# Focused practice in family medicine

## Quantitative study

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## Abstract

**Objective** To determine factors associated with having a focused practice among a sample of family medicine graduates in Canada and to assess the characteristics of FPs with focused practices and the range of services provided by these FPs in relation to the full scope of office-based care.

**Design** Secondary analyses of cross-sectional data from the 2013-2014 Western Family Medicine Resident Follow-Up Survey.

**Setting** Western University in London, Ont.

**Participants** Western University family medicine residency graduates who completed the program between 1985 and 2012.

**Main outcome measures** Physician and practice characteristics and the clinical services that survey participants provide.

**Results** Completion of postgraduate third-year (PGY3) training was associated with having a focused practice. Focused practice FPs were more likely to be remunerated by fee-for-service, alternative payment plans, or alternative funding plans compared with non–focused practice FPs, who were more likely to participate in group payment models. Focused practice FPs appeared to be a heterogeneous group who were distinguished by being either an office-based focused practice FP (OBFFP) or a non–office-based focused practice FP (NOBFFP). Office-based focused practice FPs were less likely than NOBFFPs to have completed PGY3 training and more likely to work under a fee-for-service or group payment model. Further, the OBFFP group offered a greater variety of primary care services than the NOBFFP group, but offered less variety than non–focused practice FPs.

**Conclusion** Completion of PGY3 training and payment through certain remuneration models were both associated with focused practice. Important differences exist between OBFFPs and NOBFFPs. The overall service provision of focused practice FPs was centred on specialized areas, especially among those practising in non–office-based settings. Novel findings from this study provide insights for family medicine education, work force planning, and policy making in the Canadian health system.

## Editor's key points

- Family physicians with focused practices appear to be a heterogeneous group with different practice patterns. Distinguishing characteristics include whether they have office-based practices as well as their training backgrounds, geographic distribution, and practice remuneration structures.
- It is important for health care work force planners to recognize that most family physicians with focused practices are dedicated solely to particular areas of practice, especially those who practise in non–office-based settings. Family physicians with focused practices are also less likely to work in rural and remote areas.
- This study highlights the need to understand how training experiences and the current curriculum in family medicine residency influence the scope of practice of family physicians after graduation.

## Points de repère du rédacteur

- Les médecins de famille qui adoptent une pratique ciblée semblent constituer un groupe hétérogène dont les modèles de pratique sont diversifiés. Parmi leurs caractéristiques distinctives figurent le fait qu'ils pratiquent ou non en clinique, leurs antécédents de formation, leur répartition géographique et leurs structures de rémunération.
- Il importe que les responsables de la planification des effectifs de la santé reconnaissent que la plupart des médecins de famille qui ont une pratique ciblée se concentrent exclusivement sur des domaines particuliers, surtout ceux qui exercent en dehors d'une clinique. Les médecins de famille dont la pratique est ciblée sont aussi moins enclins à travailler en milieu rural et éloigné.
- Cette étude met en évidence la nécessité de comprendre comment les expériences de formation et le cursus actuel de la résidence en médecine familiale influent sur le champ de pratique des médecins de famille après l'obtention de leur diplôme.

# Les pratiques ciblées en médecine familiale

## Étude quantitative

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## Résumé

**Objectif** Déterminer les facteurs associés à l'adoption d'une pratique ciblée dans un échantillonnage de diplômés en médecine familiale au Canada, et évaluer les caractéristiques des MF qui ont des pratiques ciblées et la gamme des services fournis par ces MF par rapport au champ complet des soins en clinique.

**Type d'étude** Des analyses secondaires de données transversales recueillies dans le sondage de suivi réalisé en 2013-2014 auprès des résidents en médecine familiale de l'Université Western.

**Contexte** L'Université Western à London (Ontario).

**Participants** Les diplômés de la résidence en médecine familiale de l'Université Western qui ont terminé le programme entre 1985 et 2012.

**Principaux paramètres à l'étude** Les caractéristiques des médecins et de la pratique, de même que les services cliniques founis par les participants au sondage.

**Résultats** Une troisième année de formation postdoctorale était associée à l'exercice d'une pratique ciblée. Les MF en pratique ciblée étaient plus susceptibles d'être rémunérés à l'acte, par des modes de rémunération alternatifs ou par d'autres régimes de financement que les MF sans pratique ciblée, qui étaient plus susceptibles de participer à des modèles de rémunération collective. Les MF en pratique ciblée semblaient composer un groupe hétérogène; ils se distinguaient par le fait d'avoir une pratique ciblée en clinique ou ailleurs qu'en clinique. Les MF qui avaient une pratique ciblée en clinique étaient moins susceptibles que ceux qui pratiquaient hors clinique d'avoir suivi une troisième année de formation et étaient plus enclins à travailler selon un mode de rémunération à l'acte ou collective. En outre, le groupe des MF en pratique ciblée dans une clinique offrait une plus grande diversité de services de soins primaires que celui hors clinique, mais offrait cependant une moins grande variété de services que les MF qui n'avaient pas une pratique ciblée.

**Conclusion** L'achèvement d'une troisième année de formation postdoctorale et une rémunération selon certains modes étaient tous 2 associés à une pratique ciblée. Il existe des différences importantes entre les MF en pratique ciblée en clinique et ceux hors clinique. La prestation globale de services des MF en pratique ciblée se concentrait sur des domaines spécialisés, surtout parmi ceux qui exerçaient en dehors d'une clinique. Les nouvelles constatations de cette étude dégagent des renseignements utiles pour les responsables de l'éducation en médecine familiale et de la planification des effectifs, de même que pour les décideurs dans le système de santé canadien.

