NEEDS ASSESSMENT AND CURRENT PRACTICE OF ALCOHOL RISK ASSESSMENT OF PREGNANT WOMEN AND WOMEN OF CHILDBEARING AGE BY PRIMARY HEALTH CARE PROFESSIONALS

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ABSTRACT

Background
Assessing the current practices and learning and resource needs of primary health care professionals in regards to their alcohol risk assessment practices is an important step in providing optimal training and educational methods. Needs and current practices in alcohol risk assessment of pregnant women and women of child bearing years may vary according to practitioner demographics.

Methods
To appraise alcohol risk assessment current practices and learning and resource needs among Saskatchewan primary health care professionals, a mail and online survey was distributed in the spring of 2006 to family physicians/general practitioners and nurse practitioners.

Results
In total, 876 surveys were distributed and 386 were returned for an overall response rate of 44.1%. The majority of survey respondents reported either rarely or never using a standardized screening tool in assessing alcohol risk in women or reported using a standardized screening tool that is less sensitive. Current practices varied according to gender, length of time in practice and practice location, while learning and resource needs were more likely to be identified by nurse practitioners, female physicians, and physicians from rural areas. Physicians who had practiced for less than 5 years were more likely to want an online course.

Discussion
Knowing the needs and practices of health care professionals may assist learning and resource training and could assist in teaching best practices in alcohol risk assessment. Assessing alcohol risk in pregnant women and women of childbearing age is critical for prevention of FASD.

Key Words: *FASD prevention; learning and resource needs; family physicians/general practitioners; nurse practitioners; survey; alcohol risk assessment; pregnant and childbearing aged women*

Health care providers play a critical role in identifying alcohol risk behavior in childbearing aged and pregnant women. Addressing alcohol risk is important for primary prevention of Fetal Alcohol Spectrum Disorder (FASD), a range of disabilities caused by prenatal exposure to alcohol use. Best practices for assessing alcohol risk in pregnant and aged women are well documented.[1-2] The use of a standardized screening tool (e.g., T-ACE, TWEAK)[3-4]and engaging patients using motivational interviewing techniques[5] are highly recommended methods of approaching an often sensitive topic.

However, primary care health professionals may perceive alcohol risk assessment as difficult, time consuming, and uncomfortable.[6-7] Gassman[8] found a relationship between physicians' and

nurse practitioners' feelings of competency and the likelihood of practicing screening and brief interventions. In her study, nurse practitioners reported perceptions of lacking a legitimate role in practicing screening and brief interventions. Other studies suggest screening and intervention efforts would be greatly improved by clinicians increased confidence and familiarity with nationally accepted standards.[9]

The present study is part of a larger Alcohol Risk Assessment project, which is intended to enhance patient care via health care providers' training and resource development. To assess current practices of family physicians/general practitioners and nurse practitioners regarding risk assessment for alcohol use in childbearing aged and pregnant women Saskatchewan health care professionals were asked about their learning and resource needs surrounding this topic and to identify their specialty, gender, practice location, and length of time in practice. The study findings are intended to guide the development and delivery of resources and education in the area of alcohol risk assessment for this population of professionals.

METHODS

A questionnaire on the current practices and learning/resource needs of health care professionals in Saskatchewan regarding alcohol risk assessment was developed and piloted with the assistance of a project advisory committee (Appendix A). The committee is representative of a number of health care disciplines such as family medicine, pediatrics, nurse practitioners, and midwifery.

APPENDIX A

ALCOHOL RISK ASSESSMENT SURVEY FOR HEALTH CARE PROFESSIONALS

Saskatchewan Prevention Institute

Our Goal is Healthy Children

We are requesting your participation in a brief survey for the ***Alcohol Risk Assessment project***. The purpose is to ***assess the current practices*** of health care professionals in Saskatchewan.

Your responses will be kept completely ***confidential*** and ***no personally identifying information*** will be linked to your data. All data will be reported in ***aggregated*** form. In instances where the data is published in an academic journal and/or presented at a professional conference, the data will be stored for a minimum of five years in locked storage.

Completion of this survey constitutes ***consent*** to participation. You may refuse to answer any individual questions. Thank you in advance for your participation in this study.

