

smoking cessation rates among study participants, the findings of this pilot study suggest that perhaps more intensive interventions, with more extensive training of delivery staff, are needed to target smoking among very low income populations. The results of this study should not be interpreted as an indictment of a motivational intervention model, but rather as a call to conduct more extensive research into the underlying contextual factors that may influence smoking among low income pregnant women, and an effort to develop new intervention models that target these factors.

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The Kaiser Permanente prenatal smoking cessation trial: when more isn't better, what is enough?

Daniel H Ershoff, Virginia P Quinn, Neal R Boyd, Julie Stern, Margaret Gregory, David Wirtschafter

The effectiveness of low cost smoking interventions targeted to pregnant women has been demonstrated, although few gains in absolute cessation rates have been reported in the past decade. Under conditions of typical clinical practice, this study examined whether outcomes achieved with brief counselling from prenatal care providers and a self help booklet could be improved by adding more resource intensive cognitive behavioural programs.

Design

Randomised clinical trial.

Setting

A large group model managed care organisation.

Participants

Three hundred and ninety English speaking women 18 years of age or older who self reported to be active smokers at their initial prenatal appointment.

Intervention

Participants were randomised to one of three groups: (1) a self help booklet tailored to smoking patterns, stage of change, and lifestyle of pregnant smokers; (2) the booklet plus access to a computerised telephone cessation program based on interactive voice response technology; or (3) the booklet plus proactive telephone counselling from nurse educators using motivational interviewing techniques and strategies. No attempt was made to change smoking related usual care advice from prenatal providers.

Main outcome measure

Biochemically confirmed abstinence measured by concentration of cotinine in urine samples obtained during a routine prenatal visit at approximately the 34th week of pregnancy.

Results

Twenty per cent of participants were confirmed as abstinent with no significant differences found between intervention groups. Multivariate baseline predictors of cessation included number of cigarettes smoked per day, confidence in ability to quit, exposure to passive smoke, and education level. No differential intervention effects were found within strata of these predictors or by baseline stage of readiness to change. Cessation rates among heavier smokers were strikingly low in all intervention groups.

Conclusion

Neither a computerised telephone cessation program nor systematic provision of motivational counselling improved cessation rates over a tailored self help booklet delivered within the context of brief advice from prenatal providers. Innovative strategies need to be developed to increase the effectiveness of existing prenatal smoking interventions. Special attention should be paid to the needs of heavier smokers.

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**Kaiser Permanente
Southern California
Group, Pasadena,
California, USA**

D H Ershoff
V P Quinn

J Stern
M Gregory
D Wirtschafter

**Fox Chase
Comprehensive
Cancer Center**
N R Boyd

Correspondence to:
Dr VP Quinn, Southern
California Permanente
Medical Group, Department
of Research and Evaluation,
Walnut Center 911,
Pasadena, CA 91188, USA;
Virginia.P.Quinn@kp.org