Traditionally, FPs have taken pride in delivering a range of services and meeting the needs of the communities they serve. This has been recognized as being foundational to well-functioning health care systems.[1] There have been changes in the traditional activities and the scope of practice engaged in by FPs, along with the development of focused practices in subspecialized areas of care.[2-5] The National Physician Survey in Canada found a steady upward trend in the proportion of FPs with focused practices at the national level: 29.5% in 2007,[6] 30.5% in 2010,[7] and 32.4% in 2014.[8] Attention to various specialized fields in medicine can develop at different stages of physicians' educational and professional journeys.[9,10] More than one-quarter of family medicine residents responding to the 2012 National Physician Survey reported that they intended to provide care in focused practices upon graduation.[11] In addition, it is estimated that no fewer than 1 in 5 residents pursue third-year postgraduate (PGY3) enhanced skills training in areas of special interest every year.[12]

Previous studies have described variation in the scope of practice of FPs.[2-4,13-15] However, factors associated with having a focused practice and the range of clinical services provided by focused practice FPs have rarely been addressed. Diverse patterns of family practice have been associated with changes in the population's health care needs,[16-21] physician demographic characteristics,[13,22,23] time since graduation,[24] training site,[25,26] undertaking additional training,[13,27] practice location,[28] and remuneration method.[29-31]

The primary care office is considered the principal setting for physicians to provide a range of primary care services and ensure continuity of care for a defined patient population.[2,13,32] Past studies have addressed services offered by FPs who practised mainly in office settings.[13,33] Other researchers have shown a decline in out-of-office services provided by general practitioners.[4,14,15] These studies did not exclude or specifically address the clinical activities of FPs with focused practices whose work context may be influenced by their special interests and areas of focused practice.

This research study aimed to shed light on factors associated with having a focused practice and to assess the characteristics of and range of services provided by focused practice FPs in relation to the scope of office-based care. Such information has implications for family medicine education, family medicine work force planning, and policy making.

## Methods

This study was a secondary analysis of data collected from the cross-sectional 2013-2014 Western Family Medicine Resident Follow-Up Survey. The survey was approved by the Western University Health Sciences Research Ethics Board. Survey details have been published elsewhere.[24] In brief, a paper survey, supplemented by an online version, was mailed to all individuals who could be located and who had graduated from the residency program between 1985 and 2012. It inquired about the nature of their practices and whether respondents considered themselves FPs with focused practices, the size of population in which respondents practised, and their primary payment method. It also asked about clinical activities the participants were engaged in by including a list of possible services. Information about respondents' sex, training site (urban or rural), year of graduation, completion of PGY3 after family medicine residency, and location were obtained from the departmental administrative database and were matched to participants' unique personal identifiers by the departmental research assistant.

### Measures

***Objective 1 study variables.*** The dependent variable, focused practice or non–focused practice FP, was drawn from the yes-or-no answer to the survey question: "The College of Family Physicians of Canada defines a family physician with a focused practice as those family doctors with a commitment to one or more specific clinical areas as major part time or full time components of their practice. Based on this definition, do you consider yourself to be a focused family physician?"

The independent variables included physician sex, training site, number of years since graduation, PGY3 training, location of practice (Ontario or other), the size of population served (inner city, urban, suburban, small town, and rural or remote), and the primary payment method of respondents. The survey included the following payment methods: fee-for-service (FFS), family health group, family health network, family health organization, salary, community health centre (CHC), and alternative funding plan (AFP) or alternative payment plan (APP). The original categories of family health group, family health network, and family health organization were collapsed together and are hereafter referred to as group payment models, as these payment strategies are based on patient enrolment, and the care within these models is provided by FPs practising in groups and being reimbursed through blended payment strategies.[30] Physicians paid by salary and those working in CHCs were combined in a single category because physicians in CHCs are paid on a salary basis.[34]

***Objective 2 study variables.*** The characteristics of participants and the range of services they provided were assessed in relation to the scope of office-based care. Respondents reported whether they had provided care in office settings in addition to a number of other services as part of their family practices. Focused practice FPs were categorized as having office-based practices (OBFFPs) or non–office-based practices (NOBFFPs).

Physician and practice characteristic variables evaluated in objective 1 were used in the analysis of factors associated with NOBFFPs, OBFFPs, and non–focused practice FPs.

The ranges of services offered by NOBFFPs, OBFFPs, and non–focused practice FPs were evaluated. The services included in-hospital patient care, after-hours clinic, house calls, palliative care, nursing home visits, minor surgery, emergency medicine, sports medicine, intrapartum obstetrics, and walk-in clinic.

Analyses were carried out to examine the specific areas of focus of focused practice FPs and to describe variation in terms of sex, PGY3 training, scope of office-based care, and size of the population in which they practised.

## Statistical analysis

Descriptive analyses were conducted to describe the characteristics of the sample. Data were analyzed using SPSS, version 25.

Associations between each of the 7 independent variables and the dependent variable were assessed in a bivariate analysis using $\chi^2$ tests for the nominal variables and an independent sample *t* test for the continuous variable. A multivariate logistic regression model was used for further assessment of the relationship between the independent and the dependent variables.

Variation among NOBFFP, OBFFP, and non–focused practice FP groups based on respondents' characteristics was compared and analyzed using $\chi^2$ tests for nominal variables and an independent *t* test for the continuous variable. The ranges of services offered by NOBFFP, OBFFP, and non–focused practice FP groups were compared and analyzed using $\chi^2$ tests.

A probability level of less than .05 was used to determine statistical significance in all analyses.

