Program Report

Improving obstetrician-gynecologist implementation of smoking cessation guidelines for pregnant women: An interim report of the American College of Obstetricians and Gynecologists

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[Received 8 January 2003; accepted 11 December 2003]

The relationship between smoking during pregnancy and adverse outcome has been well reported in the literature for many years. The American College of Obstetricians and Gynecologists, with the support of the Robert Wood Johnson Foundation, has implemented a project designed to increase the number of obstetrician-gynecologists who offer the evidence-based 5 A’s smoking cessation intervention for pregnant women. This effort, as a part of the National Partnership to Help Pregnant Smokers Quit, is derived from a model for improving integration of evidence-based guidelines into routine medical care (Orleans, Barker, Kaufman, & Marx, 2000). This interim report describes the results from a survey of Ohio obstetrician-gynecologists on smoking cessation during pregnancy, the development and dissemination of clinician resources on smoking cessation, and plans to evaluate the impact of these activities among obstetrician-gynecologists.

Introduction

The relationship between smoking during pregnancy and adverse outcome has been well reported in the literature, as have recommendations for cessation counseling specific to pregnant patients who smoke (Fiore et al., 1996; Fiore et al., 2000; Melvin, Dolan-Mullen, Windsor, Whiteside, & Goldenberg, 2000; U.S. Department of Health and Human Services, 1989); however, full implementation of these recommendations does not appear to be widespread among obstetrician-gynecologists or others providing prenatal care (Floyd et al., 2001; Grimley, Bellis, Raczynski, & Henning, 2001; Zapka et al., 2000). To increase awareness and adoption of the most recent articulation of guidelines in this area, referred to as the 5 A’s (Fiore et al., 2000; Melvin et al., 2000), the American College of Obstetricians and Gynecologists (ACOG, 2002) developed and disseminated a self-study guide. ACOG is currently facilitating partnerships to enhance awareness and adoption of the guide, which is free and available in bulk, and will evaluate awareness and use of the guide through a survey. This paper summarizes the development of the survey, dissemination activities, and evaluation method.

The intervention

The 5 A’s (ask, advise, assess, assist, and arrange) are currently considered best practice for treatment of tobacco use and dependence. Their development was based on meta-analysis and expert opinion as outlined...
in the U.S. Public Health Service’s *Treating Tobacco Use and Dependence: A Clinical Practice Guideline* (Fiore et al., 2000). The 5 A’s have been adapted for use with pregnant women (Melvin et al., 2000). The adaptation concludes that brief cessation counseling (5–15 minutes) offered with pregnancy-specific self-help materials by a trained clinician can improve cessation rates by 30% to 70% compared with cessation rates achieved with simple advice to quit. The intervention is appropriate for use during routine prenatal office visits. It is most likely to be effective with pregnant women who smoke up to 20 cigarettes per day (Melvin et al.).

**Why ACOG?**

Obstetrician-gynecologists are a logical primary target group for an education campaign around the 5 A’s. Although obstetrician-gynecologists do not provide all the prenatal care in the United States, they attend approximately 85% of the deliveries. Similarly, ACOG, as the professional association for obstetrician-gynecologists in the United States, is a logical messenger of a campaign around the 5 A’s; it has among its 45,000 members well over 95% of all board-certified obstetrician-gynecologists, obstetrician-gynecologist residents, and recent graduates from obstetrics-gynecology residency programs. In addition to its reach, ACOG is well positioned to influence its membership because its members perceive ACOG as an authority for both guideline setting and education. Furthermore, two of the primary missions of the organization are standard setting and professional education. Historically, these missions have been carried out via print and electronic media and continuing education, all of which would be likely means of promoting the 5 A’s.

**Surveys**

To determine how to proceed with an educational campaign, ACOG reviewed data collected from a national ACOG survey on smoking cessation interventions during pregnancy. This review was followed by the development and administration of a more detailed survey in Ohio. The data gleaned from these surveys guided the development of the project.

**National survey**

ACOG conducted a national survey in 1998 to determine obstetrician-gynecologists’ practice knowledge and practice of smoking cessation and alcohol interventions during pregnancy. The 32-item survey was sent to 1,000 obstetricians in the United States; 60% were completed and returned to ACOG. The responses indicated that although almost all obstetrician-gynecologists asked pregnant patients about their smoking behavior and a similar proportion advised pregnant smokers to quit, few went any further to assist (as defined by the clinical practice guideline) with quitting (Table 1; Floyd et al., 2001). ACOG did not conduct any reliability or validity analyses as part of this project.

