Smoking cessation and nicotine replacement therapy in current primary maternity care

Susan Pullon, MBChB, FRNZCGP, is a general practitioner, and Senior Lecturer in General Practice, Wellington School of Medicine and Health Sciences, University of Otago, New Zealand.

Melanie Webster, BSc, is a medical student, Wellington School of Medicine and Health Sciences, University of Otago, New Zealand.

Deborah McLeod, DPH, PhD, is Research Director, Department of General Practice, Wellington School of Medicine and Health Sciences, University of Otago, New Zealand.

Cheryl Benn, RM, IBCLC, PhD, is Associate Professor, School of Health Sciences, Massey University, New Zealand.

Sonya Morgan, BSc (Hons), is junior research fellow, Department of General Practice, Wellington School of Medicine and Health Sciences, University of Otago, New Zealand.

AIM
To determine attitudes, activity and confidence among general practitioners and midwives about smoking cessation practice, and use of nicotine replacement therapy (NRT) during pregnancy and breastfeeding.
METHOD
A postal survey of 780 New Zealand health professionals providing maternity care.
RESULTS
274 GPs (82 practising obstetrics) and 184 midwives responded (RR: 64%), with most (88% GPs, 77% midwives) regarding providing smoking cessation advice integral to their job. Only about half gave smoking cessation advice to most pregnant women who smoked. They were uncertain about the safety of NRT use in pregnant and breastfeeding women. Most respondents requested more information about NRT use.
DISCUSSION
Smoking cessation practice falls short of respondents' beliefs about good practice and current recommendations.

Smoking is one of the most important modifiable causes of adverse pregnancy outcomes. In New Zealand, 25% of women still smoke during pregnancy[1,2] and in Australia the rate is 20%[3] with rates disproportionately high for disadvantaged groups.[1,4]

Frequent brief interventions by nurses and doctors increase smoking cessation rates[5,6] with studies showing these interventions are also effective for pregnant women.[7,8] Antismoking preventive advice is common in New Zealand general practice,[9] with smoking rates among general practitioners and midwives well below general population rates at less than 10%.[10]

American obstetric providers report successful nicotine replacement therapy (NRT) use.[11] Some recommend it for pregnant smokers despite the potential risk of nicotine. Several national guidelines, including the current New Zealand guidelines,[12] advocate NRT use for women smoking more than 10–15 cigarettes per day, although they recommend professional advice is sought before using NRT.[12,13]

We wondered what the attitudes and confidence of primary care health professionals would be about smoking cessation and NRT use during pregnancy and breastfeeding.

Method

We sent postal questionnaires to a national sample of 780 health professionals likely to be providing care for pregnant and/or breastfeeding women in December 2001. The sample was made up of 250 GPs randomly sampled from a commercial database (Medimedia) of approximately 2660 GPs, all 230 doctors (GPs and specialist obstetricians) registered as providing obstetric care by the Ministry of Health, and 300/812 midwives randomly sampled from the Ministry of Health database.

The reply paid questionnaire (which was pilot tested) consisted of closed and open ended questions and used 5-point Likert scales to elicit a range of responses to brief scenarios. We arbitrarily collapsed responses on 4 and 5 of the Likert scale together. A postal reminder was sent to nonresponders after 2 weeks and a second reminder at 5 weeks.

Results

Responses were received from 274/430 (64%) GPs, (of whom 82 also practised obstetrics) and 184/290 (64%) midwives; a total response rate of 64%. Over three-quarters of the respondents regarded provision of smoking cessation advice as an integral part of their job (midwives significantly less likely than GPs, p=0.003). More midwives reported asking pregnant women about smoking status than GPs (p<0.005) and about half reported offering smoking cessation advice to most pregnant women smokers (*Table 1*).

Table 1. Health professionals' reported smoking cessation practice

	n (%) (95% CI) of respondents answering either 4 or 5 on 5-point Likert scale					
	How do you view your role in providing smoking cessation for pregnant women? 1=not part of my job, 5=an integral part of my job		For what proportion of the pregnant women you see, do you ask about smoking status? 1=no women, 2=few women, 3=about half, 4=most women, 5=every woman		For what proportion of the pregnant women you see, are you able to give advice about smoking cessation?	
GPs (n=192)	170 (89)	(83–93)	124 (65)	(55–72)	91 (48)	40–55
GPs practising obstetrics (n=82)	70 (86)	(76–92)	61 (74)	(64–83)	47 (57)	46–68
Midwives (n=184)	141 (77)	(70–83)	174 (95)	(90–97)	102 (55)	48–63

Table 2. Respondents answering 4 or 5 on 5-point Likert scale to the question: 'How do you feel about giving advice about smoking cessation to pregnant women?'

	Enjoyment 1=do not enjoy 5=enjoy		Comfort 1=do not feel comfortable 5=feel comfortable		Confidence 1=do not feel confident 5=feel confident	
	n (%)	95% CI	n (%)	95% CI	n (%)	95% CI
GPs	136/190 (91)	86–95	172/189 (91)	86–94	172/185 (93)	88–96
GPs practising obstetrics	47/82 (81)	69–90	66/82 (81)	70–88	69/82 (85)	75–91
Midwives	79/180 (63)	54–71	110/181 (61)	53–68	116/178 (66)	58–72

Table 3. Health professionals' opinion on NRT use during pregnancy and breastfeeding

	Appropriate for pregnant smokers		Appropriate for breastfeeding smokers	
	n (%)	95% CI	n (%)	95% CI
GPs	43/177 (24)	18–31	50/174 (29)	22–36
GPs practising obstetrics	19/79 (24)	15–35	22/74 (28)	18–39
Midwives	37/155 (24)	17–31	29/151 (19)	13–26

Midwives were significantly less likely than GPs to enjoy, feel comfortable, or confident with giving smoking cessation advice (*Table 2*). Less than half the respondents had received any formal smoking cessation training.