# Results

Of the survey packages mailed to the list of Western University family medicine residency program graduates, 420 individuals completed and returned the survey, for a response rate of 42.5%. There was a good response (n=412, 98.1%) to the question "Do you consider yourself to be a focused practice family physician?" with 149 (36.2%) self-defining as focused practice FPs. **Table 1** describes the characteristics of the respondents and results of bivariate analyses.

A statistically significantly larger proportion of focused practice FPs had completed PGY3 training (30.9%) than had non–focused practice FPs (3.8%). Statistically significant associations were found between practising in inner-city, urban, or small town areas and being in focused practices, and similarly between receiving remuneration through FFS, AFP, or APP and being in focused practices (**Table 1**).

Variables with statistically significant associations with the dependent variable (type of practice) at the bivariate level—in addition to sex, training site, and years since graduation from residency—were retained in the multivariate regression model, as each was considered important in the overall assessment of the factors associated with being a focused practice FP or not.

**Table 2** shows the results of the multivariate logistic regression analysis. The odds ratio for completing PGY3 training and being in focused practice was 15.00 ($P<.001$; 95% CI 5.51 to 40.80), controlling for all other variables in the model. There was also an overall significant association between physicians' primary payment method and being in focused practices ($P<.001$). Compared with physicians working in an FFS model, those working in group payment models were less likely to have focused practices. Sex, training site, years since graduation from residency, and size of the population served were not significant factors in the multivariate analysis.

**Table 1** also describes variation among NOBFFPs, OBFFPs, and non–focused practice FPs as analyzed by participant characteristics. There was a significant difference in PGY3 training, with a greater proportion of NOBFFPs completing PGY3 training compared with OBFFPs and non–focused practice FPs.

In terms of the population size served, no NOBFFPs were located in rural or remote areas with population sizes of 10,000 or less, as opposed to 8.7% of OBFFPs and 18.2% of non–focused practice FPs; these were statistically significant differences.

A significant difference in primary payment model was observed among physician groups. A greater proportion of non–focused practice FPs (75.9%) followed by OBFFPs (44.8%) worked under group payment models compared with NOBFFPs (1.4%). Most NOBFFPs (60.0%) worked in AFP or APP models, reflecting the availability of these payment models for emergency medicine and hospitalist physicians, who formed the majority of the NOBFFP group.

Among the clinical activities reported by each physician group (**Table 3**), except for emergency medicine, there was globally less participation by NOBFFPs in all other practice activities when compared with OBFFPs and non–focused practice FPs. Furthermore, among the practice categories, a significant decline was notable in the proportion of physicians providing after-hours clinic care, house calls, palliative care, nursing home visits, and minor surgery from the non–focused practice FPs, to OBFFPs, to NOBFFPs. In terms of range of services offered (**Table 3**), non–focused practice FPs tended to offer the most variety and NOBFFPs tended to offer the least; OBFFPs tended to lie in between.

In terms of areas of focused practice, 103 (69.1%) of focused practice FPs reported their areas of focus as defined in the National Physician Survey.[35] As shown in **Table 4**,[35] focused practice FPs were principally involved in emergency medicine (44.7%), sport and exercise medicine (11.7%), hospital medicine (10.7%), and palliative care (9.7%). There were more male than female

**Table 1. Characteristics of FP survey respondents and their practices, as well as results of bivariate analyses: *N=412 for the dependent variable (focused practice or non–focused practice). Bivariate analysis 1 compared characteristics of focused practice FPs (total) versus those of non–focused practice FPs; bivariate analysis 2 compared characteristics of NOBFFPs with those of OBFFPs and non–focused practice FPs.***

| CHARACTERISTIC | OVERALL (N=420) | TYPE OF PRACTICE | | | | BIVARIATE ANALYSIS 1 *P* VALUE* | BIVARIATE ANALYSIS 2 *P* VALUE* |
|---|---|---|---|---|---|---|---|
| | | FOCUSED PRACTICE FPs (n=149) | | | NON–FOCUSED PRACTICE FPs (n=263) | | |
| | | TOTAL | NOBFFP | OBFFP | | | |
| Sex, n (%) | | | | | | | |
| • Male | 218 (51.9) | 79 (53.0) | 45 (58.4) | 34 (47.2) | 135 (51.3) | .742 | .742 |
| • Female | 202 (48.1) | 70 (47.0) | 32 (41.6) | 38 (52.8) | 128 (48.7) | | |
| Years since graduation from residency | | | | | | | |
| • Mean (SD) | 13.2 (7.9) | 12.6 (7.4) | 13.0 (7.2) | 12.2 (7.6) | 13.3 (8.1) | .406 | .536 |
| Training site, n (%) | | | | | | | |
| • Rural | 52 (12.4) | 21 (14.1) | 15 (19.5) | 6 (8.3) | 31 (11.8) | .498 | .498 |
| • Urban | 368 (87.6) | 128 (85.9) | 62 (80.5) | 66 (91.7) | 232 (88.2) | | |
| PGY3 training, n (%) | | | | | | | |
| • Yes | 56 (13.3) | 46 (30.9) | 34 (44.2) | 12 (16.7) | 10 (3.8) | <.0001 | <.001 |
| • No | 364 (86.7) | 103 (69.1) | 43 (55.8) | 60 (83.3) | 253 (96.2) | | |
| Location,† n (%) | | | | | | | |
| • Ontario | 365 (86.9) | 127 (85.2) | 68 (88.3) | 59 (81.9) | 231 (87.8) | .453 | .453 |
| • Other | 55 (13.1) | 22 (14.8) | 9 (11.7) | 13 (18.1) | 32 (12.2) | | |
| Population size served,‡ n (%) | | | | | | | |
| • Inner city | 181 (43.1) | 76 (53.9) | 34 (47.2) | 42 (60.9) | 105 (42.5) | | |
| • Urban | 52 (12.4) | 21 (14.9) | 13 (18.1) | 8 (11.6) | 31 (12.6) | | |
| • Suburban | 44 (10.5) | 13 (9.2) | 10 (13.9) | 3 (4.3)‖ | 30 (12.1) | .002 | .001 |
| • Small town | 62 (14.8) | 25 (17.7) | 15 (20.8) | 10 (14.5) | 36 (14.6) | | |
| • Rural or remote§ | 52 (12.4) | 6 (4.3) | 0 (0.0)‖ | 6 (8.7) | 45 (18.2) | | |
| • Missing | 29 (6.9) | NA | NA | NA | NA | | |
| Primary payment model,‡ n (%) | | | | | | | |
| • FFS | 86 (20.5) | 47 (34.3) | 20 (28.6) | 27 (40.3) | 38 (15.0) | | |
| • Group payment models** | 224 (53.3) | 31 (22.6) | 1 (1.4)‖ | 30 (44.8) | 192 (75.9) | <.0001 | <.001 |
| • Salary or CHC | 20 (4.8) | 13 (9.5) | 7 (10.0) | 6 (9.0) | 7 (2.8) | | |
| • AFP or APP | 62 (14.8) | 46 (33.6) | 42 (60.0) | 4 (6.0)‖ | 16 (6.3) | | |
| • Missing | 28 (6.7) | NA | NA | NA | NA | | |

