests were used, as comparisons are for pairs.
Forsberg et al., 2011	N=81 control; N=85 I1; N=107 I2	10 months, 38.5%. ITT analyses also deployed	ASI	Intention to treat. OLS (continuous), logistic regression (dichotomous)

Study	Sample	Follow-up / retention	Measure	Analysis
Friedman, Terras and Glassman, 2002	N=91 control, N=110 intervention	9 months (treatment completion), plus 6 months later, 100% and 84%	Adolescent Drug Abuse Diagnosis instrument - a 150-item survey	Multiple regression
Friedmann et al., 2011	N=233 control; N=243 intervention	3 and 9 months, 94% and 86%	Timeline followback	Univariate ANOVA
Hser et al., 2013	N=50 intervention; N=50 control	3 months; 94%	Urinalysis plus ASI	ANCOVA
Jason et al., 2017	N=200. N=100 intervention, N=100 control	6 and 12 months, 87% and 84%	ASI and form-90 timeline followback	Generalised linear mixed model
Johnson et al., 2011	N=431	3 and 9 months; 91% and 86%	Timeline followback	GEE
Lanza and Gonzalez Menendez, 2013	N=13 control; N=18 intervention	6 months; 85% control, 89% intervention	ASI, urinalysis and 'ad hoc interview'	Nonparametric Cochran test (Q) to assess between-group differences over time
Lanza et al., 2014	N=13 control; N=18 I1; N=19 I2	6 months, 84%	ASI	Cochran's Q
Kutin and Koutroulis, 2003	N=358	12 months (retrospective)	Victoria Needs Assessment Tool	3 and 12 months, 84% control and 88% intervention t1, and 72% control 75% intervention at t2\
Lee et al., 2016	N=155 control; N=153 intervention	27, 52 and 78 weeks (with bi-weekly urine testing)	Timeline followback plus urine testing	Bayes factors (exploring support for null / alternative hypothesis, or no support for either, across the 3 trials)
Marlowe et al., 2005	N=100 control; N=100 intervention	6 months. 99% retained in control, 82% in intervention. 91% retention overall	ASI composites, plus self-report	Repeated measures linear mixed growth model. Group (control vs intervention) and day as fixed effects; subjects as random effects

Marlowe et al., 2007	N=142 control; N=137 intervention	6 months, 82% of ASIs and 35% of urine samples	ASI	t-test
Mathias et al., 2018	1) N=22; 2) N=20; 3 N=18; 4 N=26	8 weeks. 1) 36% dropout, weeks 2-5; 2) 35% dropout weeks 2-9; 3) 27% dropout weeks 2-7; 4) 19% dropout, weeks 2-7	Half-hourly transdermal alcohol monitoring, by ankle tag	t-tests; Mann Whitney for nonparametric
McKendrick et al., 2006	N=139. N=75 I; N=64 C. 50% ASPD.	12 months, only included those with follow-ups	Centre for Therapeutic Community Research tool - self-report, 'any alcohol use to intoxication' 12 months post-release. Dichotomous plus frequency.	Multivariate OLS regression
Naeem et al., 2005	N=35 intervention; N=38 control	12 months. Intervention: 71%; control: 71%	Clinician's Alcohol Use Scale, drawing on case files	Repeated measures, mixed-effects ANOVA for continuous items and GEE for dichotomous
Newbury-Birch et al., 2014	N=184 consented, N=181 treated control; N=178 consented, N=173 received I1; N=163 consented, N=67 received lifestyle counselling	6 and 12 months; 68% and 60%	AUDIT score of <8 at 6 months (secondary outcome - the same, at 1 year)	t-test
Nyamanthi et al., 2017	N=116. N=58 control; N=58 intervention	6 months, 90%	Texas Christian University Drug History Form 2 - frequency-of-use Likert scale, dichotomised to abstinence	Logistic regression with GEE

Owens and McRady, 2017	N=40	One month, 62.5% (7/40 missed one-month re-interviews, but were re-interviewed at 3 months to secure one-month data)	ASI, Form-90 and BAC (measured by breathalyser or skin strips)	Logistic regression implied
Polcin et al., 2018	N=21 houses, N=149 intervention; N=28 houses, N=181 control.	6 and 12 month	Timeline followback plus ASI	Two-level, mixed effects random intercept models (aka multilevel or hierarchical models). 30% of residents in MICM houses received no MI; so analyses on both ITT and modified per protocol
Polcin, 2006	N=73 @ 6 months (this is an interim)	6 months (interim)	Addiction Severity Index across 6 domains, including alcohol; total abstinence	Not stated. Both categorical and continuous comparisons reported (abstinence; ASI scores). Prison also compared with community.
Prendergast et al., 2011	N=812. N=412 intervention N=400 control	3- and 9-months post-release. 65% follow-up (1 identified as ineligible, 52 released early); erm, of those considered eligible (i.e. 65%) 91% at 3 months and 90% at 9 months.	Texas Christian University Drug Screen.	Mixed effects model with random trends (intercept and time as random variables)

Study	N	Follow-up / retention	Measures	Analysis
Prendergast et al., 2017	N=363 control, N=369 intervention	12 months; 72%	ASSIST, with four levels of alcohol use (never used, no change in risk since baseline, improved risk (from high to medium or low etc), worse. Past 3 months	t-test or chi square, except when C and I differed at baseline (in which case, logistic regression)
Sacks et al., 2006	N=151 control; N=163 intervention	6 months post-release, 53.3% intervention and 49.7% control	Centre for Therapeutic Community Research Baseline Protocol, plus the ASI	No inferentials re: treatment outcome / group x time
Scott and Dennis, 2012	N=242 control; N=238 intervention	30, 60, 90-day follow-ups. 'Over 90%' followed up at each stage.	Self-report and urinalysis	ORs plus CI
Springer et al., 2017	N=33 control, N=67 intervention	6 months. 71% intervention and 64% control retained for at least 4 moths	Timeline followback - 90 days before prison, last 30 days of prison, monthly for 6 months post-release	Multivariate OLS regression
Stein et al., 2010	N=245. N=120 control, N=125 intervention	1, 3 and 6 months, 86%	Timeline followback, 90 days	Zero-inflated count regression models
Stuart et al., 2014	N=252. N=129 (control); N=123 (intervention).	3, 6 and 12 months; 95%, 89% and 82%	Timeline followback. 6 months pre-baseline; thereafter, for each period between follow-ups. Measures - drinks per drinking day; days abstinent from alcohol; self-reported violence (CTS2).	ANOVA and t-tests for continuous; Chi-Square for nominal; Mann-Whitney U for ordinal

Sullivan et al., 2007	N=139. N=75 I; N=64 C. 50% ASPD.	12 months, only included those with follow-ups (N=139). This represented 82% of intervention (N=185) and 69% of control (N=92)	Centre for Therapeutic Community Research tool - self-report, 'any alcohol use to intoxication' 12 months post-release. Dichotomous plus frequency.	Stepwise regression
Utter et al., 2013	N=100 intervention; N=100 control	90 days (AUDIT), 2 years (arrest). 85% control, 95% intervention @ 90 days.	AUDIT	Generalised estimating equations
Van Stelle et al., 2004	N=66 control; N=212 intervention	12 months. 32% of comparator, 32% of intervention	Professional reports and official data, including 'outreach specialists' and parole officers.	ITT, multiple regression. Logistic regression for dichotomous outcomes, with OLS for continuou8s measures.
Watt, Shepherd and Newcombe, 2008	N=134 control, N=135 intervention	3 and 12 months, 84% control and 88% intervention t1, and 72% control 75% intervention at t2\	AUDIT, plus self-report weekly units, drinking days in last 12 weeks, readiness to change	Linear regression
Wheeler et al., 2004	N=56 intervention, N=43 control	Pre-test, post-test 1 (after treatment), post-test 2 (2 months after release).	Self-report	Chi square

Woodall et al., 2007	N=305 total. N=177 intervention; N=128 control.	6, 12 and 24 months. 19% of participants (N=58) had at least one instance of missing data.	Form 90 - timeline follow-back of drinking (units) in the last 90 days	Mixed factorial design, including a between-subject factor (treatment or control) and within-subject (4 time periods – pre-test, 6, 12, 24 months). 'Greatest interest was in the change from pre-treatment to posttreatment assessment, which was evaluated via a contrast between the mean at intake and the average of assessments at 6, 12 and 24 months'
Zlotnick, Johnson and Najavits	N=27 intervention; N=22 control	Pre-test, 12 weeks after start, 3 months post-release, 6 months post-release. 5 women (10%) lost by 6 months.	ASI, last 30 days	ANCOVA at each time point; generalised estimation equations analysis for intake through to final FU.

Table 3 (of 3). Intervention details. Comparative studies. Outcomes.

Study	Outcomes
Andersson et al., 2012	AUDIT negatives (<8) increased in all three groups between baseline and 6 months (from 17.7 to 29.1% in C; from 12.4 to 23.6% in I1; and 9.9 to 19.8% in I2). There were no significant differences between either intervention group and control, on either ITT or PP analyses. At 12 months, there were no significances on AUDIT <8 between groups. Additionally, I1 had significantly higher arrest rates than either of the other two conditions.
Averill et al., 2018	Several important secondary outcomes did not differ significantly between the groups: rates of cocaine, alcohol, and intravenous drug use; the score on the Sex Risk subscale of the Risk Assessment Battery; and self-reported reincarceration (percentage of participants with any reincarceration and total days of incarceration).' However, time to opioid relapse, proportion relapsing on opioids, proportion with a 2-week period of abstinence, % of confirmed opioid-negative urines, and % of days with self-reported opioid use were all significantly more improved in the intervention condition
Begun, Rose and LeBel, 2011	The mean AUDIT-12 score for the combined sample at follow-up was 12.32 (SD D 10.97), with a median score of 9. This is in sharp contrast to the very high initial mean of 27.98. Significant differences appeared in paired t test comparisons of the women's initial and 2-month follow-up AUDIT-12 screening scores. The mean scores for the treatment as usual group were 28.04 versus 14.52 and for the jail in-reach intervention group were 27.88 versus 9.05 at initial versus follow-up interviews, respectively. For the intervention group, the mean reduction in AUDIT scores (18.83), paired t (59) D 12.630, p 0.001, was significantly greater than the AUDIT score reduction observed with the treatment as usual group (mean reduction D 13.52, paired t (88) = 9.602, p 0.001). Using one-way ANOVA, the differences between the two groups' scores at the two time points were also statistically significant: F(1, 148) D 6.336, p 0.01. Initial screening scores were not significantly different between the two groups.' '
Boit et al., 2018	Study condition was not a significant predictor of percentages of days of alcohol use only, drug use only, alcohol and drug use in one day, or abstinence, or rates of post-incarceration relapse after controlling for pre-incarceration substance use. Estimates of effect sizes of study condition as a predictor of substance use outcomes (controlling for baseline values) were small for percentage of days of alcohol use only (g = 0.302), which favoured the [control] group, and days of both alcohol and drug use (g = 0.126) and days of complete abstinence (g = 0.294; Table 4); both favoured the MI group. There was a large effect size for the MI group in differences of percentage of days of drug use only (g = 0.816).' Additionally, 'Compared to pre-incarceration, only the MI group had significant increases in abstinence (see Table 4; MI: Pre PDA = 22.6%, Post = 67.3%, t = −4.113, p < 0.01, g = 1.303; EI: Pre PDA = 32.7%, Post = 65.0%, t = −2.189, p = 0.053, g = 0.824).'

Bowen et al., 2006	At three months, significantly fewer drinks per week in meditation (from M=64.83(73.01) to M=8.38(13.37) versus control (from M=43.98(55.61) to M=27.77(46.37). ß = -.26, estimate = -22.18, SE = 8.52. (p<0.05). Intervention group also showed significantly greater reductions in crack cocaine use, marijuana use, and Short Inventory of Problems global score.
Chan et al., 2005	the alcohol Odds Ratio … reflects that the PCM group has an increase of 7% of the risk, relative to the comparison group, of being in the high alcohol severity category at 6 months. Confidence intervals and p values, however, show that none of these differences are significant either at 6 or 12 months. The next two columns show that the likelihood of being in the high severity group, for any outcome measure, did not differ by group when averaged across all time points (Group P-Value), and that there were no significant Group by Time interactions.' No broader impact on child custody or service utilisation, though intervention group members were significantly more likely to visit A&E between 6 and 12 months.
Chassin et al., 2009	Treatment of greater than and less than 90 days both more effective than no treatment at reducing short- and long-term alcohol use. 'The negative deflection (i.e. −.63) for those who received treatment indicates that there is a difference of −.63 between the observed and expected post-treatment alcohol use scores in the treated group. Moreover, this deflection was significantly different from zero... If treatment has a beneficial effect, there should be larger negative deflections in the treated group than in the untreated group. For example, in Figure 1A, this represents a comparison of the −.63 [of a scale point - see measure] difference between the observed and expected alcohol use in the treated group compared to the +.22 difference between the observed and expected alcohol use in the untreated group. In this example, the alcohol use of those who received treatment was .63 scale points lower than their expected use based on their pre-treatment slope, whereas the alcohol use of those who did not receive treatment was .22 scale points higher than their expected use.'
Courtright, Berg and Mutchnick, 2000	Intervention group 'reported a lower average number of drinks consumed per drinking day at 3 months, with this effect fading at 6 and 12 months.' % of days abstinent from alcohol was significantly greater in the intervention group at 3 months (B=.09, 95%CI = .03-.14, p=0.002) and 6 months (B=.06, 95%CI - .01-.11, p=.01) but not 12 months (B=.01, 95%CI = .04-.07, p=.69). No effect of intervention on overall self-reported physical or psychological IPV, though some 3 and 6 month intervention effects on self-reported injuries caused and severe psychological / physical violence.

D'Amico et al., 2013

At the three-month follow-up… for past month alcohol and marijuana use, both groups either maintained or slightly reduced use. Similarly, for alcohol and marijuana showed a reduced number of reported consequences. There were no statistically significant differences between the two groups for use and consequences.' No significant group effect on recidivism at one year on the basis of PP or ITT analyses.

Tonnes of findings. Short version - overwhelmingly no effect, but some indications of reduced alcohol use in people <29yo and those retained longer. 'the average time to first heavy drinking day was 80.0 days, without any difference by treatment arm (80.4 vs.73.5 days; p = 0.77; Table 4). Length of incarceration, housing status, and race/ethnicity did not significantly influence the outcomes. Furthermore, when examining the time to first heavy drinking day by treatment arm and treatment intensity, we saw the longest time to first heavy drinking day for those who received 4 or more injections of XR-NTX (108.3 days) … When adjusting for age (p < 0.001), alcohol use severity using the AUDIT score categories (p < 0.001) and not actively using cocaine or heroin post-incarceration (p < 0.001), there was a statistically significant association with a longer time to first heavy drinking day in participants who received XR-NTX compared to placebo (Table 3);for every increase unit in the model, there was an increase in number of days to first heavy drinking day. In a more granular analysis, participants aged 20–29 years receiving XR-NTX were significantly more likely to have a longer time to first heavy drinking day than those receiving placebo (24.1 vs. 9.5 days; p < 0.001; Table 3). There was, however, no significant difference in this outcome in all other age groups.'
'Data analyses based upon the intention to treat analysis approach using naïve and imputed datasets for the individual pre- and post-incarceration alcohol outcome variables(average drinks per drinking day, percent heavy drinking days, number of drinking days and alcohol craving) were not statistically significantly different between treatment arms.' 'The pre-incarceration to 6months post-release change in average drinks per drinking day revealed no statistically significant difference between treatment groups and those who received more than 50% of study injections. Those who received 4 or more study injections in the placebo group reduced their average drinks per drinking day by 14.9 drinks, while those in the XR-NTX group reduced their average drinks per drinking day by 17.4 drinks. No statistical difference was found between average drinks per drinking day for the intervention period (180 days post incarceration), however those who received<4 study injections had higher average drinks per drinking day than those who received ≥4 injections.' 'No statistically significant difference was observed in the change of mean percent of heavy drinking days pre- and post-incarceration between the intervention arms and treatment intensity, nor was there a significant difference between treatment arms and treatment intensity during the intervention period.' 'The change in median total number of drinking days from pre- to post-incarceration was found to have no statistically significant difference between groups and treatment intensity. 'There was no statistically significant difference in mean change in alcohol craving between the treatment groups and the number of injections as measured by a logistic regression analysis.' 'A global alcohol improvement score was calculated as a composite score using the above 5 variables. A generalised linear regression model of imputed data demonstrated that participants who received 4 or more injections of XR-NTX were significantly more likely to have a higher alcohol consumption improvement score (p < 0.005) than those who received 4 or more injections of

Davis et al., 2003

placebo.'

