



## Doctors' attitudes and practices regarding smoking cessation during pregnancy

K Everett, H J Odendaal, K Steyn

**Objective.** To investigate the current smoking cessation practices and attitudes of doctors working in the public antenatal services, as well as their perceived barriers to addressing the issue in the context of routine care.

**Study design.** The study was qualitative, consisting of 14 semi-structured, one-to-one interviews with doctors purposefully sampled from 5 public sector hospitals in Cape Town, South Africa.

**Results.** The doctors in this study regarded HIV, poor nutrition, alcohol abuse and psychosocial stress as equal or higher risks to pregnant women than smoking. They tended to underestimate the magnitude of the risk of smoking during pregnancy. Doctors were unaware of the guidelines offering clinicians brief, structured approaches to smoking cessation counselling and were generally pessimistic that they could influence the smoking behaviour of pregnant women, especially poor, disadvantaged women who face multiple barriers to achieving health-enhancing behaviour. However, most doctors were concerned about improving their

communication with pregnant women about smoking and open to adopting new approaches or tools that could assist them. Perceived barriers to providing smoking cessation interventions included a lack of counselling skills and educational resources, other pressing priorities, too little time, and the levels of stress currently experienced by doctors and midwives working in public sector hospitals as a result of dramatic staff and budget cuts.

**Conclusion.** The study suggests that doctors working in the public sector antenatal services are not routinely addressing the issue of smoking during pregnancy or using effective methods to assist women to give up smoking. Doctors need convincing that smoking cessation interventions can be effective. The promotion and provision of evidence-based guidelines such as the Clinical Practice Guideline for Treating Tobacco Use and Dependence (Fiore, 2000), with minimal training, is a possible strategy for integrating smoking cessation interventions into routine antenatal care in South Africa.

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Maternal smoking is an important, independent cause of a number of adverse pregnancy outcomes, including abruptio placentae, placenta praevia and preterm delivery. Smoking during pregnancy also increases the risk of stillbirth, low birth weight, neonatal death and sudden infant death syndrome.<sup>1</sup>

Surveys of smoking during pregnancy in South Africa have found alarmingly high rates of smoking among one particular ethnic and cultural group, namely coloured women or women of mixed ancestry. A 1997 survey,<sup>2</sup> which sampled pregnant women from various socio-economic and cultural backgrounds, found that while 20% of South African women overall smoked during pregnancy, the figure rose to 47% for coloured women. In a 2002 survey of coloured pregnant women attending public sector antenatal clinics, 46% reported that they continued to smoke during their pregnancy (Z Petersen, unpublished data, 2003).

The urgent need for a smoking cessation intervention for this

sub-group was recently underscored by research done at a hospital in Cape Town, which found that smoking significantly increased the risks of preterm labour and abruptio placentae among the predominantly coloured women attending the obstetric services. These conditions are the two leading causes of perinatal death at the hospital. Smoking was also associated with a mean reduction of 256 g in birth weight.<sup>3</sup> Given these statistics, a smoking cessation intervention targeting disadvantaged coloured women is likely to have a significantly beneficial effect on perinatal outcomes.

There is strong evidence that smoking cessation interventions for pregnant women can achieve significant improvements in smoking cessation rates. Many studies have also demonstrated that such programmes can produce decreases in low birth weight.<sup>4</sup> Effectiveness has been most clearly documented for cognitive behavioural interventions, consisting of brief, individual counselling from a trained provider and the provision of self-help education material, specifically tailored to pregnancy. Randomised control trials of such interventions have produced quit rates on average 8 - 12% higher than those of control groups receiving usual care.<sup>4</sup> A variety of providers have been found to be effective in delivering such programmes, including doctors, nurses, midwives, lay counsellors and health education specialists.

Counselling from clinicians has been found to be significantly

*Chronic Diseases of Lifestyle Unit, Medical Research Council, Tygerberg, W Cape*

**K Everett**, BA, HDE, PG Dip Health Promotion  
**K Steyn**, MSc, NED, MD

*Department of Obstetrics and Gynaecology, Stellenbosch University, Tygerberg, W Cape*

