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**Background**

- Despite considerable efforts by health care professionals, and an overall reduction in smoking prevalence, it is estimated that approximately 20% to 30% of pregnant women still smoke during pregnancy.
- To date, smoking cessation interventions to reduce smoking during pregnancy and postpartum have been relatively unsuccessful. Despite the influx of research examining smoking and pregnancy over the last five years, the prevalence of smoking among pregnant and postpartum women has only slightly decreased.
- Advice to quit smoking by health care providers, is associated with increased smoking cessation attempts in the general population. Also, studies have shown that smoking cessation interventions by providers are associated with increased smoking cessation attempts by patients.
- The purpose of this study was to provide a comprehensive review of the existing literature to assess how providers engage pregnant smokers in smoking cessation and to examine interventions that target providers’ provision of smoking cessation interventions to pregnant girls and women.

**Methods**

- A comprehensive search of the Cumulative Index to Nursing and Allied Health Literature (CINAHL), COCHRANE Library, The Excerpta Medica (EMBASE), Educational Resources Information Center (ERIC), Medical Literature Analysis and Retrieval System Online (MEDLINE), PsycINFO, and System for Information on Grey Literature in Europe (SIGLE) databases and authors’ personal files.
- Key words and MeSH terms included: Health care provider, Physician, Nurse, Office, Obstetrician, Family practice, Nurse practitioner, Public health nurse(s), Medical/Nursing Students, Pregnancy, Prehospital, Postpartum, Perinatal, Obstetrics, Smoking. Smoking cessation, Relapse, Tobacco, Readmission, Harm Reduction, Brief intervention, Brief advice, Care, Telephonic support, Counseling, On-line support groups, Prehospital visits, Referrals, Best practices, Program evaluation, Program criteria.
- Of 986 studies that were obtained from our search of databases, 28 publications met our inclusion criteria. To organize the articles identified in the literature, the results of our review are presented under the following areas:

**Barriers**

- Pessimism towards intervening (ineffective, not role, may harm relationship with provider)
- No formal training in smoking cessation
- Time constraints
- Lack of patient interest/motivation
- Lack of confidence in personal intervention skills
- Lack of on-hand resources/ referral sources
- NRT not adequately tested in pregnant women
- No re-imbursement for smoking cessation programs

**Learning Needs**

- Formal training in providing smoking cessation
- How to advise pregnant women to stop smoking
- How to provide social support
- Advice on patient education materials
- Referral resources
- Continuing education workshops, updates on evidence and research on smoking during pregnancy

**How are providers engaging pregnant smokers?**

<table>
<thead>
<tr>
<th>ASK about tobacco use</th>
<th>73% to 100% (n = 11 studies)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADVISE every tobacco user to quit</td>
<td>66% to 100% (n = 11 studies)</td>
</tr>
<tr>
<td>ASSESS readiness to quit</td>
<td>42% to 81% (n = 11 studies)</td>
</tr>
<tr>
<td>ASSIST self-help material, offering pharmacotherapy</td>
<td>28% to 99% (n = 13 studies)</td>
</tr>
<tr>
<td>ARRANGE follow up or referral</td>
<td>6% to 42% (n = 11 studies)</td>
</tr>
</tbody>
</table>

**System-Level Interventions**

**Provider Trainings**

<table>
<thead>
<tr>
<th>Population (Authors)</th>
<th>Key Intervention Components</th>
<th>Results</th>
<th>Increased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midwives (Bottorff et al, 2003)</td>
<td>Minimum Intervention</td>
<td>3 hrs training sessions</td>
<td>Knowledge, confidence, and perceived ability to help clients</td>
</tr>
<tr>
<td>Perinatal nurses and managers (Selim et al, 2003)</td>
<td>Advising, setting quit date, after care</td>
<td>3 hrs training sessions</td>
<td>Knowledge, confidence, and perceived ability to help clients</td>
</tr>
<tr>
<td>Midwives (Hodson, 2002)</td>
<td>Preparing to implement smoking intervention</td>
<td>3 hrs training sessions</td>
<td>Knowledge of resources and sources of support</td>
</tr>
<tr>
<td>Public health nurse</td>
<td>14 hour training workshops in TTM and MI</td>
<td>Preparing to smoking intervention</td>
<td></td>
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**Conclusions**

- There was modest compliance with some components of the 5As in the research studies, but overall low compliance with using all components together.
- Several barriers and learning needs for providers engaging in smoking cessation interventions with pregnant smokers were identified.
- Promising system-level and training interventions approaches to increase the use of brief interventions (i.e., the 5As), however no studies which demonstrate the effectiveness of such interventions in smoking cessation reduction.

There is still a lack of knowledge regarding provider smoking cessation practices among sub-groups of the population, including rural populations, First Nations communities, and individuals with mental health and substance use issues.