	Significant reductions in alcohol use. Also reduced drug sales, and cannabis use (hair and self-report measures). 'Table 20 shows the results of the stepwise regression analysis predicting the youths' reported frequency of getting very high or drunk on alcohol during the follow-up period. The Time 1 predictor variables, including the youths' Time 1 reported frequency of getting very high or drunk on alcohol, had R^2 = 0.285 (F = 6.80; df = 15,256; p < .001). Importantly, the R^2 change value (0.017) associated with the FEI-ESI group assignment variable was statistically significant (F = 6.16; df = 1,255; p < .007). Youths receiving FEI services reported getting very high or drunk on alcohol less often than youths receiving ESI services, with an effect of .58 on the outcome variable that had a mean of 1.57 and a standard deviation of 2.17. The R^2 change (0.003) associated with the case type by group assignment interaction term was low and nonsignificant. Overall, all the predictor variables accounted for 30.5 percent of the variance (F = 6.56; df = 17,254; p < .001).'
Dembo et al., 2000	
Dembo et al., 2000	Youths receiving FEI services reported getting very high or drunk on alcohol less often than youths receiving ESI services, with an effect of .58 on the outcome variable that had a mean of 1.57 and a SD of 2.17.
Dembo et al., 2001	No difference overall, but group effects. 'The Year 1 predictor variables, including the youths' Year 1 reported frequency of getting very high or drunk on alcohol, had R' = 0.21 3 (F = 4.72; df = 15,262; p < .001). The R' change value (0.002) associated with the FEI-ESI group assignment variable was not statistically significant. However, the R' change associated with the residualised variable comparing FEI completed and FEI non-completed youths (.013) was statistically significant (F = 4.38; df = 1,260; p < .05). Compared to FEI non-completed youths, FEI completed youths reported getting very high or drunk on alcohol less often. Overall, all the predictor variables accounted for 22.8 percent of the variance (F = 4.5 1; df = 17,260; p < .OO 1).' '20 percent of the youths reported getting very high or drunk on alcohol 12 or more days during the year preceding their last follow- up interview. This rate is similar to the rate reported by the youths at the time of their initial interviews.'
Dienes, Coulton and Heather, 2017	"On average, daily drinks decreased by 77%, from 3.0 to 0.69 (P < 0.01), once patients began treatment with XR-NTX. Average drinks per drinking day also showed a 39% decline during treatment, from 6.6 to 4.0 (P = 0.04) once treatment began, although post-treatment, the positive effect lessened. Percent days abstinent showed a 31% increase (greater abstinence), from 56.8 to 81.96 (P = 0.02), that persisted after treatment was completed. Finally, the overall average change in percent days with 1 or more interlock BAC test failure decreased in-treatment and post-treatment compared with baseline values but was not statistically significant in either case."
Forsberg et al., 2011	Significantly more likely to be abstinent at 3 months post-release (63% vs 49%, p<0.05) but not at 12 months; positive changes in ASI alcohol composite for intervention vs control by 12 months (details not reported)

Friedman, Terras and Glassman, 2002	No group effect on alcohol use, though a significant group effect on reductions in drug use.
Friedmann et al., 2011	No significant differences between CM conditions on the number of weeks in which alcohol was drunk. Participants in conditions 1, 2 and 4 had significantly lower average transdermal alcohol concentrations than those in condition 3.
Hser et al., 2013	No impact on alcohol ASI scores. No impact on drug scores, employment, family, legal, medical, psychiatric ASI domains either.
Jason et al., 2017	Data for alcohol use vs not over 6-month periods: 'The main effect of time was not significant… The main effect of condition was not significant… The condition by time interaction effect was not significant…' Additionally, no impact on employment, criminal charges, being charged with a new offence, or arrests.
Johnson et al., 2011	Collaborative behavioural management was associated with a significant (p<0.001) reduction in alcohol use; this effect was more pronounced for women (29% of controls used vs 5% of CBM; p<0.001).
Lanza and Gonzalez Menendez, 2013	Figure 2 presents the percentages of abstinent females at pre-, post-, and follow-up assessment phases. All participants consumed actively when initiating the intervention. At posttreatment, a statistically significant group difference was observed in favour of the ACT condition, [χ2 (1, N = 31) = 20.48, p= .000]. At follow-up, the ACT group maintained this significant difference, [χ2 (1, N = 27) = 6.09, p= .014]. Cochran's statistic showed that the evolution of ACT was statistically significant, [Q (2) = 9.25, p= .010], but that of the CG was not, [Q (2) = 2, p = .368]."No significant posttreatment group differences were found in any area of the ASI-6. However, 6 months later, the intervention group was statistically different from the control group in the Alcohol area, [t (24, 13.6) = -2.17, p = .048].' NB: this appears to be because the problems of the control group increased, more than the problems of the intervention group decreasing. No impact on drugs, health, family, or psychological wellbeing. No impact on psychopathology (including depression or anxiety). No impact on anxiety sensitivity.
Lanza et al., 2014	ASI alcohol composite pre-test, post-test, 6 month FU - control 0.38(0.02), 0.40(0.04), 0.42 (0.06); ACT 0.47(0.04), 0.46(0.02), 0.4(0.05); CBT 0.42(0.05), 0.41(0.05), 0.41(0.05). F(2,39) = 2.571, p =.090, n2=0.119, I-ß=0.482. 'the ACT and CBT groups maintained a statistically significant difference in the AAQ-II in comparison to the CG group. Moreover, the ACT group showed a statistically significant difference with regard to the CBT group. Last, statistically significant differences were found in the CS in favour of the ACT group compared with the CG, in the areas of alcohol and drugs.' Also marginal significance (p=0.06, p=0.069) for ACT conditions over control for reducing diagnoses of panic disorder and depressive disorder.

Kutin and Koutroulis, 2003	Overall, significant reductions in three out of four measures of alcohol consumption from baseline to 3-month and 12-month follow-up were observed (P=0.001; Figure 2). Whilst there was no significant reduction in weekly heavy episodic drinking between baseline and 3-month follow-up (baseline 85.5%; 3-month follow-up 86.7%; 95%CI. 0:07;.0:04), the proportion of participants at 12-month follow-up who reported weekly or more consumption of 8+ standard units had decreased significantly (12-month follow-up 78.2%; 95%CI. .0:003;.0:14). There were no significant between-group differences as a function of the intervention at 3- month follow-up (AUDIT, P=0.18; weekly units, P=0.39; number of drinking days, P=0.94; weekly heavy episodic drinking, 95%CI. 0:13;.0:06), or 12-month follow-up (AUDIT, P=0.61; weekly units, P=0.79; number of drinking days, P= 0.95; weekly heavy episodic drinking, 95%CI. 0:12;.0:08), even after baseline differences on alcohol measures and education levels had been adjusted for in the analyses.'
Lee et al., 2016	No support for null or alternative hypothesis in the CJS. Some support for the null hypothesis (i.e. leaflet, brief advice, lifestyle counselling are all equally (in)effective) when studies combined
Marlowe et al., 2005	Significantly greater reductions in alcohol use within the intervention group vs control (p=0.031).
Marlowe et al., 2007	The average days of sobriety were 100.48 in the voluntary group and 117 in the involuntary group. The findings show that there was no statistically significant difference between the two groups, t(118) = -0.867, p = .39, 95% CI [-55.24, 21.61].
Mathias et al., 2018	…there is no difference between the two groups with regard to drug and alcohol consumption'
McKendrick et al., 2006	Intervention group significantly reduced 'any alcohol use to intoxication' (from 57% to 21%) vs control (55% to 39%). Odds 0.43, p=0.02. 'Likewise, the reduction in the frequency of alcohol used to intoxication was greater in the MTC group) ß=-0.69, p<0.05), with a reduction of 63% in the MTC group compared to 28% in the control group.' Also showed significantly greater reductions in any substance use and any illegal drug use. Kaplan-Meier survival analysis indicated that on average those in intervention conditions began using substance slater than those in control (3.7 vs 2.6 months).

Naeem et al., 2005	...there was a significant matching-by-time interaction effect on self-reported alcohol intoxication (p < 0.05) (Table 2). Participants who were assigned to the matched condition (regardless of risk level) reported greater reductions in alcohol intoxication from baseline to follow-up than participants assigned to status hearings as usual. All of the following evidenced significant time x group interactions at p<0.05. Days of alcohol intoxication (last 30 days) low risk I from 2.32(3.12) to 1.30(2.52); low risk C from 2.44(4.02) to 2.02(3.27). High risk I from 3.59(5.21) to 1.40(3.27), high risk C from 3.13(6.04) to 2.67(5.98). Any alcohol intoxication, last 30 days. Low risk I from 55% to 33%, low risk control from 46% to 45%. High risk I from 48% to 20%. High risk C from 39% to 36%. Reductions also apparent in drug use (days / any / just cannabis), any criminal activity, and any criminal charge (last 6 months)
Newbury-Birch et al., 2014	In both the control and BI arms, the total AUDIT score decreased significantly from baseline until 90 days, by 4.7 units (95% confidence interval [CI], 3.6-5.8) among control subjects and by 3.4 (95% CI, 2.4-4.4) among BI subjects. However, total and all component 90-day AUDIT scores as well as the change in AUDIT score from baseline were no different between the treatment arms. The mean decrease in total AUDIT score relative to baseline, 4.7 (5.1) units among control subjects and 3.4 (5.0) units among BI subjects, did not differ between the treatment arms (difference, -1.3; 95% CI, -2.8 to +0.1). Similar proportions of subjects in each arm reported binge drinking [relative risk (RR) 1.6; 95% CI, 0.8-3.0; BI relative to control], frequent drinking [relative risk (RR) 1.1; 95% CI, 0.6-1.9), remaining abstinent from alcohol (RR, 0.9; 95% CI, 0.4-2.1), and injuring oneself or someone else because of drinking (RR, 0.4; 95% CI, 0.1-2.4).' No impact on arrests or reconvictions, which were in any case scarce (<3% both groups).
Nyamanthi et al., 2017	[P]articipants in the DBT-CM group were more likely to become or remain alcohol-abstinent during the study period (OR=3.12; 95%CI [1.24, 7.85]; p= 0.02); the HP group did not change.' No significant effect of the intervention (vs control) on abstinence from both drugs and alcohol.
Owens and McRady, 2017	"Analyses revealed no group differences in terms of change scores for the ASI patient ratings of treatment importance for alcohol and drug use, use of primary substance in previous 30 days, SIP, and ASI composite scores."

Polcin et al., 2018	…all groups except … PP … showed significant improvement at 12 months on the ASI alcohol scale, the aSI drug scale and 6-month [timeline followback] abstinence.' Abstinence - control increased from 30.4% to 47.5%; intervention increased from 32.9% to 47.2%. ORs from multilevel modelling also reported on p.1650. 'There were no significant time x condition interactions for alcohol and drug variables in our ITT or PP analyses.' Women assigned to MICM reported higher rates of abstinence at 12 months compared with the control group. This was the case for the ITT analysis (OR = 0.15, CI = [0.02, 0.94]) as well as the PP analysis (OR = 0.10, CI = 0.01, 0.68])
Polcin, 2006	Mann-Whitney tests for independent samples found no significant differences between those in jail vs not in jail at baseline or six-month follow-up, again we found no difference between those who had been in jail or prison vs those who had not…. multiple areas of functioning were assessed including six areas on the ASI (alcohol...' 'over half (51%) had been completely abstinent from drugs and alcohol over the past 6 months. Among those who had relapsed we nonetheless found significant reductions in six-month measures of alcohol (p<0.001) ... use'. However, NS differences on ASI alcohol scores (which were low at entry).
Prendergast et al., 2011	none of the differences for drug [or alcohol] use, crime, or HIV outcomes was significant in any of the sites. Based on the results from the mixed effects model, none of the between-group differences overall, at either interview point, was statistically significant.'

	No effect on any measure of alcohol use. No impact on treatment uptake post-release. No impact on rearrest. No impact on HIV risk behaviours. No impact on QoL. 'At follow-up, drug use over the 3 months prior to the interview was reported by 75.1% of the SBIRT group and 69.2% of the control group, a nonsignificant difference (p=0.19). Alcohol use over the past 3months was also not significantly different between the two groups (p=0.12): 61.1% for SBIRT and 64.2% for control. For some respondents, time to complete the scheduled 12-month follow-up interviews were much longer than 12 months (up to 34 months). As noted above, the groups did not differ by time to follow-up. But to account for any effect of differing time to follow-up, this variable was controlled for in multinomial logistic regression models for the two primary outcomes of drug use and alcohol use 3 months prior to follow-up. No significant group differences were found for either drug use (p = 0.37) or alcohol use (p = 0.08), controlling for time to follow-up. Change in risk level between baseline and follow-up for all drugs examined and for alcohol did not differ significantly between groups. Similarly, no difference was found for the third outcome related to drugs and alcohol—number of days until first use following release. For drugs, the mean days until first use was 32.6 (SD = 93.4) for SBIRT and 24.8 (SD = 70.5) for control; for alcohol, the mean number was 27.6 (SD=63.5) for the SBIRT group and 31.5 (SD=63.2) for the control group. The distribution was very skewed, with the median days until drug use being 2 for SBIRT and 1 for control; for alcohol use, the median was 1 for SBIRT and 2 for control. Because of the skewness, we used the Wilcoxon sign-ranks test; neither difference was significant (p = 0.11 for drugs and p =
Prendergast et al., 2017	0.16 for alcohol).'
Sacks et al., 2006	Reduction in drinks from baseline (in prison?) to 6 months, control: 43.98 (SD55.61) to 27.77(46.37); intervention 64.83(73.01) to 8.38 (13.37).
Scott and Dennis, 2012	RCM did not significantly increase alcohol abstinence (OR 0.79; CI 0.54-1.15). Engaging with treatment - not randomised, and achieved by only 5% of the sample - did (OR 3.74; CI 2.32-6.02; p<0.001)
Springer et al., 2017	Modified TC had no effect (vs control) on any alcohol intoxication or frequency of alcohol intoxication (for either ASPD or non-ASPD groups). However, the intervention did significantly reduce both incarceration and the sum of frequencies of drug use in the ASPD group (p<0.01).

Stein et al., 2010

A test of the treatment by time interaction effect on the inflation part of the model indicates statistically significant between group differences (Difference Scaled χ2 = 8.20, df = 3, p < .05) in abstinent days. At 1-month, between group differences are small and not statistically significant. Intervention effects on abstinent days are substantively larger and statistically significant at 3-months (OR = 1.96, 95% CI 1.17, 3.30). By 6-months the effect of intervention was somewhat attenuated and no longer statistically significant. There was no evidence that the intervention significantly reduced the number of drinks on days when drinking was initiated. A test of the treatment by time interaction effect on the count part of the model was not statistically significant (Difference Scaled χ2 = 0.98, df = 3, p > .10) and an examination of the individual coefficients indicated the effects of intervention on the expected number of drinks on drinking days were trivially small at baseline, 3-, and 6-months (Table 2). The effect at 1-month was substantively stronger (IRR = 0.81, 95% CI 0.63, 1.04) though not statistically significant (p > .05). … [ZNIB] At baseline, those randomised to intervention had a slightly lower probability of drinking on days in the prior three months, at 1-month the probability of an abstinent day in the two groups was nearly equal, and at 3-months the probability of an abstinent day was .68 for those randomised to intervention and .57 for controls. At 6- months, the significant intervention group effect was no longer present. The second panel of Figure 2 gives the expected number of drinks per drinking day for the ZINB model presented in Table 2. At 1-month participants randomised to intervention= consumed 9.8 drinks per drinking day while controls were estimated to drink 12.2 drinks per drinking day (p> .10) At all other time points between group differences in the number of drinks per drinking day were very small.'

Stuart et al., 2014

All offenders demonstrated a positive change in alcohol and other drug use when post-test scores were compared with pre-test scores … Matched and unmatched offenders, however, did not differ in the extent to which the alcohol use or other drug use scores on the needs assessment changed at pre- and post-test (alcohol use: U=1390, z = -1.03, 0 =0.30; drug use L U = 1326, z = -1.40, p = .16)'

Sullivan et al., 2007

There were no significant differences in alcohol and drug use between the three randomised groups at either baseline or at follow-up, all three groups significantly reducing alcohol and drug use from baseline to follow-up. Compared to a constructed variable signifying abstinence (no use of drugs or alcohol during the 30 days prior to interview), no differences between the groups were found, with 54.4% (62 people) reporting sobriety during the 30 days prior to post-ASI, compared to 12.3% (14 people) before intervention at intake. There were no differences between groups in the secondary outcome measures identified in the ASI. All groups showed significant reduction in illegal activity from baseline to follow-up and overall increase in more working days between pre- to post-ASI, highlighted in the BSF+ group'

Utter et al., 2013	For alcohol use, the median was 0 (0-3.37) days per 100 community days. Those who reported any alcohol use drank on a median of 6.22 (1.54-20.51) days per 100 community days. Comparison of substance use between CBM and SP group revealed fewer alcohol use days in the CBM group (Wilcoxon's Z=2.61, p=0.01), but no differences for days of primary drug or other drug use... CBM participants also used less alcohol (ARR 0.38, 95% CI: 0.22, 0.66, P=0.0006) with an average monthly predicted probability of alcohol use of 3.30% in the SP group and 1.27% in the CBM group. A group x time interaction (ß=0.10, 0.05 SE, P=0.03) indicated that the reduction in alcohol use associated with CBM waned over time. CBM participants also tended to report less heavy drinking (ARR 0.49, 95% CI 0.23, 1.02, P=0.06).' No group effect on stimulant or opiate use. p=0.08 for reductions in marijuana use, 'a trend towards lower...' No significant reductions in crime.
Van Stelle et al., 2004	...both TC and C groups showed significant reductions (p < 0 .001) from baseline to 6-month post-prison release on all four measures of substance abuse (alcohol use, drug use, frequency of alcohol use, and highest frequency of drug use). The table also shows that no significant differences between TC and C were evident for any of the four substance use variables.' Any alcohol use: 53% to 25% (intervention); 50% to 19% (control). Frequency (ordinal scale) of alcohol use: 4.25(2.52) to 1.22(2.33) intervention; 4.17(2.48) to 0.97(2.03) control. Additionally, reductions in trauma (PSS trauma severity), depression (Beck), arrest for reasons other than parole violation, and sex for money or drugs.
Watt, Shepherd and Newcombe, 2008	No effect of DTTOs on alcohol use - uncontrolled analysis -> p=0.409; controlled for baseline -> p=0.259; controlled for baseline 'and other variables' -> p=0.266. Significant improvements in drug use, but no significant group effects on any other domain (crime, physical health, psychological problems, risk behaviour, functioning...).
Wheeler et al., 2004	Chi-squares indicated no significant differences between the two groups with relation to drinking in the past 60 days *es / no), driving after drinking in the past 60 days (yes / no), number of days with five or more drinks (yes / no), or driving after drinking five or more drinks (yes / no): drinking in the past 60 days, $\chi2(1,N = 81) = 0.020$, P = ns; driving after drinking, $\chi2(1,N = 81) = 0.202$, P = ns; five or more drinks, $\chi2(1,N = 81) = 0.073$, P = ns; driving after five or more drinks, $\chi2(1,N = 81) = 0.171$, P = ns.'
Woodall et al., 2007	For both groups, significant reductions in drinking days, units consumed, and average BAC (p<0.001). Group x time also significant (p<0.02) - reductions were greatest for intervention conditions. Pre-post between groups: total units, $F(1,245) = 6.564$, p = 0.011; drinking days, $F(1,245) = 9.963$, p = 0.002; average BAC, $F(1,245) = 6.357$, p = 0.012). Control reduced by 26.9 drinks, pre-post; intervention by 110 drinks (90 days) pre-post. Treatment-control difference significant at all three follow-ups (in favour of the intervention condition). Some indications that people diagnosed with ASPD responded significantly better to treatment than those without such diagnoses.

