

Do female primary care physicians practise preventive care differently from their male colleagues?

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OBJECTIVE To assess whether female primary care physicians' reported coverage of patients eligible for certain preventive care strategies differs from male physicians' reported coverage.

DESIGN A mailed survey.

SETTING Primary care practices in southern Ontario.

PARTICIPANTS All primary care physicians who graduated between 1972 and 1988 and practised in a defined geographic area of Ontario were selected from the Canadian Medical Association's physician resource database. Response rate was 50%.

MAIN OUTCOME MEASURES Answers to questions on sociodemographic and practice characteristics, attitudes toward preventive care, and perceptions about preventive care behaviour and practices.

RESULTS In general, reported coverage for Canadian Task Force on the Periodic Health Examination's (CTFPHE) A and B class recommendations was low. However, more female than male physicians reported high coverage of women patients for female-specific preventive care measures (ie, Pap smears, breast examinations, and mammography) and for blood pressure measurement. Female physicians appeared to question more patients about a greater number of health risks. Often, sex of physician was the most salient factor affecting whether preventive care services thought effective by the CTFPHE were offered. However, when evidence for effectiveness of preventive services was equivocal or lacking, male and female physicians reported similar levels of coverage.

CONCLUSION Female primary care physicians are more likely than their male colleagues to report that their patients eligible for preventive health measures as recommended by the CTFPHE take advantage of these measures.

OBJECTIF Évaluer si la couverture rapportée par les femmes médecins de famille concernant l'application de certaines stratégies de soins préventifs aux patients admissibles est différente de celle rapportée par leurs confrères de sexe masculin.

CONCEPTION Sondage postal.

CONTEXTE Pratiques de soins de première ligne du Sud de l'Ontario.

PARTICIPANTS Tous les médecins de première ligne qui ont reçu leur diplôme entre 1972 et 1988 et qui exerçaient dans des régions géographiques définies de l'Ontario ont été sélectionnés à partir de la banque de données sur les effectifs médicaux de l'Association médicale canadienne. Le taux de réponse fut de 50 %.

PRINCIPALES MESURES DES RÉSULTATS Réponses aux questions sur les caractéristiques de la pratique et les données socio-démographiques, sur les attitudes envers les soins préventifs et les perceptions entourant le comportement et les pratiques dans le domaine des soins préventifs.

RÉSULTATS En général, on a rapporté une faible mise en application des recommandations des catégories A et B du Groupe de travail canadien sur l'examen médical périodique (GTCEMP). Par contre, plus de femmes médecins ont rapporté une meilleure couverture des patientes en ce qui concerne les mesures préventives spécifiques aux femmes (p. ex. cytologie cervicovaginale, examen des seins et mammographie) et la mesure de la tension artérielle. Les femmes médecins semblent questionner un plus grand nombre de patients sur un plus grand nombre de risques à la santé. Souvent, le sexe du médecin s'est avéré le facteur prépondérant de la décision d'offrir des services de soins préventifs considérés efficaces par le GTCEMP. Cependant, lorsque les preuves démontrant l'efficacité des services préventifs sont équivoques ou inexistantes, les médecins des deux sexes ont rapporté des taux semblables de mise en application.

CONCLUSION Comparativement à leurs collègues masculins, les femmes médecins de famille sont plus susceptibles de rapporter qu'elles appliquent aux patients admissibles les mesures de santé préventive recommandées par le GTCEMP.

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DURING THE PAST 10 YEARS, STUDIES OF THE effect of a physician's sex on his or her primary care practice behaviour have moved from simply assessing time spent in practice to examining whether male and female physicians have different attitudes to patient care and caregiving behaviour. Maheux and colleagues¹ have suggested that female physicians are more oriented toward preventive care. Several studies have suggested that female physicians are more likely than male physicians to screen women patients for cancer of the breast and cervix.²⁻⁶ Evidence has come from physician self-reporting,² surveys of women in the general population,³ chart reviews of female patients enrolled in a health plan,⁴ chart reviews and surveys of primary care physicians,⁵ and chart reviews of patients older than 50 cared for by family medicine residents.⁶