1. Please select the appropriate response for the following statements. Select only *one*.

Statement	Always	Sometimes	Rarely	Never
I ask all women of ***childbearing age*** about their personal alcohol use.				
I discuss the harmful effects of alcohol use during pregnancy with all women of ***childbearing age***.				
I advise all women of ***childbearing age*** to abstain from alcohol use during pregnancy.				

I use a standardized tool to screen all women of ***childbearing age*** for alcohol use.				
I use brief motivational techniques to engage all women of ***childbearing age*** about their alcohol use.				
I refer all women of ***childbearing age*** who report heavy / binge alcohol use for treatment.				
I ask all ***pregnant*** women about their personal alcohol use.				
I discuss the harmful effects of alcohol use during pregnancy with all ***pregnant*** women.				
I advise all ***pregnant*** women to abstain from alcohol use during pregnancy.				
I use a standardized tool to screen all ***pregnant*** women for alcohol use.				
I use brief motivational techniques to engage all ***pregnant*** women about their alcohol use.				
I refer all ***pregnant*** women who report heavy / binge alcohol use for treatment.				

2. I ***primarily*** use the following standardized tool to screen all women of ***childbearing age*** for alcohol use (select only ***one***):

☐ TWEAK [Tolerance – Worried – Eye Opener – Amnesia – K(C)ut Down]
☐ CAGE [Cut Down – Annoyed – Guilty – Eye Opener]
☐ T-ACE [Tolerance – Annoyed – Cut Down – Eye Opener]
☐ Rarely or never use a standardized screening tool
☐ Other (please specify) _____

3. I ***primarily*** use the following standardized tool to screen all ***pregnant*** women for alcohol use (select only ***one***):

☐ TWEAK [Tolerance – Worried – Eye Opener – Amnesia – K(C)ut Down]
☐ CAGE [Cut Down – Annoyed – Guilty – Eye Opener]
☐ T-ACE [Tolerance – Annoyed – Cut Down – Eye Opener]
☐ Rarely or never use a standardized screening tool
☐ Other (please specify) _____

4. Which of the following would assist you in learning about ***screening and using brief motivational techniques*** when discussing alcohol use with all women of childbearing age, particularly pregnant women? Select ***all*** that apply.

☐ Training session
☐ Audiovisual material

☐ Educational book / manual
☐ Online web course
☐ Do not need
Other (please specify) _____

5. Please select your ***gender:***

☐ Male
☐ Female

6. How many ***years*** have you been practicing?

☐ Less than 5 years
☐ 6 – 10 years
☐ 11 – 20 years
☐ More than 20 years

7. In which ***health region(s)*** do you work? Please select all that apply.

☐ Athabasca Health Authority
☐ Cypress
☐ Five Hills
☐ Heartland
☐ Keewatin Yatthé
☐ Kelsey Trail
☐ Mamawetan Churchill River
☐ Prairie North
☐ Prince Albert Parkland
☐ Regina Qu'Appelle
☐ Saskatoon
☐ Sun Country
☐ Sunrise
☐ Other (please specify) _____

8. What is your ***specialty***?

☐ Family Physician
☐ Nurse Practitioner
☐ Other (please specify) _____

Additional Comments

Six questions assessed current practices regarding the frequency of asking about alcohol use, discussing harmful effects during pregnancy, advising abstinence, using a standardized screening tool and brief motivational techniques, and referring heavy/binge drinkers. Respondents were asked to rate the frequency in terms of "always" "sometimes", "rarely" or "never". The frequency questions were asked in regards to both pregnant and childbearing aged woman.

Respondents were also asked to identify the particular screening tool that they primarily used for each woman of childbearing age, and each pregnant woman. The choices were TWEAK, CAGE, T-ACE, "rarely or never use" or "other"-tool to be specified by the respondent. Two additional questions identified what participants felt would assist them when discussing alcohol use and in learning about screening and using brief motivational techniques. Further questions identified respondents' specialty, gender, length of practice and practice location.

A contact database of all family physicians and general practitioners in Saskatchewan in 2006 was obtained from the College of Physicians and Surgeons (n = 809). Nurse practitioner contact was made through the Saskatchewan Registered Nurses Association (n = 67), and therefore direct knowledge of respondents' practice location was not available. Nurse practitioners are Registered Nurses who have gained enhanced knowledge and skills through additional education and clinical practice. Their scope of practice includes diagnosing, prescribing, ordering diagnostic tests and managing common acute conditions and stable chronic illness.