Zlotnick, Johnson and Najavits

No effect of SS on alcohol use. 'On the alcohol composite [of the ASI], only the women in treatment as usual showed a significant decrease and at one time point (intake to 3 month follow-up).' No differences between groups in terms of days abstinent. Additionally, both groups improved on PTSD scores; no sig diffs between control and intervention (treatment as usual vs SS).

Appendix 3. Summary tables of reviewed papers. Studies with no comparison group.

Table 1 (of 3). Intervention details

Study	Country	Year	Setting	Design	Intervention vs comparison
Bean et al., 2017	US	2017	Courts	Case series	Intervention: use of fingernail samples and blood spots to monitor compliance with court-imposed alcohol abstinence requirements. Negative biomarkers and positive biomarkers plus positive disclosure resulted in a BI; positive biomarkers plus nondisclosure resulted in increased frequency of testing and, if not abstinent within 3 months, non-compliance procedures.
Bjerne et al., 2003	Sweden	2003	Probation	Case series	Control: DWI offenders in Swedish counties without interlocks; Control 2: Swedish DWI offenders who refused intervention; Intervention: fitting of an ignition interlock, with three-monthly medical supervision plus feedback on alcohol-related biomarkers
Bjerre, 2005	Sweden	2005	Probation	Case series	Primary prevention: initial resistance (inconveniencing drivers), 75% found little inconvenience after 1.5 years. 848 positive breath tests of 8=251,580 attempted starts. Secondary: Control: DWI offenders in Swedish counties without interlocks; Control 2: Swedish DWI offenders who refused intervention; Intervention: fitting of an ignition interlock, with three-monthly medical supervision plus feedback on alcohol-related biomarkers
Bowen et al., 2007	US	2007	Prison	Case series	Control: not described / treatment as usual; intervention: treatment as usual plus a ten-day Vipassana mindfulness meditation course, with 8-10 hours of meditation per day
Bowser et al., 2010	US	2010	Unclear	Case series	Mobile van delivering harm reduction information, and case managed referrals to support services.
Crane et al., 2014	US	2014	Courts	Case series	I1: 12-week CBT; I2: 12 weeks drug counselling

Study	Country	Year	Setting	Study type	Intervention
Cropsey et al., 2013	US	2013	Probation	Case series	Intervention: buprenorphine for opiate dependent people, in combination with 'a minimal psychosocial intervention (Medication Management) for reducing opiate use and other HIV-risk behaviours.' Effectively brief counselling in response to positive weekly drug tests
Jainchill, Hawke and Messina 2005	US	2005	Courts	Case series	Intervention: recovery houses for young people mandated to treatment. Abstinent therapeutic communities
Lapham and McMillan, 2011	US	2011	Courts	Case series	Extended release naltrexone injections every month for three months, with supportive manualised therapy
Martire and Larney, 2011	Australia	2011	Courts	Case series	Intervention: 'willing clients who meet eligibility criteria are provided with treatment to address their problematic alcohol use, including residential detoxification and rehabilitation services, pharmacotherapy, case management, and counselling and community outpatient services as necessary'
Mustard, May and Phillips, 2006	US	2006	Courts	Cross-sectional	Intervention: court-mandated, supervised antabuse
Scott and Easton, 2010	US	2010	Courts	Case series	Weekly one-hour group treatment. Manualised CBTY.
Smelson et al., 2019	US	2019	Courts	Case series	Intervention: intensive case management (caseloads of 15), with 'critical time intervention,' service linkage, 13 sessions of 'dual recovery therapy,' peer support, and vocational / educational support. All trauma-aware.
Thompson et al., 2010	US	2010	Courts	Case series	Intervention: intensive, targeted residentially services for young people; intensive at-home intervention for family members. Goal of 'family reunification.' Draws on the principles of the 'Teaching Family Model' (6-8 children in a home run by a married couple), Multi-Dimensional Treatment Foster CAre (based on social learning theory) and Multisystemic Therapy; plus an aftercare component.

Wheeler et al., 2011	New Zealand	2011	Probation	Case series	Intervention: community provision for people referred by probation services. 4 groups based on MI principles.
Wupperman et al., 2012	US	2012	Courts	Case series	Intervention: 12 60-minute one-to-one therapy sessions based on mindfulness
Zlotnick et al., 2003	US	2003	Prison	Case series	intervention: treatment as usual (voluntary 12-step residential rehabilitation on a minimum-security wing) plus 3*90-minute small-group sessions (c.5 women) per week of 'seeking safety' (CBT, PTSD and SUD)

Table 2 (of 3). Studies with no comparison group. Samples, follow-up and analysis

Study	Sample	Follow up	Measure of alcohol use	Method of analysis
Bean et al., 2017	N=260	12 months, for most	Biomarkers (phosphatidyl ethanol from blood spots; ethyl glucuronide from nails)	Descriptives
Bjerne et al., 2003	N=311 intervention; N=625 Control 1; N=2,367 Control 2	2-year follow-up (alcohol outcomes); 5 year (routine data - hospital and police)	AUDIT and biomarkers	Chi square
Bjerre, 2005	N=311 intervention; N=625 Control 1; N=2,367 Control 2	2-year follow-up (alcohol outcomes); 5 year (routine data - hospital and police)	AUDIT and biomarkers	Chi square
Bowen et al., 2007	N=57 intervention; N=116 control	6 months; 50% re-interviewed	Daily Drinking Questionnaire and Short Inventory of Problems	Fixed effects modelling for repeated, nonnormally distributed measures. ITT
Bowser et al., 2010	468 individuals, for whom 12-month data could be secured	6 and 12 months; % FU not given	Self-report, last 30 days	Nonspecific 'analysis.' Inferentials seemingly deployed - comparison of means?
Crane et al., 2014	N=60	1, 2 and 3 months; 85%, 75%, 82%	Timeline followback at 4, 8, 12 weeks	Linear and quadratic random effects models
Cropsey et al., 2013	N=30	1 month, 100%	Not identified. Presumably self-report	Generalised estimating equation, with sex (m/f) as group and opioid positive urines as outcome
Jainchill, Hawke and Messina, 2005	N=282	5 year, 65.1%	Any alcohol use, months of alcohol use over 5 years since release, alcohol dependence	Descriptives, I Wilcoxon signed ranks

Kutin and Koutroulis, 2003	N=358	12 months (retrospective)	Victoria Needs Assessment Tool	3 and 12 months, 84% control and 88% intervention t1, and 72% control 75% intervention at t2
Lapham and McMillan 2011	N=10	9 months, 100%	Timeline followback, mean drinks per day, drinks per drinking day, days abstinent. Interlock data also available	
Martire and Larney, 2011	N=202	12 months minimum, 59%	Days of alcohol use in the last 30 days	Paired samples t-tests
Mustard, May and Phillips, 2006	N=204	N/A - though 45% prescribed for <1 year, 25% for up to 2 years, 31% more	Self-report	Descriptive
Scott and Easton, 2010	N=75 (39 Caucasian, 36 African-American)	12 weeks	ASI for functioning; timeline followback for drinking. Breathalysers also used.	Repeated measures linear mixed models
Smelson et al., 2019	N=86	6 months, 78% retained.	ASI - drug use section	t-tests for continuous variables; McNemar's for dichotous
Thompson et al., 2010	N=33	6 months, 24% re-interviewed	Self-report (by family)	Descriptives
Wheeler et al., 2011	N=6005 referrals; N=1715 invited to participate; N=295 agreed; N=278 participated. N=93 @ 3 months, N=53 at 6 months.	3 and 6 months	Alcohol and Other Drug Outcome Measure (ADOM)	Generalised estimating equations
Wupperman et al., 2012	N=14	12 weeks; 93%	Timeline followback, 4 weeks before treatment, final 4 weeks of treatment	Breathalyser

| Zlotnick et al., 2003 | N=18 | 6 weeks and 3 months, 89% and 83% | ASI | paired samples t-tests |

Table 3 (of 3). Studies with no comparison group. Outcomes

Study	Outcomes
Bean et al., 2017	The detection rate for the combination EtG and PEth shows that 60% (157/261) of all repeat offenders enrolled in the biomarker program tested positive for one or both of these alcohol tests at the time of the assessment interview (baseline) and 40% (104/261) tested negative by both tests… Overall, two thirds (abstainers plus controllers) of drivers tested negative for allbiomarkers at the 3-,6-, 9-, and12-month follow-ups and one third (relapsers plus refractory) tested positive at least once during the first 12 months of monitoring. The majority (79%, 37/47) of those who tested biomarker positive at follow-up responded favorably to the brief intervention they received from their assessors by showing a negative PEth result in their repeat tests. The relapsers who did not respond to the brief intervention and ended the first DSP with a positive test became the refractory group (21%, 10/47) and had to undergo a new round of 12 months of monitoring. Seven of these 10 refractory drivers were able to finish the second DSP successfully and the remaining 3 consistently failed the biomarker program.'
Bjerne et al., 2003	…better results in both the biological alcohol markers and the AUDIT questionnaire.' Men's mean AUDIT fell from 11.4 to 2.4; the proportion with scores >8 fell from 64 to 6%. Women also evidenced decreased scores (not specifically stated). Liver enzymes decreased - GGT by 33%, AST and ALT by unstated levels. Some additional methodological concerns here, as those with elevated levels of CDT after one year were identified as relapsers and so removed from the programme. Additional effects - zero repeat DWI offences (vs 1.6% (C1) and 2.9% (C2 ($p<0.001$ for C2 vs I though note the two intervention groups were also significantly different, $p<0.0002$))
Bjerre, 2005	…better results in both the biological alcohol markers and the AUDIT questionnaire.' Men's mean AUDIT fell from 11.4 to 2.4; the proportion with scores >8 fell from 64 to 6%. Women also evidenced decreased scores (not specifically stated). Liver enzymes decreased - GGT by 33%, AST and ALT by unstated levels. Some additional methodological concerns here, as those with elevated levels of CDT after one year were identified as relapsers and so removed from the programme. Additional effects - zero repeat DWI offences (vs 1.6% (C1) and 2.9% (C2 ($p<0.001$ for C2 vs I though note the two intervention groups were also significantly different, $p<0.0002$))
Bowen et al., 2007	No significant differences between groups, though note the very small sample sizes. 'Decreases over time in peak TAC during drinking episodes were found irrespective of group assignment… Though participants did not alter frequency of drinking episodes from study initiation to termination, they were less intoxicated when they drank.' Additionally, anklets were seen by offenders as both precise and acceptable. This noted, a fair few people did not volunteer because of the inconvenience of the device.

Bowser et al., 2010	In the 30 days prior to their follow-up interviews clients reported that their alcohol use declined on average from 7.4 days of use at intake to 5.4 days after 12 months (p<0.003).' Clients also self-reported reduced cocaine use, heroin use, days in jail, crimes, and sex partners at 12-month follow-up vs baseline.
Crane et al., 2014	significant linear and quadratic effects were observed for alcohol use such that use significantly declined over time (b = -.511, p = .003), followed by a slowing of the decline by the 3-month follow-up (b = .099, p = .013).'
Cropsey et al., 2013	As a secondary outcome, we were interested in determining other drug and alcohol use during treatment. Overall, no clear pattern of other illicit drugs or alcohol use across time emerged. At baseline, 30% of participants tested positive for cocaine, 26.7% were positive for benzodiazepines and 10% were positive for alcohol. Collapsing positive UDs across time, 37.9% of urines were positive for benzodiazepines, 31.7% of urines were positive for cocaine, and 16.1% were positive for alcohol across the time in the study.' Primary outcome - women had more positives for benzodiazepine use but reduced injecting behaviour more over the course of the study. GEEs were non-significant for gender comparisons in response to treatment.
Jainchill, Hawke and Messina, 2005	Large increases in alcohol use but note that this is a maturing youth justice population. 29% of men 13% of women alcohol dependent by 5 years. 'With the exception of alcohol use, there were no significant changes in the number of youth reporting substance use pre- to post-treatment for any of the major drug categories. For the total sample, both males and females, there were significant changes in the distribution of alcohol use, with more individuals reporting use during the 5-year follow-up period compared with pre-treatment. For both genders, the changes in other drug use were not significant…'
Kutin and Koutroulis, 2003	Overall, significant reductions in three out of four measures of alcohol consumption from baseline to 3-month and 12-month follow-up were observed (P=0.001; Figure 2). Whilst there was no significant reduction in weekly heavy episodic drinking between baseline and 3-month follow-up (baseline 85.5%; 3-month follow-up 86.7%; 95%CI . 0:07;.0:04), the proportion of participants at 12-month follow-up who reported weekly or more consumption of 8+ standard units had decreased significantly (12-month follow-up 78.2%; 95%CI . .0:003;.0:14). There were no significant between-group differences as a function of the intervention at 3-month follow-up (AUDIT, P=0.18; weekly units, P=0.39; number of drinking days, P=0.94; weekly heavy episodic drinking, 95%CI . 0:13;.0:06), or 12-month follow-up (AUDIT, P=0.61; weekly units, P=0.79; number of drinking days, P= 0.95; weekly heavy episodic drinking, 95%CI . 0:12;.0:08), even after baseline differences on alcohol measures and education levels had been adjusted for in the analyses.'
Martire and Larney, 2011	Alcohol use significantly reduced from 11.98(10.6) to 5.0(6.6) days out of the last 30, p<0.001. Significant improvements in psychological distress, general health and mental health also observed at p<0.001.

Mustard, May and Phillips, 2006	33% of those prescribed disulfiram self-reported 'cheating,' i.e. getting rid of the pill during supervised consumption so that they could drink.
Scott and Easton, 2010	Significant reductions in alcohol use for all participants (F(1,75) = 13.71, p<0.001). No significant group or interaction effect. No effect on drug use. Some reductions in physical violence (no group effect), verbal violence (for Caucasian offenders only). No decrease in psychological violence.
Smelson et al., 2019	No reductions in last-month alcohol consumption (p=1); highly significant reduction in last 6 months' alcohol consumption (any), from 36.4% to 10.6%, p<0.001. Any last-six-month drug use also significantly reduced (from 51.5% to 19.7%, p<0.001)
Thompson et al., 2010	"We obtained 6-month follow-up data for eight of the 19 youth who departed the program at home or to a homelike setting (42%). Unfortunately, we were unable to obtain follow-up surveys on the other eleven youth for a variety of reasons (e.g. unable to locate). At 6 months post-departure, all of these youth had remained arrest-free, seven (88%) were living in a homelike setting or independently, seven (88%) were enrolled in school or have graduated from high school, seven (88%) had remained drug-free and all remained alcohol-free."
Wheeler et al., 2011	For the small and unrepresentative cohort who were reinterviewed at 3 months, significant reductions in median number of drinking days (-0.5, p=0.03). No effect at 6 months, though median drinking days had doubled (2.0).
Wupperman et al., 2012	Significant reduction in drinking days (t1: M=11.43 (7.23); t2: M=1.36(3.27), T=0, p=.001), and number of drinks per drinking day (t1: M=4.21(1.42), t2: M=0.68(1.39), T=0, p=0.01). 62% of clients wished the treatment had continued for longer.
Zlotnick et al., 2003	Participants showed a significant decrease in drug and alcohol use from pre-treatment to 6 weeks post-release (t [16] = 6.09, p = .001; t [16] = 3.06, p = .002), respectively, and from pre-treatment to 3 months post-release (t [15] = 4.61, p = .001; t [15] = 2.88, p = .01), respectively.' Additionally, at 12 weeks 46% of women had sought no community treatment; and 46% no longer met the criteria for PTSD. Significant reductions in symptomatology.