**H J Odendaal**, MB ChB, FCOG (CMSA), MMed (O&G), FRCOG, MD

*Corresponding author: K Everett (murphy@mindspring.co.za)*



more effective if recommended smoking cessation guidelines are used.<sup>5</sup> There is substantial evidence that structured interventions as brief as 3 minutes can significantly increase cessation rates.<sup>5</sup> In the USA, smoking cessation guidelines were endorsed for use with pregnant women at a consensus workshop on interventions for pregnant women in 1988<sup>6</sup> and promoted as best practice by the American College of Obstetricians and Gynecologists in 2000.<sup>7</sup> However, despite their potential impact, research has shown that most antenatal care providers in the USA and elsewhere do not utilise recommended approaches to help pregnant women stop smoking.<sup>8</sup>

In South Africa, the state health services do not have any policies or programmes that address smoking. Even basic information on the risks of smoking during pregnancy is not available. The Medical Research Council of South Africa has undertaken research for the purposes of developing such an intervention for pregnant women and assessing its feasibility for integration into routine antenatal care in the public health sector. The project has also included research and consultation with the midwives and doctors who provide antenatal care to these women.

## Methods

A total of 15 semi-structured interviews were conducted with doctors purposefully sampled from all five public sector hospitals in Cape Town, South Africa. Questions explored doctors' evaluation of smoking as a priority issue in antenatal care, their routine practices, their approaches to and feelings about smoking cessation counselling, their attitudes to a potential intervention, and possible barriers to its implementation. The structure of the interview was flexible and open, allowing respondents to explore issues in their own terms and to raise other issues for discussion. Interviews lasted approximately 60 minutes and were conducted in the privacy of doctors' offices. They were audio-taped with permission from the respondents and then transcribed verbatim. Interviewing ceased when no new themes emerged. The data analysis methods of open, selective and axial coding from Tecsh<sup>9</sup> and Strauss and Corbin<sup>10</sup> were used in order to develop an interpretation inductively derived from the data. A preliminary analysis of the interviews was given to each respondent to review as a means of confirming the accuracy and credibility of the researcher's interpretation of their experiences.

## Results

### Knowledge and routine practices

While most doctors accepted that smoking during pregnancy was important, they explained that most of their patients had

**Table I. Doctors' perceived barriers to smoking cessation counselling**

Other more pressing priorities in antenatal care, especially HIV infection
Lack of attractive educational resources to distribute to pregnant smokers
Little understanding of how to motivate patients to change behaviour
Lack of smoking cessation counselling skills and educational aids
Lack of knowledge of effectiveness of clinic-based smoking cessation interventions
Pessimism among health care providers that they can influence patient behaviour
Low levels of educational attainment among disadvantaged patients
Negative attitude of pregnant women towards quitting
Apparent lack of concern about smoking in pregnancy among women
Pregnant women's dependence on smoking to relieve stress
Too little time to interact with and educate pregnant women
Current levels of stress among health care providers in the public sector
General despondency among staff about working conditions in the public sector
Acute shortage of midwives in public sector antenatal services

the multiple and competing health needs typical of populations of low socio-economic status. They cited poor nutrition, alcohol abuse, diabetes, pre-eclampsia and domestic violence as equally or more important pregnancy risks. HIV infection was regarded as the top-ranking priority issue in antenatal care. Nine out of 15 doctors felt strongly that smoking during pregnancy needed to be afforded greater priority in the antenatal services. One doctor was of the opinion that there was insufficient scientific evidence to warrant greater attention to the issue.

Doctors reported smoking to be a significant risk factor for preterm labour, abruptio placentae, intrauterine growth restriction and low birth weight. The association with placenta praevia was not mentioned. They tended to underestimate the magnitude of the risk of smoking during pregnancy. One doctor felt strongly that smoking was important as it compounded the problems of poor nutrition and low breastfeeding rates among disadvantaged women. All the doctors had observed that smoking during pregnancy was significantly more prevalent among coloured women than in other communities.

Doctors were unaware of the clinical guidelines available for counselling pregnant women about smoking or of the evidence showing the effectiveness of doctor-delivered interventions.

Midwives usually document women's smoking status on the record card during the first antenatal visit and are expected to advise smokers to quit. There is a tendency among doctors to discuss smoking with a patient only when a problem



considered to be associated with smoking is identified or if the patient has a history of miscarriage or stillbirth. Generally, doctors simply exhorted these women to stop smoking. They were aware that this approach was inadequate, but felt ill-equipped to counsel women on how to give up smoking. Doctors believed that their efforts to encourage women to quit smoking would be more effective if they had more time to discuss the issue; a more in-depth understanding of how to motivate patients to change behaviour; and attractive educational and self-help resources to distribute to women.

