**Table 2: Smoking Intervention Studies (ordered by length of cessation) n=14**

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| **Author** | **Country** | **Sample** | **Gender (% of M)** | **Age** **(mean years; SD)** | **Study Design** | **Intervention used** | **Comparator**  | **Follow up**  | **Drop out N (%)**  | **Primary outcome/behavioural changes measurements** | **Cessation Outcome** |
| Reitzel et al (2014a) | USA | 57 homeless smokers enrolled in a cessation programme via a transitional homeless shelter | 67 | 49.9 (7.7) | Longitudinal survey data  | Weekly group cessation counselling sessions and offered pharmacotherapy  | None | Quit day abstinence only | - | Self-reported and CO validated quit day abstinence | 10 (18%) abstinent on quit date.  |
| Spector et al (2007) |  USA | 11 homeless smoking adults  | 81.8 | 40.6 (10.8) | Prospective | Cognitive Behavioural Therapy (CBT) | Unstructured support for quitting |  1 week | 5 (45%) | Number of cigarettes and CO reduction before and after treatment.  | All decreased smoking frequencyMean daily rate dropped 19 to 9CO decreased 28 to 20.2. |
| Businelle et al (2014, a) |  USA | 68 homeless transitional smokers willing to be enrolled on the shelter-based smoking cessation clinic  | 61.8 | 49.2 (8.4) | Mixed design | Usual care (UC) smoking cessation plus small financial incentive (CM) | UC | 4 weeks  | 48 (69%)  |  | CM more likely to abstain overtime v UC:50% v 19% on quit date 30% v 1.7% at 4 weeks  |
| Power et al (2015) | AUS | 144 homeless clients of the Quit Smoking Clinic (QSC) at an inner-city homeless shelter | 100 | 45.2 (10.8) | Cross-sectional | QSC service includes quit smoking guidance, motivational counselling and NRT free of charge | None | Differed due to attendance at QSC. Cessation defined as self-reported complete as 4 weeks abstinence  | 89 (62%)  | Cessation defined as self-reported complete abstinence from both tobacco and NRT for 4-weeks.  | Cigarettes per day fell from 24.5 to 10.5 cigarettes per day  CO reduced from 25.7ppm to 17.69ppm. Only 1 quit, 3 maintained 4 weeks abstinence without NRT |
| Bonevski et al (2012) | AUS | 12 homelessness currently receiving accommodation support via outreach centre | - | - |  Pre-Post | Six sessions of weekly personalised counselling | None |  6 weeks | 6 (50%) |  | 0 quit attempts50% reported trying to cut down as a result of intervention |
| Baggett et al (2018a) |  US | 50 homeless smokers | 48 | 46.6 (9.1) | Randomised pilot RCT  | Nicotine patches & counselling offered to all plus financial incentives | Nicotine patches & counselling | 8 weeks | - | Brief smoking abstinence (Day 1 with CO<8ppm); 7-day point prevalence (CO <8ppm) | Participants receiving financial incentives were more likely to achieve brief abstinence overall and at 8 weeks (48% vs. 8%) and made more quit attempts |
| Baggett et al (2019) | USA | 50 homeless smokers | 42 | 45.6 (9.4) | Mixed method randomised pilot RCT | Nicotine patch therapy and weekly in-person counselling with and without text messaging support | Nicotine patch therapy with counseeling versus the same but with text messaging  | 8 weeks | * --
 | Brief smoking abstinence (Day 1 with CO<8ppm); 7-day point prevalence (CO <8ppm) | Smoking abstinence did not differ significantly between those receiving a text message and those who were not control arm participants (ranges 4-20% vs 0-20%) |
| Santa Ana et al (2016) | USA  | 37 adult smokers and veterans seeking treatment for primary AUD and designated currently homeless via a Substance Abuse Treatment Centre | 97.3 | 52.8 (7.5) | Prospective repeated measures quasi-experimental naturalistic A-B design | Group MI (GMI) with additional emphasis on tobaccos use (T-GMI); four sessions over 4 consecutive days | GMI | 1 & 3 months | 2 (5%) | Treatment engagement (measured through attendance) and CO.  | 1-month GMI v T-GMI:24.5 v 25 days smoked,10.9 v 11.6 cigs per day15.1 v 15.8 CO 3 months GMI c T-GMI24.6 v 25.4 days smoked10 v 10.8 cigs per day 15.7 v 18.9 CO levels |