All 809 family physicians, general practitioners, and 67 nurse practitioners were mailed a survey package consisting of a letter of invitation, the three page alcohol risk assessment survey, instructions for completing the survey, promotional business card for the project, and stamped envelope. Informed consent was explained in the letter of invitation. The study was approved by the University of Saskatchewan Ethics Review Board.

Participants were invited to complete the survey at their convenience, either in paper form or on the Internet through a web based survey website. The Internet survey was designed as to not require a response for each question should a participant refuse to answer a question for any reason. Two weeks after the initial mailing, participants who had yet to submit a survey via mail or Internet (n=706) were mailed a second survey package again requesting their participation. Four weeks after the initial mailing, a phone call was made to family physicians and nurse practitioners who had not responded. Incentive for participation was offered in the form of entry for a prize (meal and accommodation).

Data Analysis

To describe the sample of family physicians/general practitioners and nurse practitioners, frequencies and proportions were performed on demographic characteristics (gender, length of practice, practice location), current alcohol risk assessment practices, and learning/resource needs. Pearson chi-square analyses were conducted to test the association between demographic characteristics, current practices and learning/resource needs.

RESULTS

Participants

The overall response to the survey was 386/876 (44.1%). In terms of rate of participation, 293/809 (36.2%) family physicians/general practitioners and 41/67 (61.2%) nurse practitioners consented to participate and returned a completed survey. The vast majority of responses were by mail (94.6%) rather than via means of the Internet survey (5.4%). The reasons for non-consent varied from not seeing women of childbearing age in their practice (53.8%), choosing not to participate for other reasons (32.7%), while 13.5% of non-consenters returned a blank survey.

The characteristics of the respondents are presented in Table 1. According to the 2004-2005 data from the Saskatchewan Medical Association, the gender distribution of Saskatchewan physicians is 69.8% males and 30.2% females. There were a greater proportion of female physicians (approximately 7% more) who responded to our survey compared to the proportion of female physicians in the population.

Approximately 55% of the population of Saskatchewan family physicians and general practitioners practice in the two larger urban centres. Our sample slightly underrepresented

those physicians from the larger urban centres. At the same time, we had a somewhat higher rate of response from the smaller urban centres (22.2% versus N=161; 19.9%) and the rural areas (27.3% versus N=205; 25.3%).

TABLE 1 Respondents' Characteristics by Specialty

		Physicians N = 293		Nurse Practitioners N = 41	
		Freq.	%	Freq.	%
Gender	Male	183	62.9	3	7.3
	Female	108	37.1	38	92.7
Number of years practicing					
	Less than 5	39	13.3	10	24.4
	5-10	45	15.4	10	24.4
	11-20	89	30.4	10	24.4
	More than 20	119	40.6	11	26.8
Practice location					
	Large Urban	148	50.5	-	-
	Small Urban	65	22.2	-	-
	Rural	80	27.3	-	-

Current Practices

The most salient finding from the current practice section of the survey is that the vast majority of both physicians and nurse practitioners are either rarely or never using a standardized screening tool or are using a standardized screening tool that is not necessarily the most sensitive instrument (i.e., CAGE) to assess alcohol risk in women (Table 2). Physicians and nurse practitioners reported predominantly using the CAGE for both childbearing aged and pregnant women.

TABLE 2 Use of Standardized Alcohol Risk Assessment Screening Tools of Physicians and Nurse Practitioners in Two Patient Populations

Pregnant women	**Physicians (N = 293)**		**Nurses (N = 41)**		**Total (N = 334)**	
	Freq.	**%**	**Freq.**	**%**	**Freq.**	**%**
CAGE	144	53.1	17	48.6	161	52.6
TWEAK	4	1.5	1	2.9	5	1.6
T-ACE	3	1.1	2	5.7	5	1.6
Rarely / Never Use Standardized Screening Tool	120	44.3	15	42.9	135	44.1
Childbearing-aged women	**Physicians**		**Nurses**		**Total**	
	Freq.	**%**	**Freq.**	**%**	**Freq.**	**%**
CAGE	138	50.4	15	39.5	153	49.0
T-ACE	4	1.5	1	2.6	5	1.6
TWEAK	3	1.1	1	2.6	4	1.3
Rarely / Never Use Standardized Screening Tool	129	47.1	21	55.3	150	48.1