Appendix 4. Narrative summaries of papers.

Overview

Including uncontrolled case series, 65 papers from 60 studies were identified for review. Recognising the impossibility of meta-analysis, the intention behind including studies with no comparison group was to secure a broad sample for descriptive purposes. However, the limitations of this approach soon became apparent. The findings of these studies could not meaningfully be integrated with those of studies with a comparative element due to the serious problems of assessing 'pre- post-' measures in criminal justice cohorts who, by definition, are likely to be engaged at the time of their most problematic behaviour. As such, regression toward the mean (prevalent in any study) is greater still.

Nonetheless, these additional papers were identified, retrieved, and went through the first stages of this review.

A narrative description of all 65 retrieved papers is reported in this appendix, synthesising data from the tables presented above and structured according to the searches that were carried out.

1. Police

Summary

Two papers focused on interventions delivered at the point of, or shortly after, arrest were reviewed[1]. Although police-related search terms identified nine peer-reviewed papers arising from nine discrete studies, all but two involved interventions delivered in other areas of the criminal justice system. Six involved monitoring following release from prison or jail, and one centred on court-mandated treatment.

Brief interventions

One study with a low risk of bias (Utter et al., 2013) compared screening (control) with screening plus a 30-45-minute brief intervention for people arrested for DUI. After 90 days, the authors identified no treatment effects on alcohol use.

Contingency management

A study with a moderate risk of bias (Mathias et al., 2018) offered some indications that contingency management could reduce alcohol use. The study compared four contingency management conditions; after ten weeks, people in the three conditions with contingent payments reduced their alcohol use significantly more than those receiving unconditional payments.

Focus

Brief intervention

One US RCT (Utter et al., 2013) focused on individuals arrested for the first time for DUI. The study has a **low risk of bias.** Identified instances of non-compliance were

---

[1] Within the main body of this report, the decision to focus exclusively on peer reviewed papers as part of this rapid review has led to the exclusion of two reports focusing on alcohol arrest referral within the UK.

responded to with a brief intervention. 100 arrestees were randomised to control conditions, receiving a basic assessment (consisting of questions focused on demographics, individuals' treatment seeking history, and AUDIT) before being escorted back to a communal cell for release. A further 100 received the same assessment followed by a 30-45-minute brief intervention (delivered according to the principles of motivational interviewing). Arrestees in intervention conditions also received a list of local alcohol treatment services, and a handwritten letter of appreciation and support one month after their release. After 90 days, 85% of the control group and 95% of the intervention group were followed up and re-assessed using AUDIT. Both control and intervention groups reduced their drinking in the 90 days following release; but **the intervention had no identifiable impact on overall AUDIT score, binge drinking, frequent drinking, days abstinent from alcohol, or injuring oneself or someone else because of drinking.** In a two-year follow-up, no differences were found between the two groups on re-arrest or reconvictions.

Transdermal alcohol monitoring plus contingency management

The second police-related study (Mathias et al., 2018) again took place in the US, and involved a comparison of four contingency management structures to support reduced drinking behaviour, as measured by transdermal alcohol monitoring. The study has a **high risk of bias.** 86 people released on bond after an arrest for DUI were allocated to sequential contingency management conditions, with each approach being delivered for eight weeks. Conditions were: 1) a requirement for total abstinence, with escalating rewards ($20 for completing week 1, with rewards increasing by $10 for each consecutive week of abstinence (N=22)); 2) no 'heavy drinking,' with a flat $50 reward for each successfully completed week (N=20); 3) as 2), but with an additional unconditional payment of $70 per week for wearing the transdermal monitor (N=18); 4) a requirement for total abstinence and no device tampering, rewarded by $50 for each successful week (N=26). After eight weeks, between 19% (condition 4) and 36% (condition 1) had disengaged; analyses (univariate ANOVA) were conducted on all weeks for which records were available. **These identified no significant differences between contingency management conditions on the number of weeks in which alcohol was drunk; though participants in conditions 1, 2 and 4 (those with entirely conditional payments) had significantly lower average transdermal alcohol concentrations than those in condition 3.**

2. Courts

Summary

Fourteen peer reviewed papers[2] drawn from 14 studies focused on the courts. They assessed 6 types of intervention.

Brief interventions

One UK study with a low risk of bias (Watt, Shepherd and Newcombe, 2008) compared the impact of screening (control) with screening plus a 10-15-minute brief

---

[2] One additional piece of grey literature was identified (Watt and Shepherd, 2005), drawing on the same study and presenting the same findings as those of a paper reported on here (Watt, Shepherd and Newcombe, 2008)

intervention for people charged with alcohol-related violent offences. After three months, the authors identified no treatment effect on alcohol use.

Contingency management

A Canadian study (Averill et al., 2018) with a moderate risk of bias compared the alcohol outcomes of sentenced DUI volunteers within three contingency management conditions. There were no group differences on six-week alcohol outcomes between the three groups.

Pharmacological and biological interventions

A US study with a high risk of bias (Lapham and McMillan, 2011) found that extended release naltrexone reduced the alcohol consumption of a case series of ten repeat DUI offenders. Increases in days abstinent were maintained to 9-month follow-up.

A second descriptive US paper (Mustard, May and Phillips, 2006) with a very high risk of bias identified that approximately one-third of people court-mandated to take disulfiram for varying lengths of time (under one to over three years) had 'cheated' on it in order to drink.

A third US uncontrolled case series study (Bean et al., 2017) with a high risk of bias identified that two-thirds of repeat DUI offenders mandated to abstinence remained alcohol-free when routinely monitored for biomarkers for (through blood spots and fingernail samples) alcohol over the course of a year.

Judicial monitoring and supervision

Two studies assessed the impact of mandating individuals to treatment.

One UK study with a high risk of bias (Naeem et al., 2005) identified no 12-month impact on the alcohol use of drug users mandated to attend drug treatment, when compared with an uncontrolled case series of voluntary treatment seekers with offending histories.

A second study was based in the US (Boit et al., 2018) and has a high risk of bias. A twelve-month retrospective case file analysis identified no significant differences in the residential treatment outcomes of individuals court-mandated to or voluntarily attending a residential treatment service.

Two US studies assessed the impact of drug courts' judicial monitoring on alcohol outcomes.

The first (Marlowe et al., 2005) has a low risk of bias, and identified that more frequent hearings were associated with reduced ASI scores (but not with reduced consumption) after 6 months.

The second study (Marlowe et al., 2007) had a moderate risk of bias, and identified that risk-matching individuals to levels of supervision (high / low) significantly

reduced both groups' six-month alcohol use when compared to an unmatched control group.

Treatment referrals and case management
Two studies explored approaches to community treatment.

An Australian uncontrolled case series study (Martire and Larney, 2019) evidenced a high risk of bias, identifying that a group of pre-trial problematic drinkers reduced their alcohol use in the 12 months after referral to treatment.

A second uncontrolled case series study with a high risk of bias (Smelson et al., 2019) assessed the impact of intensive case management for dually diagnosed repeat offenders, finding no reductions in last-month alcohol use; but significant increases in six-month abstinence.

Conjoined domestic violence interventions
Three US studies explored changes in alcohol use in individuals mandated to domestic violence programmes. All included a focus on substance misuse.

The first study (Stuart et al., 2010) had a low risk of bias, and identified that a brief motivational interviewing intervention appended to a domestic violence programme reduced drinks per day after three months, with this effect diminishing by 6 and 12 months. The intervention also increased levels of alcohol abstinence.

The second had a high risk of bias (Crane et al., 2014), examining a cohort's baseline to 3-month post-intervention alcohol consumption whilst engaged with drug counselling or CBT (these groups were collapsed into a single uncontrolled case series for this paper, which primarily examined racial differences in treatment outcomes). The authors identified that alcohol use declined significantly during treatment.

The final study (Scott and Easton 2010) also has a high risk of bias. It identified that an uncontrolled sample engaged by a substance misuse and domestic violence intervention reduced their alcohol use by the end of treatment (12 weeks).

Focus
Brief interventions (MI)
One study evaluated a brief intervention, delivered to people charged with alcohol-related violence.

Watt, Shepherd and Newcombe (2008) reported on an RCT of an MI brief intervention in UK magistrates' courts[3]. The study has a **low risk of bias.** 269 people who were intoxicated at the time of committing a violent offence were randomised to intervention (N=135) or control (N=134) conditions. The control group received an assessment, incorporating demographic questions and AUDIT. The intervention group received the same basic assessment, followed by a 10-15-minute brief intervention structured according to the principles of motivational interviewing.

---

[3] Watt, Shepherd and Newcombe, 2008

This included information about guidelines, strategies for cutting down, and contact details for support. Individuals were followed up at 3 months (84% control and 88% intervention), and 12 months (72% of control and 75% of intervention), with ANCOVA used to identify between-group differences (using baseline scores as covariates). **Both groups reduced their drinking significantly between baseline, 3- and 12-months; but no significant between-group differences on weekly units, drinking days, weekly episodic heavy drinking were observed.**

Transdermal alcohol monitoring plus contingency management

Averill *et al.* (2018) conducted a pilot RCT of a Canadian contingency management programme. The study has a **moderate risk of bias**, recruiting sentenced volunteers. The sample comprised thirty-seven men with AUDIT scores of 8 or above, who had been sentenced for DUI and who were willing to wear a transdermal alcohol monitoring device. They were randomised to one of three six-week contingency management conditions, all of which gave participants a flat $5 per day in weeks 1 and 6. Intervention 1 (I1) gave participants an additional $1 for each day between Monday and Sunday with successive clear readings, accompanied by daily feedback emails. Payments were reset to $5 at the start of a new week. I2 gave participants $5 per day, with daily emailed feedback. I3 gave participants no feedback, and $5 per day irrespective of their levels of alcohol consumption. Fixed effects modelling for repeated non-normally distributed measures (delivered on an intention-to-treat basis) identified **no significant differences between groups**. All groups reduced the amount they drank (per drinking session) over the course of the intervention, though their frequency of drinking did not change. The authors note that the study may have been underpowered, and that a larger study may be better able to detect between-group differences.

Pharmacological and biological interventions

Three papers reporting on pharmacological or biological approaches to reducing alcohol use following sentencing were identified.

Lapham and McMillan (2011) reported on a US pilot study of extended-release naltrexone, targeting repeat DUI offenders. The study has a **high risk of bias.** Eligibility criteria required all participants to have multiple DUI convictions, an alcohol interlock installed on their car; or to be a first-time offender who had had an interlock for at least 3 months, with at least one failed start. Ten people were recruited[4], and given extended release naltrexone injections (380mg) every month for three months, accompanied by manualised therapy. Drinking was measured using timeline followback, with all participants re-interviewed after 9 months. Analyses are not reported (t-tests seem probable). **During treatment, the authors identify a decrease of 77% in daily drinks from 3.0 to 0.69 (p<0.01), and an average reduction of 39% in drinks per drinking day from 6.6 to 4.0 (p=0.04). These effects reduced after treatment finished, though an increase in the proportion of days abstinent was maintained (from 56.8% to 81.96% (p=0.02)). There was no decrease in the proportion of days with one or more failed interlock breath test.**

---

[4] This included 4 women; no separate outcomes are reported.

A second paper (Mustard, May and Phillips, 2006) detailed the findings of a US cross-sectional study of people court-mandated to take disulfiram. It has a **very high risk of bias.** 204 people were interviewed, with 45% relatively new to disulfiram (prescribed <1 year) and 31% prescribed for over two years. Analyses are descriptive. **33% of respondents reported that they had 'cheated,' disposing of their prescriptions so they could drink alcohol**.

Finally, Bean et al. (2017) reported on the use of bio markers (phosphatidyl ethanol and ethyl glucuronide) to identify non-compliance with US court-ordered abstinence requirements. This uncontrolled case series study has a **high risk of bias**. 260 people sentenced for (at least) their third DUI offence were recruited, with fingernail spots and blood markers used to identify drinking and drug use for the duration of their sentence. Identified instances of non-compliance resulted in a brief intervention if the participant also disclosed that they had breached their conditions; no disclosure in the context of positive biomarkers resulted in increased frequency of testing and, if not abstinent within three months, the initiation of non-compliance procedures. All recruits were followed up every three months for up to one year, with data analysed descriptively. The authors identify that **two-thirds of participants were consistently abstinent. Of the one-third with negative biomarker tests, 79% 'responded favourably to the brief intervention … by showing a negative PEth result in repeat tests.'** The remaining 21% who failed biomarker tests were required to restart a new 12-month round of abstinence and monitoring. All but three people eventually completed twelve months of mandated abstinence and monitoring.

Judicial factors: monitoring and coercion
Four papers drawn from three separate studies explored these aspects of treatment. Two explored the impact of court-mandating individuals to treatment (Naeem et al., 2005; Boit et al., 2018), whilst the other two assessed the role of judicial supervision within mandated treatment (Marlowe et al., 2005; Marlowe et al., 2007).

One UK paper (Naeem et al., 2005) explored on the impact of Drug Treatment and Testing Orders (DTTOs) on an uncontrolled case series of sentenced offenders with identified drug problems. The study has a **high risk of bias**, as sentenced offenders were compared with a group of people presenting at treatment services 'who had displayed offending behaviour.' The comparison group (N=38) received treatment as usual; the intervention group (N=35) were required to engage with drug treatment, urine tests, and court reviews for between 6 months and 3 years. After 12 months, 71% of each group was re-interviewed. Linear regression, using the Clinician's Alcohol Use Scale to assess levels of alcohol use, **identified no effect of DTTOs on alcohol use** (in an uncontrolled analysis p=0.409; controlling for baseline variables, p=0.259; controlling for baseline 'and other' variables, p=0.266). Drug use was the only domain in which significant improvements were associated with DTTOs. No significant group effects were identified with regards to crime, physical or psychological health, risk behaviours or functioning.

The second study exploring court-mandated treatment (Boit et al. 2018) analysed the outcomes of veterans treated for alcohol use disorder in a residential setting and had a **high risk of bias**. The study centred on a retrospective case file analysis, matching 60 people required to attend treatment by the courts for between 6 months

and 3 years with 60 individuals who attended the same service voluntarily. The follow-up period was not clearly specified, though sobriety of 'up to five years' was apparently measured. The measure of alcohol use was not specified either, though seemingly involved self-reported days of sobriety following release (potentially days to first drink). The voluntary group had an average of 100.48 days of sobriety, compared with 117 days in the involuntary group. T-tests identified **no significant difference in average days of sobriety between the voluntary and mandated treatment groups (t(118)=-0.867, p=0.39, 95% CI [-55.24, 21.61].**

Marlowe et al. (2005) described an RCT with a **low risk of bias** evaluating the impact of judicial supervision on the outcomes of a US drug court. Participants were charged with misdemeanour drug offences (cannabis possession, possessing paraphernalia, etc). Offenders with histories of drug dealing, weapons or violence were excluded from the study. 100 individuals were randomised to control conditions, receiving judicial status hearings 'as needed.' A further 100 were randomised to receive biweekly status hearings and this group received significantly more judicial contact (a mean of 6.54 hearings (SD=3.64) vs a mean of 1.89 hearings (SD=1.82). F(1,176)=123.47, p<0.0001). After 6 months, 91% of participants (99% of control, 82% of intervention) were re-interviewed to secure ASI composite scores and self-reported measures of alcohol use. Repeated measures mixed-effects ANOVA (for continuous measures / ASI composites) identified **significantly greater reductions in ASI composites for alcohol problems for the intervention group, suggesting that more regular judicial status hearings were associated with reductions in alcohol use**. Contrastingly, generalised estimating equations (for dichotomised alcohol and drug measures) identified **no impact of judicial status hearings on days of alcohol intoxication (last 30 days) or any alcohol intoxication (last 30 days) on either an intention to treat or per protocol basis.** Additionally, the authors identify that more regular judicial status hearings were associated significantly greater reductions in criminal activity, the number of criminal charges participants faced, and drug use. *23% were women, but no separate outcomes were reported.*

In a subsequent study with a **moderate risk of bias[5]**, Marlowe et al. (2007) explored the impact of judicial status hearings matched to offenders' assessed risks within a US drug court. Participants were charged with misdemeanour drug offences (cannabis possession, possessing paraphernalia, etc). Offenders with histories of drug dealing, weapons or violence were excluded from the study. Of 279 offenders, 142 were randomised to control conditions (treatment as usual, judicial status hearings every 4-6 weeks) and 137 were allocated to intervention conditions. Within the intervention group, individuals were assessed as 'high risk' if they had any history of drug treatment or met DSM-IV criteria for antisocial personality disorder. One-third of offenders were classified as high risk, and this group received fortnightly supervision. The two-thirds of the intervention group assessed as 'low-risk' received 'fewer hearings that the participants in the unmatched control conditions.' After 6 months, 82% were re-assessed using the ASI; 35% of the initial sample also provided urine tests. Analysis comprised repeated measures, mixed-effects ANOVA for continuous items, and GEE for dichotomous measures. On the basis of per-protocol analyses, the authors identified that both intervention groups evidenced

---

[5] Per protocol analyses, focused on treatment graduates

greater reductions in alcohol intoxication from baseline to follow-up than the control group. **The following evidenced significant time x group interactions at p<0.05: days of alcohol intoxication (last 30 days); and any alcohol intoxication in the last 30 days, suggesting that judicial status hearings matched to offenders' risk levels were associated with significantly greater reductions in drinking**. Also, at p<0.05, the authors describe reductions in drug use (days of / any use at all / cannabis only), any criminal activity, and any criminal charge in the last 6 months. *25% of the cohort were women, but no separate outcomes are reported.*

Treatment referrals and case management

Two papers evaluated two approaches to treatment: case management, or general community treatment services.

