Résumé

Points de vue des infirmières autorisées sur la réduction du tabagisme : enquête dans l'Ouest canadien

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Le traitement des maladies associées au tabagisme prend une place de plus en plus importante en soins infirmiers, les infirmières étant appelées notamment à faire de l'accompagnement au sevrage. La présente étude rapporte les points de vue et les pratiques des infirmières relativement à la réduction du tabagisme. On a mené une enquête auprès des infirmières autorisées ($N = 365$) employées dans deux hôpitaux de taille moyenne situés dans l'Ouest canadien et obtenu un taux de réponse de 43 % ($n = 101$) et de 86 % ($n = 113$) respectivement. Les répondantes admettent qu'elles auraient un rôle à jouer dans la réduction du tabagisme; toutefois, hormis l'évaluation de l'usage du tabac chez les patients, la plupart n'ont adopté aucune des pratiques exemplaires recommandées à cet égard. Les auteures présentent les points de vue des infirmières sur le soutien organisationnel, l'autoefficacité, les attentes des patients et la réduction du tabagisme. Les répondantes ont ouvertement rapporté ne pas se sentir préparées à accompagner des patients en sevrage et ne jouir que d'un soutien organisationnel limité pour le faire. Par ailleurs, les différences dans les réponses entre les établissements indiquent qu'intégrer la réduction du tabagisme aux soins infirmiers exigera un engagement en ce sens de la part des infirmières comme des hôpitaux.

Mots clés : tabagisme, réduction du tabagisme

Registered Nurses' Perspectives on Tobacco Reduction: Views from Western Canada

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Treatment of tobacco-related health conditions have increasingly become a significant part of nursing practice and nurses are being challenged to also provide cessation support as part of their care. This study describes nurses' views of and practice related to tobacco reduction. Registered nurses ($N = 365$) employed by 2 Western Canadian mid-sized hospitals were surveyed; response rates were 43% ($n = 101$) and 86% ($n = 113$). The respondents agreed that they had a role to play in tobacco reduction; however, beyond assessment of smoking status, best practice guideline activities had not been integrated into the practice of most nurses. Nurses' perspectives related to institutional support, self-efficacy, and perception of patient expectations, and their attitudes towards tobacco reduction, are described. The nurses candidly reported feeling unprepared and having limited institutional support for assisting with cessation. Additionally, response differences between hospital sites suggest that the integration of tobacco reduction into practice will require a commitment by both nurses and hospitals.

Keywords: Tobacco use, smoking cessation, clinical nursing research

Introduction

As we enter the 21st century a significant issue facing all health practitioners is the treatment of tobacco-related health conditions. Tobacco use is reported to be a leading cause of preventable mortality and morbidity (World Health Organization [WHO], 2000), associated with a variety of cancers, cardiovascular diseases, and pulmonary conditions (France, Glasgow, & Marcus, 2001; Kozlowski, Henningfield, & Brigham, 2001; Rice & Stead, 2004; Rigotti, Munafo, & Stead, 2001). Additionally, tobacco use can exacerbate other health conditions, such as surgical outcomes (Ratner et al., 2004) and a variety of cancer-related treatments and outcomes (Wakefield, Olver, Whitford, & Rosenfeld, 2004). Accordingly, health practitioners are increasing being encouraged to extend their practice beyond the treatment of tobacco-related conditions to include tobacco-reduction strategies (Canadian Nurses Association, 2001a, 2001b; Fiore et al., 2000).

One group of health practitioners believed to have an integral role to play in tobacco reduction is nurses (International Council of Nurses [ICN], 1999; Rice & Stead, 2004; WHO, 1999), mainly because nurses

are the largest group of health professionals, have the most contact with patients, and are trusted by the public (ICN, WHO, 1999). While globally nurse scientists and governance bodies have begun to engage in the issue of tobacco reduction (Schultz, 2003), we have limited insight regarding the engagement of direct-care nurses in tobacco reduction. Moreover, in Canada there are no published studies concerning the integration of tobacco-reduction strategies into acute-care nursing practice. This paper is intended to shed light on this deficit by presenting findings from a study focused on the work of acute-care registered nurses in the province of British Columbia.

