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Barriers and Promoters of an Evidenced-Based Smoking Cessation Counseling During Prenatal Care in Argentina and Uruguay

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Abstract

In Argentina and Uruguay, 10.3 and 18.3 %, respectively, of pregnant women smoked in 2005. Brief cessation counseling, based on the 5A's model, has been effective in different settings. This qualitative study aims to improve the understanding of factors influencing the provision of smoking cessation counseling during pregnancy in Argentina and Uruguay. In 2010, we obtained prenatal care providers', clinic directors', and pregnant smokers' opinions regarding barriers and promoters to brief smoking cessation counseling in publicly-funded prenatal care clinics in Buenos Aires, Argentina and Montevideo, Uruguay. We interviewed six prenatal clinic directors, conducted focus groups with 46 health professionals and 24 pregnant smokers. Themes emerged from three issue areas: health professionals, health system, and patients. Health professional barriers to cessation counseling included inadequate knowledge and motivation, perceived low self-efficacy, and concerns about inadequate time and large workload. They expressed interest in obtaining a counseling script. Health system barriers included low prioritization of smoking cessation and a lack of clinic protocols to implement interventions. Pregnant smokers lacked information on the risks of prenatal smoking and underestimated the difficulty of smoking cessation. Having access to written materials and receiving cessation services during clinic waiting times were mentioned as promoters for the intervention. Women also were receptive to non-physician office staff delivering intervention components. Implementing smoking cessation counseling in publicly-funded prenatal care clinics in Argentina and Uruguay may require integrating counseling into routine prenatal care and educating and training providers on best-practices approaches.

Keywords

Qualitative research; Health personnel; Prenatal care; Smoking cessation counseling

Background

Argentina and Uruguay, classified as middle and high-income countries by the World Bank [1], are among the countries with the highest proportion of women who smoke, with rates ranging from 15.7 to 19.8 % [2, 3]. In these countries, 10.3 and 18.3 %, respectively, of pregnant women smoked during pregnancy in 2005 [4]. Smoking during pregnancy causes preterm delivery, fetal growth restriction, low birth weight, placenta previa, and placental abruption [5]. Infants exposed to smoking in utero are at greater risk of preterm-related infant death and sudden infant death syndrome (SIDS) [6, 8, 9]. Reducing maternal tobacco use may improve tobacco-related adverse outcomes [10, 11]. Thus, smoking among pregnant women is an immediate health care concern in these countries.

The Argentinean and Uruguayan Ministries of Health developed national clinical guidelines in 2005 and 2009, respectively, that recommend that clinicians provide effective smoking

cessation counseling to pregnant women who smoke [12, 13]. However, providers' knowledge, attitudes and implementation of these guidelines remain unknown. Brief cessation counseling, based on the 5A's model, has been effective for smoking cessation in different settings, and by different types of providers [14]. The 5A's model includes: Ask about smoking status, Advise to quit smoking, Assess readiness to quit, Assist to quit, and Arrange follow-up. A 2013 Cochrane review demonstrated that behavioral interventions, such as the 5A's, increase the smoking abstinence rate during pregnancy by 5 % [15]. The 5A's are currently a best practice approach in the USA for all patients, including for pregnant women during prenatal care [16].

Provider barriers to implementation of the 5A's within prenatal care settings include lack of time, resources, training, and confidence in having the skills to intervene [17–21]. Meanwhile pregnant smokers' barriers to receiving smoking cessation interventions include lack of awareness of smoking harms [22–25]. To our knowledge, no prior research has examined barriers to implementation of smoking cessation interventions in South America, in which there are differences in women's cultural context and health care delivery.

This qualitative study aims to improve the understanding of systemic and individual factors influencing the implementation of the 5A's in prenatal care settings among prenatal clinic directors and providers and acceptance of interventions among pregnant women in Argentina and Uruguay. This study was designed to identify barriers and promoters in order to culturally tailor an intervention for providers on how to deliver the 5A's strategy during routine prenatal care in the context of a clinical trial.