Martire and Larney (2019) explored reductions in alcohol use in an Australian uncontrolled case series bailed before trial for nonviolent and non-sexual offenders. The study has a **high risk of bias.** Individuals were eligible for the intervention if they had a 'demonstrable history of problematic alcohol use,' and were willing to engage with services. The intervention comprised a package of community treatment options including residential detoxification, residential rehabilitation, pharmacotherapy, case management, and counselling or community outpatient services 'as necessary.' 202 participants were engaged, with 59% reinterviewed after at least 12 months. Paired samples t-tests identified **significant reductions in days of self-reported alcohol use from a mean of 11.98(10.6) at baseline to 5.0(6.6) at follow-up**. The authors also report significant improvements in psychological distress, general health, and mental health (all at p<0.001). *14% of the sample were women; but no separate outcomes were reported.*

Smelson et al. (2019) reported on a case management intervention for people processed by US drug courts with dual diagnosis (serious mental illness and drug use). The study has a **high risk of bias.** 86 participants with at least two previous convictions were recruited into an intensive case management intervention. Case managers carried caseloads of 15 people, delivering 'critical time interventions,' service linkage and 13 structured sessions of 'dual recovery therapy,' whilst engaging clients in peer support programmes and educational / vocational training. All provision was trauma informed. After 6 months, 78% of the sample had been retained in treatment, and were reinterviewed. T-tests on ASI composites (drug sections) identified **no reductions in last-month alcohol consumption (p=1); but substantial and significant reductions in last-6-month alcohol consumption (any) from 36.4% to 10.6% (p<0.001).** Rates of any drug use also decreased from 51.5% to 19.7% (p<0.001). *18% of the sample were women; but no separate outcomes were reported.*

Mandated domestic violence programmes

Three US papers based on three separate studies explored reductions in alcohol use in men mandated to domestic violence programmes. All had components that specifically addressed substance misuse.

Stuart et al. (2014) report on a US RCT evaluating the impact of a 90-minute alcohol MI for men mandated to attend a batterer intervention. The study has a **low risk of bias.** Hazardously drinking men (>5 drinks in one sitting at least once per month, or

>8 on AUDIT) convicted of domestic violence were URN randomised to control (N=129) or intervention (N=123) conditions. The control group received treatment as usual, comprising 40 hours of group treatment with one session focused on substance misuse. The intervention group received control conditions, plus a 90-minute motivational interviewing brief intervention. Timeline followback was used at 3, 6 and 12 months to assess drinks per drinking day, days abstinent, and self-reported violence (drawing on the Conflict Tactics Scale 2). Between 95% (3 months) and 82% (12 months) of participants were reinterviewed at each time. Generalised estimating equations identified that **the intervention group 'reported a lower average number of drinks consumed per drinking day at 3 months, with this effect fading at 6 and 12 months.' The MI group also reported a higher proportion of days abstinent from alcohol at 3 and 6 months.** The intervention had no identifiable effect on self-reported physical or psychological violence, though there were some 3- and 6-month effects on injuries inflicted and severe psychological and physical violence.

Crane *et al.* (2014) reported on changes in alcohol use in a sample of men mandated to attend a US batterer programme in an outpatient forensic setting. The study has a **high risk of bias.** Although men were originally randomised to receive either drug counselling (N=30) or cognitive behavioural therapy (N=30), the two groups were collapsed into a single case series to allow for linear and quadratic random effects models to explore factors related to reductions in alcohol use and violence. In consequence, the results presented are effectively from an uncontrolled case series study using pre- / post- self-report measures. Men were followed up at 4 (85% re-interviewed), 8 (75%) and 12 (82%) weeks, using timeline follow back to explore days of drinking over the last 30 days. The authors describe significant linear and quadratic effects for drinking such that **alcohol use significantly declined initially (b=-0.511, p=0.003), followed by a slowing of the decline by the 3-month follow-up (b=0.099, p=0.013). Alcohol use was also significantly associated with violence. This relationship was moderated by stakes in conformity (a measure of social capital). Heavy drinkers with high stakes in conformity evidenced more violence than heavy drinkers with low stakes in conformity (b=1.733, p =0.002); light drinkers with high stakes in conformity evidenced less violence than light drinkers with low stakes in conformity (b=-3.158, p =<0.001)**The authors also note that levels of judicial monitoring moderated the effect of the intervention(s) on domestic abuse, with those with high perceived levels of monitoring starting out with low levels of abuse, which decreased significantly over time; whilst those with low levels of perceived monitoring initially increased their self-reported levels of violence, though this decreased significantly over time.

Scott and Easton (2010) presented findings from an evaluation of a mandated substance abuse and domestic violence programme in the US. The twelve-week intervention consisted weekly one-hour group sessions of manualised CBT. The paper has a **high risk of bias and** lacks a comparison group. The authors specifically explored racial differences in treatment effects, with the alcohol-related outcomes (as measured by the ASI, timeline follow back, and breathalyser tests) of 39 Caucasian and 36 African-American men compared using repeated measures linear mixed models. After 12 weeks in treatment, all participants were re-assessed. Scott and Easton describe **significant reductions in alcohol use for all**

participants (F(1,75)=13.71, p<0.001), with no significant group effects. Additionally, the intervention had no effect on participants' levels of drug use, but was associated with some reductions in physical violence (no group effects) and verbal violence (for Caucasian offenders only). The study reports no reductions in psychological violence.

3. Prison

Summary.
Papers reporting on five treatment approaches, assessed in 10 studies and reported by 11 papers were reviewed.

Brief interventions
Three studies assessed the impact of brief interventions.

In a study with a low risk of bias, Prendergast et al. (2017) compared risk-matched (intervention; ranging from 20 minutes of MI (low-risk) to MI and a referral to treatment (high-risk)) brief interventions with unmatched brief interventions (control). After 12 months, they identified no intervention effects on any measure of alcohol use.

In the second study, Owens and McRady (2010; low risk of bias) found that one hour of one-to-one MI (compared with watching two educational videos) was associated with no one-month effect on most measures of alcohol use; though significantly more prisoners in intervention conditions remained abstinent.

In the third, Davis et al. (2003; moderate risk of bias) compared the impact of screening only (control) with screening plus an hour of structured feedback (intervention). No treatment effects on alcohol use were identified after 2 months.

Motivational interviewing
Two studies explored the impact of longer motivational interviewing interventions. Both evidenced a moderate risk of bias.

A Swedish study (Forsberg et al., 2011) found that two intervention conditions (five sessions of MI delivered by prison staff; five sessions of MI delivered by prison staff with ongoing supervision) led to no ten-month reductions in any measure of alcohol use when compared with control (five sessions of planning).

A second US substantial RCT (Woodall et al., 2007) identified that ten sessions of group and one-to-one motivational interviewing intervention conditions were associated with significant reductions in drinking days, drinks per day, and average BAC after 6, 12, and 24 months.

Therapeutic communities
Three papers from two US studies reported on the impact of therapeutic communities for dally diagnosed prisoners.

The first (Van Stelle et al., 2004) had a high risk of bias, using people imprisoned before the TC was operational as case controls. The authors identified significant increases in abstinence in a TC cohort months (but not twelve months) post-release.

The second paper has a low risk of bias (Sullivan et al., 2007) and found TC conditions associated with significant one-year reductions in ex-prisoners' drinking to intoxication, when compared to prisoners accessing a structured CBT programme.

The same treatment effects were not identified in a third paper (McKendrick et al., 2006) drawing on the same study, which had a moderate risk of bias (as it focused on a non-randomised / matched ASPD subsample). It identified no significant reductions in drinking for TC participants either with or without ASPD after one year.

Victim impact panels

One study with a low risk of bias (Wheeler et al., 2004) identified no reductions in alcohol use or driving whilst intoxicated associated with participation in a Victim Impact Panel whilst serving a 28-day prison sentence (vs treatment as usual / prison plus no victim impact panel) after two months.

Mindfulness

Bowen et al. (2006, 2007) reported on two US studies with a high risk of bias, assessing the impact of a 11-hour per day two-week silent mindfulness meditation programme.

One publication (Bowen et al., 2006) identified significantly greater reductions in drinks per week in intervention vs control conditions after six months.

The second paper (Bowen et al., 2007) reported descriptive statistics only. Both intervention and control groups reduced their weekly alcohol intake.

Focus

Brief interventions

Three studies reporting on brief interventions were reviewed, drawn from three separate studies.

Prendergast et al. (2017) explored the impact of a brief intervention on a population of prisoners in two US jails who were within 4 weeks of release. The study had a **low risk of bias.** Of 732 recruits, 363 were randomised to control conditions and received a baseline ASSIST assessment, feedback on their results, and literature on reducing drug and alcohol use accompanied by a list of providers. 369 prisoners were allocated to intervention conditions, and received the control intervention, plus risk-matched additions. Those assessed as low risk of drug and alcohol use received a 20-minute MI brief intervention; medium risk prisoners received a 20-minute MI brief intervention, plus a referral to treatment if requested; and high risk prisoners received an MI brief intervention focused on encouraging them to engage with treatment. For this high-risk group, referrals were made to release treatment services with an offer of either full engagement or brief treatment on attendance. After 12 months, 72% of the sample were re-interviewed, with t-tests and chi-square used to

assess differences in groups when the groups' baseline scores were similar, and logistic regression used when baseline scores differed. Analyses identified that the intervention had **no effect on any measure of alcohol use (levels of alcohol use, risk level, days to first use), and no effect on treatment uptake post-release.** Compared to control, the intervention group also showed no differences in rearrest rates, quality of life, or HIV risk behaviours. *27% of the sample were women, but no separate analyses were provided.*

Owens and McRady (2017) took a similar approach, in a study that again had a **low risk of bias.** Prisoners in US jails with diagnoses of Alcohol Use Disorder and approaching release (and a mean of 6.7 days until release) were eligible to take part in an RCT of a brief intervention. 17 prisoners were recruited to control conditions and spent an hour watching two videos about substance use, answering written quizzes whilst doing so. Whilst research staff were present, they sought to close down any engagement or questions from participants. 23 people were allocated to intervention conditions and received a one-hour brief intervention using manualised motivational interviewing to focus prisoners on their drug and alcohol use, social networks, and treatment engagement. Open-ended questions were encouraged, but no normative feedback was provided. One-month post-release data was secured on 62.5% of the sample, using the ASI, Form-90 and BAC (measured by skin strips or breathalyser). Nonspecific regression identified **no substantive impact on alcohol use, and study conditions did not predict the percentage of days of alcohol use only, drug use only, alcohol and drug use, abstinence, or rates of post-incarceration relapse (after controlling for pre-incarceration substance use). However, of the two groups, only those receiving a brief intervention evidenced a significant increase in abstinence (from 22.6% of days before incarceration to 67.3% after. t=-4.113, p<0.01, g=1.303; control from 32.7% of days before incarceration to 65.0%. t=-2.189, p=0.053, g=0.824).** *The study included an unspecified number of women, but the authors note there were not enough women to assess the impact of sex.*

In a study with a **moderate risk of bias** due to follow-up difficulties, Davis et al. (2003) described an RCT evaluating the impact of a brief intervention in US prisons. The study specifically focused on self-identified military veterans approaching release from a large county jail. Forty veterans were allocated to control conditions, receiving a one-hour 'standard [Veterans Association] assessment battery including: the ASI… the Form-90… and a checklist with DSM-IV SUD criteria.' The baseline assessment also included the Short Inventory of Problems the Readiness to Change Questionnaire, and others. A further forty veterans were allocated to intervention conditions, receiving the same assessment as the control group, plus an additional one-hour structured feedback session structured according to the precepts of motivational interviewing. Educational, general population, and comparative data was included. After two months, 35.1% of the control group and 47.2% of the intervention group were re-assessed. The ASI and timeline followback were used to secure data on alcohol use. Although no analyses are specifically reported, it seems likely that linear regression was used. Analyses identified **no intervention effect on alcohol use**. Additionally, there were 'no group differences in terms of change scores for the ASI patient ratings of treatment importance for alcohol and drug use, use of primary substance in previous 30 days, SIP and ASI composite scores.'

Motivational interviewing

Two studies were structured around more substantive motivational interviewing interventions.

In the first, Forsberg et al. (2011) trained staff in 14 Swedish prisons to deliver an MI intervention to drug using prisoners. The study had serious problems with securing follow-up interviews, and so is attended by a **moderate / high risk of bias.** 273 prisoners were recruited and randomised to one of three conditions. The control group (N=81) received usual planning, structured across five sessions. The first intervention group (I1; N=85) involved prisoners receiving five sessions of manualised motivational interviewing, informed by the trans theoretical model and with some focus on patterns of speech identification. Staff received no supervision after the initial training. The second intervention group (I2; N=107) was identical to I1, but staff attended peer support meetings and received ongoing supervision after their initial training. Ten months after release, 38.5% of the sample were re-interviewed, using the ASI. Stepwise regression identified **no significant differences in alcohol or drug use between the three groups at either baseline or follow up, with all three groups reducing their substance use in this time. There were no group differences in abstinence (which increased from 12.2% at baseline to 54.5% at follow-up), or on any ASI measure.** There were also no group differences in illegal activity or working days between groups; with all groups improving on these measures.

The second paper (Woodall et al., 2007) used MI as a component within a US intervention focused on first-time DUI offenders. The study has a **moderate risk of bias.** Within this study, an uncontrolled case series of primarily American-Indian men, one-sixth of whom had diagnoses of ASPD, were randomised to two jail conditions. The control group (N=128) received 28 days of imprisonment; the intervention group (N=177) received 28 days of imprisonment accompanied by 1-1 counselling (MI), and groups covering ten structured areas of teaching. Culturally appropriate services were also available – for example, sweat lodges. The intervention group received monitoring and support for between 3 and 12 months following release. The sample were followed up at 6, 12, and 24 months; 19% of participants (N=58) had at least one instance of missing data. Based on Form 90 (timeline followback for units consumed in the last 90 days), a mixed factorial design including a between-subject factor (treatment vs control) was used to assess within-subject change over the four time periods. This identified **significant reductions in drinking days, units consumed, and average BAC (all p<0.01) for both groups. Group x time interactions were significant (p<0.02), with reductions proving greatest for the intervention group. Whilst the control group reduced their 90-day drinking by 26.9 drinks, those in the intervention group reduced their alcohol intake by 110 drinks over the same time frame.** The authors also identify some indications that those with ASPD responded more favourably to the intervention.

Therapeutic communities

Three papers evaluating therapeutic communities were identified. All focused on the same approach (modified TCs for dual diagnosis / mental illness and chemical dependency), and two were drawn from the same study.

In the first paper, Van Stelle et al. (2004) used a case control approach to evaluate a modified TC in a US prison. The study has a **high risk of bias.** The outcomes of 66 people who met eligibility criteria but were approaching release when the TC was introduced were compared with those of 212 prisoners who passed through the TC. The comparison group nonetheless received substantive treatment, accessing a mental health programme on a segregated prison wing. A structured CBT programme (with 72 hours of groups focused on substance misuse), medication, weekly therapy, and group programmes were all a part of this. The intervention group accessed a modified therapeutic community, adapted to support seriously mentally ill prisoners. Adaptations included individual treatment plans, flexible programming, and less intensive relational aspects (traditional TCs rely on prisoners challenging each other's behaviour). 12 months after release, data was available for 32% of each group, consisting of professional reports (from parole officers and 'outreach specialists') and official data. Analysis was on an intention-to-treat basis, using OLS for continuous and logistic regression for dichotomous measures. This identified that the TC group were **significantly more likely to be abstinent at 3 months post-release (63% vs 49%) but not at 12 months. The authors also describe – but do not directly report – positive changes in ASI alcohol composite scores for the TC group when compared to control.**

McKendrick et al. (2006) and Sullivan et al. (2007) report on the outcomes of the same US TC, drawing on a different cohort. Sullivan et al. (2007) evidences a **low risk of bias.** Here, 139 individuals were randomised to control (N=92) or intervention (N=93) conditions. Intervention and control are as described by Van Stelle et al. (2004; paragraph above). After one year, 82% of the intervention group and 69% of controls were re-interviewed, using the Centre for Therapeutic Community Research Tool and self-reports of 'any alcohol use to intoxication' with both dichotomised (yes / no) and frequency measures. Sullivan et al. (2007) detail per protocol analyses using multivariate OLS regression identified that **the intervention group reduced their levels of alcohol use to intoxication (from 57% to 21%) significantly more than those in control conditions (from 55% to 39%; OR 0.43, p=0.02). Additionally, the frequency with which alcohol was drunk to intoxication was reduced significantly more in the intervention (-63%) compared to the control group (-28%; ß=-0.69, p<0.05).** Kaplan-Meier survival analysis indicated that on average those accessing the TC had more days to first substance use than the control group.