The studies raise as many questions as they answer. Are female primary care physicians simply more likely to offer women appropriate screening tests (Papanicolaou smears, mammograms) or are they generally more likely to offer all patients more preventive care services? Are male physicians more likely to offer their male patients appropriate preventive care services? Do women physicians attract to their practices patients, particularly women patients, who are more interested in preventive care and demand more preventive care services? For example, although Franks and Clancy³ reported that women reporting female physicians as their usual providers in the 1987 National Medical Expenditure Survey were less likely to have missed having Pap tests and mammograms (a smaller, non-significant similar trend was observed for breast examinations), male and female physicians were equally likely to have offered these patients blood pressure checks. No male patients were studied.

In this paper, we examine the extent to which sex changes how family and general practitioners perceive the proportion of patients they have asked about specific health risks and how they perceive the extent to which, in their actual practices, they have ordered or performed selected preventive maneuvers for eligible patients.

METHOD

Questionnaire

The questionnaire sought information on personal and professional characteristics of responders; perceptions of the proportion of patients they had asked about 12 possible health risks; and perceptions of the proportion of eligible patients for whom they had ordered or performed 15 preventive maneuvers (chosen from maneuvers for adults for which the CTFPHE has published recommendations).⁷ For the latter two sets of questions, seven response alternatives were provided and physicians were asked to circle one best estimate of coverage for each item. The questions on health risks were adopted from a survey of attitudes, knowledge, and practice of disease prevention and health promotion developed by investigators at the Johns Hopkins Health Institution.⁸

Sample

From the Canadian Medical Association's (CMA) Physician Resource File, we drew a cohort of physicians listed as general practitioners or family physicians who had graduated from medical school between 1972 and 1988 and lived within an hour's drive of Hamilton, Ont (selected on the basis of postal codes). This was done to facilitate the second phase of the study, which involved introducing unannounced standardized patients into the practices of consenting physicians. Because metropolitan Toronto included nearly half of the eligible physicians, we restricted mailings to postal codes west of Yonge St. Altogether, the CMA listed 1236 physicians in this cohort.

Survey procedures

The survey was mailed in October 1993 with a covering letter. A thank-you and reminder card was sent to everyone 10 days later. Follow-up mailings were sent to nonrespondents in November 1993 and early January 1994. Because of problems with the sampling frame (which included many ineligible respondents), we attempted to check whether physicians not responding to the second mailing were eligible. We excluded from the third mailing 24 physicians who were ineligible according to the

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Table 1. Response rate for the study cohort:
Response rate was 56%; usable response rate was 50%.

NO. OF PHYSICIANS SURVEYED (N = 1236)	NOT ELIGIBLE	ELIGIBLE
Questionnaires returned (696)		
• Not in family medicine or general practice	165	
• Graduated before 1972 or after 1988	34	
• Moved and could not be located	17	
TOTAL	216	480
Questionnaires not returned (540)		
• Canadian Medical Directory check after second mailing: wrong graduating year, not in Ontario, specialist	24	
• Telephone check after third mailing: not in family medicine or general practice	16	
• Not contacted physicians assumed ineligible	16	
TOTAL	56	484
OVERALL TOTAL	272	964

1993 *Canadian Medical Directory*. After the third mailing, a random sample of nonrespondents was contacted by telephone to ascertain eligibility. Data collection was terminated 10 weeks after the third mailing.

Reliability of responses

To examine the reproducibility of questionnaire responses, 50 physicians participated in a study assessing test-retest reliability. For each question type, a random sample of items was selected to make the task less onerous. For questions used in this analysis, intraclass correlation coefficients ranged from 0.56 to 0.81.

Analysis

Data were entered into an SPSS-PC (Statistical Package for the Social Sciences) database and audited. As well, data on the medical field, sex, and certification status of nonrespondents were obtained (when available) from the latest edition

of the *Canadian Medical Directory*. We examined whether nonrespondents differed from respondents using logarithmic linear analysis.