| Baggett et al (2018)  | USA | 70 adult smokers  | 74.8 | 45.1 (11.4) | RCT  | Nicotine patch therapy and weekly in-person counselling with and without contingency management (CM) payment for negative CO samples on follow up. | Nicotine patch with standard care versus the same but with CM payments.  | 4, 8, week, 3-6 month. | 6 (8%) | Longest duration of abstinence and % of negative COs from between weeks 1-4.  | Longest duration of abstinence was significantly higher for those assigned to CM than those not (4.2 v 1.2 days). The percentage of CO negatives was also significantly different, with more people in the CM group providing negative CO readings (51.3% CM V 33.9) |
| Segan et al (2015) | AUS | 49 homeless adults via smokers Homeless Persons Program (nurses’ clinic) | 63 | 48 (13.8) | Pre-post  | 69% pharmaco-therapy and 61% Quitline  | None | 3mth & 6mth post-enrolment | 12 weeks: 19 (39%)22 weeks: 22 (45%) | Making a quit attempt (quit ≥ 24 hours) between the baseline and end of programme surveys, and self-reported 24-hour point prevalence abstinence at end of programme or at 6 months.  | 24-hour point prevalence abstinence rates = 6% at end of program and 4% at 6 months (none achieved sustained cessation) |
| Carpenter et al (2015) | USA | 20 homeless veteran smokers via Veterans Medical Centre | 90 | 54.7 (7.0) | Open pilot pre-post design | Multicomponent intervention - Smoking cessation counselling session, NRT and bupropion (if eligible) & 4 weeks smartphone-based application for CM  | None | 7 days, 3mth & 6mth | n/a | 7-day point prevalence (CO <6ppm) | 50% 4 weeks. 55% 3 months45% 6 months |
| Shelley et al (2010) | US | 58 homeless adult smokers from an outpatient substance abuse treatment program and a transitional residential treatment program for homeless clients | 89.7 | 47 (8.97) | Pre-post  | Group counselling based on motivational interviewing (MI) and CBT + pharmacotherapy | None | 12-24 weeks | 12weeks: 14(24%)24weeks: 19(33%)  | 12- and 24-week CO-confirmed 7-day point-prevalence abstinence and confirmed by a CO (ppm<10) | ITT12 weeks:15.5% CO-confirmed 7-day abstinence62.1% attempted to quit for at least 1 day in past 12 weeksITT 24 weeks:13.6% CO-confirmed 7-day abstinence(other measures not reported at 24 weeks) |
| Okuyemi et al (2013) | USA | 430 homeless adult smokers from a Homeless shelter | 74.7 | 44.4 (9.9) | RCT | Standard care (patch alone) and MI | Standard Care  | 8 & 26 weeks | 107 (25%) | 7-day abstinence at 26 weeks, as validated by CO and salivary cotinine.  | 8 weeks:9.3% MI +SC8.9% SC 26 weeks:9.3% MI + SC 5.6% SC |
| Okuyemi et al (2006) | USA | 46 homeless adults from a community-based smoking cessation intervention at multiple facilities |  |  | Pilot RCT  | 5 individual MI, 6 group meetings choice of 8 weeks of 21 mg patch or 4mg nicotine lozenge. MI targeted either smoking behaviours AND other addictions or life events that could affect ability to quit (S+).  | Intervention but MI targeted smoking behaviours exclusively (SO)  | week 8 & week 26 | - | Feasibility assessed: proportion of participants who returned for randomization; adherence to prescribed NRT; retention rates at 26-week study appointment; CO verified 7-day point prevalence at 26 weeks. | CO abstinence at - Week 8:SO 13% v S+ 17% (ns) Those who used at least 4 patches per week more likely to quit at week 8, than those with fewer patches Week 26:SO 9% v S+ 17% (ns)  |

\* data only provided those homeless attending the smoking cessation clinic (n=14)

# refers to uptake of the smoking cessation clinic (NB: 55 did not attend smoking cessation service (not indicated how many were homeless)

^ data only for the homeless adults (not staff)

US = United States; AUS=Australia; RCT = randomised control trial; M=male; QSC = Quit Smoking Clinic; CBT = Cognitive Behavioural Treatment; NRT = nicotine replacement therapy; QSC = Quit Smoking Clinic; AUD = alcohol use disorder; MI = motivational interviewing; CM = contingency management; GMI = group motivational interviewing; T-GMI = tobaccos focused group motivational interviewing; mth=months; UC = usual care; SC=standard care, ns = non-significant; CO = carbon monoxide ; ITT = Intention to Treat