**State survey**

In 2001, a more detailed survey on smoking cessation interventions was mailed to all ACOG members who were practicing obstetrician-gynecologists or obstetrician-gynecologists in training in Ohio. The results confirmed the earlier findings: All obstetrician-gynecologists asked all prenatal care patients about smoking and 98% discussed the adverse effects of smoking and advised patients to stop smoking, yet fewer went beyond those steps (Table 2).

When asked about training in smoking cessation interventions, 77% of practicing obstetrician-gynecologists had received no formal training in smoking cessation and 85% reported that the methods they used were self-taught. When asked about learning needs, respondents indicated that they wanted to learn more about how to advise pregnant women to stop smoking (87%), how to provide social support (87%), and how to help a pregnant woman get support at home or work (86%). Almost all (95%) wanted advice on patient education materials for use with pregnant patients, and two-thirds wanted to learn more about organizing their office to provide smoking cessation counseling. The most preferred method for learning

**Table 1.** Percentage of U.S. obstetrician-gynecologists involved in screening and treating tobacco use in pregnancy (1998).

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ask women about tobacco use at first prenatal visit</td>
<td>98</td>
</tr>
<tr>
<td>Discuss adverse effects of tobacco use and advise abstinence</td>
<td>95</td>
</tr>
<tr>
<td>Assist with development of a quit plan</td>
<td>56</td>
</tr>
<tr>
<td>Provide self-help materials</td>
<td>35</td>
</tr>
</tbody>
</table>

Source. Data from American College of Obstetricians and Gynecologists national survey (Floyd et al., 2001).

**Table 2.** 2001:% of Ob-gyns in Ohio involved in screening and treating tobacco use in pregnancy.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Ask all prenatal care patients about smoking</td>
<td>100%</td>
</tr>
<tr>
<td>Discuss adverse effects of smoking and advise patients to stop smoking</td>
<td>98%</td>
</tr>
<tr>
<td>Assess the patients willingness to quit smoking</td>
<td>66%</td>
</tr>
<tr>
<td>Provide social support for cessation within the office</td>
<td>51%</td>
</tr>
<tr>
<td>Provide pregnancy-specific patient education materials</td>
<td>43%</td>
</tr>
<tr>
<td>Help the patient arrange social support at home</td>
<td>23%</td>
</tr>
</tbody>
</table>

Data from ACOG survey of Ob-gyns in Ohio (2001).
about smoking cessation for pregnant patients was a self-teaching manual (80%) followed by video or CD-ROM (53% and 48%, respectively).

These results were based on a mail survey of 346 Ohio obstetricians: 276 practicing obstetricians and 70 nonpracticing obstetricians (practice restricted to gynecology). The survey was sponsored by the Ohio section of ACOG, which partnered with the Ohio Department of Health and the national ACOG office. Princeton Survey Research Associates (PSRA) administered the survey and collected the data. The national ACOG office provided PSRA with the names and addresses of all Ohio members in ACOG’s membership database and listed as practicing obstetrician-gynecologists or residents in obstetrics-gynecology programs. PSRA attempted to contact each member up to three times via mail and e-mail, and those who did not respond were mailed a second copy of the questionnaire. Some 20 surveys were returned indicating a change of address or an undeliverable address. With 346 completed questionnaires among the 1,211 sent to a deliverable address, a total of 29% responded to the survey.

The survey was administered in Ohio because an established relationship existed between the Ohio Department of Health and the Ohio section of ACOG, both parties had identified physician involvement in implementing the 5 A’s as a priority, and both were interested and able to partner with the national ACOG office, the primary coordinator of the project.

Secondary data
In designing the project, ACOG reviewed the literature on physician adherence or nonadherence to practice guidelines. Nonadherence to guidelines appeared to be related to specific knowledge, attitudes, and beliefs on the part of physicians that included (a) lack of awareness of or access to the guidelines, (b) lack of agreement with the guidelines or beliefs that the guidelines are not relevant to the physician’s practice, will reduce autonomy, will lead to more litigation, or are impractical, (c) lack of outcome expectancy, and (d) lack of a sense of self-efficacy. Other factors that appeared as specific barriers to implementing counseling for smoking cessation included (a) lack of training, (b) lack of systems of support for counseling activities, (c) lack of appropriate patient education materials, and (d) the perception that smoking cessation will take more time than available (Cabana, Rand, Becher, & Rubin, 2001; Easton et al., 2001; Farquhar, Kofa, & Slutsky, 2002, O’Laughlin et al., 2001; Vaughn et al., 2002).

