Primary care reform

Physicians' participation in Hamilton-Wentworth

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ABSTRACT

OBJECTIVE To determine physicians' reasons for and against participating in a primary care reform (PCR) pilot project, to identify demographic and practice characteristics associated with participation, to gauge physicians' satisfaction with implementation of the project, and to seek suggestions for change.

DESIGN Cross-sectional mailed survey using a self-administered questionnaire.

SETTING Family practices in Hamilton-Wentworth, Ont.

PARTICIPANTS Eighty-two of 107 (76.6%) physicians who participated in the pilot project and 101 of 150 (67.3% of a 60% random sample of the area's remaining generalist physicians) who chose not to participate.

MAIN OUTCOME MEASURES Physicians' primary and secondary motives for participating or not; comments on the pilot project; and subjects' demographic, professional, and practice characteristics.

RESULTS Despite their experience with capitation practice, after controlling for other factors, physicians from health service organizations were no more likely than their fee-for-service colleagues to join the pilot project. Those in large group practices were more likely to participate. Both participants and non-participants were concerned about disrupting call groups, burdening office staff, not having enough time, and whether the project's objectives were achievable. Other key findings were how few patients declined enrolment and how many physicians had unrealistic ideas about the demands of participation and the capabilities of currently available information technology.

CONCLUSION While many Hamilton-area physicians were eligible and willing to participate in a PCR pilot project, many were not. Our findings suggest that physicians and government should clarify their expectations for PCR and that we need to look for better ways to register patients and select information technology for PCR.

RÉSUMÉ

OBJECTIF Déterminer les raisons des médecins en faveur de la participation à un projet expérimental de réforme des soins de première ligne et contre cette participation, identifier les caractéristiques démographiques et liées à la pratique associées avec la participation, évaluer le degré de satisfaction des médecins à l'endroit de l'implantation du projet et solliciter des suggestions de changements.

CONCEPTION Un sondage transversal au moyen d'un questionnaire envoyé par la poste et rempli par l'intéressé.

CONTEXTE Des pratiques familiales à Hamilton-Wentworth, en Ontario.

PARTICIPANTS Un total de 82 médecins sur les 107 (76,6%) qui ont participé au projet expérimental et 101 des 150 (67,3% d'un échantillon aléatoire de 60% des médecins généralistes de la région) qui ont choisi de ne pas participer.

PRINCIPALES MESURES DES RÉSULTATS Les raisons principales et secondaires des médecins motivant leur participation ou leur refus; des commentaires sur le projet expérimental; et les caractéristiques démographiques, professionnelles et liées à la pratique des sujets.

RÉSULTATS En dépit de leur expérience antérieure avec la pratique par capitation, après avoir vérifié d'autres facteurs, les médecins venant d'organisations de services de santé n'étaient pas plus enclins que leurs collègues rémunérés à l'acte à se joindre au projet expérimental. Ceux appartenant à de grandes pratiques collectives étaient plus susceptibles d'y participer. Autant ceux qui ont participé que ceux qui n'ont pas participé se préoccupaient du dérangement des groupes du service de garde, du fardeau imposé au personnel du bureau, du manque de temps et de savoir si les objectifs du projet étaient réalisables. Au nombre des autres principales constatations figuraient la rareté des patients qui ont refusé l'inscription et le nombre de médecins qui avaient des façons irréalistes de voir les exigences de la participation ainsi que les capacités de la technologie de l'information actuellement disponible.

CONCLUSION Si de nombreux médecins de la région d'Hamilton-Wentworth étaient admissibles et disposés à participer à un projet expérimental de réforme des soins de première ligne, plusieurs ne l'étaient pas. Nos conclusions indiquent que les médecins et le gouvernement devraient préciser leurs attentes à l'endroit d'une telle réforme, et qu'il nous faut trouver de meilleures façons pour inscrire les patients et choisir la technologie de l'information dans cet exercice.

