Patients' perceptions and experiences of family medicine residents in the office

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ABSTRACT

OBJECTIVE To examine patients' perceptions and experiences of having family medicine residents in the office.

DESIGN Descriptive survey; questionnaire completed by patients.

SETTING Outpatient office of 4 family physicians in the greater Vancouver area, affiliated with the Department of Family Medicine at the University of British Columbia.

PARTICIPANTS A total of 265 English-speaking adult patients attending the office.

MAIN OUTCOME MEASURES Patients' self-reported perceptions and experiences of having family medicine residents in the office.

RESULTS Response rate was 94.7% (251 of 265 patients completed the questionnaire). Although 81% of respondents had seen residents in the office, 59% did not understand a resident's training or thought residents were medical students. The 3 main reasons participants gave for choosing to have residents involved in their care were the following: to contribute to training future doctors (61.8%); to obtain 2 opinions instead of 1 (20%); and residents are most up-to-date (11.2%). The most common reasons for choosing not to see residents were the following: to continue relationships with their own doctors (54.2%); to avoid the need to repeat history (18.6%); and the perception that residents are less experienced (16.9%). Having a resident involved in their care was perceived as a positive experience by 95.5% of respondents who had seen residents. Overall satisfaction with care and overall comfort in dealing with residents were ranked good to excellent by 91.8% and 90.8% of respondents, respectively. About 71% of patients said they would choose to have residents involved in their care.

CONCLUSION Respondents reported very positive experiences with having family medicine residents in the office. Overall comfort and satisfaction with seeing family medicine residents was reported to be extremely high, and most patients surveyed would choose to have family medicine residents involved in their care. Patients needed to know more about the resident's level of training and the role of residents in patient-resident interactions.

EDITOR'S KEY POINTS

- Although a great deal of time in family medicine residency is spent in preceptors' offices, no studies have looked in detail at patients' perceptions and experiences of having family medicine residents involved in their care.
- This study assessed patients' knowledge of residents' training and role in the office and investigated patients' preferences regarding residents' involvement in their care.
- Having residents involved in their care was a positive experience for almost all respondents who had seen residents; overall satisfaction and overall comfort with having residents in the office were ranked good to excellent by more than 90% of these respondents, respectively.

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Perceptions et expériences des patients concernant la présence de résidents en médecine familiale dans le cabinet

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RÉSUMÉ

OBJECTIF Examiner les perceptions et expériences des patients concernant la présence de résidents en médecine familiale dans le cabinet.

TYPE D'ÉTUDE Enquête descriptive; questionnaire rempli par les patients.

CONTEXTE Bureaux de consultation externe de 4 médecins de famille du grand Vancouver affiliés au département de médecine familiale de l'Université de Colombie-Britannique.

PARTICIPANTS Un total de 265 adultes de langue anglaise venus en consultation.

PRINCIPAUX PARAMÈTRES ÉTUDIÉS Perceptions et expériences rapportées par les patients concernant la présence de résidents en médecine familiale dans le bureau.

RÉSULTATS Le taux de réponse était de 94,7% (251 patients sur 265 ont rempli le questionnaire). Même si 81% des répondants avaient vu des résidents dans le bureau, 59% ignoraient en quoi consiste la formation des résidents ou croyaient qu'ils s'agissait d'étudiants en médecine. Les 3 raisons principales invoquées par les participants pour souhaiter que des résidents participent à leurs soins étaient: contribuer à la formation des futurs médecins (61,7%); obtenir 2 opinions plutôt qu'une (20%); et les connaissances des résidents sont plus à jour (11,2%). Les raisons les plus fréquemment citées pour préférer l'absence de résidents étaient: maintenir la relation avec leur médecin (54,2%); éviter d'avoir à répéter son histoire (18,6%); et l'idée que les résidents ont moins d'expérience (16,9%). Le fait qu'un résident participe à leur traitement était considéré comme une expérience positive par 95,5% des répondants. Dans l'ensemble, le niveau de satisfaction pour les soins et le niveau de confort face aux résidents étaient jugés bons à excellents par 91,8% et 90,8% des répondants respectivement. Environ 71% des patients déclaraient qu'ils choisiraient que des résidents participent à leur traitement.

CONCLUSION Les répondants ont déclaré que la présence de résidents dans le bureau était une expérience très positive. Le niveau global de confort et de satisfaction relatif à la présence des résidents en médecine familiale était jugé extrêmement élevé et la plupart des répondants ont dit qu'ils choisiraient que des résidents en médecine familiale participent à leur traitement. Toutefois, les patients avaient besoin d'en savoir plus sur le niveau de formation des résidents et sur leur rôle dans les interactions entre patient et résident.