AFP—alternative funding plan, APP—alternative payment plan, CHC—community health centre, FFS—fee-for-service, NA—not applicable, NOBFFP—non–office-based focused practice FP, OBFFP—office-based focused practice FP, PGY3—postgraduate third year.
*Statistically significant at *P*<.05.
†Locations were collapsed from the original categories that included 8 Canadian provinces, other, and United States to account for the small number of responses from individuals not based in Ontario.
‡Some respondents indicated the population size served or their primary payment model but then did not specify their type of practice; therefore, percentages according to type of practice are based on total available responses.
§The original categories of *rural* and *isolated or remote* were collapsed into *rural or remote* because of the low number of responses in each.
‖For cell sizes <5, the significance values for Fisher exact tests are reported.
**Group payment models include family health groups, family health networks, and family health organizations.

physicians in emergency medicine, sport and exercise medicine, hospital medicine, and anesthesia practices.

Most physicians with focused practices in anesthesia (75.0%) and emergency medicine (63.0%) had completed PGY3 training, whereas most physicians who worked in sport and exercise medicine, hospital medicine, palliative care, and other areas were not PGY3 program graduates.

Most focused practice FPs in emergency medicine (89.1%), followed by hospital medicine, anesthesia, and palliative care, had non-office-based practices. On the other hand, most physicians in sport and exercise medicine (66.7%), and all those with areas of focus in child and adolescent health, maternity and newborn care, mental health, and addiction medicine had office-based practices.

Regarding practice location, most physicians (53.9%) from different focus areas were located in inner cities (population >250,000), whereas only 6 (4.3%) worked in rural or remote areas (population ≤10,000).

**Table 2. Results of logistic regression analysis exploring associations between physician and practice characteristics and having a focused practice: *N=412*.**

| CHARACTERISTIC | MULTIVARIATE LOGISTIC REGRESSION RESULTS | | |
|---|---|---|---|
| | B | *P* VALUE* | OR (95% CI) |
| Sex | | | |
| • Male | Ref | Ref | Ref |
| • Female | .24 | .41 | 1.27 (0.72-2.25) |
| Years since graduation from residency | -.02 | .25 | 0.98 (0.94-1.01) |
| Training site | | | |
| • Rural | Ref | Ref | Ref |
| • Urban | .75 | .11 | 2.12 (0.83-5.38) |
| PGY3 training | | | |
| • No | Ref | Ref | Ref |
| • Yes | 2.70 | <.001 | 15.00 (5.51-40.80) |
| Population size served | NA | .15 | NA |
| • Inner city | Ref | Ref | Ref |
| • Urban | -.01 | .97 | 0.98 (0.43-2.23) |
| • Suburban | -.55 | .24 | 0.58 (0.22-1.46) |
| • Small town | .05 | .90 | 1.05 (0.46-2.38) |
| • Rural or remote | -1.31 | .02 | 0.27 (0.09-0.81) |
| Primary payment model | NA | <.001 | NA |
| • FFS | Ref | Ref | Ref |
| • Group payment model† | -1.99 | <.001 | 0.14 (0.07-0.27) |
| • Salary or CHC | .63 | .27 | 1.88 (0.61-5.8) |
| • AFP or APP | .45 | .31 | 1.58 (0.65-3.8) |

AFP—alternative funding plan, APP—alternative payment plan, CHC—community health centre, FFS—fee-for-service, NA—not applicable, OR—odds ratio, PGY3—postgraduate third year, Ref—reference category.
*Statistically significant at *P*<.05.
†Group payment models include family health groups, family health networks, and family health organizations.