Tobacco Use in British Columbia

British Columbia is reported to have the lowest rate of tobacco use in Canada, at 17% (Health Canada, 2003). Estimates that 18% of the non-smoking population is exposed to second-hand smoke daily (Vancouver Coastal Health Authority, 2004) indicate that approximately 35% of British Columbians, or about 1.5 million people, are at increased risk of developing tobacco-related health conditions. In British Columbia approximately 6,000 people die each year from tobacco-related diseases (British Columbia Ministry of Health Services [BCMHS], 2004a) and over $500 million is spent annually on direct care for tobacco-related illnesses (BCMHS, 2004b). Health care for individuals with conditions associated with or exacerbated by tobacco use is, therefore, a significant feature of the practice of many health practitioners.

Acute-Care Registered Nurses and Tobacco Reduction

Hospitalization may be an ideal opportunity to initiate conversations with patients about tobacco use, the health effects of tobacco use, and stopping smoking, because tobacco-use patterns are interrupted during a hospital stay and smokers often contemplate cessation when faced with a health crisis (Fiore et al., 2000; France et al., 2001; Ratner et al., 2004; Rigotti et al., 2001). Given that most nurses work in acute-care hospitals (Canadian Institute for Health Information, 2003), these nurses should be encouraged to move beyond providing care for tobacco-related health conditions to integrate tobacco-reduction activities into their practice.

A meta-analytic review of studies evaluating the efficacy of nurse-delivered cessation interventions suggests that nurses can significantly influence tobacco-use patterns and rates (Rice & Stead, 2004). Moreover, evidence-based best practice guidelines have been published to guide health clinicians in effective ways of delivering tobacco-reduction interventions (Commonwealth Department of Health and Aged Care, 1999; Fiore et al., 2000; Raw, McNeil, & West, 1998). The guiding framework for supporting the integration of tobacco reduction into practice is the "four A's," with each *A* representing a series of possible actions. The first

A pertains to *asking,* which includes assessment of tobacco use, interest in quitting, and documentation of this information. The second *A* stands for providing *advice* regarding the health risks and benefits associated with tobacco use and cessation, along with advice for stopping. The third *A, assist,* focuses practitioners on providing information about quitting, coping with relapse, and nicotine-replacement therapy. The final *A, arrange,* encompasses arranging follow-up or referral to a cessation expert or program. While all of these activities are expected to be integrated into practice, research has demonstrated that even brief interventions comprising assessing and advising can influence tobacco-use patterns and cessation (Rigotti et al., 2001; Tsoh & McClure, 1997). Rice and Stead suggest that the next step for the nursing profession is to have cessation interventions become a standard of care, their vision being that tobacco users are provided the opportunity at every health-care visit to talk about tobacco use and stopping.

The tobacco-reduction practices of oncology registered nurses in the United States (Sarna, Brown, Lillington, Rose, et al., 2000), American acute-care registered nurses (McCarty, Hennrikus, Lando, & Vessey, 2001) and Australian acute-care nurses (Nagle, Schofield, & Redman, 1999) have been described. Sarna, Brown, Lillington, Rose, and colleagues surveyed a random sample of members of the Oncology Nursing Society of the United States (38% response rate; $n = 1,508$). They report that the majority of nurses were assessing and documenting tobacco use; however, far fewer were assessing patient interest in stopping (38%), advising patients to stop smoking (32%), teaching cessation strategies (16%), and referring patients to cessation experts (5%). In a survey of acute-care registered nurses working on adult in-patient wards at four hospitals in the United States (68% response rate; $n = 397$) (McCarty et al.), only 30% stated that they frequently counselled smokers in cessation and 11% reported advising all smokers (patients) to quit. A study with acute-care nurses in seven hospitals in Australia (Nagle et al.) (88% response rate; $n = 335$) reports that although almost two thirds of the nurses believed that tobacco reduction was an expected part of their role and that all smoking patients should be educated in tobacco reduction, only 10% thought patients who use tobacco received such care. These researchers found that key factors supporting the integration of tobacco reduction into nursing practice were patient interest in stopping, the health benefits associated with cessation, and a belief that nurses have a role to play in addressing tobacco use. Identified barriers to the integration of tobacco-reduction practices were lack of time, low confidence in ability to support cessation, an inadequate knowledge base, and lack of leadership.

