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| **Systematic review of interventions to improve health providers’ provision of smoking cessation care in pregnancy** |
| **Background/Objectives**Smoking in pregnancy is the most important preventable risk factor for poor maternal and foetal health outcomes. Health providers (HPs) report that they seldom perform all the recommended care elements (Ask about smoking, Advise to quit, Assess dependence, Assist cessation, Arrange Follow-up). Interventions to improve HPs provision of care include different components such as training, audit and feedback, and reminders. The aim of this study was to systematically review all available studies on interventions to improve HPs provision of smoking cessation care (SCC) during pregnancy.**Methods**Five databases were searched. Screening of abstracts and full texts were conducted by two reviewers independently. Interventions were characterized according to the EPOC taxonomy. Random-effects meta-analyses examined intervention effects on the recommended care elements, and patient cessation rates. Estimates were either number of participants reporting each outcome, or mean score, transformed into Cohen’s d to allow pooling of studies. Crude meta-regressions, and meta-analysis subgrouping, were performed to examine whether intervention effects on ‘Ask’, ‘Advise’ and ‘Assist’ could be explained by different intervention components.**Results**Out of 3165 manuscripts screened, 16 were included. Pooled intervention effects for each care component were: “Ask” d=0.47, 95%CI 0.13, 0.81; "Advise" d=0.46, 95%CI 0.02, 0.9; "Assess" d=0.98, 95%CI 0.5, 1.45; "Assist" d=0.65, 95%CI 0.46, 0.83; and "Arrange” d=0.84, 95%CI 0.4, 1.29. Patient smoking abstinence rates showed a non-significant treatment effect (d=0.17, 95%CI -0.04, 0.38). Having a theoretical basis and inclusion of audit and feedback may improve intervention effectiveness for ‘Ask’, ‘Advise’ and ‘Assist’. **Discussion**Interventions designed to improve provision of SCC during pregnancy show a modest increase in all care elements, and may have the potential to improve cessation rates. Audit and feedback and basing the intervention design on a behavioural theory may improve effectiveness. Future research needs to focus on understanding which intervention components may further strengthen intervention effects. **Keywords**Systematic Review; Interventions; Smoking Cessation; Pregnancy; Health Providers |