**Table 3. Services offered by focused practice FPs (office-based or non–office-based) and non–focused practice FPs: *N=412*.**

| SERVICES | FOCUSED PRACTICE FPs (n=149) | | NON–FOCUSED PRACTICE FPs (n=263), n (%) | *P* VALUE* |
|---|---|---|---|---|
| | NOBFFP (n=77), n (%) | OBFFP (n=72), n (%) | | |
| In-hospital patient care | 24 (31.2) | 25 (34.7) | 98 (37.3) | .373 |
| After-hours care | 3 (3.9)† | 37 (51.4) | 182 (69.2) | <.001 |
| House calls | 7 (9.1) | 25 (34.7) | 163 (62.0) | <.001 |
| Palliative care | 16 (20.8) | 22 (30.6) | 153 (58.2) | <.001 |
| Nursing home visits | 4 (5.2)† | 10 (13.9) | 83 (31.6) | <.001 |
| Minor surgery | 2 (2.6)† | 22 (30.6) | 150 (57.0) | <.001 |
| Emergency medicine | 46 (59.7) | 9 (12.5) | 57 (21.7) | .001 |
| Sports medicine | 5 (6.5) | 16 (22.2) | 31 (11.8) | .498 |
| Intrapartum obstetrics | 0 (0.0)† | 9 (12.5) | 23 (8.7) | .444 |
| Walk-in clinic | 0 (0.0)† | 4 (5.6)† | 11 (4.2) | .587 |

NOBFFP—non–office-based focused practice FP, OBFFP—office-based focused practice FP.
*Statistically significant at *P*<.05.
†For cell sizes <5, the significance values for Fisher exact tests are reported.

## Discussion

More than one-third (36.2%) of Western University family medicine program graduates identified themselves as focused practice FPs, a slightly higher proportion than among FP respondents to the 2014 National Physician Survey.[8] The most frequently indicated area of special focus was emergency medicine, a finding compatible with National Physician Survey data.[7] Completing PGY3 training beyond the core 2-year family medicine residency

**Table 4. Areas of practice of focused practice FPs by sex, PGY3 training, and practice setting (office-based or non–office-based): *N=103.***

| AREA OF FOCUSED PRACTICE* | TOTAL, n (%) | SEX, n (%) | | PGY3 TRAINING, n (%) | | PRACTICE SETTING, n (%) | |
|---|---|---|---|---|---|---|---|
| | | MALE (n=60) | FEMALE (n=43) | YES (n=42) | NO (n=61) | OBFFP (n=38) | NOBFFP (n=65) |
| Emergency medicine | 46 (44.7) | 27 (58.7) | 19 (41.3) | 29 (63.0) | 17 (37.0) | 5 (10.9) | 41 (89.1) |
| Sport and exercise medicine | 12 (11.7) | 9 (75.0) | 3 (25.0) | 3 (25.0) | 9 (75.0) | 8 (66.7) | 4 (33.3) |
| Hospital medicine | 11 (10.7) | 7 (63.6) | 4 (36.4) | 1 (9.1) | 10 (90.9) | 4 (36.4) | 7 (63.6) |
| Palliative care | 10 (9.7) | 5 (50.0) | 5 (50.0) | 1 (10.0) | 9 (90.0) | 4 (40.0) | 6 (60.0) |
| Family practice anesthesia | 8 (7.8) | 7 (87.5) | 1 (12.5) | 6 (75.0) | 2 (25.0) | 3 (37.5) | 5 (62.5) |
| Child and adolescent health | 5 (4.9) | 2 (40.0) | 3 (60.0) | 1 (20.0) | 4 (80.0) | 5 (100.0) | 0 (0.0) |
| Maternity and newborn care | 4 (3.9) | 1 (25.0) | 3 (75.0) | 0 (0.0) | 4 (100.0) | 4 (100.0) | 0 (0.0) |
| Occupational medicine | 3 (2.9) | 1 (33.3) | 2 (66.7) | 0 (0.0) | 3 (100.0) | 2 (66.7) | 1 (33.3) |
| Health care of the elderly | 2 (1.9) | 0 (0.0) | 2 (100.0) | 1 (50.0) | 1 (50.0) | 1 (50.0) | 1 (50.0) |
| Mental health | 1 (1.0) | 1 (100.0) | 0 (0.0) | 0 (0.0) | 1 (100.0) | 1 (100.0) | 0 (0.0) |
| Addiction medicine | 1 (1.0) | 0 (0.0) | 1 (100.0) | 0 (0.0) | 1 (100.0) | 1 (100.0) | 0 (0.0) |

NOBFFP—non–office-based focused practice FP, OBFFP—office-based focused practice FP, PGY3—postgraduate third year.
*Areas of focused practice as identified in the National Physician Survey.[35]

was associated with having a focused practice. Although most self-defined focused practice FPs in the study did not do PGY3 training, the proportion of PGY3 graduates among focused practice FPs was significantly higher than among non–focused practice FPs, especially among physicians who worked in non–office-based settings. Other studies have indicated that completing additional family medicine training is related to more restricted scopes of practice among FPs.[36,37] For example, undertaking PGY3 training explained variations in practice patterns seen among graduates of core 2-year and 3-year family medicine training programs in Ontario who graduated between 1996 and 2002, where PGY3 graduates practised mostly in those areas in which they had completed additional training.[27] It is reasonable to surmise that FPs who wish to commit to specific clinical areas as part-time or full-time components of their practices are pursuing further education to enhance their skills in these subspecialized areas before entering the work force.