The purpose of this study was to contribute to the nascent global discussion by providing a Canadian perspective on the integration of

Annette S. H. Schultz, Joy L. Johnson, and Joan L. Bottorff

tobacco-reduction activities into nursing practice. Specifically, the study investigated the practice of registered nurses working in acute-care hospitals and addressed four research questions: *To what degree are nurses integrating tobacco-reduction activities into their practice? What are nurses' attitudes concerning tobacco use and tobacco reduction? What are the perceived barriers and motivators to providing tobacco-reduction activities? Are there differences in the degree of integration of tobacco-reduction strategies, attitude towards tobacco reduction, and perceptions of influencing factors concerning tobacco reduction among nurses working in hospitals situated in communities with diverse population smoking rates?*

Methods

Background

The findings discussed are a result of a cross-sectional survey design, which was part of a larger mixed-methods research project investigating the use of tobacco-reduction strategies by acute-care registered nurses in their practice. The study was approved by the University of British Columbia Behavioural Research Ethics Board as well as by the ethical review board of each participating hospital.

Study Sites

Sampling decisions were guided by the larger research project design of comparing two populations of nurses and their workplace culture. The first selection criterion was the provincial regions with the lowest and highest rates of tobacco use, which ensured an initial contextual tobacco-related difference between study sites. We then selected mid-sized hospitals in these two regions, because hospitals of this size tend to serve the immediate surrounding communities and have a variety of adult in-patient wards. In one region there was only one mid-sized hospital, so based on that bed size we selected one comparable hospital in the other region. A comparison of the study hospitals is shown in Table 1.

Participants

The sample included all registered nurses employed for at least 6 months at the study hospitals who had worked at least one shift on an adult in-patient ward (surgery, medicine, rehabilitation, cardiac, or psychiatry) during the data-collection period. Eligible nurses were identified via human resources records: 235 for site A and 134 for site B. Differences in the number of eligible nurses reflected hiring practices: site A used more casual staff than site B. Of the sample, 101 nurses from site A and 113 nurses from site B completed questionnaires (response rates of 43% and 86%, respectively).

Table 1 *Description of Differences and Similarities in Study Sites*	
Differences	
Site A	**Site B**
Southern region	Northern region
294-bed acute-care hospital	260-bed acute-care hospital
Population smoking rate: 20% (Ipsos Reid, 2003)[a]	Population smoking rate: 31% (Ipsos Reid, 2003)
Nicotine-replacement therapies not available on the hospital formulary	Nicotine-replacement therapies available on the hospital formulary
No in-hospital smoking cessation expert	In-hospital referral program, including most hospital pharmacists and clinical nurse specialists, all educated through the Mayo Clinic Nicotine Dependence program in Rochester, Minnesota, United States
Minimal community resources, including local community pharmacists and general practitioners	Established community program, initiated through a public health nursing office
Similarities	
• Smoking status assessment requested on admission history form • Established smoking-restriction policies • No hospital policies or protocols regarding tobacco reduction • No tobacco-related in-service education for registered nurses • No published tobacco-reduction best practice guidelines available in hospital • Limited availability of patient-education materials	
[a] Ipsos Reid survey results include BC regional population smoking rates.	