Participants were asked about their current practices regarding the use of brief motivational techniques to engage childbearing aged and pregnant women. While 95.6% of physicians and 95.1% of nurse practitioners reported that they "always" or "sometimes" ask pregnant women about alcohol use, 39.9% of physicians and 34.1% of nurse practitioners reported "rarely" or "never" using brief motivational techniques when engaging pregnant women about alcohol use. The use of brief motivational techniques was less frequent in childbearing aged women, with 48.1% of physicians and 39% of nurse practitioners reporting "rarely" or "never" using them in this population. There were no significant differences between physicians and nurse practitioners in our sample regarding alcohol risk assessment current practices.

Various physician characteristics (length of practice, gender, and practice location) were analyzed to describe associations with current alcohol risk assessment practices. Physicians who had been in practice for 10 years or less were more likely than physicians in practice for 11 years or longer to report "always" or "sometimes" using a standardized tool to screen each pregnant woman for alcohol use (52.4% versus 34.9%; χ^2 = 7.49, p<.01). Even so, the physicians who had been in practice for the least amount of time (i.e., the most recent graduates, in practice for less than 5 years) reported using a standardized screening tool with each pregnant woman "always" or "sometimes" only 51.3% of the time. Significantly more female physicians compared to male physicians reported "always" or "sometimes" referring each pregnant woman who reports heavy/binge alcohol use for treatment (96.8% versus 88.4%; χ^2 = 5.32, p<.02). In terms of practice location, physicians from smaller urban centres (20%) were significantly less likely than larger urban physicians (53.2%; χ^2 = 8.41, p<.01) to report "always" or "sometimes" asking childbearing aged women.

The use of brief motivational techniques to engage women of childbearing age about alcohol use also varied according to physician characteristics. Physicians who had been in practice for more than 20 years (60.5%) were more likely to engage childbearing aged women than the newer groups of physicians (45.8%; χ^2 = 10.03, p<.02). Smaller urban physicians (33.9%) were less likely than larger urban physicians (55.6%; χ^2 = 7.92, p<.02) to engage childbearing aged women.

Learning/Resource Needs

There were a number of differences between physicians' and nurse practitioners' identified learning and resource needs. In general, nurse practitioners were less likely than physicians to report that they did not have any learning needs (4.9% versus 18.4%; χ^2 = 4.73, p<.03) or resource needs (2.4% versus 15.7%; χ^2 = 5.23, p<.02). When asked about learning needs for screening and use of brief motivational techniques, nurse practitioners were more likely than physicians to report a desire for an educational book/manual (63.4% versus 43%; χ^2 = 6.04, p<.01), an online course (51.2% versus 29.4%; χ^2 = 7.90, p<.005) and a training session (68.3% versus 30.4%; χ^2 = 22.72, p<.0001). When asked about resource needs for discussing alcohol use, nurse practitioners were more likely than physicians to want posters (65.9% versus 42%; χ^2 = 8.29, p<.01) and quick reference materials (73.2% versus 32.8%; χ^2 = 24.99, p<.0001).

Learning and resource needs also varied according to physician characteristics. Those physicians who had been in practice for five years or longer were significantly less likely to desire a list of treatment services (45.8% versus 69.2%; χ^2 =7.39, p<.04), while those physicians in smaller urban centres (61.5%) compared to the larger urban centres (43.9%; χ^2 =6.74, p<.03) were also less likely to desire such a list. Years of practice was also related to a desire for an online course, with physicians in practice longer than 20 years being significantly less likely to identify the need for an online course (79%) compared to physicians in practice for less than five years (51.3%; χ^2 =11.29, p<01.). Female physicians were more likely than male physicians (41.7% versus 23.5%; χ^2 =10.63, p<.001) to want a training session to assist in learning about screening and using brief motivational techniques. Practice location was also associated with the need for a training session. Rural physicians were more likely than physicians from larger urban areas (38.8% versus 25.7%; χ^2 =4.14, p<.04) to report an interest in a training session. Similarly, physicians from larger urban centres were more likely than rural physicians to report not requiring

assistance with learning about screening and using brief motivational techniques (25.7% versus 8.8%; χ^2 =11.06, p<.004).