There was clinician or practice registration to provide government subsidised nicotine patches or gum for 122 GPs (45%) and 8 (4%) midwives. Most wanted more information on all aspects of NRT use in pregnancy and during breastfeeding. Most did not consider NRT use appropriate (*Table 3*).

Discussion

Our study relied on self reported responses which leaves the result open to challenges of validity with clinical behaviour. Responders may have engaged in smoking cessation interventions more often. Both these weaknesses probably overestimate smoking cessation practice. However, even these rates fall short of recommended practice which is in common with Australian studies.[14,15]

Could the dislike and lack of confidence we found be changed? Training in smoking cessation increases knowledge, confidence and practical expertise.[16] In this study, less than half the respondents had received smoking cessation training.

Despite the evidence regarding NRT effectiveness in nonpregnant populations,[17] and the evidence for smoking cessation effectiveness during pregnancy,[7] there is little evidence to suggest that the addition of NRT to such programs is effective in pregnancy or breastfeeding.[18,19] Nicotine replacement therapy is almost certainly safer in pregnancy than smoking over 10–15 cigarettes per day, but empirical data are absent.[20]

Acknowledgments

The researchers thank all GPs, midwives and obstetricians involved in the study. The study was funded by the Wellington Faculty of the Royal New Zealand College of General Practitioners and supported by the Wellington School of Medicine and Health Sciences, University of Otago. The study was approved by the Wellington Ethics Committee.

Implications of this study for general practice

- There is good evidence that health professionals can provide effective smoking cessation activity within routine maternity care.
- Primary care doctors and nurses know this and regard it as part of their job, although they probably fall short of these ideals.
- There is uncertainty about the appropriateness of using NRT in pregnancy and breastfeeding.

Conflict of interest: none declared.

References

1. Borman B, Wilson N, Maling C. Socio-demographic characteristics of New Zealand smokers: results from the 1996 census. N Z Med J 1999;112:460–463.
2. Wellington Women's Hospital. Capital Coast Health. Women's health and newborn service report 1994–1997: The Perinatal Infant Management System (PIMS). Wellington: Capital Coast Health, 1998.
3. Commonwealth Department of Health and Aged Care. The National Tobacco Strategy 1999 to 2002–3: a Framework for National Action. Canberra: AusInfo, 1999.
4. Siahpush M, Borland R, Scollo M. Prevalence and socioeconomic correlates of smoking among lone mothers in Australia. Aust NZ J Public Health 2002;26:132–135.
5. Silagy C, Stead LF. Physician advice for smoking cessation. Cochrane Database of Systematic Reviews 2001(3).
6. Rice VH, Stead LF. Nursing Interventions for smoking cessation. Cochrane Database of Systematic Reviews 2001(3).
7. Lumley J, Oliver S, Waters E. Interventions for promoting smoking cessation during pregnancy. Cochrane Database of Systematic Reviews 2001;2:1–36.
8. Walsh RA, Lowe JB, Hopkins PJ. Quitting smoking in pregnancy. Med J Aust 2001;175:320–323.
9. McLeod D, Somasundaram R, Howden-Chapman P, Dowell A. Promotion of smoking cessation by New Zealand general practitioners: a description of current practice. N Z Med J 2000;113:480–485.
10. Hay D. Cigarette smoking by New Zealand doctors and nurses; results from the 1996 population census. N Z Med J 1998;111:102–105.
11. Oncken CA, Pbert L, Ockene JK, Zapka J, Stoddard A. Nicotine replacement prescription practices of obstetric and pediatric clinicians. Obstet Gynecol 2000;96:261–265.
12. National Advisory Committee on Health and Disability. Guidelines for Smoking Cessation. Wellington, New Zealand: National Advisory Committee on Health and Disability, 2002.
13. Raw M. Smoking cessation: evidence based recommendations for the healthcare system. BMJ 1999;318:182–185.
14. Walsh R, Redman S, Brinsmead M, Arnold B. Smoking cessation in pregnancy: a survey of the medical and nursing directors of public antenatal clinics in Australia. Aust NZ J Obstet Gynaecol 1995;35:144.
15. Young J, Ward J. Implementing guidelines for smoking cessation advice in Australian general practice: opinions, current practices, readiness to change and perceived barriers. Fam Pract 2001;18:14–20.
16. Lancaster T, Silagy C, Fowler G. Training health professionals in smoking cessation. The Cochrane Library, 2001.
17. Silagy C, Lancaster T, Stead L, Mant D, Fowler G. Nicotine replacement therapy for smoking cessation. Cochrane Database of Systematic Reviews 2002;2.
18. Benowitz N, Dempsey D, Goldenberg J. The use of pharmacotherapies for smoking cessation in pregnancy. Tob Control 2000;9:1–3.
19. Wisborg K, Henriksen T, Jespersen L, Secker N. Nicotine patches for pregnant smokers: a randomized controlled study. Obstet Gynecol 2000;96:967–971.
20. Dempsey DA, Benowitz NL. Risks and benefits of nicotine to aid smoking cessation in pregnancy. Drug Saf 2001;24:277–322.

AFP

Correspondence
Email: <spullon@wnmeds.ac.nz>