This study showed variations in physician practice patterns based on remuneration model that were similar to findings elsewhere.[13,29,30] Most non–focused practice FPs were in group payment models, while focused practice FPs were remunerated mainly by FFS, AFP, or APP. Furthermore, remuneration methods varied substantially among focused practice FPs; OBFFPs were mainly remunerated by group payment or FFS models, while NOBFFPs were paid mostly through AFP or APP. While there is a paucity of information in the literature about the impact of different payment models on practice behaviour of focused practice FPs, this study supports previous research findings that group payment models are associated with broader scopes of practice among FPs,[13,38] whereas FFS, AFP, and APP remuneration structures are associated with more specialized practices.[39,40] As the trend toward working in focused practices is increasing, remuneration methods may also need to shift. While the most relevant payment model for focused practice FPs may vary according to the type and setting of their practices, compensation models that encourage focused practice FPs to engage in collaborative work with non–focused practice FPs should be considered to optimize patients' access to a broad range of primary care and consulting services in family medicine. This would be in line with the College of Family Physicians of Canada's Family Medicine Professional Profile position statement, which describes the collective responsibilities of family physicians to provide collaborative, comprehensive, continuous, and community-adaptive care to the people of Canada.[41]

## Geographic location

Geographic location is an important predictor of physician practice patterns.[13,15,28,42] In this study, focused practice FPs served populations of varying size, but they were less prevalent in rural and remote geographic areas compared with non–focused practice FPs. A variation in the geographic location of focused practice FPs was also noted in relation to the scope of office-based care. Few OBFFPs (8.7%) practised in rural or remote areas, while none of the NOBFFPs worked in these areas. This suggests that FPs in rural settings may work in primary care office settings and maintain greater practice variety even if they develop enhanced skills in specialized domains. This finding is similar to those of other studies where physicians who work in rural areas tend to provide more comprehensive care.[28,42]

This research underlines variation among focused practice FPs based on their areas of focus. For instance, most focused practice emergency medicine physicians completed PGY3 training and practised in non–office-based settings, whereas most physicians with a focus in sport and exercise medicine had not completed a PGY3 program and had office-based practices. In terms of location, except for a limited number of physicians with practices in anesthesia or care of the elderly, none of the physicians from other areas of focus worked in rural or remote areas.

Provision of care to rural and remote populations, including Indigenous populations in Canada, is a critical responsibility[42] and requires physicians with a broad scope of practice and the skills that extra training may provide. Our study found that few of those with focused practices in specialized areas and further training transferred those skills to more remote geographic areas and were more likely to practise in larger urban areas. This raises the question of what policy provisions might be considered to ensure that the trend to focused practice and PGY3 training positions are more closely tied to demonstrated community need including remote and marginalized populations.

## Scope of practice

The range of services offered by FPs varied in terms of their scope of practice (focused versus non-focused) and the practice setting of focused practice FPs (office-based versus non–office-based practices). Focused practice FPs, who constitute approximately 30% of the FP work force,[8] offered fewer overall primary care services compared with non–focused practice FPs. Family physicians with focused practices can aid the work of generalist FPs in the health system by filling in gaps in the availability of other specialists in some communities and expanding the range of clinical services offered to patients in primary care settings. Although most focused practice FPs in the study dedicated their work to specialized fields, it is interesting to recognize that those with office-based practices delivered a broader range of services than those who were not office based. This suggests the provision of care in office settings is associated with the delivery of greater variety of services among FPs, which is a new finding.

The College of Family Physicians of Canada encourages focused practice FPs to collaborate with other FPs and health care providers in team-based practices within the concept of the Patient's Medical Home to ensure the delivery of patient-centred, broad-scope primary care and consulting services that meet community and patient needs.[43] Notably, in this study, OBFFPs appear to come closest to this goal.

## Planning implications

These findings have implications for health care planners, policy makers, and remuneration systems. Supporting the provision of care in office settings may facilitate the integration of FPs with subspecialized interests into primary care teams to promote the delivery of a broad basket of family medicine and consulting services to patient populations.

In addition, the findings presented here have implications for the Department of Family Medicine at Western University and likely for family medicine departments elsewhere. Certification requirements for graduates of all family medicine programs are the same across Canada,[44] yet FPs' practices after graduation vary in scope.

The family medicine residency program at Western University aims to train comprehensive FPs. Most of its graduates (63.8%) practise generalist family medicine, the nature of which varies by time since graduation from residency and by location of practice.[24] However, as identified in this study, more than one-third of program graduates elected to provide care in focused practices, with no significant variation between recent and less recent graduates. Previous studies have shown that patterns of care developed during residency may guide future practice.[25,27] The results of this study highlight the need to identify ways in which training environments and the current curriculum influence the scope of practice of FP graduates and to understand their implications for work force requirements to ensure the pipeline of trainees and the services they provide after graduation meet the needs of the population.

## Limitations and future research

This research study provides insight about focused practice in family medicine based on input from graduates of only 1 family medicine residency program in Ontario. Studies from other universities would enhance our understanding of focused practices in family medicine in Canada. An important association between undertaking PGY3 training and having focused practices was noted in the study; however, most self-defined focused practice FPs had not completed PGY3 training. There are 2 routes

to focused practice, the shorter of the 2 through PGY3 training and the longer through other means. Motivations of physicians taking these 2 routes are likely quite different and deserve further research attention. This study found that most focused practice FPs are located in urban rather than rural areas. Future research examining the range of medical services offered by focused practice FPs in rural settings is important. In addition, the extent to which health policy and market forces may influence focused and comprehensive practices in urban and rural areas are key topics for future research. Additionally, future studies could help explain whether changes in physicians' scopes of practice and the increasing popularity of focused practice in family medicine are meeting community needs. For example, how are the numbers of PGY3 positions in family medicine programs distributed among various areas of subspecialty? How are community needs included in these determinations?

Another limitation of the study is that the survey data used for this study are from 2014, and there have likely been important changes in physicians' practices since then. Despite these limitations, this study provides a greater understanding of focused practice in family medicine and enhances the literature on the topic.

## Conclusion

This is the first study that sheds light on factors associated with having a focused practice and the range of clinical services provided by focused practice FPs in Canada. Completion of PGY3 training and certain remuneration models were associated with focused practice. Office-based focused practice FPs differ in important ways from focused practice FPs who are not office based. Health care planners, policy makers, educators, and researchers must take into account that focused practice FPs are heterogeneous in various ways.