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Health care has undergone tremendous change in Canada during the last two decades. In Ontario, that change was accelerated in 1995 by direction from the province's Hospital Restructuring Commission and, more recently, through calls for parallel reforms in other parts of the health care system, including long-term care and primary care.[1,2] In May 1998, the Ontario Ministry of Health announced plans for five primary care reform (PCR) pilot projects. By far the largest of these, with a projected enrolment of 110 physicians and 200000 patients, was slated for Hamilton. Since then, PCR pilot projects have been launched from coast to coast.[3]

Among the objectives of Ontario's PCR are improvements in access, quality, continuity, and cost-effectiveness of primary health care and increased patient and provider satisfaction.[4] To achieve these objectives, the Ontario pilot projects incorporate six key components (**Table 1**). In contrast to traditional fee-for-service remuneration (the method by which 90% of Canada's primary care physicians are paid),[5] the annual fees paid to each pilot project participant are based on a capitation rate and the size and age-sex composition of his or her patient "roster." These fees are paid to physicians either as services are rendered ("reformed fee-for-service") or in predefined monthly payments ("global capitation").

Table 1. Key elements of Ontario primary care reform pilot projects

Physicians contract with the Ministry of Health to provide a specified "basket" of services, including extended office hours
Primary care networks (PCNs) of at least five physicians will supply these services
Patients enrol with predefined patient and provider obligations, including agreement that patients will seek nonemergency care first from their PCNs
Capitation-based core funding offers separate financial incentives for preventive care, home care, and approved continuing medical education activities
A telephone health advisory service provides after-hours advice and triage to enrolled patients
A computerized clinical management system incorporates both a cumulative patient profile to be shared among PCN members and the capacity to, among other things, flag patients eligible for specific preventive interventions and review drug use

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In May 2000, the Ontario Finance Minister announced plans to accelerate PCR and his hope of convincing 80% (about 6000) of the province's primary care physicians to convert to PCR over the coming 4 years.[6] Because little is known about why physicians accept PCR or what their experience has been with it,[7,8] this study aimed to determine physicians' reasons for and against participating in a PCR pilot project, to identify demographic and practice characteristics associated with participation, to gauge physicians' satisfaction with the project's implementation, and to seek suggestions for change.

METHODS

Study design and subjects

The study comprised two cross-sectional mailed surveys: one sent to physicians who, as of February 2000, were registered as participants in the Hamilton-Wentworth PCR Pilot Project (participants); and one to non-specialist physicians whose practice address was located within the geographic boundaries established for the project, but who chose not to participate in the pilot project (non-participants). We surveyed physicians in Hamilton-Wentworth rather than physicians at other Ontario pilot sites for three main reasons: the Hamilton-Wentworth project was one of the first and, with 80% of participants, by far the largest project; all of its participants chose payment on the basis of global capitation; and some of the community's physicians and patients had had prior experience with rostering and capitation as former members of health service organizations (HSOs). Outside the latest round of reforms, HSOs remain the only Canadian family practices in which care delivered by physicians is paid for on the basis of capitation.[9] While we recognized this feature of our population would limit the generalizability of our findings, we believed we had more to gain by incorporating this perspective than by excluding it.

Names and addresses of participants were obtained from the project's coordinating committee. The sampling frame for non-participants was all active, non-specialist members of the College of Physicians and Surgeons of Ontario (CPSO) whose primary practice addresses were located within the Regional Municipality of Hamilton-Wentworth. The source for the sampling frame was the CPSO's Registrant Database accessed in March 2000 via the World Wide

Web (at **www.cpso.on.ca**). This database contains the name, sex, date and place of graduation, primary practice address, and status with both the College of Family Physicians of Canada (CFPC) and the Royal College of Physicians and Surgeons of Canada of all physicians registered with the CPSO.

Our search generated a list of 353 apparently eligible subjects, 107 (30.3%) of which were registered with one of the pilot project's eight primary care networks (PCNs). As we hoped to survey a roughly equal number of physicians in both groups, we used SPSS® to identify a simple random sample of 150 of the remaining 246 non-participating physicians. We sent them our non-participant questionnaire.

Survey instruments and methods

Two self-administered questionnaires were developed for the surveys, each with three main sections. Both were reviewed by two physician-colleagues for clarity and comprehensiveness, but neither was subjected to formal pilot testing or validation. Section 1 asked for physicians' primary and secondary motives for participating or not in the pilot project. A list of possible reasons was given, and subjects were asked to rank the reasons in order of importance to them. For the participant survey, we based the core list of reasons on the primary and secondary subcomponents of the service agreements reached between the PCNs and the Ministry of Health. Section 2 asked for feedback on project implementation, including the proportion of patients who declined enrolment and time spent attending meetings, rostering patients, selecting computers, and so on. We also asked for advice about how to improve the implementation process or the project proposal, as appropriate. Section 3 requested information about demographic, professional, and practice characteristics; participants were asked to focus on their practice characteristics before joining the pilot project.