Categorical data were compared using χ^2 tests. The bivariate relationship between sex of physician and questions on frequency of health risk questioning and proportion of eligible patients receiving preventive services was assessed using *t* tests following regression analysis. We entered dummy variables for the five other descriptors (practice type [group or solo], decade of graduation [1970s, 1980s], certification by CFPC [yes, no], fee for service [yes, no], McMaster medical graduate [yes, no]) as a block in the multiple linear regression model and then entered sex of physician. This allowed us to examine how sex of physician contributed to the variance seen in preventive care practices and behaviours, after controlling for the effects of other differences between male and female physicians.

RESULTS

Response rate

After three mailings, we had a usable response rate of 50% (Table 1). (Response rate was 56% before ineligible physicians were removed from the numerator and denominator). Respondents were compared with nonrespondents as to sex, decade of graduation, and certification or member status with the College of Family Physicians of Canada (CFPC) using logarithmic linear analysis. Certificants (59%) were significantly more likely to respond than noncertificants (39%; $z = 4.94$, $P < 0.001$), and CFPC members (including certificants and others) were more likely to respond than nonmembers. Women (56%) were not significantly more likely to respond than men (49%; $z = 0.53$, NS). No difference was observed by decade of graduation.

Description of sample

Table 2 gives a description of the sample. Female physicians were significantly more likely than males to be in group practice. Among the respondents, 26.7% were McMaster medical graduates, the medical school at the centre of the geographic

area defined. McMaster graduates were significantly more likely to be female than graduates of other medical schools. About two thirds of respondents were CFPC certificants. Female physicians were significantly more likely to be certificated than male physicians. Female physicians comprised only 21.8% of the 1972 to 1979 graduates, but accounted for more than half of the 1980 to 1988 graduates. More than three quarters of women respondents graduated from medical school in 1980 or later. Thus, men and women physicians differed significantly ($P < 0.001$) on four of the five background variables examined. *Table 3* gives practice descriptors of physicians in the sample.

Provision of preventive services

Physicians were asked to what proportion of eligible patients they thought they provided 15 preventive care services, given the “real world” limitations of their actual practices. Their responses to each item are found in *Table 4*, along with the CTFPHE’s recommendation on the item. Because the Ontario Ministry of Health guidelines on the frequency of mammography screening for women 50 to 59 years (once every 2 years) differed from the CTFPHE’s recommendation (every year), two items about mammography were included.

Table 2. Description of the sample

VARIABLE	MEN N	%	WOMEN N	%	TOTAL N	%
Sex	278	57.9	202	42.1	480	
PRACTICE TYPE†						
• Group	165	60.2	165	84.6	330	70.4
• Solo	108	39.4	28	14.4	136	29.0
• Locum‡	1	4	2	1.0	3	.6
Decade of graduation*						
• 1970s	144	51.8	44	21.8	188	39.2
• 1980s	134	48.2	158	78.2	292	60.8
CFPC CERTIFICATION*						
• Yes	150	54.0	154	76.2	304	63.3
• No	128	46.0	48	23.8	176	36.7
FEE-FOR-SERVICE†						
• Yes	236	86.1	170	87.2	406	85.6
• Other	38	13.9	25	12.8	63	13.4
MCMASTER GRADUATE*						
• Yes	56	20.1	72	35.6	128	26.7
• No	222	79.9	130	64.4	352	73.3

* χ^2 test used for difference between men and women physicians, $P \leq 0.001$.

† Data were missing for some subjects.

‡ Excluded from regression analysis due to insufficient numbers.