Survey Questionnaire

Construction of the self-administered questionnaire was informed by studies that investigated nurses' perspectives on tobacco use and reduction (Sarna, Brown, Lillington, Rose, et al., 2000; Sarna, Brown, Lillington, Wewers, & Brecht, 2000), a survey developed by the Ontario Tobacco Research Unit to investigate the practice and perceptions of community pharmacists (Brewster et al., 2005), best practice guidelines related to tobacco reduction (Fiore et al., 2000), and an extensive review of the nursing literature on tobacco reduction (Schultz, 2003). To strengthen content validity, two nurse researchers, who were tobacco-reduction experts and had extensive experience in survey construction, reviewed the questionnaire for completeness and relevance for the health-care

context in British Columbia. Finally, the questionnaire was pretested with 16 registered nurses working on acute adult in-patient wards in hospitals other than the study sites; their feedback was obtained through individual interviews, which informed minor changes to enhance clarity.

The questionnaire included items in four areas. *Nurses' tobacco-reduction activities* were assessed by asking respondents the frequency with which they engaged in 14 activities with patients who used tobacco. The items drew on the work of Sarna, Brown, Lillington, Rose, and colleagues (2000) but also included newly constructed items to reflect activities related to the "four A's" outlined in tobacco-reduction best practice guidelines (Fiore et al., 2000). The response choices were *almost always, frequently, seldom,* and *almost never.* The second group of items, *nurses' attitude towards tobacco reduction and their role,* was assessed with nine items using a four-point Likert format (*strongly agree* to *strongly disagree*). These items were compiled from several sources and included questions assessing nurses' attitudes about what tobacco-related actions nurses should be engaged in (Sarna, Brown, Lillington, Wewers, et al., 2000), what tobacco-reduction activities their colleagues were engaged in (new items), and their beliefs concerning tobacco reduction (Brewster et al., 2005) and supporting cessation (Brewster et al.; Sarna, Brown, Lillington, Wewers, et al.). *Barriers and motivators* to addressing reduction of tobacco use were measured using an instrument containing 19 items (Sarna, Brown, Lillington, Rose, et al.). A four-point Likert format employed response options ranging from *strongly agree* to *strongly disagree.* Categories of barriers and motivators included: associated health concerns, concern for the patient (i.e., not wanting to make patients feel guilty), knowledge and confidence, and institutional factors. *Demographic* items included age, sex, marital status, smoking status, nursing education, length of nursing career at the hospital, current nursing position, and perception of tobacco use among patients. Additional psychometric testing of items has been published elsewhere (Schultz & Johnson, in review).

Procedure

One week prior to delivery of the survey, introductory flyers about the study were posted on each nursing ward to raise awareness about the study and encourage nurses to participate. The survey was packaged in an unsealed self-addressed envelope marked "confidential" and respondents were asked to return the completed survey in the self-addressed envelope through internal hospital mail to a special research-project mailbox. Copies of the surveys were available on each ward for a 2-month period. During the data-collection period, reminder flyers were posted weekly regarding the survey, along with response rates.

	Table 2 *Personal and Professional Characteristics of Participants*		
Variable		**Site A** **(*n*=101)**	**Site B** **(*n*=113)**
Personal			
Age: M ean (range) in years		40.1 (22–64)	40.5 (23–64)
Sex (%) Female		95	96
*Marital Status*** (%) Single Partnered/married Separated/divorced/widowed		28 57 15	11 77 11
Smoking Status (%) Current smoker Former smoker Never smoked		19 27 55	16 32 52
Professional			
Education (diploma/degree) (%)		76	74
Number of years at the hospital Mean (range)		9.9 (1–31)	9.5 (1–26)
Position (%) Full time Part time Casual		61 23 15	67 21 11
Ward (%) Surgery Medicine Psychiatry		31 54 16	30 48 22
Nurses perceived *almost always* or *frequently* working with patients who smoke** (%)		83	96
** *p* < .01			

Analysis

Descriptive statistics were used to summarize demographic-item responses. The responses to four-point Likert items (nurses' tobacco-reduction activities, attitudes towards tobacco use and reduction, and perceived motivators and barriers to addressing tobacco reduction with