### Response of pregnant women to health care provider advice

All doctors expressed frustration about their lack of success in encouraging women to stop smoking. Doctors reported that when they advise women to quit, they usually meet with resistance. Women will often give anecdotal accounts of other women who smoked during pregnancy with no ill effects, or assure the doctor that they have radically cut consumption in an attempt to placate the doctor and avoid further discussion of the issue. Many women report that their life circumstances make quitting too difficult and that smoking helps them cope with the daily stress of child-care, financial worries and relationship problems. Doctors understood that in this situation, smoking was often not of immediate concern to women.

Five of the respondents expressed the view that the prevalent approach to smoking cessation among health care providers, which is authoritarian and confrontational, may be partly responsible for pregnant women's negative response to their advice. They argued that a more caring and empathetic approach could improve communication about smoking with pregnant women.

### Doctors' attitudes to proposed smoking cessation intervention

Doctors were asked how they would feel about possible involvement in an intervention which would include training in the use of best practice guidelines for smoking cessation counselling and the distribution of a self-help quit guide for pregnant women. Most of the doctors expressed a positive attitude to such a proposal. Doctors acknowledged that they needed training in order to be able to move beyond the traditional, advice-giving approach and thought that evidence-based guidelines could be helpful. While they believed that midwives should play the primary role in such an intervention, as they spent more time with patients, they accepted that doctors also had a responsibility to address the issue more effectively. One doctor, who was negative, was of the opinion that such an intervention was unlikely to be effective with populations of low socio-economic status, who face more immediate risks to their health and well-being.

**Table II. Positive factors that could facilitate the introduction of a smoking cessation intervention**

Doctors accept smoking should be given greater priority as preventive pregnancy risk
Smoking accepted as factor in current high rates of low birth weight, preterm labour, abruptio placentae
Observation that smoking rates among coloured women are extremely high
Doctors acknowledge that current approach to smoking cessation counselling is ineffective
Doctors wish to have greater success in advising women to quit
Doctors keen to improve communication with pregnant women about smoking
Doctors expressed need for training in behavioural change counselling skills to use in variety of situations
Doctors concerned to adopt more empathetic, patient-centred approach to smoking cessation counselling
Doctors welcome prospect of receiving educational aids, guidelines and attractive media for distribution to pregnant women

However, despite feeling positive about the idea of participating in a smoking cessation intervention, doctors were pessimistic that such an intervention could be implemented in the current context, if usual care providers were expected to assume any significant responsibility. Current working conditions in the public sector were described as being extremely demanding, both physically and emotionally. According to the doctors, staff are under tremendous pressure as a result of increasing patient numbers, dramatic budget cuts and acute staff shortages. One doctor reported that there were as many as 30 vacancies for midwives at his hospital.

The government's apparent lack of concern to effectively resolve these problems left doctors feeling frustrated and despondent. Given this situation, doctors felt that staff would be receptive to the introduction of a smoking cessation intervention only if it brought additional staff into the system, was independently administered and funded, and cast doctors and midwives in a supportive rather than primary role.

### Discussion

The doctors interviewed in this study are not taking full advantage of the unique opportunity pregnancy affords for smoking cessation intervention and are not using recommended methods to assist pregnant women to stop smoking. If not even their doctor entreats them to quit smoking, many pregnant women will not see any pressing reason to try and give up.

It was clear that some doctors did not consistently note the smoking status of each patient, despite this being represented on the clinic card. Giving cessation advice only when there was already a problem was a common approach. Other doctors made initial enquiries about smoking status and explained the



**Table III. Quotes from interviews reflecting doctors' attitudes to proposed smoking cessation intervention**

**Positive attitudes**

'I think that cigarette smoking has a huge impact. Babies born to smokers are about 200 - 250 g lighter than babies born to non-smokers. Smoking also compounds other factors in LBW, such as poor nutrition and alcohol abuse, in a very powerful way. Cigarette smoking also contributes to the atrocious breastfeeding rate in this community, which is a public health disaster.'

'I don't think there would be any difficulty in us playing a role because we are talking to patients all the time anyway. Getting women to quit smoking seems to be an ideal that continues to elude us. So, I think you would get support from the obstetric staff here.'

'If we knew the correct way to discuss smoking cessation with patients, we could give better advice. Training could suggest how we should approach the problem, that it should not be scolding or confrontational. I am sure that will be of huge benefit.'