Methods

Data Collection and Study Population

Focus groups and semi-structured interviews were conducted with three segments: prenatal clinic directors, health providers [obstetrician-gynecologists (Ob/Gyns), midwives, nurses], and pregnant smokers. These segments were chosen to provide varying perspectives of both delivery and receipt of the intervention. Except for clinic directors, a convenience sample for each segment was employed until reaching saturation. This research was conducted during August–November 2010 prior to implementing a randomized-cluster controlled trial [26].

Clinic directors and providers were recruited from two public prenatal clinics in Buenos Aires, Argentina and two in Montevideo, Uruguay. These clinics were selected because they served similar patients and operates similarly to clinics that were included in the main trial. Generally, the clinic directors were physicians who set policies and procedures for prenatal care practice. Nurses took vital signs (e.g., weight, blood pressure). In Argentina, midwives cared for low-risk patients, and Ob/Gyns cared for high-risk patients throughout pregnancy. In Uruguay, midwives mainly performed health promotion activities. Four interviews were conducted with clinic directors, three focus groups were conducted with midwives, four with nurses, and three with Ob/Gyns.

Pregnant smokers were eligible if they self-reported current smoking and attended any of two public prenatal clinics in Argentina and two in Uruguay. These four clinics were

different from which the providers were recruited. A total of four focus groups were conducted with pregnant smokers.

Recruitment was conducted by a coordinator working in each clinic. Participants completed a short demographic questionnaire and gave consent. Clinic directors and providers did not receive reimbursement for participation. Women received a bag of diapers and reimbursement for transportation costs. Meals were provided for focus group sessions with providers and women. Each focus group lasted 60–90 min, and the individual interviews lasted 60 min. The protocol was approved by the Ethics Committees of the School of Medicine of the Universidad de la República, Montevideo, Uruguay; the CEMIC Norberto Quino School of Medicine, Buenos Aires, Argentina; Centers for Disease Control and Prevention, Atlanta, Georgia, United States; and Tulane University, New Orleans, Louisiana, United States.

Analysis

All sessions were audio recorded for transcription, systematization, and analysis. The sessions were moderated by the principal investigator, and a research assistant took notes of participants' comments and recorded any non-verbal cues. At the beginning of each session with providers, an explanation of the 5A's protocol was provided. A deductive content analysis was conducted. The principal investigator and research assistant coded independently information from the transcripts according to categories based on the interview and focus group questions. Agreement was substantial, and discrepancies were discussed until the researchers resolved them. The researchers categorized the themes, and a matrix was developed where the axis represented: the codes used and the participants' categories. Finally abstraction and interpretation of data was performed. As part of this analysis, direct quotations representative of participants' opinions were selected. Quotations were translated from Spanish to English for the purpose of this article.

Results

A total of 52 health professionals and 24 women participated in the study (see Table 1). Providers included: clinical directors [6], Ob/Gyns [7], midwives [20] and nurses [19]. Eight participants were men, (mainly directors and Ob/Gyns). 72 % were <50 years old, and a third had more than 10 years of prenatal care experience. Barriers and facilitators of potential implementation of the 5A's emerged among both providers and women (Figs. 1, 2).

Barriers Identified by Providers

Most providers reported several barriers to implementation of smoking cessation interventions, such as: lack of knowledge and training about how to provide the counseling, low self-efficacy, lack of time, consensus on strategies and of priority setting at the clinic.

Barriers Related to Individual Issues

Inadequate knowledge: Providers varied in their understanding of how to intervene with pregnant smokers. Some providers recommended abstinence while others recommended to

reduce the amount of tobacco they smoked, as they felt this was a realistic expectation for both the provider and the patient.

Midwife: Well, I tell them, “Beginning today, you should start smoking half a cigarette. The rest you throw in the garbage.”