Table 3   *Nurses' Tobacco Reduction Activities in Everyday Practice[a]*

Sentence Stem and Items *With your patients who use tobacco how often do you…*	Site A (*n*=101) %	Site B (*n*=113) %
Ask		
Assess smoking status on admission	85	90
Chart smoking status[*]	68	81
Assess interest in quitting	51	57
Advise		
Talk about health effects of smoking	39	51
Talk about health benefits of stopping[*]	34	47
Advise patient to stop smoking[*]	32	46
Advise patient to cut down	46	49
Assist		
Discuss stopping strategies[*]	21	35
Discuss strategies to cope with relapse	12	15
Discuss nicotine replacement therapies[***]	30	59
Recommend nicotine replacement therapies for a patient[***]	36	66
Have a conversation with a family member[**]	9	24
Arrange		
Refer a patient to in-hospital expert[***]	0	38
Refer a patient to a community-based program[*]	3	12

[a] Items presented in this table represent the percentage of respondents whose response to the item was either *almost always* or *frequently.*

[*] $p < .05$; [**] $p < .01$; [***] $p < .001$

patients) were recoded into two response options: affirmative and negative. Chi square analysis was used to determine response differences between site A and site B participants (Hazard Munro, 2001).

Results

Participant Demographics

The personal and professional characteristics of the participants were similar across the two sites in every regard except marital status ($\chi 2$ (2, $n = 212$) =12.089) (see Table 2). Perceptions of tobacco use among patients differed by site: 96% of site B nurses compared to 83% of site A nurses reported *almost always* or *frequently* working with patients who were smokers ($\chi 2$ (1, $n = 211$) = 10.369).

Representativeness of the samples was assessed by comparing sample demographic data with population data obtained from the human resources department at each site. Population data obtained included age, number of years employed at the hospital, description of position (full time, etc.), and the primary ward for the nurse's position. Based on available data, the samples for each site appear representative of the population, with one exception: the sample of respondents from site A included a higher percentage of full-time nurses than in the target population (Schultz, 2005).

Nurses' Tobacco-Reduction Activities

Between-group differences were noted for at least one of the items for each of the four categories of tobacco reduction activities (see Table 3). Site B participants reported a greater likelihood of charting smoking status ($\chi 2$ (1, $n = 212$) = 4.595), talking with patients about the health benefits of stopping ($\chi 2$ (1, $n = 212$) = 3.812), advising patients to stop smoking ($\chi 2$ (1, $n = 212$) = 4.516), talking to patients about strategies to support cessation ($\chi 2$ (1, $n = 212$) = 5.361) and the use of nicotine-replacement therapies ($\chi 2$ (1, $n = 212$) = 17.805), recommending the use of nicotine replacement ($\chi 2$ (1, $n = 212$) = 19.208), and talking with family members about tobacco reduction ($\chi 2$ (1, $n = 208$) = 8.078). Moreover, site B participants reported referring patients to in-hospital ($\chi 2$ (1, $n = 211$) = 47.241) and community smoking-cessation resources more frequently than site A participants ($\chi 2$ (1, $n = 208$) = 5.972).

Nurses' Attitudes towards Tobacco Reduction and Their Role

Responses to items assessing nurses' attitudes towards tobacco reduction and their related role were similar at the two sites, with one exception (see Table 4). More site B than site A participants reported that their registered nurse colleagues were likely to discuss stopping smoking with patients ($\chi 2$ (1, $n = 213$) = 10.153).

Motivators and Barriers to Providing Tobacco-Reduction Activities

Responses to items related to associated health concerns demonstrated no between-group differences (see Table 5); however, the other three categories demonstrated between-group differences. In comparison with site B respondents, site A nurses were less likely to report having confidence in their ability to support cessation ($\chi 2$ (1, $n = 208$) = 4.081) and having positive experiences with helping people to stop ($\chi 2$ (1, $n = 208$) = 5.789). Additionally, site B nurses were more likely than site A nurses to agree that the following two institutional factors supported their involvement in addressing tobacco issues with patients: administrative support for providing smoking-cessation counselling ($\chi 2$ (1, $n = 209$) =

55.840), and physicians' requests for nurse assistance with cessation (χ^2 (1, $n = 209$) = 7.371). Finally, site B nurses were less likely than site A nurses to report that a perceived sense of non-motivation to stop smoking by a patient would be a barrier to their addressing tobacco use (χ^2 (1, $n = 211$) = 5.260).