POINTS DE REPÈRE DU RÉDACTEUR

- Même si les résidents en médecine familiale passent beaucoup de temps dans le cabinet de leur professeur, aucune étude n'a examiné en détail les perceptions et expériences des patients lorsque des résidents en médecine familiale participent à leurs soins.
- Cette étude visait à évaluer ce que les patients savent de la formation des résidents et de leur rôle dans le cabinet, ainsi que les préférences des patients concernant la participation des résidents à leur soins.
- La participation des résidents à leurs soins représentait une expérience positive chez presque tous les répondants ayant vu un résident. Les niveaux globaux de satisfaction et de confort relatifs à la présence des résidents dans le bureau allaient de bons à excellents chez 90,8% des répondants.

*Le texte intégral est accessible en anglais à **www.cfp.ca.**

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Although a great deal of time in family medicine residency is spent in preceptors' offices, no studies have looked in detail at patients' perceptions and experiences of having family medicine residents involved in their care. Some studies have examined patients' views on teaching medical students in general practice[1-6] and in a variety of other settings.[7-12] One study looked at patients' acceptance of family medicine and internal medicine residents in private internal medicine ambulatory clinics,[13] and studies of general practice trainees in Ireland[14] and "junior doctors" in Denmark[15] found patients were highly satisfied with care by residents, even though almost half the patients did not feel fully informed about the trainee system.[15]

In this study we sought to assess patients' knowledge of residents' training and role in family physicians' offices and their preferences regarding resident involvement in their care. We thought this information would help us understand why patients choose or choose not to see residents in the office, and to understand factors associated with their experiences.

METHODS

The study was conducted between November 18 and December 1, 2005, in the office of 4 family physicians affiliated with the University of British Columbia postgraduate training program in the greater Vancouver area. The office had been involved in postgraduate teaching for the past 20 years by taking on 1 resident each year. The resident rotated with each of the 4 family physicians as a preceptor and ideally saw as many of each physician's patients as possible. If patients agreed to have a resident involved in their care, they were seen initially by the resident who then reviewed the case with the preceptor.

The survey was designed based on a literature review, then was formally pilot-tested in the office for a day with 10 patients. Feedback obtained was used to revise the survey, and a final version was created. The University of British Columbia's Research Ethics Committee approved the study.

All patients coming to see their primary physicians at the clinic were included in the study. Adolescents coming to the office unaccompanied by their parents were included, as it was assumed that they were old enough to give informed consent to participate if they were visiting their doctor's office unaccompanied. The only exclusion criteria were being a young child and being unable to read English; however, all patients at the clinic were English-speaking and able to read English, so no potential respondents were excluded.

The survey took approximately 5 minutes to complete. The medical office assistant handed out a package consisting of a cover letter and the questionnaire to patients when they checked in for their appointments. The cover letter explained the study's purpose and assured patients that their responses would remain anonymous because no personal identifiers were requested. Patients were encouraged to complete the questionnaire while waiting for their appointments. Completed questionnaires were placed in a closed box by patients; and at the end of each day, the questionnaires in the box were collected and counted so that the response rate could be calculated accurately.

The questionnaire had 4 sections. The first section asked for demographic data. The second section examined knowledge about residency training and number of residents seen in the office, concerns regarding resident involvement, whether patients would choose to have a resident involved in their care, and the reasons for their choice. The third section asked about perceptions and experiences of having a resident in the office; respondents rated their perceptions and experiences on a series of Likert scales. The fourth section explored overall experience, satisfaction, and comfort with seeing residents in the office. At the end of the 4 sections, there was an open section for general comments.

We aimed for a sample size of more than 200 because a net sample of approximately 200 completed questionnaires would give a margin of error of ±7% for proportions at a 95% confidence level. Tables were created to show frequency and descriptive statistics. Bivariate analysis was carried out using χ^2 tests for 2 categorical variables. One-way analysis of variance was conducted for 1 categorical and 1 interval variable, and correlations were done for 2 interval variables. Statistical significance was set at $P = .05$ (2-tailed).