Also, providers, mostly midwives, had the perception that advising pregnant smokers to quit might be detrimental to the patient-provider relationship.

Midwife: You have to be careful with how to tell them things. Because sometimes they do t like it or they take it wrong or.... they do t come back.

Little information on the risks of smoking: The majority of providers, mostly midwives and nurses, reported that smoking was bad, but they lacked knowledge of the specific risks in order to advise their patients.

Expectations of poor outcome expectancies for smoking cessation counseling and low self-efficacy: Providers’ attitudes towards implementing smoking cessation counseling were sometimes skeptical about the likelihood of success, inhibiting their willingness to intervene. They expressed a lack of confidence in their ability to provide appropriate interventions, though some providers did offer referrals. Also, they did not feel confident in their communication skills to adequately advise women about smoking cessation.

Midwife: If you have a patient who maybe smokes 40 cigarettes [a day], it is impossible that she will quit smoking.

Provider’s smoking status: Providers who were non-smokers expressed that someone who smokes should not deliver cessation counseling, since it would reduce the credibility of the advice given to the patients.

Ob/Gyn: If there is a health professional that smokes, he ca t show up in front of the woman with a pack of cigarettes or smelling like cigarettes, do you understand?

Barriers Related to Clinic and Organizational Issues

Communication issues: Providers described poor communication with authorities and colleagues in the health centers. Medical teams lacked consensus on implementation strategies and did not have clinical guidelines for smoking cessation, contributing to inconsistencies between providers and hindering a systematic approach.

Director: There is no protocol for the process. What do we do when we face that situation in the clinic? It is not written down...

Lack of time: Most providers believed that they did not have adequate time during prenatal visits to conduct smoking cessation counseling, since the average time allocated is only about 15 min. They expressed feeling pressured for time with current demands of completing many records for each patient visit.

Midwife: I first have to gain the woman's trust so that she will tell me she smokes one or 50 or none, if she smokes *Paco* (crack), if her husband hits her, if she is a lesbian. I have to generate this [report]... and in 15 min I can't....

Lack of training: All providers from both countries reported that the last time they received information about smoking cessation was during medical school. Providers anticipated that the most important topic in training would be how to deal with addictions. They also wanted information on the consequences of smoking during pregnancy and implementation of the 5A's.

Ob/Gyn: We need training on interventions, on what to say. The information we have is from the university, the basics, but nothing new....

Smoking cessation is not a high priority in current practice: Despite the high prevalence of smoking in pregnant women, smoking cessation has not been prioritized by health centers.

In addition, midwives stated that Ob/Gyns do not want to conduct health promotion activities. Finally, they highlighted the importance of receiving support and commitment from the authorities in order to put the issue into the agenda.

Midwife: This is the first time we are hearing something related to prevention. The topics were always related to nutrition, breastfeeding, that kind of stuff....

Barriers Identified by Pregnant Smokers

Similar to providers, women reported barriers to participating in smoking cessation counseling, such as lack of knowledge of the risks of prenatal smoking, personal perceived risks, and logistical barriers.

Lack of knowledge: Most women were not aware of the specific risks of prenatal smoking. While most women were aware that smoking was harmful in general, they were unaware of how it could be harmful to themselves and their babies. Pregnant smokers appeared to be in denial of their need to quit smoking. In addition, among those women who had received information regarding the benefits of quitting, some received incorrect information.

Patient: When the doctor checked me, she asked me, "How many do you smoke?" "Three or four and maybe more." And the doctor said to me, "OK, you do t have to quit. Just do t smoke more than three because it is bad for you."

Previous babies were healthy: Women who smoked throughout a previous pregnancy and had healthy babies, failed to see the need to quit. They also had the belief that the anxiety caused by quitting would be worse for the baby than smoking.

Patient: This [baby] I am having is number eight, and I smoked with all of them and never had a problem with the kids. Thank God, right?