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Table 3. Practice descriptors of male and female primary care physicians: *In results of multiple regression, variables considered as a block included practice type (group or solo), source of remuneration, fee for service, CFPC certification status, decade of graduation (1970s, 1980s), and McMaster graduate (yes or no).*

DESCRIPTORS	MEAN	SD	% CONTRIBUTION TO EXPLAINED VARIANCE BY BEING A WOMAN PHYSICIAN (SIGNIFICANCE OF CONTRIBUTION)
NO. OF PATIENTS			
• Male (238)	2175	1052	2.0 ($P = 0.004$)
• Female (139)	1718	1312	
PERCENTAGE OF ADOLESCENT AND ADULT FEMALE PATIENTS			
• Male (254)	52.7	11.4	33.0 ($P < 0.001$)
• Female (184)	73.0	11.9	
PATIENT CARE HOURS PER WEEK, EXCLUDING ON CALL			
• Male (275)	40.4	11.1	16.1 ($P < 0.001$)
• Female (195)	29.2	9.9	
AVERAGE NO. OF PATIENTS SEEN PER HOUR IN OFFICE			
• Male (274)	5.2	1.4	1.5 ($P < 0.004$)
• Female (193)	4.7	1.0	

Coverage of eligible patients for the CTFPHE's A and B recommendations was not optimal. Even for the preventive maneuver with the best coverage, blood pressure measurement, only 51.25% reported that they ordered or performed this service for 90% or more of their eligible patients. However, most physicians reported 75% or higher coverage of eligible patients for Pap smears, yearly influenza vaccine for patients 65 years old and older, regular blood pressure measurement for adults, annual breast examination for 50- to 59-year-old women, mammography every 2 years for 50- to 59-year-old women, and smoking cessation counseling. All of these preventive services have CTFPHE A or B recommendations, except frequency of mammography as noted above.⁷

Physicians reported low coverage of community-dwelling patients older than 65 years with

pneumococcal vaccination and regular chest x-ray examinations. Half of respondents indicated that 10% or fewer of their eligible patients had their prostate-specific antigen measured; and few patients' stools were tested for occult blood. Thyroid-stimulating hormone levels were rarely measured at regular intervals. The low rate of coverage for these maneuvers is consistent with CTFPHE C and D recommendations.

Physicians' perceptions of their coverage of eligible men with regular testicular examinations (C recommendation) varied considerably. Nearly 22% said 10% or fewer of eligible patients were covered, while 31% indicated that 75% or more patients received this service. Lower proportions of 50- to 59-year-old women were perceived to have been offered yearly mammography than were offered mammography every 2 years (A recommendation). More than half reported that they provide annual digital rectal examinations to men older than 50 years (C recommendation).

In bivariate analyses, female physicians were more likely than their male colleagues to think that they offered appropriate preventive services to most women patients. After controlling for other practice differences, being a female physician continued to be significantly associated with providing more preventive services needed solely by women patients. For three other, non-sex-related preventive services (blood pressure measurement, influenza vaccine for elderly patients, and TSH measurement at regular intervals), being female was also associated with significantly higher self-reported coverage of eligible patients after controlling for other physician characteristics.

Questions about health risks

Physicians were asked what proportion of their patients they had questioned about 12 health risks (Table 5). For nine of the 12 risks, female physicians reported significantly better coverage of their eligible patients than male physicians. Sex of physician continued to be the most important explanatory variable ($P \leq 0.001$), even when confounding variables were taken into account. Sex of physician was the only significant explanatory

Table 4. Physicians' perceptions of the extent to which eligible patients in their practices obtained preventive health services