Table 4 *Nurses' Attitude towards Tobacco–Reduction and Their Role[a]*		
Item	**Site A** **($n=101$)** **%**	**Site B** **($n=113$)** **%**
1. Nurses who agree that relief of withdrawal symptoms is important for successful stopping	98	97
2. Nurses who perceive that on their ward nurses assess tobacco use status on admission	90	93
3. Nurses who perceive a need for additional training/skills in assisting people to stop	88	90
4. Nurses who agree that it is important for nurses to set a good example by not smoking	87	85
5. Nurses who agree it is important for nurses to talk with their patients about tobacco use	87	85
6. Nurses who agree that it is important that nurses actively encourage patients to stop smoking	76	75
7. Nurses who agree that most smokers can stop if they really want to	68	66
8. Nurses who agree that smokers appreciate it when nurses provide smoking cessation advice	47	55
9. Nurses who agree that with most smokers nurses can be effective in promoting cessation	45	50
10. Nurses who perceive that on their ward nurses discuss stopping smoking with their patients**	25	46
11. Nurses who perceive that on my ward nurses chart about nursing care provided that relates to tobacco	31	41
12. Nurses who agree that when a person has been smoking for many years, there is not much point in trying to stop	8	6
[a] Items presented in this table represent the percentage of respondents whose response to the item was either *strongly agree* or *agree*. ** $p < .01$		

Table 5 *Motivators and Barriers to Integrating Tobacco Reduction*[a]		
Sentence Stems and Items	**Site A** **(***n***=101)** **%**	**Site B** **(***n***=113)** **%**
Motivators ***I address stopping smoking with my patients because…***		
Associated Health Concerns		
1. Nurses who agreed there are health benefits for their patient	99	98
2. Nurses who agreed stopping smoking will decrease risks of tobacco related health effects	99	98
3. Nurses who agreed that if a patient stopped smoking, it would influence treatment side effects	71	69
Concern for the Patient		
4. Nurses who are motivated by a patient wanting to stop smoking	81	87
Knowledge and Confidence		
5. Nurses who agreed they have personal experience with stopping	41	41
6. Nurses who agreed they have confidence in their ability to help someone stop⋆	24	36
7. Nurses who agreed they have past positive experiences with assisting people with stopping⋆	19	34
Institutional Factors		
8. Nurses who agreed it is an expected part of my role	57	61
9. Nurses who agreed there is administrative support on their ward to assist a patient in stopping⋆⋆⋆	10	60
10. Nurses who agreed physicians request nurses' involvement in assisting with stopping⋆⋆	17	34
11. Nurses who agreed they have adequate time to provide assistance with stopping	12	21
12. Nurses who agreed there is recognition for assisting with stopping	0	4

Table 5 *cont'd*		
Barriers *I avoid addressing stopping smoking with my patients because…*		
Associated Health Concerns		
1. Nurses who agreed that stopping smoking would make no difference due to poor prognosis	22	22
2. Nurses who agreed that smoking is not a health priority	5	11
Concern for the Patient		
3. Nurses who agreed when a patient is not motivated or interested*	84	71
4. Nurses who agreed when they don't want to add to their patient's stress	54	43
5. Nurses who agreed they feel it is an invasion of privacy	37	35
6. Nurses who agreed they don't want their patient to feel guilty	30	21
Knowledge and Confidence		
7. Nurses who agreed they lack adequate knowledge about how to assist my patient in stopping	58	46
[a] Items presented in this table represent the percentage of respondents whose response to the item was either *strongly agree* or *agree*. * $p < .05$; ** $p < .01$; *** $p < .001$		