The tools shown to improve physician adherence to guidelines include medical record checklists and flow-sheets, stickers and alerts, reminders, and the provision of feedback on performance (Andrews, Tinger, Waller, & Harper, 2001; McPhee & Detmer, 1993).

ACOG’s plan
In response to the survey results and the findings described in the literature on physician adherence to practice guidelines, ACOG developed the following strategies aimed at increasing awareness and adoption of the 5 A’s: (a) develop and disseminate information on the 5 A’s in hard copy, (b) provide in-person educational opportunities to learn about the 5 A’s, (c) promote systems changes, (d) build a market and demand for the intervention, and (e) evaluate the impact of these efforts among obstetrician-gynecologists. These strategies, and the activities that support them, are described in the sections that follow.

Develop and disseminate information on the 5 A’s
To increase the number of obstetric providers who are aware of and implement the 5 A’s, ACOG developed and distributed two major educational resources: an educational bulletin that established the 5 A’s as best practice, and a detailed “one-stop shopping” self-instruction guide and toolkit for office use.

The ACOG educational bulletin Smoking Cessation During Pregnancy (ACOG, 2000) established the 5 A’s as a routine part of prenatal care, outlined the components of appropriate smoking cessation counseling for pregnant women, and included a chart insert that guides the clinician through the steps of the 5 A’s. This publication reached over 40,000 ACOG members. In addition, over 4,700 standalone copies of the bulletin were distributed to various public health professionals including state health department health educators, staff from Centers for Disease Control and Prevention-designated regional training centers and voluntary organizations.

Smoking Cessation During Pregnancy: A Clinician’s Guide to Helping Pregnant Women Quit Smoking, available as of November 2002, is a CME-accredited self-instruction guide for clinicians and toolkit for office practices. It is available free of charge. It was developed in consultation with obstetrician-gynecologists, representatives from the Smoke-Free Families National Dissemination Office, Association of Women’s Health and Obstetric and Neonatal Nurses, and Association of Certified Nurse-Midwives as well as smoking cessation specialists. It has three components: (a) a 28-page monograph that describes the 5 A’s and how to integrate the 5 A’s into routine prenatal care, including photocopy-ready office tools,
such as an intervention documentation flowsheet for a patient's medical record, a quick-reference card on how to ask about smoking status, and a checklist and role assignment chart for launching the 5 A's in any practice setting, (b) a 20-page booklet of case studies that includes dialogue and key points to consider when counseling women who smoke, and (c) the Smoke-Free Families patient education workbook Need Help Putting Out That Cigarette.

Promotional flyers were mailed to ACOG's membership (N=43,000). The guide was mailed to all residents in obstetrics-gynecology (N=4,843) and to all members who had recently completed residency (N=4,531). Guides were mailed to all members of the Society of Maternal-Fetal Medicine (N=1,900). The guide was marketed in ACOG Today, the monthly ACOG newsletter, and other direct membership mailings. In the first month of such marketing, over 500 requests were received for the guide. Further distribution targeted educational programs including residency program directors, medical school obstetrics-gynecology clerkship directors, and chairs of university obstetrics-gynecology departments.

In addition to the promotional mailings, ACOG marketed the guide at seminars or trainings on smoking cessation, including the ACOG annual clinical meeting, annual district and section meetings, and other ACOG postgraduate courses. ACOG also promoted the guide to other membership organizations involved in prenatal care by capitalizing on the Smoke-Free Families National Partnership to Help Pregnant Smokers Quit.

**Offer training opportunities**

A slide lecture and accompanying guide were developed as companion pieces to the self-instruction guide. The lecture is suitable for training small groups of residents or participants of a large plenary session. These materials are available (on ACOG’s website ACOG.org) as downloadable files free of charge to anyone interested in providing training on the 5 A’s.