McKendrick et al. (2006) report on an ASPD subsample of the same study. The study has a **moderate risk of bias.** Of the 139 individuals who were re-interviewed at 12 months, 69 had diagnoses of ASPD, and 70 did not. Propensity scores were calculated and used to adjust for baseline differences between the two groups. Multivariate OLS regression identified **no significant TC effects for alcohol use for either the ASPD or non-ASPD subgroups**, though both incarceration (p<0.01) and the sum of frequencies of substance use in the ASPD group were significantly reduced (p<0.01).

Victim impact panels

One paper evaluated victim impact panels.

In New Mexico, first-time DUI offenders are sentenced to a mandatory 28 days in jail. In a study with a **low risk of bias,** Wheeler et al. (2004) sampled this population, randomising 99 inmates[6] to one of two conditions. The control arm (N=43) received standard care, consisting of therapeutic and educational prison treatment plus an unspecified amount of post-release aftercare. The intervention group (N=53) received all interventions delivered to the control group but were also required to engage with a Victim Impact Panel chaired by a former drink-driver and with panel members who had suffered bereavement (including as a result of their own drink-driving). The session was followed by group discussions about loss and bereavement. A core feature of the intervention was cultural sensitivity – 70% of panel members were Navajo, reflecting the target population ('[t]he majority of intervention program participants attending the Panel are Navajo/Diné, and are known or related by family or clan'). Self-report was used to assess individuals' drinking behaviour at the point of release, and after two months (at which point 84% were reinterviewed). **Chi-square analyses (yes / no) identified no significant differences between the intervention and control groups on any drinking in the past 60 days, driving after drinking in the past 60 days, or driving after drinking five or more drinks.** *25% of the sample were women, but no separate outcomes were reported.*

Mindfulness

Two papers reporting separate trials of mindfulness based in the same prison setting were reviewed.

Bowen et al. (2006) describe a substantial evaluation of mindfulness meditation on a group of US minimum security prisoners. The study has a **high risk of bias.** 63 prisoners volunteered for the 10-day intervention, consisting of 11-hour days practising silent meditation. Their drinking outcomes were compared with those of 242 prisoners receiving treatment as usual, with over half of this group accessing drug treatment and harm reduction programmes (alongside other groups). Prisoners were followed up post-treatment and at 3 and 6 months, with 21% of the comparison and 43% of the intervention group reinterviewed at six months. Multivariate path analysis was used to assess the results of a Daily Drinking Questionnaire, and a calendar for recording 'typical weeks' of alcohol use. This identified that prisoners receiving the intervention **reported significantly greater reductions in drinks per week than the comparison group.** The intervention group also showed greater reductions in crack cocaine and marijuana use, and in Short Inventory of Problems scores. *20% of the sample were women, but no separate analyses are provided.*

In a second study, Bowen et al. (2007) explored the impact of a mindfulness and meditation intervention on a population of US minimum security prisoners. The study has a **high risk of bias.** The authors do not describe recruitment or matching processes but appear to have compared the outcomes of 57 volunteers for a

---

[6].

Vipassana mindfulness meditation programme with 116 prisoners who did not volunteer. Control conditions are consequently not described, beyond comprising 'treatment as usual.' The intervention condition consisted of ten days of meditation, with each day containing 8-10 hours of sitting meditation focused on observation of breath and body, and acceptance of internal experiences. Reading, writing and speaking (other than to ask questions of the teacher) were not allowed. At 6 months, 50% of ex-prisoners were re-interviewed using the Daily Drinking Questionnaire and the Short Inventory of Problems. Analyses were descriptive. The authors identify that **the control group reduced their drinking from baseline to 6 months from 43.98 per peak week (SD55.61) to 27.77(46.37) whilst the intervention group reduced their drinking from 64.83(73.01) to 8.38(13.37)**.

4. Probation and parole

Summary
Thirteen papers were reviewed, reporting on 12 studies. Interventions followed 7 broad approaches.

Brief interventions
Two papers with a low risk of bias and drawn from the same study reported on a brief intervention delivered in UK probation offices.

The first (Newbury-Birch et al., 2014) identified no 6- or 12-month treatment effects on alcohol use from either intervention condition in a comparison of screening (control); screening plus a five-minute feedback intervention (intervention 1); or screening, five-minutes of feedback, and an offer of 20 minutes of lifestyle counselling (intervention 2).

In the second Dienes, Coulter and Heather (2017) re-analysed data from the same study, looking for signs of no effect. They identified no support for either the null or alternative hypothesis (within the probation setting).

Case management approaches
Three papers explored various approaches to probation or parole case management.

The first (Friedman et al., 2011) had a low risk of bias, and identified wide-ranging reductions in alcohol use for a group randomised to collaborative behavioural management (vs treatment as usual).

The second had a moderate risk of bias (Polcin et al., 2018), and identified no treatment effects related to alcohol use arising from motivational interviewing case management.

The third explored strengths-focused case management and has a low risk of bias (Prendergast et al., 2011). It identified no treatment effects on alcohol use.

Diversion from custody

In a study with a high risk of bias, Courtright, Berg and Mutchnick (2000) identified no 3-month post-release differences in alcohol use between a control group of DUI offenders sentenced to 28 days in jail, and a treatment group allocated to home detention and tagging.

Alcohol interlocks

Two papers (Bjerre 2003; Bjerre 2005) report the same set of findings from a Swedish study of alcohol interlocks. The study has a high risk of bias. The authors describe reductions in the baseline to two-year AUDIT scores of an uncontrolled case series.

Community services

Two studies reported on aspects of community treatment.

Kutin and Koutroulis (2003) reported on a study with a high risk of bias, identifying that an Australian cohort of probationers risk-matched to treatment had 12-month outcomes that were similar to those of unmatched probationers.

Wheeler et al. (2011) identified that, in a small and highly unrepresentative New Zealand uncontrolled case series of probation referrals who attended treatment (over 6,000 were referred; under 300 attended), alcohol use reduced significantly after 6 months.

Automated telephone assessments

Andersson et al. (2012) reported on a Swedish study with a low risk of bias. Over 30 days, automated telephone assessments with feedback were associated with significantly greater reductions in alcohol use than automated telephone assessments alone.

Pharmacological

In an uncontrolled case series study with a high risk of bias, Cropsey et al. (2013) identified no changes in alcohol use arising from the prescribing of buprenorphine, plus brief psychosocial interventions in response to drug or alcohol use.

Focus

Brief interventions

Two papers were identified that drew on the same multi-site UK study to explore the impact of brief interventions on a sample of probationers who were not engaged in treatment.

The first paper (Newbury-Birch et al., 2014) evidences a **low risk of bias.** Offenders reporting to offices in three probation areas were screened using one of two tools (M-SASQ and FAST) and those who screened positive were invited to take part in the intervention. Conditions were cluster randomised. For the control group, 184 people consented, with 181 taking part. This comprised the screening test plus the

offer of an information leaflet. In the first intervention group (I1), 178 people were consented and 173 received the control intervention plus five minutes of structured advice. In this third intervention, 163 people were consented and 63 received I1 plus a request to return for a 20-minute appointment with an alcohol a health worker for lifestyle counselling. Participants were followed up at 6 and 12 months, with 68% and 60% retained respectively. AUDIT scores <8 at six months comprised the primary outcome, with the same measure at 12 months constituting a secondary outcome. Analyses comprised logistic regression, delivered on an intention-to-treat (ITT) basis. The authors identify that **AUDIT negatives increased in all three groups between baseline and 6 months, but there were no significant differences between either intervention group or control on the basis of either ITT or per protocol analyses. At 12 months, there were no significant differences between groups on AUDIT scores.** Finally, individuals receiving I1 had significantly higher arrest rates than participants in either of the other two conditions.

Newbury-Birch et al. (2014) reported on one arm of 'SIPS' trials. As part of the same project, the same intervention was evaluated in primary healthcare and hospital Accident and Emergency departments. Consequently, the second paper (Dienes, Coulter and Heather, 2017) used Bayesian factor analysis to assess whether or not there was evidence for no effect within the three SIPS trials. The authors conclude that **the evidence is inconclusive for the study situated within probation – that there is no support for either the null or alternative hypothesis. Contrastingly, when all studies were combined, there was some support for the null hypothesis (i.e. control conditions and both interventions are equally (in)effective)**.

Case management

We identified three papers reporting on adaptations to probation or parole case management. Two more (Chan et al., 2005; Johnson et al., 2011), focusing exclusively on women and so described in **Section 8**).

Two US papers focused on collaborative behavioural management. In the first, Friedman et al. (2011) describe an RCT of US parolees mandated to addiction treatment. The study has a **low risk of bias.** 233 offenders were randomised to 'standard parole' receiving 1-4 contacts per month and drug testing; a further 243 were randomised to collaborative behavioural management, comprising an initial multi-agency session to establish a shared behavioural contract followed by 12 weekly contacts focused on specifying roles, negotiating contracted targets, tracking adherence to the contracting, and responding to behaviour with reinforcement or sanctions. Individuals were followed up at 3 and 9 months, with 94% and 86% re-interviewed at each stage. Timeline followback data was analysed using generalised estimating equations. These indicated a broad range of improvements related to intervention conditions. **The intervention group had 'fewer alcohol use days … [And] also used less alcohol (ARR 0.38, 95% CI 0.22, 0.66, p=0.0006) with an average monthly predicted probability of alcohol use of 3.3% in the [control] group and 1.27% in the CBM group. A group x time interaction (ß=0.10, 0.05 SE, p=0.03) indicated that the reduction in alcohol use associated with CBM waned over time. CBM participants also tended to report less heavy drinking (ARR 0.49, 95% CIP 0.23, 1.02, p=0.06).** The authors note no group effect on

stimulant or opiate use, non-significant reductions in marijuana use, and no significant reductions in crime. *A related study (Friedman et al., 2011) reports on women's outcomes, and is reported in Section 8.*

A second paper explored the impact of motivational interviewing case management for people on probation or parole in the US (Polcin et al., 2018). The study has a **moderate risk of bias**. The sample comprised 'ex-offenders' voluntarily entering abstinence-focused supported housing. Houses were cluster randomised to control or intervention conditions, with 181 ex-offenders in 28 houses allocated to control conditions, and 149 ex-offenders in 21 houses allocated to the intervention. The control intervention comprised 'SLH services as usual along with a list of resources a that could be used to address a variety of problems.' The intervention consisted of motivational interviewing case management, with three sessions delivered in the first month and monthly contacts thereafter. As intensity decreased, so contacts also shifted from face-to-face to telephone interviews. Crisis management was also available, with provision described as needs-led. Timeline followback and ASI data were collected at 6 and 12 months and analysed using two-level mixed effects random intercept models. Analyses were conducted on both an ITT and per protocol basis (as 30% of residents in intervention houses received no MI). The authors identify that **all analyses except those for the per protocol intervention condition showed significant improvements on the 12-month ASI alcohol scale and 6-month abstinence (as measured by timeline followback). Group by time analyses showed no significant interactions for alcohol or drug outcomes for either ITT or PP analyses.** *The study reported separate outcomes for women; for these, see section 8.*

The third paper described a multisite RCT evaluating the impact of strengths-focused case management on US parolees (Prendergast et al., 2011). The study has a **low risk of bias.** Recruitment began in prison. 400 prisoners were randomised to control conditions, consisting of standard planning and referral to treatment, plus links made to the release area. A further 412 were randomised to intervention conditions, receiving control conditions plus strengths-focused case management structured by solution-focused therapy. The intervention comprised three phases: 1) assessment; 2) follow-up (1-month pre-release, by phone); 3) weekly meetings for three months, with monthly meetings thereafter. 35% of the sample were deemed ineligible for follow-up because of complications such as early release. Of those who remained, 91% were re-interviewed at 3 months and 90% at 9 months using the Texas Christian University Drug Screen to assess levels of drinking. A mixed effects model with random trends identified that **no differences in drug or alcohol use (or HIV risk behaviour or crime) was significant at any site. Moreover, none of the between-group differences overall, or at either interview point, was statistically significant.** *12% of the sample were women. However, no separate outcomes were reported.*

Diversion from custody
In a US study with a **high risk of bias,** Courtright, Berg and Mutchnick (2000) explored the impact of jail diversion on the drinking outcomes of an uncontrolled case series of DUI offenders. 57 individuals were diverted from a mandatory jail sentence to receive home detention backed up by electronic monitoring, whilst

attending mandated treatment. They were compared with a matched sample[7] of 57 offenders who had been received mandated treatment whilst imprisoned before tagging became available. Drawing on urine tests and self-report data, the authors followed up 100% of the sample at 3 months. T-tests identified **'no difference between the two groups with regard to drug and alcohol consumption**.'

Alcohol interlocks

Two papers reporting on alcohol ignition interlocks (requiring a breath test before a car's ignition can be started) which also detailed alcohol outcomes were identified. Both came from Sweden.

In the first, Bjerre (2003) reported on the outcomes of DUI offenders who were engaged with probation and volunteered for two years with an alcohol ignition interlock. The study has a high **risk of bias.** Whilst two matched comparison groups were established, only reconviction data was available for them. Alcohol outcomes were consequently pre-post for an uncontrolled case series. The intervention group (N=311) received the interlock plus three-monthly medical supervision providing feedback on alcohol-related biomarkers. Two groups were used as comparators for routinely collected data. First, DUI offenders in Swedish counties that did not offer interlocks (N=2,367); and second, DUI offenders who refused an interlock (N=625). The interlock group were followed up for two years (for alcohol outcomes; comparative data was secured for 5 years). Here, the authors identified **improvements in AUDIT scores (from a mean of 11.4 to 2.4 over 2 years). Liver enzymes also decreased by 33% for GGT and unspecified amounts for AST and ALT. Additionally, there were no repeat DUI offences within the interlock group, compared with 1.6% recidivating in the same-county control group; and 2.6% in other Swedish counties.** *An unspecified proportion of the sample were women. The results are presented in Section 8.* Bjerre (2005) reports the same findings from the same study in a later paper; but also identifies that there was little resistance to having the interlock fitted amongst volunteer drivers, who did not find it an inconvenience.

Community services

Two papers from two separate studies were identified, reporting on two aspects of community treatment. The first (Kutin and Koutroulis, 2003) assessed the impact of matching treatment intensity to probationers' assessed risk; the second (Wheeler et al., 2011) explored reductions in alcohol use in an uncontrolled case series of probationers referred to community treatment.

In an Australian study of community corrections, Kutin and Koutroulis (2003) used a retrospective case file analysis to explore the impact of treatment matching. The study has a **high risk of bias.** In principle, Victorian corrections officers were required to assess new probationers and allocate them to one of three treatment conditions matched to their levels of motivation and risk. The least intensive treatment option, for low-risk and unmotivated offenders, is monitoring; followed by a brief educational intervention; with specialist drug and alcohol treatment representing the most intensive treatment tier. However, matching was not always possible. The treatment outcomes of 110 unmatched offenders were thus compared with those of

---

[7] Matched on age, gender, criminal history, years of education, and requirement for mandated treatment

187 offenders matched to treatment. 12-month retrospective data was used, with alcohol use measured by the Victoria Needs Assessment Tool. ANOVA and t-tests were used to analyse continuous measures; Chi-square for nominal data; and Mann-Whitney U for ordinal. Analyses identified **no significant differences between groups in changes to alcohol (or other drug) scores between baseline and final assessment (alcohol use: U=1,390, z=-1.03, p=0.3)**. Matching also had no impact on order completion, reoffending rates, changes in risk scores over time, psychological functioning, or any measure of educational, employment, or family need. *18% of the sample were female. (More specifically, it is reported that 82% were male). No discrete analyses are provided.*

In a separate paper, Wheeler et al. (2011) explored reductions in New Zealand probationers' alcohol use following a referral to community services. The study has a **high risk of bias.** Perhaps the most noteworthy finding here is the extent to which referrals did not translate into treatment: of 6,005 referrals, 278 offenders participated in the planned programme of four motivational interviewing group sessions. Of these, 93 were interviewed at 3 months, and 53 at 6 months post-treatment. Alcohol use was assessed using the Alcohol and Other Drug Outcome Measure and analysed using generalised estimating equations. These identified that **for the small and highly unrepresentative group who were reinterviewed at 3 months, the median number of drinking days had decreased significantly (-0.3, p=0.03). There was no effect at 6 months, though the median number of drinking days had doubled to 2.0.**

Automated telephone assessments

One paper from one study explored the impact of automated telephone assessments on probationers' drinking.

In a Swedish study with a **low risk of bias,** Andersson et al. (2012) described an RCT evaluating the impact of automated telephone assessments for parolees. 56 individuals were randomised to control conditions, receiving daily automated telephone risk assessments (and nothing more). Brief summaries of these were emailed to parole officers, though the extent to which these were used was not explored. 52 parolees were randomised to intervention conditions, receiving the same automated telephone assessment plus very brief feedback. This informed them if their risk score had increased or decreased since the last telephone assessment. If it had increased, automated feedback advised them to talk to someone they trusted. All of the sample were re-interviewed after 30 days and asked if they had used any alcohol yesterday. Answers were analysed using a repeated measures linear mixed growth model, with the group and day as fixed effects and subjects as random effects. The authors report that intervention conditions were associated with **significantly greater reductions in alcohol use when compared with control (p=0.031).** The intervention was also associated with significant improvements in drug use, mental health, stress, and overall risk when compared with control. *Three of the sample were women.*

Pharmacological

One study describing pharmacological interventions in the probation setting was reviewed.

