Incentives for smoking cessation in pregnancy

Incentives for smoking cessation in pregnancy: Time for implementation?

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Smoking during pregnancy is a common modifiable risk factor for adverse child health outcomes.(1) While smoking cessation before and during pregnancy lowers the risk of these adverse outcomes,(2, 3) less than half of women who are daily smokers, successfully quit during pregnancy.(1) This underlines the need for effective interventions to support pregnant women who smoke to quit. Based on evidence from nine randomised controlled trials, a 2019 Cochrane review concluded that provision of incentives effectively promotes sustained smoking cessation during pregnancy.(4) The study of Berlin and colleagues conducted in eighteen French maternity wards further adds to this evidence.(5)

Pregnant women were supported in smoking cessation by provision of six 10-minute face-to-face visits to set a quit date, to provide motivational counselling, support, and skills-training, and to prevent relapse. Women received a €20 voucher at the end of each visit to encourage attendance. Women randomised to the intervention also received incentives for biochemically validated abstinence, increasing in value and amounting to maximally €400. Provision of incentives increased continuous abstinence throughout pregnancy (16.4% versus 7.4%) and point prevalence abstinence (OR 4.61; 95%CI 1.41-15.01), and reduced the risk of poor neonatal outcomes (2.0% versus 8.6%).(5) The relatively large sample size of 460 women and inclusion via several maternity wards spread across the country increase generalisability of the findings. Lack of involvement of the target population during development and implementation of the study and of smoking partners in the intervention are limitations.

The results of this study – combined with those of the Cochrane review and more recent studies – provide compelling evidence that incentives effectively promote smoking cessation during pregnancy.(4, 6-8) Although the effect of incentives on birth outcomes is less clear overall,(9) epidemiological evidence clearly indicates that smoking cessation during pregnancy is associated with reduction of most adverse perinatal health risks.(2) As such, it is reasonable to assume that cessation will translate into perinatal and child health benefits at the population level. Given the clear signal that incentives support pregnant women to quit smoking, how do we take this forward?

Ongoing and future studies can help address some of the remaining questions: what is the optimal incentive scheme (i.e. timing, frequency, value, duration, and type of incentive)? Who should deliver it and how? Could personalised incentives be more effective than a one-size-fits-all approach? Would involvement of a significant other (e.g. the pregnant woman's partner) in the intervention increase effectiveness? Also, given that over 40% of women who successfully quit during pregnancy relapse within six months postpartum, could extension of the intervention to include the postpartum period sustain cessation? This is important as maintaining a smoke-free home will enable children to grow up free from the health hazards associated with tobacco smoke exposure. Evidence from several trials currently underway to address some of these issues will help optimise strategies to support implementation of incentive provision in daily practice.(10-12)

Considering current evidence supporting the effectiveness of incentives for smoking cessation during pregnancy, we argue that implementation should be pursued in parallel with ongoing and future research. Several studies have indicated that incentives are highly cost-effective,(7, 13) and ongoing work will provide more detailed information in the near future.(5, 11) Incentives seem most effective when provided as an adjunct to psychosocial counselling, and as such may be integrated into existing cessation support services.(14) Successful examples are available,(6) and the Royal College of

Physicians and Royal College of Midwives have already argued that financial incentives should routinely be offered to promote smoking cessation during pregnancy.(15, 16) This is supported in forthcoming NICE guidance in the UK.(17) Integration in national best-practice guidelines and determining responsibility for implementation, service provision, and cost coverage will be important in shaping national and local strategies. Appropriate consideration of ethical aspects is also essential.(18) Involvement of the pregnant women and their families will help ensure that local implementation will be culturally appropriate.(19)

This study adds to growing evidence that the time is right to start including incentive provision as part of standard practice to support smoking cessation during pregnancy. Doing so will also play an important role in reducing health inequalities at their earliest origin.

STATEMENTS

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