'What we need is a tool, an intervention that we believe could make a difference. At the moment I feel there is nothing I can use except personal lecturing and one gets the feeling of futility about the whole thing.'

'I would happily go along to training that would help me improve my communication with patients and train me in a different approach to discussing these kinds of problems with them.'

'We can play a role because patients look up to doctors, they trust a doctor's advice. If the midwives discuss smoking first, it would be important for doctors to confirm and reinforce what the midwives are saying.'

'It is such a common problem and the best thing is preventive action early on in pregnancy, but there is not enough emphasis on it in our antenatal service.'

**Negative attitudes**

'Unless you can produce very good evidence that smoking is a major risk factor for something like placenta abruptio or growth restriction, I don't see how it can be ranked as a priority.'

'There's huge pressure on our staff because the HIV tide has reached us. It's cutting a swathe through our patients. There is just so much else that is happening at the moment that requires our attention and our energy.'

'There are a lot of women who are hardened smokers. When you start talking to them they sigh as though everyone has already spoken to them about it and they are fed up with it.'

'Most women don't manage to give up. Even women with problems, such as growth retardation, will often acknowledge that it is a problem and will try to give up, but don't cope. It is very difficult.'

'Everything we try to do to prevent things like HIV or smoking in terms of education is a bit farcical because people are prepared to take risks when there is nothing much else in their lives. When you can imagine a future worth living for, then those risks become unacceptable and that is when you are prepared to change your behaviour.'

'The midwives are having a terrible time at the moment. There is not enough staff, there's too much work, and with HIV, there is more complex work. So, I think involving midwives in your project would be very difficult.'

'When doctors and nurses are working in stress survival mode, they are not going to have the time or the inclination to sit down and speak to people the way they should. The situation is really affecting the quality of care we can deliver. So, I am doubtful that your intervention could work in the current context.'

risks, but did little to monitor and review the situation throughout the pregnancy. Where doctors did attempt to more actively encourage women to quit smoking, their approach was limited to repeatedly giving advice.

This situation is not unusual. Doctors' reluctance to adopt a population-based, preventive approach, where cessation is raised with all patients who smoke, has been reported elsewhere, with physician specialists even less likely to adopt this approach than primary care physicians. A number of studies in the UK, Australia and the USA with antenatal care providers have found that while doctors may advise pregnant women to stop smoking, the vast majority of them do not assess their readiness to quit, discuss strategies for quitting, arrange follow-up to reinforce motivation, or offer self-help materials.<sup>8,11</sup> Clasper and White<sup>12</sup> found that less than 6% of the GPs and obstetricians they surveyed in the UK used available guidelines to assist them in counselling pregnant women to stop smoking.

The doctors in this study did not regard smoking as a priority issue in antenatal care and tended to underestimate the magnitude of the risk. Those doctors who had been exposed to a research study that had demonstrated an increased risk of preterm labour and abruptio placentae among their patients who smoked, expressed greater concern about the issue. The doctors interviewed generally had little confidence in the ability of health education or counselling to achieve behavioural change and were particularly pessimistic that they could influence women's smoking behaviour. Their sympathy for the barriers disadvantaged women in particular face in achieving health-enhancing behaviour served to entrench this attitude.

Other researchers have found similar attitudes. Cooke *et al.*<sup>13</sup> found that, in comparison to midwives, doctors are less likely to regard smoking during pregnancy as a priority issue, believe brief health education to be useful or be optimistic about the effectiveness of health provider-delivered smoking cessation



programmes. As a consequence, they were found to be less likely to adopt smoking cessation programmes than midwives or attend training. Helwig *et al.*<sup>8</sup> suggested that a perceived lack of success and a cynicism about the prospects of behavioural change were reasons why obstetricians in their study failed to actively promote smoking cessation with their patients. Obstetricians in a survey in the USA<sup>14</sup> reported that if they believed that a pregnant woman was not motivated to give up smoking or used smoking to relieve major stressors in her life they were less likely to try and assist her with quitting. Ockene *et al.*<sup>15</sup> found that doctors were considerably more negative about their counselling than were the women who received it. Even those smokers who had no intention of quitting still rated doctors' counselling as helpful. In a recent South African survey, pregnant women rated doctors as the most trusted source of information about smoking cessation and 92% stated that they would like to participate in a programme if it were delivered as a part of antenatal care (Z Petersen, unpublished data, 2003).