Cropsey et al. (2013) report on a US evaluation of the impact of buprenorphine and medication management in a community corrections / probation sample. The study has a **high risk of bias.** Whilst the study was primarily focused on opioid use, alcohol data was collected as a secondary outcome. Thirty offenders were engaged in an intervention in which buprenorphine was offered, backed up by 'a minimal psychosocial intervention' in response to positive drug screens. All participants were re-assessed after one month. The tools used to assess alcohol use are not reported. The authors note that **there was no clear pattern of alcohol use across time, with 10% testing positive for alcohol at baseline, and 16.1% of subsequent tests showing positive for alcohol.** *Women comprised 56% of the sample; findings are reported separately in section 8.*

5. Resettlement, thoughcare and aftercare

Summary

Three papers drawn from 3 studies and reporting on three types of intervention were reviewed.

Abstinence-focused supported housing

In one US study with a high risk of bias, Polcin et al. (2006) found no difference between the six-month drinking outcomes of people who had entered abstinence-focused supported housing from prison vs those with other entry pathways.

Case management

In a study with a low risk of bias (though aimed primarily at heroin dependent offenders) Hser et al. (2013) identified no three-month treatment effects on alcohol use arising from a recovery management intervention compared to control (treatment as usual).

Pharmacological

In a study with a low risk of bias, Springer et al. (2017) identified no main treatment effects of extended release naltrexone (vs placebo injections) on a wide variety of measures of alcohol consumption after 6 months. A treatment effect was, however, identified in participants aged 20-29 with a longer time to first drink associated with naltrexone prescribing.

Focus

Abstinence-focused supported housing

Polcin et al. (2006) compared the outcomes of ex-prisoners and community members accessing abstinence-focused l houses in a US study with a **high risk of bias**. In an uncontrolled case series of 73 residents, 20 had entered the house straight from prison or jail. Six-month ASI data for all 73 individuals was analysed using methods that are not clearly described. However, **Mann-Whitney tests found no significant differences between those who had been in jail and those who had not at baseline or 6 month follow up on any measure, including alcohol use**. The authors also note that 51% of residents had been completely abstinent for

the full 6 months, and even those who had been drinking had significantly reduced their six-month measures of alcohol use. Changes to ASI composites were, however, non-significant.

Case management

Hser and colleagues (2013) explored the impact of a Chinese recovery management intervention on opiate dependent people mandated to semi-carceral residential treatment. Treatment units are based in prison buildings and run by the prison system. The study has a **low risk of bias.** 50 people approaching release were randomised to control conditions, receiving treatment as usual (monthly meetings with a social worker, plus urinalysis) enhanced by a strengths-based assessment and release planning. A further 50 were randomised to intervention conditions, receiving a recovery management intervention. This comprised control conditions, plus weekly sessions with a social worker again supported by urinalysis. Contrasting with control, the results of urinalysis were not shared with the police, but instead were used to structure advice and feedback. Each weekly contact involved a review of major life domains with the possibility of referrals for support. After 3 months, 94% of the sample were followed up with urinalysis and ASI scores providing the basis for ANCOVA. This identified **no impact of the intervention on alcohol ASI scores.** The intervention also had no effect on ASI drug, employment, family, legal, medical, or psychiatric domains.

Pharmacological

Springer et al. (2017) reported on a US RCT evaluating the impact of extended-release naltrexone provided to HIV positive prisoners returning to the community. The study has a **low risk of bias.** HIV-positive prisoners approaching release and with a history of problematic alcohol use (4/5 drinks per day, or AUDIT scores of >4 for women or >8 for men) were randomised to control conditions (N=33) offering placebo injections, or intervention conditions (N=67) receiving injections of 380mg extended-release naltrexone every 28 days for 6 months. Data was collected at the time of each injection, with 71% of the intervention group and 64% of controls retained for at least 4 months. Using timeline followback (90 days before prison, last 30 days of prison, monthly for the 6 months post-release) generalised linear regression and Bayesian modelling identified a small number of nuanced impacts on alcohol use. **The headline findings are that the intervention – measured on the basis of ITT or exposure – had no significant impact on time to first drink, average days per drinking day, percent heavy drinking days, number of drinking days, or alcohol craving. However, in those aged 20-29 years old, those receiving extended release naltrexone had a longer time until their first heavy drinking day than those who received placebo (24.1 vs 9.5 days, p<0.001). A similar relationship was found when controlling for age (p<0.001), alcohol use severity using AUDIT (p<0.001), and not actively using heroin or cocaine post-prison (p<0.001), with time to first drink increasing with every unit in the model.** *21% of the sample were female, and 2% transgender. However, no separate outcomes were reported.*

6. Interventions operating in unspecified areas of the CJS

Summary

Two papers were identified, describing interventions that could not be clearly situated in any specific area of the criminal justice system. They came from separate studies and described different types of intervention.

Harm reduction

An uncontrolled case series of ex-offenders engaged by a Californian harm reduction outreach bus reduced their alcohol consumption (drinking days) over 12 months. The study has a high risk of bias.

Pharmacological

Lee et al. (2016) assessed the impact of extended release naltrexone on a cohort of opiate dependent offenders, compared with relapse prevention advice (control). The study has a low risk of bias; the authors identified no treatment effects related to alcohol consumption.

Focus

Harm reduction outreach

The first was based in California (Bowser et al., 2010) and reported on an outreach approach to harm reduction 'that was primarily aimed at ex-offenders', with a van used to deliver information and case managed referrals to support services. The study has a **high risk of bias.** 12-month self-reports of people's drinking in the last 30 days was secured for 468 individuals who engaged with the service. Analyses are not described, but the **authors report a mean reduction in drinking days from 7.4 to 5.4 '(p<0003)'**. Reductions in self-reported cocaine use, heroin use, days in jail, crimes, and sex partners were also identified.

Pharmacological (extended release naltrexone)

A second US study (Lee et al., 2016) reported on extended release naltrexone provided to 'criminal justice offenders' with histories of opiate dependence, and a desire to avoid opioid substitute medication. The study has a **low risk of bias.** 155 offenders were URN randomised to control conditions, receiving counselling focused on relapse prevention and overdose, and support for community treatment involvement. 153 were randomised to intervention conditions, receiving control treatment plus an injection of 380mg of extended release naltrexone every four weeks plus medical management counselling (focused on managing the side effects of naltrexone). Participants were followed up at 27, 52 and 78 weeks (with bi-weekly urine testing persisting throughout the study). Data on alcohol use was gathered using timeline followback, analysed with mixed-effects logistic regression on an intention-to-treat basis. This identified that **there was no significant reduction in alcohol use for the intervention vs control condition**. Intervention conditions were also not associated with any improvements in the areas of cocaine use, intravenous drug use, sex risk behaviours, or self-reported re-imprisonment. However, time to opioid use, the proportion relapsing on opioids, the proportion with a 2-week period of abstinence, the proportion of confirmed opioid-negative urine

tests, and the proportion of days with self-reported opioid use were all significantly more improved in the intervention conditions.

7. Young people

Summary
Eight papers were reviewed, reporting 6 studies and assessing 6 broad types of intervention for young people.

Motivational interviewing
In a US study with a low risk of bias, D'Amico et al. (2013) identified no effect of six sessions of MI on alcohol use, when compared to control conditions (a similar number of 12-step groups).

Treatment as usual
In a study with a high risk of bias, Chassin et al. (2009) retrospectively reviewed the treatment outcomes of young offenders who had engaged with any variety of treatment service whilst engaged with criminal justice system. They identified that those who accessed any form of treatment (short or long, individual or group) had significantly better alcohol outcomes than those who did not.

Out of home placements
In a US uncontrolled case series study with a very high risk of bias, Thompson et al. (2010) identified that 8 of 33 young people who were followed up after an out-of-home residential placement (aimed at 'family reunification) were alcohol abstinent.

Family empowerment intervention
In a series of three papers with a moderate risk of bias, Dembo et al. (2000a; 2000b; 2003) explored the impact of a ten-week family empowerment intervention involving home visits and mandated family meetings. Whilst young people allocated to the intervention reduced the frequency with which they got 'very drunk' significantly more than those in the control group after one year, these differences were not apparent after four years.

Multimodel treatment
In a study with a moderate risk of bias, Friedman, Terras and Glassman (2002) found that up to 55 sessions of cognitive behavioural / social learning treatment had no impact on the drinking outcomes of court-adjudicated young men.

Therapeutic communities
In an uncontrolled case series study with a high risk of bias Jainchill. Hawke and Messina (2005) identified large pre- to 5-year-post-treatment increases in drinking in a group of young offenders who had spent 10-12 months in therapeutic communities.

Motivational interviewing

D'Amico et al. (2013) report on a group motivational interviewing intervention for young people convicted of a first drug or alcohol offence in the US. The study has a **low risk of bias.** 193 young people 'at risk for drug or alcohol use' were recruited from a 'teen court setting.' 80 were randomised to control conditions, receiving 'usual care' (six group sessions based on twelve step abstinence-based principles). A further 113 were allocated to the intervention, receiving six sessions of motivational interviewing centred on discussions of the pros and cons of drug use, and utilising 'willingness and confidence rulers' to explore young people's desire for change. After 3 months, 97% were re-interviewed, with questions from the RAND Adolescent / Young Person Panel Study used to assess the frequency of alcohol use and binge drinking. Analysis involved multilevel modelling and identified that **alcohol and marijuana use had increased slightly for both groups at three months, and that by twelve months there were 'no statistically significant differences between the two groups for [alcohol] use and consequences.' Nor were there any significant differences on recidivism or drug use on the basis of ITT or PP analyses.**

Treatment as usual (prison)

Chassin et al. (2009) reviewed the alcohol outcomes of a US cohort of serious juvenile offenders, adjudicated as delinquent or found guilty of a serious offence by courts in Philadelphia or Phoenix. The study has a **high risk of bias.** In a retrospective analysis of the case files of young people identified as using substances at their first assessment, the outcomes of 146 juveniles who received some form of treatment were compared with those of 283 who did not. Treatment included day programmes, court-ordered treatment, one-to-one counselling, and twelve-step programmes. Young people were followed up for 12 months, with self-reported alcohol consumption measured using a five-point frequency scale (never; 1-5 times in the last 6 months; 1-3 times per month; 1-3 times per week; 4 or more times per week). Multilevel modelling assessed within-individual change pre- and post-treatment. The authors note that both short (<90 day) and longer (>90 day) interventions were more effective than no treatment at reducing short- and long-term alcohol use. At follow-up, **those who received some form of intervention had significantly better alcohol outcomes (-0.63 vs expected scores on the five-point frequency scale) than those who received no treatment (+0.22 vs expected scores on the five-point frequency scale).** Cannabis use was also reduced; whilst smoking and offending were only reduced by interventions with a family component.

Out-of home placements, plus cognitive behavioural aftercare

A US study with a high risk of bias, involving pre- post measures from a small uncontrolled case series with a very low (24%) follow-up rate. Thompson *et al.* (2010) explored the impact of a cognitive-behavioural program for young people in need of out-of-home placements whilst under the jurisdiction of a juvenile court. Thirty-three young people were engaged by intensive, targeted residential services in houses of 6-8 children managed by a married couple. The principles of multi-

systemic therapy and 'multi-dimensional foster care' guided interventions and support. Eight (of 19) young people who returned to family or 'home-like' contexts were re-interviewed six months after leaving their placements, with family members identifying that **all young people were alcohol abstinent.** Additionally, none of the 8 had been arrested, 7 were drug free, and 7 were enrolled in or had graduated from high school.

A family empowerment intervention

Dembo and colleagues authored three papers (2000a; 2000b; 2001) with a **moderate risk of bias** assessing the impact of a US-based family empowerment intervention targeted at young people processed at the Hillsborough County Juvenile Assessment Centre between 1994 and 1998. 315 children between the ages of 11-18 were recruited (90% were between 13 and 17 years old); the authors do not specify how many were allocated to each condition. The control group received monthly telephone calls from a research assistant over a period of ten weeks. Intervention conditions involved monthly visits from a 'field consultant' providing support focused on nine domains, broadly centred around discipline, boundaries, and communication. All families participating in the intervention also had 24-hour access to support staff and were expected to hold three one-hour family meetings each week for the ten-week duration of the intervention. 278 young people were followed up at least once, up to a maximum of four years (93.5% were followed up after 2 years; 93.4% after 3; and 91% after 4). Stepwise regression was used to predict 'very drunkenness.' **After one year, there were signs that the intervention had reduced drunkenness**: 'the R^2 change value (0.0017) associated with the FEI-ESI group assignment value was statistically significant (F=6.16, df=1,255, p<0.007). Youths receiving FEI services reported getting very high or drunk on alcohol less often than youths receiving ESI services'. **However, there were no group differences after four years. Gender remained a powerful predictor of drunkenness, with young women getting very high or drunk significantly less frequently than young men (4-year outcomes for male gender: b=0.518, beta=0.124, r=0.144; p<0.01).**

Multimodel [sic.] residential treatment

Friedman, Terras and Glassman (2002) reported on a RCT evaluating a US residential treatment programme for 'inner-city, low SES, court-adjudicated male adolescents.' Though most had histories of drug use, 'unmanageable' young people were excluded from the study. The study evidenced a **moderate risk of bias,** with analyses conducted on a per protocol basis. Participants were between the ages of 13 and 18, with a mean of 15.5 years old. 201 young people were randomised to control (N=91) or intervention conditions (N=110). Control consisted of treatment as usual – mandated treatment in a residential setting (consisting of 'frat houses' holding 20 boys each), with on-site schooling, psychological services, and social workers. Intervention conditions added up to 55 sessions of cognitive behavioural / social learning treatment centred on substance misuse, general behaviour, violence, and values. Young people who were allocated to the intervention group, and who attended at least three sessions, were included in the intervention group for analysis. After 9 months post-release, 84% were re-interviewed with alcohol use measured by the Adolescent Drug Abuse Diagnosis instrument (a 150-item survey). Multiple

regression identified **no group effect on alcohol use,** though those in the intervention group had significantly reduced their drug use.

Therapeutic communities

Jainchill, Hawke and Messina (2005) evaluated a US therapeutic community for young people (13-18-year-old girls, and 14-18-year-old boys) 'involved with the juvenile justice system' and mandated to residential treatment. The study evidenced a **high risk of bias,** utilising an uncontrolled case series design with pre-post measures. These were particularly problematic in the context of measuring the alcohol use of a group of teenagers (girls' average age was 15.8 years old at entry to treatment, boys' was 16.7) with a five-year follow-up period – children became adults who were legally old enough to drink as the study progressed. Of the 282 children recruited, 100 boys were on a treatment pathway for children with histories of drug selling; 100 were engaged by an intensive treatment programme; and 82 girls (29.8% of the sample) engaged with a single programme in a separate facility. All young people attended abstinence-focused therapeutic communities with a strong emphasis on twelve-step principles. The duration of treatment was 10-12 months; core treatment components involved education, life skills, anger management and standard TC approaches to community living. After 5 years, 65.1% of young people were reinterviewed, with self-report data collected on abstinence, months of alcohol use over the 5 years since release, and levels of alcohol dependence. The Wilcoxon Signed Rank test identified **large increases in alcohol use for the total sample after TC treatment, with 29% of young men and 13% of young women alcohol dependent by the 5-year point**. The authors also note that for both genders, changes in other drug use were non-significant. *29.8% of the sample were female, and separate outcomes were reported (described above). Young women also had different treatment needs at entry.*

8. Women

Summary

Sixteen papers were reviewed, reporting on 15 studies covering 9 types of intervention.

Four studies described outcomes for both women and men. Three studies reported men's and women's outcomes in the same articles (Bjerre et al., 2003; Cropsey et al., 2013; Polcin et al., 2018). The fourth reported women's outcomes discretely (Johnson et al., 2011; men's outcomes reported in Friedman et al., 2011).

Brief interventions

Two papers explored brief interventions.

The first had a low risk of bias**,** with Stein et al. (2010) comparing screening followed by a brief intervention with screening only. They identified some improvements in abstinence 3 months after release for the intervention group but no benefits at either 1 or 6 months.

The second (Begun, Rose and LeBel, 2011) focused on women detained pre-sentence or on remand and evidenced a high risk of bias. Assessment and a brief

intervention was compared with treatment as usual. In the 20% who were followed up after 2 months, those who underwent the intervention evidenced greater reductions in AUDIT scores.

Mindfulness

In a study with a high risk of bias, Wupperman (2012) explored changes in drinking in an uncontrolled case series of women convicted of domestic violence and taking part in a twelve-week mindfulness course. The cohort reduced their drinking during their time in the intervention.

Therapeutic communities

Sacks et al. (2006) identified no treatment effects on alcohol use arising from a modified, trauma-aware prison therapeutic community six months after release when compared to treatment as usual (90 hours of CBT). The study has a **moderate risk of bias.**

Acceptance and commitment therapy

Two Spanish studies with a low risk of bias report on ACT.

The first (Lanza and Gonzalez-Mendez, 2013) compared a 16-week ACT intervention with a waiting list control group, finding a significant reduction in 6-month post-prison alcohol use in the intervention group.