RESULTS

Response rate was 94.7%; 251 of 265 questionnaires were returned. Four questionnaires were incomplete. Demographic and patient-physician characteristics are shown in **Table 1**. Median age of respondents was 50 years (range 18 to 86 years); 75.3% were female; 67.2% had been with their doctors for more than 10 years; and 17.6% had been with their doctors for 6 to 10 years. Almost 75% of respondents rated their current health as

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Table 1. Demographic and patient-physician relationship characteristics of study participants

CHARACTERISTICS	N (%)
Sex (N = 251)	
• Male	62 (24.7)
• Female	189 (75.3)
Age (y) (N = 247)	
• 18-29	25 (10.1)
• 30-39	37 (15.0)
• 40-49	58 (23.5)
• 50-59	53 (21.5)
• 60-69	42 (17.0)
• 70-79	26 (10.5)
• 80 or older	6 (2.4)
Education (N = 249)	
• University or higher	63 (25.3)
• College	85 (34.1)
• High school	89 (35.7)
• Below high school	12 (4.8)
Employment (N = 248)	
• Work outside home	123 (49.6)
• At school	11 (4.4)
• At home with children	12 (4.8)
• Unemployed	12 (4.8)
• Retired	67 (27)
• Other*	23 (9.3)
Patient of (N = 251)	
• Dr 1 (male)	71 (28.3)
• Dr 2 (primary preceptor, female)	71 (28.3)
• Dr 3 (female)	60 (23.9)
• Dr 4 (female)	49 (19.5)
Years with the above doctor (N = 250)	
• 0-1	7 (2.8)
• 2-3	16 (6.4)
• 4-5	15 (6.0)
• 6-10	44 (17.6)
• More than 10	168 (67.2)
Frequency of visits to this doctor (N = 250)	
• Weekly	2 (0.8)
• Monthly	39 (15.6)
• Every 3 months	92 (36.8)
• Every 6 months	68 (27.2)
• Every year	37 (14.8)
• Less than every year	12 (4.8)
Rating of relationship with this doctor (N = 248)	
• Excellent	187 (75.4)
• Good	57 (23.0)
• Fair	3 (1.2)
• Poor	1 (0.4)
Rating of current health (N = 251)	
• Excellent	41 (16.3)
• Good	147 (58.6)
• Fair	54 (21.5)
• Poor	9 (3.6)

*Other includes home business owner.

good to excellent, and 98.4% rated their current relationships with their physicians as good to excellent.

Table 2 shows participants' knowledge and preferences regarding residents' involvement in their medical care in the office. Of respondents, 81.3% had seen a family medicine resident; most frequently 1 or 2 residents had been involved in their care (49.4%). Of all respondents, 55.2% thought a resident was a medical student, and 4% indicated that they were not sure.

Table 2. Knowledge and preferences of survey participants regarding residents' involvement in medical care in the office

KNOWLEDGE AND PREFERENCES	N (%)
Are you aware that the teaching office is affiliated with the University of British Columbia (N = 251)	
• Yes	227 (90.4)
• No	24 (9.6)
Is a resident a medical student? (N = 250)	
• Yes	138 (55.2)
• No	102 (40.8)
• Unsure	10 (4.0)
Is a resident a doctor finishing his or her training who will be practising independently within a year? (N = 251)	
• Yes	177 (70.5)
• No	45 (17.9)
• Unsure	29 (11.6)
No. of residents involved in your care (N = 251)	
• 0	47 (18.7)
• 1-2	124 (49.4)
• 3-4	63 (25.1)
• 5 or more	17 (6.8)

A summary of respondents' reasons for choosing to see or not to see a resident is shown in **Table 3**. The 3 main reasons respondents chose to have residents involved were the following: to contribute to training future doctors (61.8%), to obtain 2 opinions (20%), and residents are most up-to-date (11.2%). The most common reasons for choosing not to see a resident were the following: to continue relationships with their own family doctors (54.2%), to avoid the need to repeat history (18.6%), and the perception that residents are less experienced (16.9%).

About 71.2% of patients would choose to have residents involved in their care. Study participants' experiences with having residents involved in their care are shown in **Tables 4** and **5**. Questionnaires of the 47 respondents who had never seen a family medicine resident in the office were removed from the analysis of data for these tables.

Table 4 shows 72.3% of respondents agreed or strongly agreed it was worthwhile to be involved in resident training. Reasons that ranked very high for having residents involved in care included contributing to residents' education and contributing to the

Table 3. Summary of respondents' written reasons for choosing to see or not see residents