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**Acknowledgment**

We thank **Leslie Boisvert**, research support staff, who contributed to survey data gathering, input, and management that laid the groundwork of this quantitative study.

**Contributors**

**Dr Melad Marbeen** contributed to the study concept, literature review, statistical analysis, interpretation of results, and the final manuscript. **Dr Thomas R. Freeman** and **Dr Amanda L. Terry** contributed to the study concept, interpretation of results, revisions to the text, and the final manuscript.

**Competing interests**

None declared

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**References**

1. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q* 2005;83(3):457-502.
2. Schultz SE, Glazier RH. Identification of physicians providing comprehensive primary care in Ontario: a retrospective analysis using linked administrative data. *CMAJ Open* 2017;5(4):E856-63.
3. Woodward CA, Cohen M, Ferrier B, Brown J. Physicians certified in family medicine. What are they doing 8 to 10 years later? *Can Fam Physician* 2001;47:1404-10.
4. Tepper J. *The evolving role of Canadian family physicians, 1992–2001*. Ottawa, ON: Canadian Institute for Health Information; 2004. Available from: **https://secure.cihi.ca/free_products/PhysiciansREPORT_eng.pdf**. Accessed 2022 Nov 12.
5. Collier R. The changing face of family medicine. *CMAJ* 2011;183(18):E1287-8.
6. National Physician Survey. *National results by FP/GP or other specialist, sex, age, and all physicians*. Mississauga, ON: College of Family Physicians of Canada, Canadian Medical Association, Royal College of Physicians and Surgeons of Canada; 2007.
7. National Physician Survey. *National results by FP/GP or other specialist, sex, age, and all physicians*. Mississauga, ON: College of Family Physicians of Canada, Canadian Medical Association, Royal College of Physicians and Surgeons of Canada; 2010.
8. National Physician Survey. *Results for family physicians by sex and age*. Mississauga, ON: College of Family Physicians of Canada, Canadian Medical Association, Royal College of Physicians and Surgeons of Canada; 2014.
9. Pianosi K, Bethune C, Hurley KF. Medical student career choice: a qualitative study of fourth-year medical students at Memorial University, Newfoundland. *CMAJ Open* 2016;4(2):E147-52.
10. Leduc N, Vanasse A, Scott I, Scott S, Orzanco MG, Maman Dogma J, et al. *The career decision-making process of medical students and residents and the choice of specialty and practice location: how does postgraduate medical education fit in?* Ottawa, ON: Future of Medical Education in Canada postgraduate consortium; 2011.
11. National Physician Survey. *Results for family medicine residents*. Mississauga, ON: College of Family Physicians of Canada, Canadian Medical Association, Royal College of Physicians and Surgeons of Canada; 2012.
12. Slade S, Ross S, Lawrence K, Archibald D, Palacios Mackay M, Oandasan IF. Extended family medicine training. Measuring training flows at a time of substantial pedagogic change. *Can Fam Physician* 2016;62:e749-57. Available from: **https://www.cfp.ca/content/62/12/e749.long**. Accessed 2022 Nov 25.
13. Wong E, Stewart M. Predicting the scope of practice of family physicians. *Can Fam Physician* 2010;56:e219-25. Available from: **https://www.cfp.ca/content/cfp/56/6/e219.full.pdf**. 2022 Nov 23.
14. Chan BTB. The declining comprehensiveness of primary care. *CMAJ* 2002;166(4):429-34.
15. Bass MJ, McWhinney IR, Stewart M, Grindrod A. Changing face of family practice. Trends from 1974 to 1994 in one Canadian city. *Can Fam Physician* 1998;44:2143-9.
16. Chan BTB, Schultz SE. *Supply and utilization of general practitioner and family physician services in Ontario. ICES Investigative Report*. Toronto, ON: ICES; 2005. Available from: **https://www.ices.on.ca/flip-publication/supply-utilization-of-general-practitioner/files/assets/basic-html/index.html#3**. Accessed 2022 Nov 12.
17. Collier R. Canada's emergency medicine shortfall. *CMAJ* 2016;188(11):E246. Epub 2016 Jul 4.
18. Frank C, Seguin R. Care of the elderly training. Implications for family medicine. *Can Fam Physician* 2009;55:510-1.e1-4. Available from: **https://www.cfp.ca/content/cfp/55/5/510.full.pdf**. Accessed 2022 Nov 23.
19. Hogan DB, Borrie M, Basran JFS, Chung AM, Jarrett PG, Morais JA, et al. Specialist physicians in geriatrics—report of the Canadian Geriatrics Society Physician Resource Work Group. *Can Geriatr J* 2012;15(3):68-79. Epub 2012 Sep 20.
20. Sisler JJ, DeCarolis M, Robinson D, Sivananthan G. Family physicians who have focused practices in oncology. Results of a national survey. *Can Fam Physician* 2013;59:e290-7. Available from: **https://www.cfp.ca/content/cfp/59/6/e290.full.pdf**. Accessed 2022 Nov 23.
21. Barbera L, Hwee J, Klinger C, Jembere N, Seow H, Pereira J. Identification of the physician workforce providing palliative care in Ontario using administrative claims data. *CMAJ Open* 2015;3(3):E292-8.
22. Cohen M, Ferrier BM, Woodward CA, Goldsmith CH. Gender differences in practice patterns of Ontario family physicians (McMaster medical graduates). *J Am Med Womens Assoc* (1972) 1991;46(2):49-54.
23. Norton PG, Dunn EV, Soberman L. Family practice in Ontario. How physician demographics affect practice patterns. *Can Fam Physician* 1994;40:249-56.
24. Freeman TR, Boisvert L, Wong E, Wetmore S, Maddocks H. Comprehensive practice. Normative definition across 3 generations of alumni from a single family practice program, 1985 to 2012. *Can Fam Physician* 2018;64:750-9.
25. Myhre D, Szafran O, Schipper S, Dickinson J, Janke F. Scope of practice of family medicine graduates who completed a rural versus urban program. *Rural Remote Health* 2018;18(3):4514. Epub 2018 Jul 31.
26. Strasser R, Cheu H. Needs of the many. Northern Ontario School of Medicine students' experience of generalism and rural practice. *Can Fam Physician* 2018;64:449-55.
27. Green M, Birtwhistle R, MacDonald K, Kane J, Schmelzle J. Practice patterns of graduates of 2- and 3-year family medicine programs. In Ontario, 1996 to 2004. *Can Fam Physician* 2009;55:906-7.e12. Available from: **https://www.cfp.ca/content/cfp/55/9/906.full.pdf**. Accessed 2022 Nov 23.
28. Wenghofer EF, Kam SM, Timony PE, Strasser R, Sutinen J. Geographic variation in FP and GP scope of practice in Ontario. Comparative provincial study. *Can Fam Physician* 2018;64:e274-82. Available from: **https://www.cfp.ca/content/cfp/64/6/e274.full.pdf**. Accessed 2022 Nov 23.
29. Gosden T, Forland F, Kristiansen IS, Sutton M, Leese B, Giuffrida A, et al. Impact of payment method on behaviour of primary care physicians: a systematic review. *J Health Serv Res Policy* 2001;6(1):44-55.
30. Hutchison B, Glazier R. Ontario's primary care reforms have transformed the local care landscape, but a plan is needed for ongoing improvement. *Health Aff* (Millwood) 2013;32(4):695-703.
31. Glazier RH, Green ME, Frymire E, Kopp A, Hogg W, Premji K, et al. Do incentive payments reward the wrong providers? A study of primary care reform in Ontario, Canada. *Health Aff* (Millwood) 2019;38(4):624-32.