PREVENTIVE SERVICES	SEX OF PHYSICIAN	N	≤10%	25%	50%	75%	≥90%	CTFPHE Recommendation*	% CONTRIBUTION TO EXPLAINED VARIANCE†
									MALE PHYSICIAN
Pap smears at regular intervals for sexually active women		452	0.4	1.8	13.1	36.9	47.8	B	5.4 <i>P</i> < 0.001
	M	264	0.8	2.7	17.8	40.9	37.9		
	F	188	0	0.5	6.4	31.4	61.7		
Annual breast examination by physician for women 50 to 59 years		450	1.8	7.1	21.6	41.3	28.2	A	2.7 <i>P</i> < 0.001
	M	264	2.7	11.0	23.5	40.9	22.0		
	F	186	0.5	1.6	18.8	41.9	37.1		
Annual mammography for women 50 to 59 years		422	41.9	16.6	20.6	12.6	8.3	A	1.5 <i>P</i> = 0.007
	M	251	45.0	19.1	20.7	10.0	5.2		
	F	171	37.4	12.9	20.5	16.4	12.9		
Mammography for women 50 to 59 years every 2 years		436	3.9	10.3	29.4	33.0	23.4	–	1.6 <i>P</i> < 0.001
	M	259	5.0	14.7	29.0	33.2	18.1		
	F	177	2.3	4.0	29.9	32.8	31.3		
Blood pressure measurement at regular intervals for adults		451	0.7	3.3	13.1	31.7	51.2	A	2.3 <i>P</i> < 0.001
	M	264	1.1	3.8	14.0	33.7	47.3		
	F	187	0	2.7	11.8	28.9	56.7		
Annual influenza vaccination for patients 65 years and older		448	0.2	2.9	13.4	40.4	43.1	A	0.8 <i>P</i> = 0.034
	M	263	0.4	4.2	13.3	40.7	41.4		
	F	185	0	1.1	13.5	40.0	45.4		
Tetanus booster immunization every 10 years		449	12.7	17.1	25.6	26.1	18.5	A	0.3
	M	261	14.6	17.6	28.0	22.6	17.2		
	F	188	10.1	16.5	22.3	30.9	20.2		
Annual digital rectal examination for men older than 50 years		449	5.3	12.9	26.9	31.4	23.4	C	0.1
	M	263	5.7	12.5	28.5	30.8	22.4		
	F	186	4.8	13.4	24.7	32.3	24.7		
Chest x-ray examination at regular intervals for adults		443	67.3	14.9	10.6	5.6	1.6	D	– 0.2
	M	260	63.8	15.0	12.3	6.5	2.3		
	F	183	72.1	14.8	8.2	4.4	.5		
Smoking cessation counseling		451	3.0	9.5	20.0	27.9	39.5	A	0.1
	M	263	4.2	9.5	19.0	29.7	37.6		
	F	188	1.6	9.6	21.3	25.5	42.0		
Measurement of prostate-specific antigen at regular intervals to detect prostate cancer in middle-aged and elderly men		446	50.4	16.1	17.3	10.1	6.1	D	– 0.2
	M	263	46.4	18.6	17.5	11.0	6.5		
	F	183	56.3	12.6	16.9	8.7	5.5		
Testing stools for occult blood at regular intervals for middle-aged and elderly adults		446	60.1	12.1	14.8	8.5	4.5	C	– 0.2
	M	263	58.2	14.4	14.4	8.4	4.6		
	F	183	62.8	8.7	15.3	8.7	4.4		
Thyroid-stimulating hormone measurement at regular intervals for adults†		448	48.0	15.0	17.4	12.9	6.7	C/D‡	2.3 <i>P</i> < 0.001
	M	262	49.2	17.9	17.2	11.1	4.6		
	F	186	46.2	10.8	17.7	15.6	9.7		
Pneumococcal vaccination for community-dwelling patients older than 65 years		446	79.4	8.1	7.6	2.9	2.0	C	0
	M	263	78.7	7.2	8.7	3.0	2.3		
	F	183	80.3	9.3	6.0	2.7	1.6		
Testicular examination by physician at regular intervals		449	21.6	24.3	23.2	19.6	11.4	C	– 0.2
	M	264	22.3	22.3	24.2	19.7	11.4		
	F	185	20.5	27.0	21.6	19.5	11.4		

*Canadian Task Force on the Periodic Health Examination. Assessment of evidence supporting the recommendation that the condition be specifically considered in a periodic health examination: A – good evidence; B – fair evidence; C – poor evidence, but recommendations may be made on other grounds; D – fair evidence for exclusion from consideration.

†Significance of *F* in regression model for other factors entered as a block before sex of physician considered. Significance of *T* to enter sex of physician variable.

‡C – postmenopausal women, D – general population.