REASONS	N (%)
Would you choose to have a resident involved in your care? (N = 251)	
• Yes	178 (71.2)
• No	59 (23.6)
• Unsure	13 (5.2)
Reasons why patients chose to see residents (N = 170)	
• Contribution to training future doctors	105 (61.8)
• Obtain 2 opinions instead of 1, different outlook	34 (20.0)
• Most up-to-date, fresh out of training	19 (11.2)
• More thorough	6 (3.5)
• Confidence in this office	2 (1.2)
• Only if my doctor is not available	2 (1.2)
• Helps my doctor save time	1 (0.6)
• Wait time to see specialists is shorter	1 (0.6)
Reasons patients chose not to see residents (N = 59)	
• Long-term relationship with own family doctor	32 (54.2)
• Need to repeat history	11 (18.6)
• Less experienced	10 (16.9)
• Personal reason	5 (8.5)
• Previous poor experience with a resident	1 (1.7)

medical system. In terms of time commitment, 35.5% of respondents agreed or strongly agreed that the actual visit with the doctor would take longer when a resident was involved; 30.5% perceived they would wait longer in the waiting room; but only 16.1% agreed or strongly agreed that the extra time involved (if any) would be inconvenient.

Table 5 shows that having a resident involved in their care was a positive experience for 95.5% of respondents who had seen a resident. Overall satisfaction and overall comfort with residents in the office was rated good to excellent by 91.8% and 90.8% of respondents, respectively.

Table 6 shows a comparison of the views of participants who had seen residents in the office with the views of those who had not. Patients who had seen 1 or more residents in the office were significantly more aware it was a teaching office ($P<.001$) and significantly more aware that residents are doctors finishing their training ($P=.033$).

The 47 patients who had never seen a resident in the office were similar to the rest of the respondents in terms of demographics and patient-physician characteristics. We found no association between demographic characteristics or patient-physician characteristics and choosing not to see a resident. Demographic variables appeared to have no relation to overall satisfaction, overall comfort, or overall experience with residents.

A significantly higher proportion of the primary preceptor's patients had seen residents in the office than patients of the other 3 physicians in the office had ($P=.025$). Sixty percent (60.1%) of respondents agreed or strongly agreed that they were more comfortable with female residents, and this was significantly associated with being a woman ($P=.001$). The younger the age of the female patient, the more comfortable they were with female residents ($P=.003$).

DISCUSSION

Most patients reported very positive experiences with family medicine residents. This was consistent with results of studies completed with medical students,[1-12] general practitioner trainees in Ireland,[14] and junior doctors in Denmark.[15] Our results are also similar to those studies of medical students in general practice, which found that patients were very supportive of helping with training because of what they gained personally and what such training contributed to the medical system.[16] We found the main reasons patients chose to see residents were that they could contribute to training new doctors and receive 2 opinions instead of 1.

The main reason patients chose not to see residents was positive in a way, as it related to their close relationships with their primary doctors (patient-physician relationships are one of the core principles of family medicine). Almost 70% of patients surveyed had been with their current doctors for more than 10 years, which would probably explain why our findings are slightly different from those of studies done in walk-in clinics.[11,17] Other studies have reported reasons for not choosing to see residents to include privacy or confidentiality, lack of justification, and discomfort, but these were not found in our study.[18] Tabulating the reasons patients chose not to see residents is also helpful from a resident perspective. Our results suggest patients should be given more information on a resident's role in their care and reassured that the continuity of their medical care by their own family doctors would persist even if they saw a resident.

Our results confirmed the previously published finding that female patients prefer female residents.[19] Our study also showed that the younger the female patient, the more she preferred to see a female resident. A recent Australian study[20] in primary care, but in a rural setting, reported that young women were significantly more likely than middle-aged or older women to prefer to see a female doctor. This paper proposed that the "culture of practice" exhibited by female doctors was what young women found attractive, rather than the essential appeal of the sex of the practitioner.

An interesting finding was patients' knowledge of the stage of training of a family medicine resident. Even with increased exposure to residents, most patients still thought residents were medical students. This finding was similar to that of a recent study in an emergency room setting, which showed that even patients who

Table 4. Study participants' responses: *A) Participants' views on having residents involved in their care. B) Participants' experiences with residents.*