Patient: A doctor told me that it is worse to be anxious than to smoke ...Smoke one or two a day because anxiety is worse for you.

Underestimation of the difficulty of smoking cessation: Many women did not perceive a need for provider support to quit smoking, since they were not aware that quitting smoking could be challenging.

Patient: Because I think that if I want to quit, I will quit. I do t need the doctor to tell me those things....

Dissatisfaction with care provided at the health center and communication with providers: Pregnant smokers expressed frustration with long waiting times for short check-ups that did not always meet their needs. Women also experienced difficulty communicating with providers because they talked too little, answered too quickly, or gave unclear information.

Patient: To me it is not right, a professional with a degree who uses his terminology or [a condescending] manner of talking to the patient...

Promoters Identified by Providers

Participants described various factors that would facilitate the integration of smoking cessation into prenatal care.

Willingness to change behavior: Most providers expressed interest in modifying their current approaches to smoking cessation. Specifically, nurses believed that counseling could be part of their activities. Providers agreed that education about the benefits of smoking cessation would raise awareness and increase motivation to implement counseling in routine care.

Nurse: I graduated a year ago, and I am capable of counseling. I am trained for that and for more than that.

Use of time while waiting to see provider: Providers noted that the time women spent in the waiting room could be used for smoking cessation counseling. This time has been used to provide supportive care to patients and health education activities.

Midwife: We already started showing a breast cancer prevention video in the waiting room. In fact, it is successful because in our center, we use the waiting room a lot. So before seeing the patients, when there are 20 mothers, we take advantage of that and we give a talk, provide materials, and they participate.

Use of written materials: Providers recommended that smoking cessation counseling should include written materials (e.g., brochures, pamphlets). They reported that patients appreciated written materials, and felt that it would be a good resource for smoking cessation counseling. Also they perceived that when brochures contain shocking images, it might motivate cessation.

Midwife: The materials are very influential. Me, I work a lot with written materials. Mothers read them....

Guided approach with explicit counseling script: Lastly, providers expressed the need for an explicit and evidence-based script to deliver the counseling. They stated that having a structured protocol on how to approach women would increase their confidence and improve efficiency by saving time and obtaining better results. Also counseling reminders could be placed in the records.

Midwife: It would be good to be trained in a structured way to give the smoking cessation advice.

Promoters Identified by Pregnant Smokers

Good Patient and Provider Relationship—Women stated that a strong patient and provider relationship would be essential to the effectiveness of smoking cessation counseling.

Openness to information: They expressed interest in topics that addressed pregnancy, so receiving additional information regarding smoking cessation via brochures, posters, and other educational materials would be welcomed.

Patient: the posters prompt you to ask your doctor and while in the waiting room, since you have nothing to do you can read.

Openness regarding who delivers the advice: Women reported that they would accept smoking cessation information from any of the office staff.

Patient: Maybe it is giving [the doctor] too much work, right? If possible, it is the same if it is the nurse or the midwife. Split the tasks a bit, so the job is a little easier.

Emphasize the adverse effects on the baby: Women suggested that receiving information about the adverse health outcomes of smoking on the baby would raise their awareness and motivate them to quit.

Discussion

Our results revealed a variety of factors that might influence provider implementation and women acceptance of smoking cessation counseling during prenatal care in Argentina and Uruguay. This study is unique because we took into account both perspectives of providers and patients in hopes to improve implementation of the smoking cessation intervention. Previous studies addressed how to effectively implement the 5A's model in different settings, and others addressed barriers to the provision of smoking cessation counseling [27]. But a few studies focused on barriers for the implementation of brief cessation counseling during pregnancy, and not one has been performed in South America. Only one study performed in Africa [18], used a qualitative approach and assessed Ob/Gyn's barriers for the provision of counseling, and another study conducted in UK assessed midwives perceptions on the same issue [17]. Other studies assessing cessation counseling during pregnancy did not assess professional's barriers and suggestions cannot be offered [28–30]. Finally,

regarding pregnant smokers views, only one qualitative study had assessed barriers, but did not assess potential promoters [25].