Discussion

The findings from this study provide the first description of the attitudes and practice of Canadian registered nurses related to tobacco reduction in acute-care hospital settings. While the level of involvement in tobacco-reduction interventions is slightly higher than rates reported for nurses in other countries (McCarty et al., 2001; Nagle et al., 1999; Sarna, Brown, Lillington, Rose, et al., 2000), many opportunities to address tobacco use with patients continue to be missed. As well, findings from this study suggest the presence of institutional influences on the integration of tobacco-reduction activities and provide important information on nurses' views about addressing tobacco use with patients and their perceived ability to provide support for stopping smoking.

The positive influence of the availability of tobacco-reduction resources appears to be reflected in the findings. The participants reported regularly assessing and charting tobacco use, with significantly more nurses at site B reporting that they charted smoking status. This difference might reflect the accessibility of in-hospital and community cessation resources at site B. At both sites, only half of the nurses indicated that they assessed interest in quitting, and fewer provided advice regarding tobacco use and reduction. Nevertheless, nurses with greater access to tobacco-related resources (site B) reported higher rates of talking with patients about the benefits of stopping as well as providing advice about stopping. Assisting with smoking-cessation activities was restricted to nicotine-replacement therapy, with significantly more nurses at site B than at site A reporting that they had incorporated these activities into their practice. Arranging follow-up for patients interested in reducing their use of tobacco was not a frequent activity among respondents, although 37% of nurses at site B reported that they *almost always* or *frequently* referred such patients to an in-hospital expert. Finally, nurses working at site B reported higher levels of tobacco-reduction activity among colleagues. While these differences suggest a positive relationship with accessibility to tobacco-related resources, they are particularly interesting because the two sets of nurses reported similar attitudes towards tobacco use. Even though nurses believe tobacco use is an important health issue and ought to be addressed, the institution likely plays an important role in shifting practice norms.

Previous research suggests that institutional commitment to tobacco reduction influences the successful integration of tobacco-reduction interventions by clinicians (Cooke, Mattick, & Campbell, 1998; Fiore et al., 2000; Vaughn et al., 2002), and, in general, a positive relationship between institutional commitment to practice guidelines and practice norms has been reported (Grimshaw, Eccles, & Totes, 2004; Wall, 2005). One workplace factor commonly noted as influencing the uptake of research evidence into practice is the availability of resources to integrate new practice activities (France et al., 2001; Hutchinson & Johnston, 2004; Varcoe & Hilton, 1995). While findings from this study concur that tobacco-related resources are likely an underlying factor in between-site differences in reported practice norms, other noteworthy plausible influences include perceived administrative support to address tobacco use and physician expectation for nurses' involvement in tobacco reduction. In addition, lack of time to address patients' tobacco use is commonly reported as a workplace environmental barrier (Block, Hutton, & Johnson, 2000; McCarty et al., 2001; Nagle et al., 1999; O'Loughlin et al., 2001; Sarna, Brown, Lillington, Wewers, et al., 2000; Vaughn et al.), a finding that was reflected in the responses of the majority of nurses in

this study. Interestingly, despite between-site similarities in perceived availability of time to address tobacco use, nurses at site B reported higher rates and a greater range of tobacco-reduction activities. Thus, perceived availability of time appears to be unrelated to reported practice norms.

Hospitalization has been proposed as an ideal opportunity to address tobacco use (France et al., 2001; Ratner et al., 2004; Rigotti et al., 2001); however, it has been speculated that health-care providers are reluctant to discuss tobacco use with their patients for fear of straining the relationship and heightening stress for a person who is already facing a health crisis (Block et al., 2000; Kozlowski et al., 2001). Interestingly, the majority of nurses in this study did not believe that addressing tobacco reduction would increase patients' sense of stress or guilt or would represent an invasion of privacy. Additionally, almost all nurses reported that patient interest in stopping would motivate them to address tobacco reduction; yet nurses from site B (those with greater access to resources) were less likely to be deterred from addressing tobacco use because a patient was perceived to be unmotivated to stop smoking.