32. *Primary care and family medicine in Canada: a prescription for renewal. A position paper*. Mississauga, ON: College of Family Physicians of Canada; 2000. Available from: **https://www.cfpc.ca/CFPC/media/Resources/Health-Care-Delivery/PRIMARY-CARE-AND-FM-IN-CANADA-2000(1).pdf**. Accessed 2022 Nov 12.
33. Weiner JP, Starfield BH. Measurement of the primary care roles of office-based physicians. *Am J Public Health* 1983;73(6):666–71.
34. Glazier RH, Zagorski BM, Rayner J. *Comparison of primary care models in Ontario by demographics, case mix and emergency department use, 2008/09 to 2009/10. ICES investigative report.* Toronto, ON: ICES; 2012. Available from: **https://www.ices.on.ca/flip-publication/comparison-of-primary-care-models-in-ontario-by-demographics/files/assets/basic-html/index.html**. Accessed 2022 Nov 13.
35. National Physician Survey. Mississauga, ON: College of Family Physicians of Canada, Canadian Medical Association, Royal College of Physicians and Surgeons of Canada; 2013.
36. Varner C, Ovens H, Letovsky E, Borgundvaag B. Practice patterns of graduates of a CCFP(EM) residency program. A survey. *Can Fam Physician* 2012;58:e385-9. Available from: **https://www.cfp.ca/content/cfp/58/7/e385.full.pdf**. Accessed 2022 Nov 23.
37. Chan BTB. Do family physicians with emergency medicine certification actually practise family medicine? [research letter]. *CMAJ* 2002;167(8):869-70.
38. Gosden T, Forland F, Kristiansen IS, Sutton M, Leese B, Giuffrida A, et al. Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians. *Cochrane Database Syst Rev* 2000;(3):CD002215.
39. *Primary care payment models in Ontario*. Toronto, ON: Ontario Ministry of Health; 2020. Available from: **http://www.health.gov.on.ca/en/pro/programs/pcpm/**. Accessed 2022 Nov 13.
40. Henry DA, Schultz SE, Glazier RH, Bhatia RS, Dhalla IA, Laupacis A. *Payments to Ontario physicians from Ministry of Health and Long-Term Care sources, 1992/93 to 2009/10. ICES investigative report.* Toronto, ON: ICES; 2012. Available from: **https://www.ices.on.ca/Publications/Atlases-and-Reports/2012/Payments-to-Ontario-Physicians**. Accessed 2022 Nov 13.
41. *Family medicine professional profile*. Mississauga, ON: College of Family Physicians of Canada; 2018. Available from: **https://www.cfpc.ca/en/Resources/Education/Family-Medicine-Professional-Profile**. Accessed 2022 Nov 13.
42. Hutten-Czapski P, Pitblado R, Slade S. Short report: scope of family practice in rural and urban settings. *Can Fam Physician* 2004;50:1548-50.
43. *Communities of practice in the Patient's Medical Home*. Mississauga, ON: College of Family Physicians of Canada; 2016. Available from: **https://patientsmedicalhome.ca/files/uploads/BAG_CPFM_ENG_RevOct12_Web.pdf**. Accessed 2022 Nov 13.
44. *Standards of accreditation for residency programs in family medicine*. Mississauga, ON: College of Family Physicians of Canada; 2018. Available from: **https://www.cfpc.ca/en/education-professional-development/residency-program/residency-program-accreditation**. Accessed 2022 Nov 13.


This article has been peer reviewed.
Cet article a fait l'objet d'une révision par des pairs.
*Can Fam Physician* 2022;68:905-14. DOI: 10.46747/cfp.6812905