[Archived] Tobacco Cessation Programs for Pregnant Women and Mothers of Young Children Commenting: McBride and Melvin

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Introduction

The papers by Colleen McBride and Cathy Melvin describe the significant impact that exposure to tobacco smoke has on fetal, infant, and child development. The papers highlight the important opportunity that pregnancy and parenthood provide for promoting long-term abstinence and achieving reduction in the prevalence of smoking. The authors describe effective cessation interventions and call for their widespread dissemination through health care systems and educational and community organizations. They identify high-risk subgroups in special need of assistance, including pregnant women and mothers with low incomes and low levels of education. The papers discuss organizational and societal barriers that must be overcome to make cessation treatments available to all smokers. The papers detail gaps in the research

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literature and suggest new directions and opportunities for increasing the effectiveness of tobacco treatments for pregnant women and families with children. The authors also describe a comprehensive policy and service development agenda to address the substantial health and economic costs that result from maternal and parental smoking.

Subject

Twenty-five percent of women of childbearing age (18–44) smoke cigarettes.[1] Maternal smoking during and after pregnancy presents serious threats to fetal, infant, and child health.[2,3] Increased cessation and long-term abstinence lead to improved pregnancy outcomes and reduce children's exposure to environmental tobacco smoke (ETS).[2,3] Pregnancy and parenthood heighten motivation for changing smoking behaviour.[4,5] Multiple contacts with health care systems, schools, and other community organizations provide opportunities to intervene with pregnant women and mothers who smoke. The papers in this section describe current evidence-based cessation treatments and ways in which they can be modified for pregnant smokers. The authors highlight the importance of conducting further research to improve the effectiveness of interventions and increase their dissemination to pregnant women and parents who smoke.

Problems

The authors identify significant problems that must be addressed in order to reduce smoking-related harm to fetal, infant, and child health. A fundamental issue is the accurate identification of smokers. Smokers are often reluctant to discuss their tobacco use with health care providers[6] and several trials have found high deception rates among pregnant women when self-reported smoking status was confirmed biochemically.[7,8] As noted in these papers, biochemical assessment is the gold standard for identifying smoking status. However, ethical and cost factors prevent its widespread adoption in prenatal or pediatric settings. The use of a structured, multiple-choice screening questionnaire has been demonstrated to improve disclosure,[6] but more effective strategies would benefit both pregnant women and parents who smoke.

Other problems discussed in these papers include the lack of effective interventions to help women who quit smoking during pregnancy and remain abstinent in the postpartum period.[9,10] Moreover, many issues remain to be resolved in the treatment of heavily dependent pregnant smokers, particularly when including nicotine replacement pharmacotherapy.[11] Better methods to quantify exposure to ETS are needed for research and intervention purposes. The integration

of cessation services in obstetrical and pediatric services is incomplete.[12] Partner and family-based approaches to tobacco treatment are understudied.

Research Context

As noted in the papers mentioned above, the recommendations for tobacco cessation treatment among pregnant smokers are based on randomized, controlled trials included in the meta-analyses summarized in *Treating Tobacco Use and Dependence: A Clinical Practice Guideline*.[11] Meta-analyses of postpartum cessation have been conducted,[13] but no equivalent analyses are available for interventions targeting parents who smoke.

Key Research Questions

Drs. McBride and Melvin pose key research questions for reducing the prevalence of maternal smoking and children's exposure to ETS:

1. What ethical issues are associated with using biochemical assessments and incentives to motivate pregnant smokers to remain smoke-free?
2. How can the prevalence of smoking during pregnancy and children's exposure to ETS be reduced through the involvement of partners and family members in cessation interventions?
3. What is the efficacy of various components of counselling and behavioural therapies and of motivational interventions?
4. Under what conditions can nicotine replacement therapy be incorporated into interventions for heavily dependent pregnant smokers?
5. How can smoking-related interventions be implemented in obstetric and pediatric settings, and can linkages within health systems help women who quit smoking during pregnancy to maintain abstinence after delivery?
6. How can the association between adult smoking and the resulting harm to children be used to motivate adult cessation and reduce exposure to ETS?

Recent Research Results

Smoking during pregnancy remains the most important preventable cause of poor birth outcomes,[2,11] and children exposed to ETS are at risk for increased rates of mortality and

morbidity.[2,3] Smoking cessation services are cost-effective and save, among pregnant smokers, more than $6 for every $1 spent.[11,14] In response to the evidence, clinical practice guidelines recommend the widespread adoption of screening practices and treatment for tobacco use.[11,15,16] There is consensus that pregnant smokers should be offered psychosocial interventions that exceed minimal advice and include pregnancy-specific self-help materials.[11,16] Benefits of intervention among heavily dependent pregnant smokers have not been demonstrated,[17] and findings are inconsistent in low-income settings.[18,19] To date, interventions to prevent relapse during pregnancy and in the postpartum period have not been successful.[9,10,20,21] Interventions among mothers who smoke have shown self-reported improvements in smoking topography, but mixed results for promoting cessation.[22,23] The influence of partners on the smoking status of pregnant women and mothers has been demonstrated,[24] but interventions that include partners remain to be tested.

Conclusions

The epidemiological evidence demonstrates that there are significant health consequences associated with maternal smoking during pregnancy and of children's exposure to ETS.[2,11] Cost-effective treatments that double or triple the rate of cessation are available[11] and should be provided to pregnant smokers and parents who smoke. Pregnancy and parenthood heighten smokers' motivation to quit; however, we have yet to take full advantage of this opportunity through the systematic delivery of tobacco cessation services.[12,25]

Important research questions need to be answered in order to enhance the effectiveness of cessation treatment, especially among subgroups of pregnant smokers, such as smokers who are heavily dependent on nicotine and smokers with multiple social-psychological barriers. Few intervention studies have been conducted among parents who smoke and we lack knowledge about optimal ways in which to motivate parents and how to address smoking cessation through family-based interventions. Finally, we have yet to develop linkages that provide continuity in smoking treatments within health settings, and between health systems and community resources.

Implications for Policy and Services

The authors provide a broad policy and service development agenda for addressing a significant threat to public health through the provision of tobacco cessation programs for pregnant women

and mothers of young children. They call for health care settings to develop tobacco-user identification systems; encourage clinicians to provide effective tobacco cessation services through education, incentives, and performance monitoring; and include tobacco treatment as services covered by health insurance packages. Implementing comprehensive tobacco control programs will result in fewer infant deaths and fewer children suffering from smoking-related illnesses. Given the substantial health and economic burden, community resources and social institutions should be involved in public health campaigns to change perceptions about the risks associated with maternal and parental smoking. Research is needed to evaluate new cessation and relapse prevention interventions, as well as strategies to promote the widespread adoption of effective programs.

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