The second (Lanza et al., 2014) compared ACT, CBT and a waiting list control group. The authors identified that ACT reduced alcohol use significantly more than control; CBT had no effect.

Seeking safety

Two studies explored the impact of 12 groups of manualised CBT in addition to treatment as usual (full-time 12-step treatment) on alcohol use and trauma for imprisoned women in the US.

The first (Zlotnick et al., 2003) had a high risk of bias, and identified that women reduced their alcohol use when comparing pre-prison and post-prison scores.

The second had a low risk of bias, with Zlotnick, Johnson and Najavits (2009) identifying no reductions in alcohol use arising from programme when compared with control.

Dialectical behavioural therapy

Reporting on an intervention for homeless ex-offenders, Nyamanthi et al. (2017) identified that a low-intensity twelve-week DBT programme was associated with significantly greater levels of alcohol abstinence than a health promotion intervention of identical intensity / length. The study has a low risk of bias.

Probation case management

Three studies explored the impact of changes to probation case management.

Chan et al. (2005) compared the outcomes of high-intensity, low-caseload case management with treatment as usual, in a study with a high risk of bias. The authors identified no intervention effects on alcohol use.

The second study (Johnson et al., 2011) had a low risk of bias and explored the impact of a 12-week collaborative behavioural management intervention (one contact per week) compared to probation as usual, finding significantly greater reductions in alcohol use within the intervention group. Women in intervention conditions were much more likely to be alcohol abstinent than those in control conditions.

Finally, in a study with a moderate risk of bias Polcin et al. (2018) cluster-randomised residents in sober living houses to either treatment as usual or enhanced MI case management (three sessions in month one, thereafter monthly). They identified that intervention conditions were associated with significantly greater levels of alcohol abstinence after 12 months.

Recovery management check-ups
In a study with a low risk of bias, Scott and Dennis (2012) assessed the impact of monthly motivational interviewing check-ups vs treatment as usual on women released from jail. They identified no treatment effects on women's alcohol use after 30, 60 or 90 days.

Alcohol interlocks
Bjerre 2003; Bjerre 2005) report the same set of findings from a Swedish study of alcohol interlocks. The study has a high risk of bias. The authors describe reductions in the baseline to two-year AUDIT scores of an uncontrolled case series.

Pharmacological
In an uncontrolled case series study with a high risk of bias, Cropsey et al. (2013) identified no changes in alcohol use arising from the prescribing of buprenorphine, plus brief psychosocial interventions in response to drug or alcohol use.

Abstinence-focused supported housing
Jason et al. (2017) compared the treatment outcomes of women accessing an abstinence-focused supported housing scheme following release from prison with those of women without such support. The study has a high risk of bias. After 6 and 12 months, no treatment effect on alcohol use was identified.

Courts. Mindfulness
Wupperman et al. (2012) reported on a US intervention for alcohol-dependent women convicted of domestic violence. The cohort study has a **high risk of bias.** Fourteen women were recruited to take part in the intervention, which consisted of twelve weekly one-hour one-to-one therapy sessions based on the principles of mindfulness. Alcohol use was assessed using timeline followback for the 4 weeks pre-treatment, and the final 4 weeks of treatment. T-tests identified **a significant**

reduction in drinking days (From a mean of 11.43(7.23) to 1.36(3.27); t=0, p=0.001), and number of drinks per drinking day (From a mean of 4.12(1.42) to 0.68(1.39); t=0, p=0.001.).

Focus

Prison. Brief interventions

Two papers evaluating the impact of brief interventions for women prisoners were reviewed.

The first US study has a **low risk of bias.** In it, Stein et al. (2010) conducted an RCT of a brief intervention aimed at hazardously drinking women prisoners. Hazardous drinking was operationalised as drinking 4 or more units at least 4 times in the previous 4 months or having an AUDIT score of 8 or more. 245 women were recruited and, of these, 120 were randomised to control conditions and received a baseline assessment only. The other 125 were randomised to receive a brief intervention, consisting of the baseline assessment plus two 30-45-minute motivational interviewing brief interventions. Session 1 focused on goal setting; session two consisted of a follow-up; an assessment of progress, barriers and goals; and a review of recovery strategies. Follow-ups were conducted at 1, 3 and 6 months post-release, with data secured using timeline followback analysed using zero-inflated count regression models. This identified **almost no discernible intervention effects on drinking behaviour. The intervention group described significantly more days abstinent at the three-month follow-up; but not at 1 and 6 months. At no point was there any significant difference between groups on the number of drinks per drinking day.**

The second study also has a **high risk of bias** due to very low follow up rates, and again focuses on the US. Here, Begun, Rose and LeBel (2011) evaluated the impact of a BI on women detained pre-sentence or on remand with AUDIT scores of >8. Of 790 women recruited, 'about two-thirds' were randomised to intervention conditions. The rest were randomised to control conditions, receiving prison treatment as usual. The intervention comprised screening, a motivational interviewing brief intervention, and a referral to treatment. Women also received a resource folder tailored to their local community, with information about support, housing, health and a three-month calendar for tracking appointments. Baseline assessments comprised AUDIT and the Texas Christian University Drug Screen. Attempts to re-interview women two months after their release secured interviews with just 20.4% of the sample. Three-fifths of those who were re-interviewed had been allocated to control conditions, suggesting a disproportionately large drop-out rate amongst those who received the intervention. Reported analyses comprised t-tests and ANOVA. These identified that **both intervention and control groups reduced their AUDIT scores following release; but that those who received the brief intervention evidenced considerably greater reductions in their AUDIT scores than the treatment as usual group.**

Prison. Therapeutic communities

Sacks et al. (2006) report on an RCT of a US therapeutic community for treatment-seeking women prisoners. The study has a **moderate risk of bias** due to low follow-up rates. 314 women were eligible for the study, with 151 allocated to control

conditions and 163 to the intervention. Control consisted of treatment as usual – 90 hours of CBT delivered over 15 weeks, with women retaining access to other prison services (including trauma-centred support, art, and resettlement provision). The intervention consisted of 'challenge to change,' a four-stage, 72-bed, trauma-aware therapeutic community adapted to ensure that mutual respect (rather than authoritarianism) structured community relationships. Group treatment centred on substance use, relationships, mental health, crime, trauma, and parenting. Assessments centred on the ASI and Centre for Therapeutic Community Research Baseline Protocol. 49.7% of the control group and 53.3% of the intervention group were re-interviewed after 6 months in the community. Analyses were described as being on an intention-to-treat basis, with logistic regression for dichotomous outcomes and OLS for continuous measures. This identified that **both intervention and control groups significantly reduced their alcohol use (in terms of days abstinent, and frequency of use); but that 'no significant differences between TC and control were evident for any of the four substance use variables' (alcohol / drugs x abstinence / frequency).** Both groups also improved on other variables, including trauma severity, depression, arrest for reasons other than parole violation, and sex for money or drugs.

Acceptance and commitment therapy

Two papers report the findings from two Spanish studies with a **low risk of bias** evaluating the impact of Acceptance and Commitment Therapy for women prisoners with Substance Use Disorder. The first paper (Lanza and Gonzalez-Mendez 2013) reported on the first six months of an RCT with a waiting list control group. Women randomised to control conditions (N=13) could access treatment as usual within the prison. Those allocated to the intervention (N=18) received 16 weekly 90-minute small groups focused on challenging notions of control, building understanding of acceptance (of cravings, desires, etc), and on developing commitment to goals. After 6 months, 85% of the control group and 89% of the intervention group were re-interviewed using the ASI, urinalysis, and an 'ad hoc' interview schedule. Cochran's Q was used to assess differences between groups over time. **In terms of abstinence, a statistically significant group difference was observed post-treatment, and this was maintained until 6 months ($X^2(1,N=27)=6.09$, p=0.014). Cochran's Q identified that the 'evolution' of the ACT group was statistically significant (Q(2)=9.25, p=0.01) but that of the control group was not Q(2)=2, p=0.368).** No impact of the intervention was identified in terms of drug use, health, family, or psychological wellbeing. Nor was there any impact on psychopathology, or anxiety sensitivity.

A second study reported by Lanza et al. (2014) applied a similar approach to a group of 50 women in Spanish prisons. It again shows a **low risk of bias.** Fifty women prisoners with diagnoses of substance use disorder and at least six months left to serve were randomised to one of three conditions. 13 women were allocated to a waiting list control group; 18 were allocated to a 16-week ACT intervention (see details above); and 19 were allocated to a 16-week programme of small-group cognitive behavioural therapy. Alcohol use was measured using the ASI, with Cochran's Q used to assess between-group differences over time. This identified that at 6 months, **women in the ACT group reduced their alcohol consumption significantly more than those in the control group. CBT showed no significant**

improvements in alcohol use over control. ACT treatment also approached statistically significance in participants' reductions in panic and depressive disorders. CBT was also associated with a broad range of improvements in somatic, psychological and social functioning whilst ACT was associated with reductions in drug use.

Seeking Safety – CBT for PTSD and SUD

Two papers explored the impact of manualised, trauma aware cognitive behavioural therapy for women prisoners with PTSD and substance use disorder.

The first US study has a **high risk of bias.** In it, Zlotnick et al. (2003) recruited 18 minimum security women prisoners with 12-16 weeks left to serve. All were already engaging with a 'treatment as usual' prison programme, comprising full-time twelve step treatment. The intervention added three ninety-minute small group sessions per week of manualised CBT focused on PTSD and substance use disorder. Women were followed up at 6 weeks and 3 months, with 89% and 86% of participants re-interviewed at each stage. Paired samples t-tests on ASI scores indicated that **women had significantly reduced their alcohol use at both follow-ups, in comparison to pre-treatment scores.** Additionally, 46% women had sought no community treatment, and 46% no longer met the criteria for PTSD.

The second US evaluation covered similar ground using a different methodology and evidences a **low risk of bias.** Here, Zlotnick, Johnson and Najavits (2009) report on RCT of seeking safety for a separate group of minimum-security women prisoners. Twenty-two women were randomised to control conditions, receiving 180-240 hours of individual and group treatment over 6-8 weeks. The intervention added three ninety-minute small group sessions per week of manualised CBT focused on PTSD and substance use disorder. Women were interviewed at baseline, after 12 weeks of treatment, and at 3 and 6 months post-release. ANCOVA was used to assess changes in scores between time points; GEE explored changes over time from intake to the final follow up. These analyses identified **no effect of the intervention on alcohol use.** The authors elaborate: 'on the alcohol composite, only the women in treatment as usual showed a significant decrease and at one time point (intake to 3-month follow-up).' There **were no significant differences between groups in terms of days abstinent from alcohol**, or on PTSD symptomatology.

Dialectical behavioural therapy

Nyamanthi et al. (2017) reported on a US RCT aimed at homeless female ex-offenders engaged with probation or parole and residing in the community. The study has a **low risk of bias.** Using URN randomisation, 58 women were allocated to control conditions and received 6 groups focused on health promotion and chronic conditions delivered over 12 weeks. Women also received some one-to-one support. The 58 women randomised to intervention conditions received 6 weekly small group sessions and 6 weekly one-to-ones, again spread over 12 weeks. Groups were structured according to the principles of DBT, and focused broadly on substance misuse (e.g. urges, cues, rebellion, and building a life worth living). After 6 months, 90% of participants were reinterviewed using the Texas Christian University Drug History Form 2 (a Likert-type measure of frequency, dichotomised to abstinence). Logistic regression with generalised estimating equations identified that **participants**

in the DBT group were more likely to become or remain alcohol-abstinent during the study period (OR=3.12; 95%CI[1.24, 7.85]; p=0.02); the HP group did not change.' The intervention did not significantly affect abstinence from drugs and alcohol combined.

Probation case management

In a US study, Chan et al. (2005) assessed the impact of probation case management on drug-involved women offenders. Women could volunteer pre-sentence, whilst imprisoned, or for parole; but all were case managed by probation. The study had a **high risk of bias,** with volunteers first filling all available case management slots (N=65) before other recruits (N=44) were allocated to treatment as usual. In treatment as usual, women were carried by officers with caseloads of 100-150 (though these could be as low as 50 on high risk teams), with probation officers responsible for writing reports, enforcing conditions, and supporting treatment access. The intervention group received a more consistent form of provision, carried by officers with caseloads of 50, receiving uniform screening and assessment, and with engagement focused on therapy, advocacy, and referrals to services. Home visits and gender-specific education and support were included within the intervention. ASI measures were taken at baseline, 6 and 12 months with 77% and 84% re-interviewed respectively. Generalised estimating equations were used to assess group differences in dichotomised high / low ASI composites. This identified **no group differences on any outcome measure, including alcohol ASI composites. Whilst the intervention group was 7% more likely than their comparators to be in the high alcohol severity category at 6 months, this difference was not significant**. Additionally, the intervention had no discernible impact on child custody or service utilisation, though recipients were more likely to visit A&E between the 6- and 12-month follow-ups.

In a US paper building on Friedman et al. (2011; see earlier), Johnson et al. (2011) explored the role of gender in a comparison of collaborative case management with standard parole. The study has a **low risk of bias.** In a sample of 431 parolees the outcomes of 77 women (38 randomised to control, 39 to intervention) were compared with those of men (178 randomised to control, 182 to intervention). Control conditions comprised standard parole, with 1-4 contacts per month and drug testing. The intervention consisted of collaborative behavioural management, comprising an initial multi-agency session to establish a shared behavioural contract followed by 12 weekly contacts focused on specifying roles, negotiating contracted targets, tracking adherence to the contracting, and responding to behaviour with reinforcement or sanctions. Individuals were followed up at 3 and 9 months, with 94% and 86% re-interviewed at each stage. Timeline followback data was analysed using generalised estimating equations. This identified that **collaborative behavioural management was associated with significant reductions in alcohol use (p<0.001), as reported earlier. The authors also note that this effect was more pronounced in women – 29% of controls drank during the follow-up period, compared with just 5% of the collaborative behavioural management group (p<0.001)**.

Polcin et al. (2018) explored the impact of motivational interviewing case management on parolees' outcomes. The study has a **moderate risk of bias**. The

sample comprised 'ex-offenders' voluntarily entering abstinence-focused supported housing. The main features of the analysis are reported earlier (see 4. Probation and Parole). However, gendered findings are also reported, as 9 of the 25 cluster randomised houses were for women only. The authors consequently identify that **women assigned to intervention conditions reported higher rates of abstinence at 12 months when compared to the control group. This was the case for the intention-to-treat analysis (OR=0.15, CI=[0.02, 0.94]) as well as the per protocol analysis (OR=0.10, CI=[0.01, 0.68]).** This is despite the authors also documenting no time x group intervention effects (see report of men's findings in section 4. Probation and Parole).

Recovery management check-ups

Scott and Dennis (2012) conducted an RCT focused on recovery management check-ups for women returning to the community from a US county jail substance abuse treatment programme. The study has a **low risk of bias.** 242 women were randomised to control conditions, receiving treatment as usual. A further 238 women were randomised to the intervention group, which consisted of face-to-face motivational interviewing at thirty-day intervals providing feedback on substance use and discussing barriers to progress and women's motivation to change. Women were also offered treatment referrals when needs were identified, with recovery workers maintaining contact whilst women were engaged by other services. Self-reported alcohol use was recorded at 30, 60 and 90 days post-release, with 'over 90%' of women re-interviewed at each stage. Analyses consisted of odds ratios and confidence intervals. These identified that **recovery management had no impact on alcohol abstinence (OR 0.79; CI0.54-1.15).** Engaging with treatment did increase abstinence (OR 3.74; CI 2.32-6.02; p<0.001), but this was not randomised and was only achieved by 5% of the sample (who are likely to be highly atypical).

Probation. Alcohol interlocks

Bjerre (2003) reported on the outcomes of DUI offenders who were engaged with probation and volunteered for two years with an alcohol ignition interlock. The study has a high **risk of bias,** with the methodology more fully described in section 4. Probation and Parole. The authors do not specify what proportion of their sample comprised women; but note that women evidenced (unspecified) decreases in AUDIT scores comparable to those of men.

Probation. Pharmacological.

Cropsey et al. (2013) reported on a US evaluation of the impact of buprenorphine and medication management in a community corrections / probation sample. The study is an uncontrolled case series with a **high risk of bias.** The methodology is more fully reported in section 4. Probation and Parole. Women evidenced more benzodiazepine positives and reduced injecting behaviour more over the course of the study, but generalised estimating equations identified that there were no gendered effects differences in alcohol outcomes (the sample was 56% female).

Abstinence-focused supported housing

Jason et al. (2017) report on a case control evaluation of the impact of Oxford Recovery Housing for women with alcohol or drug problems who had been released

from prison in the previous two years. The study has a **high risk of bias,** with analyses resting on an unclear case matching process. The comparison group consisted of 100 women who experienced 'what occurred naturally after completing treatment or jail,' whilst the intervention group lived in self-run, abstinence-focused accommodation for a mean of 131 days (SD 14). Data was collected at 6 and 12 months, from 87% and 84% of participants respectively. Alcohol use was measured using the ASI and timeline followback, with analyses using generalised linear mixed modelling. Analyses identified **no significant effects on drinking: 'the main effect of time was not significant… the main effect of condition was not significant… the condition by time interaction effect was not significant.'** There was also no impact on employment, criminal charges, being charged with a new offence, or arrests.