Doctors' disinclination to counsel pregnant women about smoking may in part be related to their medical orientation and training, which places little emphasis on the benefits of patient education and counselling or on the importance of preventive approaches. It could also be related to a lack of confidence in their own counselling skills, poor knowledge of the proven efficacy of smoking cessation interventions and a lack of appropriate resources.

### Practice implications

While the current situation in the public health sector in South Africa presents a considerable challenge to implementing a smoking cessation intervention, it would perhaps still be possible for doctors to adopt the approach recommended for clinicians as outlined in the Clinical Practice Guideline for Treating Tobacco Use and Dependence<sup>5</sup> as these simple strategies are designed to take up only a few minutes of a clinician's time.

Doctors need convincing that such interventions can be effective and that even small increases in smoking cessation rates have clinical significance. They also need opportunities to improve their communication skills and to understand the processes of behaviour change. This may address some of the

barriers they perceive in discussing smoking with pregnant women and enable them to experience such interactions in a more positive and rewarding way.

Best practice interventions need to become widely integrated into routine antenatal care in South Africa and addressing the issue of smoking during pregnancy needs to become accepted as a standard of good practice. An approach that delineates clear roles for doctors and midwives would help ensure that pregnant smokers attending the public sector antenatal services in South Africa receive appropriate information, advice and support throughout their pregnancy.

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### References

1. US Dept of Health and Human Services and Centers for Disease Control and Prevention. National Centre for Chronic Disease Prevention and Health Promotion. Office on Smoking and Health. Women and Smoking, A Report of the US Surgeon General (2001). [www.cdc.gov/tobacco/sgr/sgr\\_forwomen/index.htm](http://www.cdc.gov/tobacco/sgr/sgr_forwomen/index.htm) (last accessed 21 April 2005).
2. Steyn, K, Yach D, Stander I, Fourie J. Smoking in urban pregnant women in South Africa. *S Afr Med J* 1997; **87**: 460-463.
3. Odendaal HJ, Van Schie DL, De Jeu RM. Adverse effects of maternal cigarette smoking on preterm labour and abruptio placentae. *Int J Gynecol Obstet* 2001; **74**: 287-288.
4. Lumley J, Oliver S, Waters E. Interventions for promoting smoking cessation during pregnancy (Cochrane Review). In: *The Cochrane Library* 2004; Issue 1. Chichester, UK: John Wiley, 2004.
5. Fiore MC. A Clinical Practice Guideline for Treating Tobacco Use and Dependence. A US Health Service Report. *JAMA* 2000; **283**: 2344-2354.
6. Health Resources and Services Administration and the Centers for Disease Control and Prevention. Consensus Workshop on Smoking Cessation during Pregnancy. Rockville, Md, 9 - 10 April 1998. Sponsored by the Robert Wood Johnson Foundation and the Smoke Free Families Program.
7. American College of Obstetricians and Gynecologists. Educational bulletin on smoking during pregnancy. No. 260. *Int J Gynecol Obstet* 2001; **75**: 345-348.
8. Helwig AL, Swain GR, Gottlieb M. Smoking cessation intervention: the practices of maternity care providers. *J Am Board Fam Pract* 1998; **11**: 336-340.
9. Tesch R. In: Creswell JW, ed. *Research Design: Qualitative and Quantitative Approaches*. Thousand Oaks: Sage, 1990: 154-155.
10. Strauss A, Corbin J. *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park, Calif.: Sage, 1990.
11. Zapke J, Pbert L, Stoddard A, Ockene, J, Valentine Goins K, Bonollo D. Smoking cessation counselling with pregnant and post-partum women: a survey of community health center providers. *Am J Public Health* 2000; **90**: 78-84.
12. Clasper P, White M. Smoking cessation interventions in pregnancy: practices and views of midwives, GPs and obstetricians. *Health Educ J* 1995; **54**: 150-162.
13. Cooke M, Mattick R., Walsh R. Differential uptake of a smoking cessation programme disseminated to doctors and midwives in antenatal clinics. *Addiction* 2001; **96**: 495-505.
14. Grimley D, Bellis J, Raczynski J, Henning K. Smoking cessation counselling practices: A survey of Alabama obstetrician-gynecologists. *South Med J* 2001; **94**: 297-303.
15. Ockene JK, Kristeller J, Goldberg R, *et al.* Increasing the efficacy of physician delivered smoking interventions - a randomised control trial. *J Gen Intern Med* 1991; **6**: 1-8.