ACOG plans to promote the guide in 2003–2004 to obstetrician-gynecologists through a special project that facilitates public-private partnerships. This initiative was originally drafted by cooperative agreement between the Federal Maternal and Child Health Services and ACOG to facilitate the collaborative efforts of public health organizations at the state and local level, including the March of Dimes and other provider organizations, and state ACOG clinicians in the area of perinatal and women’s tobacco use and exposure to environmental tobacco smoke. Currently, four states (Maryland, North Carolina, Nevada, and New York) have ACOG tobacco partnerships and others are emerging. Each team is autonomous, developing strategies fitting the needs and resources of the locality. Most of the partnerships are developing innovative strategies to promote the ACOG self-instruction guide. For example, in Maryland, a pilot project across one county will use the guide as a format for training and office system development for both public and private prenatal care providers. Also in Maryland, county tobacco control leaders across the state will work with individual obstetric providers to develop office-based counseling programs. In Nevada, the guide is promoted along with the Tobacco User’s Help Line, supplying obstetric providers with the tools to screen and intervene on tobacco use and then directly referring women to the help line for counseling and support.

In addition to these formal state partnerships, this ACOG project has disseminated the guide to all state public maternal and child health officials, Medicaid directors, lead family planning agencies, and other appropriate state and national perinatal and women’s health leaders. Other key statewide initiatives have sprung up through these distribution points. In Minnesota, 220 guides were disseminated at a state medical providers’ meeting. In West Virginia, trainers will follow the curriculum outlined in the guide to train 200 public health nurses in the 5 A’s of tobacco counseling. In conjunction with its campaign on prematurity, the March of Dimes has asked each of its state chapters to promote the guide through chapter newsletter articles, individual provider contacts, and other promotional campaigns.

*Promote systems changes to institutionalize the intervention*

ACOG identified three key areas in which to focus:

**Medical school curriculum.** ACOG will promote the guide to directors of obstetrics-gynecology clerkships for medical students and the obstetrics-gynecology special interest group for medical students. In addition, ACOG is collaborating with the Association of Professors of Gynecology and Obstetrics to revise the learning objective on tobacco use during pregnancy for graduating medical students.

**Obstetrics-gynecology residency curriculum.** ACOG plans to assess the obstetrics-gynecology residency curriculum as it relates to treatment of tobacco use and dependence and the content of the residency in-service obstetrician-gynecologist exam for questions on the 5 A’s. ACOG also will initiate discussions with the American Board of Obstetrics and Gynecology regarding the inclusion of questions on treating tobacco use and dependence on the written board exam and in the recertification exams.
ACOG promoted the guide to ACOG members in its monthly newsletter, Web site, and monthly resource packet. Nonmembers may learn about the guide’s availability through the National Partnership to Help Pregnant Smokers Quit. Also, since 1999, ACOG has facilitated the recording of public service announcements. These announcements are recorded by ob-gyns and include information on the health risks of smoking and encourage women to ask their obstetrician-gynecologist for help with quitting.

Evaluate the impact of these strategies among obstetrician-gynecologists

ACOG plans to participate in two major efforts that will evaluate the impact of these strategies on obstetrician-gynecologist awareness and implementation of the 5 A’s. First, a database has been created of obstetrician-gynecologists who received the self-instruction guide. These recipients will be asked to respond to an evaluation of the guide. This information is already being collected from obstetrician-gynecologists who complete the CME assessment test and evaluation. In addition, ACOG will mail a separate survey to residency program directors to assess their use of the guide and slide lecture kit in residency education.

Second, ACOG and the Smoke-Free Families National Dissemination Office are in the process of developing a national survey of obstetrician-gynecologists to estimate (a) the number of obstetrician-gynecologists who have received formal training via the ACOG code, other CME-accredited self-study guides, or in-person training in the 5 A’s, and (b) the number of obstetrician-gynecologists who implement the 5 A’s. Regional differences will be assessed, thereby allowing ACOG to follow-up in Ohio, the state where detailed baseline information was collected.

Conclusion

ACOG’s surveys and literature review point to specific learning needs among clinicians that, if redressed, could greatly increase the number of obstetrician-gynecologists who offer the 5 A’s, an evidence-based intervention to help pregnant women quit smoking. ACOG hopes to reach obstetrician-gynecologists through widespread dissemination of its free CME-accredited self-instruction guide on the 5 A’s, state-level facilitated partnerships, and changes to undergraduate and graduate medical education.

Acknowledgments

Funding for the activities described in this project were provided by ACOG and the Robert Wood Johnson Foundation.