



# Using incentives within the addictions field to support smoking cessation – A Cochrane review

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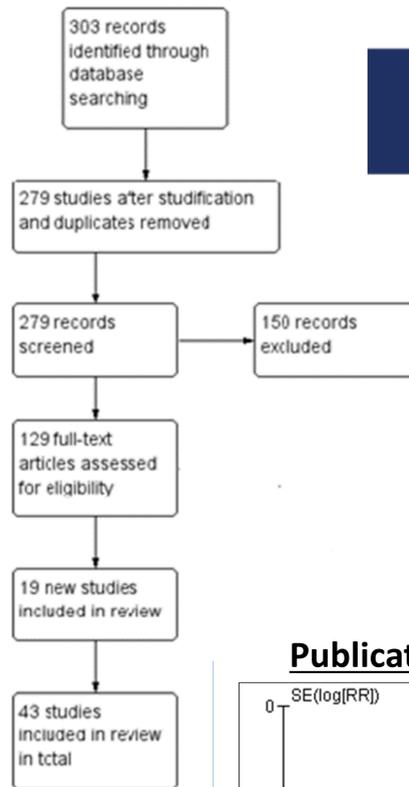
**Background:** There is good evidence for contingency management approaches within addictions treatment. Previous reviews have found incentives to be effective for tobacco addiction, to support smoking cessation, but long-term effects have not been determined.

**Methods:** Systematic review of randomised controlled trials, allocating individuals, workplaces, groups or communities to smoking cessation incentives or control. Including mixed populations, those in substance misuse treatment, and pregnant women. The outcome was abstinence from smoking at longest follow-up (at least six months from intervention start).

**Results:** 33 mixed-population studies met inclusion criteria, including 21,600 participants in community settings, clinics, workplaces, and drug clinics. Eight studies recruited participants from substance misuse clinics. In mixed population studies, **the relative risk (RR) for quitting with incentives at longest follow-up compared with controls was 1.49 (95% confidence interval (CI) 1.28 to 1.73; 31 RCTs, adjusted N = 20,097; I<sup>2</sup> = 33%).** We conducted a sensitivity analysis exploring the effect of incentives offered continuously, up until long term follow up, compared with studies where longest follow-up was beyond the end of the incentive period. Results were not sensitive to the exclusion of six studies where incentives were offered at long term follow up (RR 1.40 95% CI 1.16 to 1.69; 25 RCTs; adjusted N = 17,058; I<sup>2</sup> = 36%). In a subgroup analysis of trials recruiting participants in substance misuse treatment, results also suggested a favourable benefit of incentives for smoking cessation at longest follow-up (no significant subgroup difference (P = 0.38; I<sup>2</sup> = 0%; RR in substance misuse subgroup 1.24, 95% CI 0.81 to 1.89; 8 studies; N = 1055). Findings were consistent with the overall meta-analysis which found a beneficial effect of the intervention.

**Conclusions:** Overall there is high quality evidence that incentives improve smoking cessation rates at long term follow-up in mixed population studies, including populations in treatment for substance misuse. The effect of incentives appears to be sustained over time (both while in place and following discontinuation). Incentives offer an important route to smoking cessation that is effective and may add value to a comprehensive public health approach to reducing smoking prevalence, alongside other forms of cessation support.

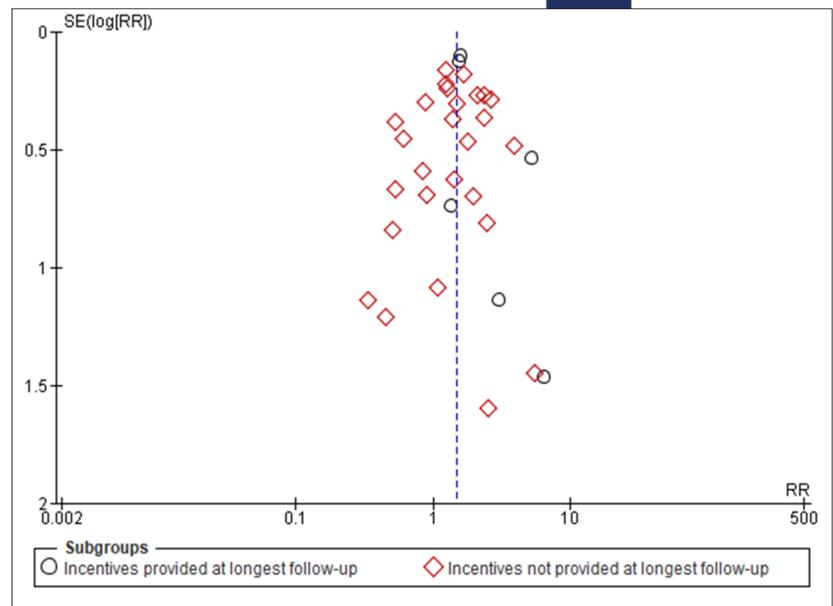
### Prisma diagram



### Quality appraisal

Study	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Other bias
Ainscough 2017	●	●	●	●	●
Alessi 2014	●	●	●	●	●
Baker 2018	●	●	●	●	●
Brunette 2017	●	●	●	●	●
Cheung 2017	●	●	●	●	●
Cooney 2017	●	●	●	●	●
Dalrymple 2016	●	●	●	●	●
De Paul 1994	●	●	●	●	●
Donatelle 2000a	●	●	●	●	●
Donatelle 2000b	●	●	●	●	●
Donatelle 2002	●	●	●	●	●
Drummond 2014	●	●	●	●	●
Eber 2016	●	●	●	●	●
Fraser 2017	●	●	●	●	●
Gallagher 2007	●	●	●	●	●
Otosh 2016	●	●	●	●	●
Qin 2010	●	●	●	●	●
Glasgow 1993	●	●	●	●	●
Halpern 2015	●	●	●	●	●
Halpern 2018	●	●	●	●	●
Harris 2015	●	●	●	●	●
Heil 2008	●	●	●	●	●
Henonius 2002	●	●	●	●	●
Higgins 2014	●	●	●	●	●
Lasser 2017	●	●	●	●	●
Ledgerwood 2014	●	●	●	●	●
Undersma 2012	●	●	●	●	●
Rand 1989	●	●	●	●	●
Rettig 2018	●	●	●	●	●
Rohsenow 2015	●	●	●	●	●
Rohsenow 2017	●	●	●	●	●
Romanowich 2015	●	●	●	●	●
Secades-Villa 2014	●	●	●	●	●
Shoptaw 2002	●	●	●	●	●
Tappin 2015	●	●	●	●	●
Tevyaw 2009	●	●	●	●	●
Tuten 2012	●	●	●	●	●
van den Brand 2018	●	●	●	●	●
Voipp 2006	●	●	●	●	●
Voipp 2009	●	●	●	●	●
White 2013	●	●	●	●	●
White 2018	●	●	●	●	●
Windsor 1988	●	●	●	●	●

### Publication bias



### Exploratory meta-regression – effect of incentive amount