Major provider barriers included inadequate knowledge and low self-efficacy to implement a brief counseling intervention during pregnancy. In addition, providers reported other major barriers such as a lack of protocols and confidence that cessation intervention would be effective. Providers also believed that smoking cessation counseling was lengthy and required complex skills. Though providers expressed interest in modifying their current approaches to smoking cessation and stated that training, including scripts, might increase their skills. However, because of time constraints, they were skeptical that a counseling intervention could be added to an already full prenatal visit. Providers, other than Ob/Gyns, expressed interest in conducting counseling. For example, nurses believed that it could be part of their activities, and many had received training in how to conduct health promotion activities.

Women also reported a number of barriers to accepting a brief counseling intervention. Because of dissatisfaction with long wait times, women perceived additional visits to the clinic for smoking cessation counseling as an inconvenience. Women also lacked adequate information on the risks of prenatal smoking and did not seek help from providers to quit smoking, but they suggested that receiving information regarding health outcomes would raise awareness and motivate them to quit. However, women who had smoked in other pregnancies and experienced no complications, failed to see any benefit of smoking cessation.

Time constraints for both providers and pregnant women were reported as a main barrier to providing smoking cessation intervention, as has also been suggested by prior research [19, 20, 31]. Therefore, training must emphasize concise counseling sessions and clarify misperceptions regarding time consumption. Other relevant provider barriers previously documented were lack of confidence on chances of success and lack of counseling skills [18, 20, 21, 32], indicating that training may improve health promotion aptitudes and convince providers that smoking cessation interventions can be effective. As seen in studies with culturally diverse women [23–25], lack of adequate information on the risks of prenatal smoking was an important barrier for seeking help from providers to quit smoking.

Lack of established protocols at the organizational level was already reported [33] and was a significant barrier for the delivery of cessation interventions. Protocols that require all prenatal care patients to be asked about their smoking status and that require smokers to be counseled to quit or referred to services, may help ensure that smoking cessation interventions are offered. For example, adding check boxes on medical records to indicate smoking status and whether counseling was received has been successful in making smoking cessation a routine part of prenatal care in high-income countries, and it is cost-effective [7]. Additionally, strengthening referral systems, and increasing providers' awareness of their performance by providing feedback reports have all helped to improve cessation implementation [7]. Failures in communication between providers and directors or with other providers were reported often. Evidence suggests that difficulties in communication among physicians inhibit referrals and the ability to treat [34]. Moreover,

training in effective teamwork and communication among providers could significantly improve health outcomes [35].

A successful implementation of a smoking cessation intervention could be achieved if the following suggestions from participants are taken under consideration:

- Obtain commitment of the clinic director to support and advocate for the initiative.
- Involve the nursing staff and midwives as a key part of the implementation strategy as they appeared to be more open to implementing new activities and are trained for health promotion. They need support from the authorities and Ob/Gyns.
- Include a module of awareness and information on smoking during pregnancy.
- Use reminders in the clinical record, offices and nursery to track delivery of counseling.
- Utilize time spent in the waiting room. Receiving the smoking cessation counseling shouldn't imply additional visits to the clinic.
- Place posters in the waiting room and brochures to be handed out to the women. Provide systematic guidelines for an effective approach.

We note some limitations. First, we employed convenience sampling for recruitment, thus the study is not generalizable beyond the study participants. Second, the findings were based on opinions and perceptions rather than observation of actual providers in practice. Additional barriers could exist that may affect intervention implementation that could not be ascertained through this research. The results of the present study are relevant for providers and institutions for implementation of cessation counseling as part of routine prenatal care. Although our findings are, for the most part, consistent with previous research, this formative research is needed to better understand whether implementation of a best practice approach, such as the 5A's will be successful given the differences in ethnicity, cultural environment, smoking rates, and health system (e.g., waiting times, prenatal care visit length, organizational issues and prenatal care schedules) in our study countries. Addressing providers and women barriers and capitalizing on promoters for cessation counseling could improve its integration into routine prenatal care and, ultimately, improve infant health outcomes.