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variable in eight of the nine models where sex was important. Only two health risks (familial premenopausal breast cancer and a history of testicular maldescent) were sex-specific. Female physicians reported asking a higher proportion of eligible patients about a family history of premenopausal breast cancer than did male physicians. Neither male nor female physicians often asked about a history of testicular maldescent. For the two other items where no sex difference was noted, either very few physicians reported making

inquiries (about regular exposure to excessive noise), or almost everyone said they often inquired (about tobacco use).

Women patients and preventive care directed solely at them

To examine whether coverage of eligible women patients for sex-specific preventive care services was better in practices where physicians reported having a high proportion of female patients, we correlated physicians' responses regarding

Table 5. Physicians' perceptions of the proportion of patients they asked about certain health risks by sex of physician

HEALTH RISKS	N	SEX OF PHYSICIAN	PROPORTION OF PATIENTS COVERED					% CONTRIBUTED TO EXPLAINED VARIANCE
			≤10	25	50	75	≥90	
Female: Familial premenopausal breast cancer	458	M	6.7	6.7	12.3	20.4	53.9	5.6
		F	2.1	1.1	5.8	11.1	79.9	<i>P</i> <0.001
High-risk sexual behaviour (eg, promiscuity)	453	M	36.1	22.9	17.3	13.5	10.2	4.8
		F	15.0	15.5	20.9	21.9	26.7	<i>P</i> <0.001
Family history of dysplastic nevi	457	M	56.5	14.9	11.2	8.9	8.6	4.9
		F	34.6	17.6	15.4	11.2	21.3	<i>P</i> <0.001
Early onset of sexual activity	455	M	42.2	28.4	13.0	8.6	7.8	3.7
		F	27.3	25.7	16.0	11.2	19.8	<i>P</i> <0.001
Family history of colorectal cancer	457	M	5.6	7.4	16.4	20.4	50.2	4.1
		F	2.1	3.7	11.2	14.9	68.1	<i>P</i> <0.001
Family history of hypercholesterolemia	457	M	9.3	9.0	21.6	22.8	37.3	2.4
		F	3.7	6.9	13.2	24.3	51.9	<i>P</i> <0.001
History of upper body radiation	456	M	79.0	9.7	6.7	3.7	0.7	3.6
		F	67.2	12.2	12.7	2.6	5.3	<i>P</i> <0.001
Family history of heart attack	458	M	2.2	2.2	7.4	20.8	67.3	2.1
		F	1.1	2.1	5.8	10.6	80.4	<i>P</i> =0.001
Family history of glaucoma	456	M	47.0	19.0	17.9	6.3	9.7	2.3
		F	43.6	17.0	16.0	8.0	15.4	<i>P</i> <0.001
History of tobacco use	458	M	1.1	1.1	3.0	10.8	84.0	0
		F	2.1	1.1	1.6	4.8	90.5	
Male: History of testicular maldescent	455	M	60.7	13.1	8.2	9.0	9.0	0.6
		F	62.2	17.0	5.3	8.0	7.4	
Regular exposure to excessive noise	457	M	45.0	26.0	15.2	8.9	4.8	-0.2
		F	54.8	18.6	13.3	7.4	5.9	

coverage of eligible patients for the four services targeted at women with the proportion of their patients reported to be women. This analysis, done separately for male and female physicians, indicated that the correlation between reported coverage of women patients for breast examinations, mammography, and Pap smears was not related to the proportion of patients in the practice who were women. Correlations ranged from $-.05$ to $.16$; none was significant.

DISCUSSION

Many physicians reported less than optimal coverage of patients for preventive health measures with CTFPHE A or B recommendations, despite widespread awareness of the task force's existence. These results indicate the limited value of simply disseminating information as a strategy for encouraging behavioural change.^{9,10}

However, we note that these primary care physicians perceived themselves as less likely to provide maneuvers with C or D recommendations than to provide care supported by good or fair evidence. Although little of the difference among physicians was explained by the variables we examined, sex of physician usually explained more of the variance than decade of medical school graduation, primary source of remuneration, certification status, graduation from McMaster University, or practice organization. This was especially true for maneuvers with A or B recommendations.