A) VIEWS ON HAVING RESIDENTS INVOLVED IN THEIR CARE	NO. OF RESPONSES	% AGREE OR STRONGLY AGREE	% DISAGREE OR STRONGLY DISAGREE
Contribute to resident education through involvement in my care	202	83.2	2.0
Valuable to have a resident associated with this office	202	76.7	3.0
Contribute to medical system by having a resident involved	203	75.9	3.9
Worthwhile to be involved in resident training	202	72.3	4.0
Comfortable having my doctor discuss my medical history with a resident	199	70.9	8.0
My doctor benefits from having a resident	198	65.7	6.1
Enjoy hearing my doctor teach a resident during my visit	197	61.4	5.6
My doctor learns by having a resident	199	59.3	8.0
Perceive my doctor is a better clinician by having a resident	200	51.5	11.5
Prefer my doctor NOT to be involved in resident training	201	6.5	79.6
Perceive my visit lasts longer when resident is involved	200	35.5	31.5
Perceive a longer time in waiting room with resident in office	200	30.5	39.5
Extra time involved (if any) with a resident is inconvenient	199	16.1	56.3
B) EXPERIENCE WITH RESIDENTS	**NO. OF RESPONSES**	**% AGREE OR STRONGLY AGREE**	**% DISAGREE OR STRONGLY DISAGREE**
Resident is professional	196	77.0	4.1
Resident is attentive to my concerns	197	71.6	3.0
Resident has a caring attitude	196	70.9	4.1
Resident takes a complete history	195	60.5	8.7
I can discuss all health issues with the resident	199	55.3	19.1
Resident performs a complete physical examination	193	48.2	16.1
I feel comfortable with a resident taking my medical history	197	69.5	6.1
I feel comfortable with a resident involved in all aspects of my care	198	61.6	13.1
I feel more comfortable with a female resident	198	60.1	11.6
I feel comfortable with a resident doing an appropriate physical examination	197	56.9	11.2
I feel comfortable with a resident performing a complete physical examination	198	43.9	21.2

Table 5. Study participants' overall satisfaction with having residents involved in their care

EXPERIENCES	OVERALL SATISFACTION N (%)
Having a resident involved in my care was a positive experience (N = 198)	
• Agree	189 (95.5)
• Disagree	9 (4.5)
Satisfaction from seeing a resident (N = 196)	
• Excellent or Very Good or Good	180 (91.8)
• Poor or Fair	16 (8.2)
Comfort with having a resident in the office (N = 196)	
• Excellent or Very Good or Good	178 (90.8)
• Poor or Fair	18 (9.1)

Table 6. Views and beliefs of participants who had and had not seen residents

PATIENTS' VIEWS AND BELIEFS	SEEN RESIDENTS (N = 204)	NEVER SEEN RESIDENTS (N = 47)	*P* VALUE
Aware this is a teaching office	195	32	<.001
Aware that residents are doctors finishing training	184	36	.033
Believe that residents are medical students	117	21	Not significant
Believe that residents will see patients independently within a year	147	30	Not significant

made repeated visits did not have a better understanding of a resident's stage of training.[21] A study by Santen el al[22] showed that 80% of patients thought it was important to know their physicians' level of training.

Also interesting were some of the comments patients made to explain their choice to see a resident: "Because my own doctor is not available"; "To help my doctor save time"; or "Because the wait time to see a specialist is shorter." These comments indicated that some patients did not fully understand the role of family medicine residents in the office. It also raises other questions about patient understanding of the medical system in general.

Strengths and limitations

The main strength of our study was the high response rate, which was attributable to the medical office assistant and office staff, who strongly encouraged respondents to complete the survey.

The study has some limitations, including that it represents the perceptions and experiences of patients in a long-standing teaching practice, so some of them likely already had an underlying acceptance of medical education and resident involvement. The practice profile was predominantly women with a median age of 50, and no walk-in patients were accepted—2 features that cannot necessarily be generalized to other practices. The practice also takes only second-year residents, all of whom would be practising independently within a year, which might have influenced results. The 4 physicians in the practice are full-time clinicians, not full-time academic faculty, so findings from our study should be generalizable to other practices with physicians who volunteer to be preceptors for residents.

Future research could investigate whether patients' perceptions are different with first-year family medicine residents or in offices with full-time academic faculty. More research on patients who choose not to see residents, in particular if anything would help them feel more comfortable seeing residents, might prove helpful. Further research is also needed on how to improve patients' knowledge of the trainee system and of the role of residents in patient-resident encounters.

Conclusion

A great deal of time in family medicine residency is spent in preceptors' offices, and patient-resident encounters have important implications for the training of future family doctors. Our results are valuable in that they show respondents reported very positive experiences with family medicine residents. Overall comfort and satisfaction with seeing residents was reported as extremely high, and the vast majority of patients would choose to have family medicine residents involved in their care. In most cases, when patients chose not to see a resident, it was related to their close relationships with their primary care doctors. Although the experience was overwhelmingly positive, patients needed to have more information on the trainee system, the level of training of the residents they were seeing, and the role of residents in their care.

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Contributors

Dr Malcolm *was responsible for the methodology, creation of the survey, collection of surveys, statistical analysis, and writing the paper.* **Dr Wong** *was involved in data entry and contributed to statistical analysis and editing the manuscript.* **Dr Elwood-Martin** *contributed to the methodology and editing of the manuscript.*

Competing interests

None declared

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