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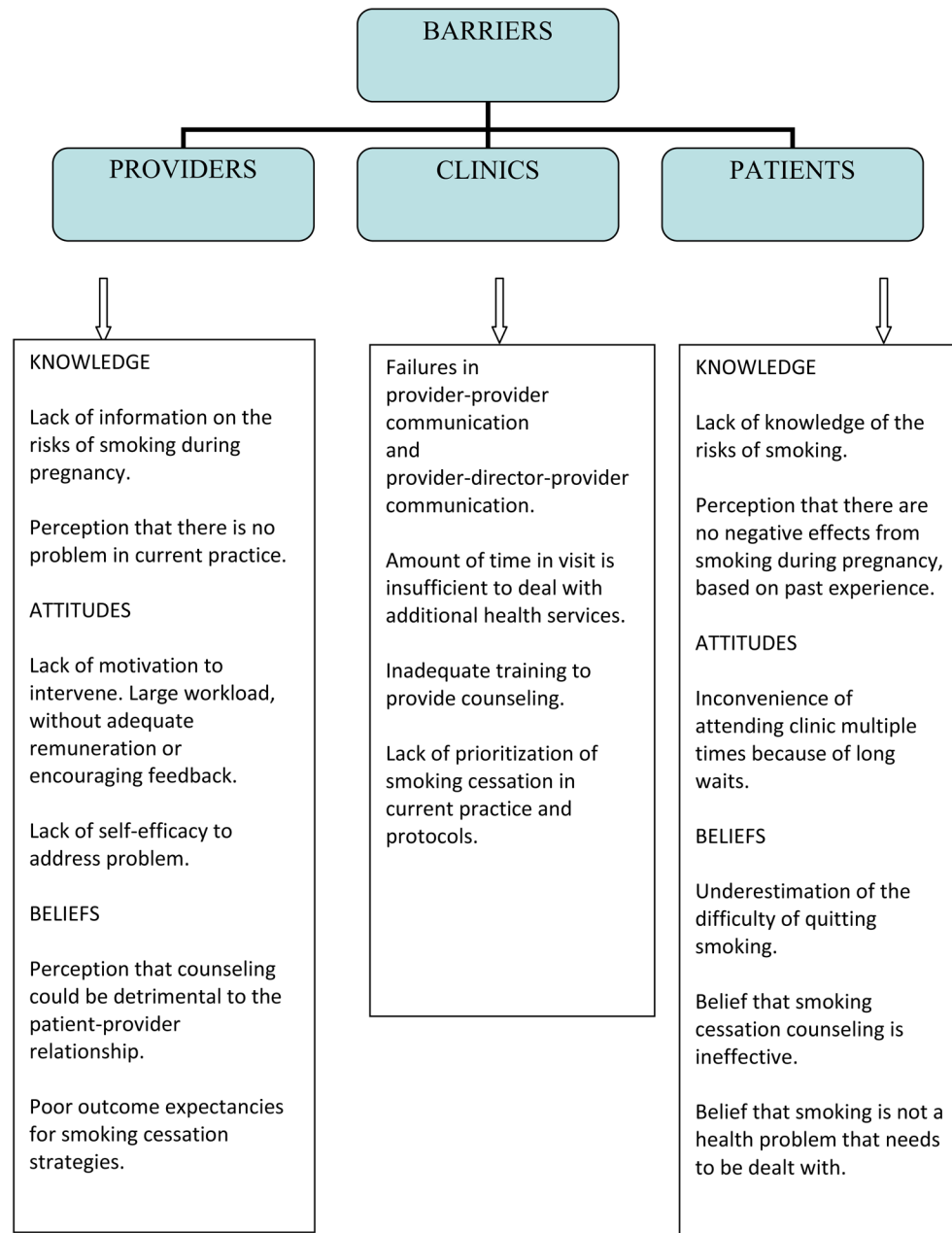