Women have greater interest

Our data and data from other studies¹⁻⁶ suggest that female physicians have greater interest and involvement in preventive care, particularly for their female patients, and especially for sex-specific measures. It is not so much the fact that female and male physicians differ in preventive health care behaviours, as the factors that are likely to account for or contribute to these observed differences that are of policy interest.

Several explanations have been offered for female physicians' possibly greater propensity to provide preventive care, particularly for women

patients. Women patients might be more ready to discuss reproductive and sexual issues and more receptive to having breast and gynecologic examinations done by female physicians.^{11,12} In particular, concern about sexual abuse of female patients by male physicians has been widely discussed in Ontario and, thus, could deter male physicians from focusing on these areas.¹³

Female physicians might attract more women to their practices, and the kinds of women attracted might be more interested in preventive health care.¹⁴ Although female physicians had a higher proportion of women patients, our data gave no indication that female (or male) physicians who had a higher proportion of women patients were also more likely to report higher coverage. Osborn et al⁵ suggest that physicians are more attentive to preventive care for same-sex patients because of their perceived personal susceptibility to similar diseases or because of their personal involvement in such health issues.

One recent study found that female primary care physicians felt more knowledgeable than male physicians about breast and cervical cancer; males felt more knowledgeable about prostate cancer; but both felt equally knowledgeable about skin and colorectal cancers.¹⁵ In our study, male physicians were not more likely than female physicians to inquire about risks or suggest preventive maneuvers needed only by male patients. However, several CTFPHE A and B recommendations relate to women's health and no A or B recommendation relates specifically to preventive health care for men.

The above explanations focus mainly on the match between female physicians and their same-sex patients. Broader socialization and cultural factors (related to both physicians and patients) might be responsible. The hypothesis that, in our society, women (patients or physicians) are generally socialized to be more conscious of preventive health care, fits our data better than the narrower sex-congruence hypothesis. Women have often been described as the health care gatekeepers for their families, at least in North American culture.¹⁶ This hypothesis encompasses female physicians' propensity to question more patients about

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many health risks, even when this will prompt further preventive screening or counseling not specific to one sex. This is consistent with the higher perceived rate of coverage, especially for women patients (who have received similar socialization), and helps account for data that suggest female physicians spend more time with their patients,^{12,17} especially during history taking,¹⁷ particularly when patients are also women.¹¹ Although this hypothesis accommodates the lack of a sex-congruence hypothesis for male physicians and their men patients, our data provide a poor test of the sex-congruence hypothesis for men because no male-specific maneuvers are supported by evidence of effectiveness. However, if women are indeed more oriented to preventive health, we can expect a higher profile for preventive health care issues as the proportion of female physicians increases.

Limitations

This study had several limitations that suggest caution in interpreting results. Physicians certified in family medicine were more likely to respond to the survey. Female physicians were more likely to be certificated in family medicine, to be in group practices, to be McMaster University graduates, and to have graduated from medical school after the CTFPHE began to report. Although multiple regression techniques were used to deal with these imbalances in the data, they cannot correct bias created by the relatively low response rate.

We think that the response rate was low because this study was conducted while numerous changes in funding arrangements were being made or actively considered in the press without much consultation with physicians. Our respondents might have been more interested in preventive care and, therefore, not representative of the larger population. Yet, their data on practice size and type are congruent with other data on differences between groups of men and women physicians.^{11,12,18} Surveys based on self-perceptions of behaviour might not yield an accurate representation of actual behaviour: physicians' estimates likely are optimistic and

overstate their actual coverage.² Whether women physicians are more likely than men to overestimate their preventive care behaviour is not known.

Given the relatively low level of self-reported coverage for A and B recommendations generally, our findings suggest that new and different efforts are needed to assist physicians and patients to comply with evidence-based preventive health care guidelines, eg, incentives to physicians,¹⁹ greater direct education of the public, and better summaries of key recommendations. The recent compendium of CTFPHE recommendations,⁷ which combines information previously scattered in many reports into one reference book, could be a step in the right direction. ■

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