The majority of participants agreed that registered nurses ought to talk with patients about tobacco use and actively encourage them to stop smoking. Similar findings are reported in the literature (McCarty et al., 2001; Nagle et al., 1999; Sarna, Brown, Lillington, Wewers, et al., 2000). While there was agreement that attempting to stop is worthwhile for any smoker and that smokers *can* stop successfully, only half of the respondents believed that smokers appreciate support provided by nurses and that such efforts are efficacious. There was also solid agreement that the relief of withdrawal symptoms is essential to cessation. Thus, although the respondents portrayed a fairly positive attitude towards cessation, less than half thought their colleagues were discussing tobacco reduction with patients. These findings point to a gap between what nurses think they ought to be doing and what they perceive is being done in their practice environments. This could be explained in part by beliefs that cessation support is ineffective and that patients are not interested in addressing tobacco reduction.

The respondents were candid about their lack of preparedness for intervening with patients concerning tobacco use. Just under half of the nurses believed they possessed adequate knowledge to support the integration of tobacco-reduction activities into their practice. As well, less than one third reported having confidence in their ability to assist a patient with stopping smoking. The results of previous studies suggest that higher levels of self-efficacy related to engaging in tobacco reduction improve integration of cessation support (Aquilino, Goody, & Lowe, 2003; McCarty et al., 2001; Nagle et al., 1999; O'Loughlin et al., 2001; Sarna, Brown, Lillington, Wewers, et al., 2000; Vaughn et al., 2002). A

Canadian initiative focused on preparing nurses to address tobacco use includes the dissemination of best practice guidelines for nurses (Registered Nurses Association of Ontario [RNAO], 2003b) and an e-learning course related to the guidelines (RNAO, 2003a). While the results of pilot testing the e-learning course include an increase in knowledge, e-learning was not sufficient to improve skills for counselling patients on tobacco use and reduction. However, when tailored educational materials, along with brief one-to-one follow-up training sessions, are used to support the use of clinical practice guidelines on tobacco reduction for nurses working with pregnant and postpartum women, nurses report increased confidence in providing tobacco-related interventions (Hyndman, 2004). Less intensive educational strategies may also have merit. Site B nurses were more likely than site A nurses to report confidence in their ability to provide tobacco-reduction support and to report positive past experiences with supporting cessation efforts. This difference existed even though neither hospital provided specific in-service tobacco-reduction education for nurses. It is possible that the in-hospital cessation experts at site B were role models for the nurses in addressing tobacco use and/or provided informal learning opportunities for nurses.

This study has a number of limitations. Since whole-population sampling was used, generalizability of the findings beyond the study participants is not possible. The response rate at site A was lower than expected; however, based on the available population data, the participants appear representative. No further information about the non-responders is available. Level of integration of tobacco reduction is based on self-report and no attempt was made to check for accuracy; therefore, response bias might have influenced reported rates. Still, these findings provide a basis for discussing the views and practices of Canadian registered nurse related to tobacco reduction.

Conclusion

The findings from this descriptive study add to the evidence showing that nurses commonly assess smoking status and that, beyond this activity, addressing tobacco use has not become a regular part of the practice of acute-care registered nurses. While the nurses believed they had a role to play in tobacco reduction, they felt unprepared to support tobacco reduction with patients. Logical ways of addressing this gap would include providing relevant in-service education along with clarification and standardization of which tobacco-reduction activities could reasonably be integrated into practice. However, as has been noted previously, the uptake of practice guidelines will not be successful if solutions rest

solely within the domain of practitioners (Grimshaw et al., 2004). The successful integration of tobacco reduction by practitioners will depend on the commitment of health-care institutions to provide such care. As Fiore and colleagues (2000) note, our ability to attenuate the health effects of tobacco use will be restricted if we focus solely on the practice of the individual clinician; a systemic approach encompassing strategic planning for health institutions and health-care systems to integrate tobacco control is required.

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