Fig. 1. Professionals, patients, and clinic barriers to uptake and provision of a smoking cessation intervention in prenatal care clinics—Argentina and Uruguay, 2010

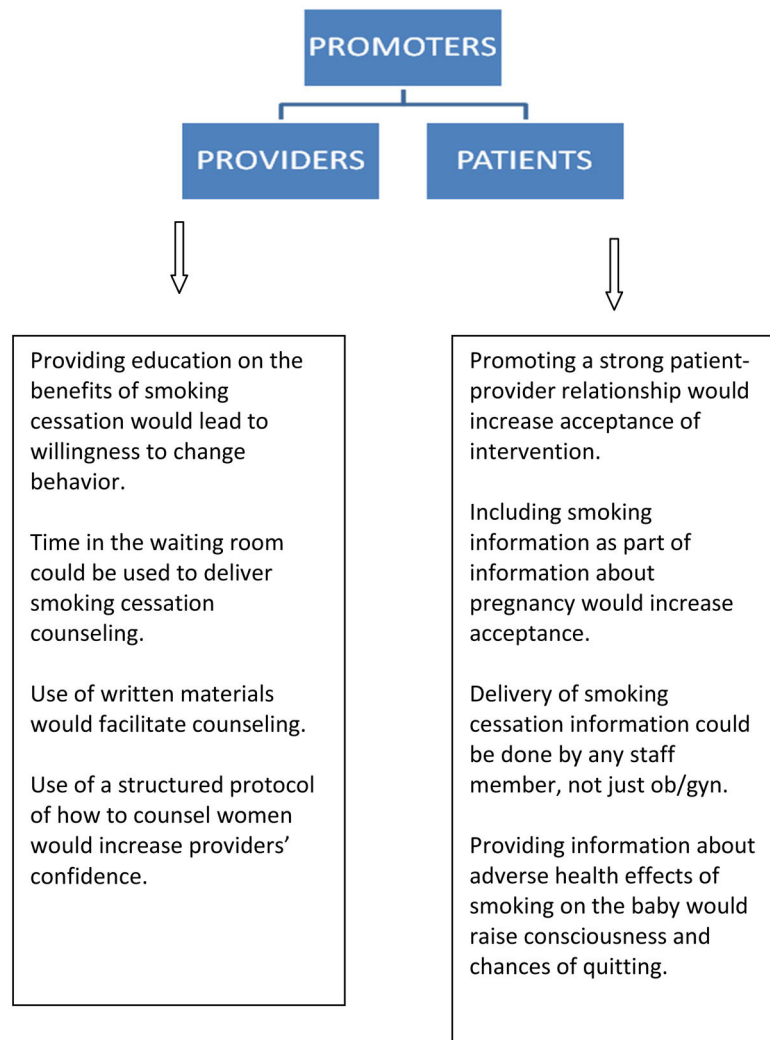


Fig. 2. Patient and provider promoters of provision and acceptance of a smoking cessation intervention in prenatal care clinics—Argentina and Uruguay, 2010

Table 1

Characteristics of pregnant smokers—Argentina and Uruguay, 2010

Characteristic	N	%
Total	24	100
<i>Country</i>		
Argentina	13	54.0
Uruguay	11	46.0
<i>Age</i>		
<20	4	17.0
20–34	18	75.0
>35	2	8.0
<i>Parity</i>		
First child	6	25.0
Second or later child	18	75.0
<i>Marital status</i>		
Single	11	45.8
Married or living with partner	13	54.2
<i>Highest level of education</i>		
No or some primary school	1	4.2
Completed primary school	6	25.0
Some high school	11	45.8
Completed high school	4	16.7
Some university	2	8.3