DISCUSSION

Current Practices

While a high proportion of both family physicians/general practitioners and nurse practitioners reported asking childbearing aged and pregnant women about alcohol use, best practices in terms of using a standardized screening tool, using motivational techniques, and using the most appropriate standardized tool were not highly reported in our sample.

For physicians, the characteristics of gender, length of practice, and practice location were related to current practices in assessing alcohol risk in pregnant and childbearing aged women. Female physicians were more likely to refer pregnant women for treatment who report alcohol use. This finding could be attributed to the majority of female physicians practicing in larger urban centres where specialized treatment centres exist. Newer physicians were more likely to report using a standardized tool in alcohol risk assessment, a practice that could have been acquired during more recent medical training. At the same time, physicians in practice for more than 20 years may be more likely to engage childbearing aged women due to long standing patient-physician relationships. Physicians from smaller urban centres who are significantly less likely than larger urban physicians to report asking and engaging childbearing aged women may have a more personal knowledge of their patient population and may determine such questions less necessary.

Learning/Resource Needs

The findings on current practices emphasize the need for increased education regarding alcohol risk assessment for both populations of Saskatchewan health care professionals. Specific learning/resource needs were identified according to physician characteristics and health profession specialty. In general, nurse practitioners were more likely than physicians to report requiring learning and resource needs.

Training sessions were especially popular among female physicians and physicians from rural areas. Female physicians may be more interested in a training session because they may be more likely to see female patients compared to male physicians. A greater proportion of female physicians responded to the survey, perhaps due to its prenatal content. Access to such training sessions among rural physicians will be more limited than for larger urban physicians which could account for their interest. Similarly, the physicians in larger urban centres with greater access to services and resources could explain why they were less likely to require assistance than rural physicians. Those physicians who had been in practice for five years or longer and who practiced in smaller urban centres may have been less likely to desire a list of treatment services because of their familiarity with these services.

The finding that newer physicians have a greater interest in learning with online courses fits well with the University of Saskatchewan, College of Medicine's Continuing Professional Learning mandate to offer continuing education credits via this medium. Using an online method, however, may not reach physicians who have been in practice longer—those physicians comprised a large proportion of our sample.

CONCLUSION

Our current practice findings are similar to a study of American obstetrician - gynecologists.[6] Diekman and colleagues measured assessment and management practices regarding patient alcohol use. Ninety-seven percent of their sample reported asking their pregnant patients about alcohol use. In their sample, use of a standardized screening tool was also low, and the CAGE was the most used.

One limitation of the present study relates to restrictions regarding the nature of the survey questions. In our efforts to increase the survey's response rate and therefore keep the length of the questionnaire relatively brief, some information regarding current practices could not be collected. A few respondents took the time to qualify their responses. For example, a number of physicians indicated that they did not ask each woman of childbearing age about alcohol use "always" if the patient presented for an unrelated complaint.

Some physicians specified that they "always"assessed" alcohol risk, but only at the time of physical exams.

Another limitation was related to how the survey could be distributed to the physician population. At the time of this survey, there was no Saskatchewan database of physicians who offer services to prenatal and childbearing aged women. Subsequently, later in 2007, a brief telephone survey to physician offices in the province gathered information on the delivery of prenatal care for an unrelated project.[10] According to this telephone survey, less than half of the physicians in the contact database (47.5%) deliver prenatal care. It is likely that the Alcohol Risk Assessment survey was sent to a number of potential respondents who did not see prenatal patients and therefore did not respond. The survey was also not distributed to obstetricians-gynecologists. This will have lowered our rate of response. However, it is important to keep in mind that these results may not generalize to all Saskatchewan physicians who conduct alcohol risk assessment.

These findings underline the need to provide clinicians with best practice information, resources and training around alcohol risk assessment. The results also suggest certain groups of health care providers may be more amenable than other professionals to particular learning and resource options. The design and delivery of various educational methods need to account for these differences among health care provider groups.

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