The two surveys were conducted consecutively: from March to June 2000 (participants); and from June to September 2000 (non-participants). Prospective subjects received up to three copies of their questionnaire accompanied by a letter signed by the investigators and a stamped, addressed envelope.

Data analysis

Univariate descriptive statistics were used to characterize respondents and summarize results. Because not all respondents completed every question, our results specify the number who replied. Percentages do not always add up to 100 due to rounding. Responses to open questions were grouped into categories and are reported as frequencies and proportions. Where respondents gave numerical responses in the form of a range, the midpoint of the range was used for analysis.

Section 1 of the questionnaires posed two analytical challenges: first, five (6.1%) participants and seven (6.9%) non-participants *rated* rather than *ranked* items. Second, where items were ranked, subjects often excluded items they deemed unimportant. For ease of interpretation, we limited our analyses to subjects who *ranked* items, and we compared the relative importance of the reasons they selected by reporting the frequency with which particular reasons were judged "most important" (ie, were ranked number one).

Tests for intergroup differences (χ^2, Fisher's exact, or Student's t test, as appropriate) were two-sided, with type I error set at .05. Multiple logistic regression was used to confirm whether factors identified through univariate analyses were associated with participation in the pilot project. Factors significant at the $P < .05$ level remained in the final multivariate model. Data were analyzed using SPSS® and SAS.® The protocol was approved by the Research Ethics Board at St Joseph's Healthcare in Hamilton.

RESULTS

Eighty-two (76.6%) participants and 101 (67.3%) non-participants responded to our surveys for an overall response rate of 71.2%. Respondents and nonrespondents were similar in terms of sex and years since graduation, but respondents were more frequently certified by the CFPC (66.5% vs 47.2%, respectively; $P < .01$).

Among non-participants sent questionnaires, one was deceased, and 26 (26%) deemed themselves "ineligible" for the pilot project. Among the 50% that did not practise "family medicine," most worked in hospitals (eight), occupational health (three), or student health centres (two). The rest were salaried (six), retired (two), or no longer practising in Hamilton (four). Subtracting these from our population of apparently eligible physicians, 37% of the area's eligible physicians chose to participate in the project. Findings are reported for the 82 participants and 74 non-participants who considered themselves eligible.

Characteristics of respondents

At the time of the survey, 74 participants had spent a mean of 233 (SD 95) days registered with a PCN. Eight had yet to sign their PCN agreements, but intended to participate in the pilot project and completed our questionnaire. Respondents' characteristics are summarized in **Table 2**.

Table 2. Respondents' demographic and practice characteristics before joining the pilot project

CHARACTERISTIC	PARTICIPANTS (N = 82)	NON-PARTICIPANTS (N = 74)
Male sex (%)	50 (61.0)	45 (60.8)
Mean age (SD)	48.3 (8.5)	49.1 (10.2)
Mean no. of years since graduation (SD)	22.5 (8.7)	22.6 (10.7)
Place of graduation		
• McMaster University (%)	23 (46.9)	26 (53.1)
• University of Toronto (%)	21 (25.6)	13 (17.6)
• Other Canadian universities (%)	22 (26.8)	20 (27.0)
• Non-Canadian universities (%)	16 (19.5)	15 (20.3)
No. with CFPC certification (%)	59 (72.0)	51 (68.9)
No. teaching (%)	45 (56.3)	37 (51.4)
Mean no. of years practising in Hamilton-Wentworth (SD)	18.2 (10.1)	18.3 (10.3)
No. in group practices (%)	48 (58.5)	41 (56.9)
Mean group size (SD)	4.2 (1.8)*	2.8 (1.4)*
No. paid by fee-for-service (%)	47 (57.3)†	53 (73.6)†
Mean estimated no. of patients in practice (SD)	2059.4 (712.2)	1881.6 (762.9)
Mean estimated no. of patient visits in a typical workday (SD)	37.2 (11.6)†	32.5 (10.8)†
No. of practices with the following office staff (%)		
• Registered nurse	37 (46.3)	32 (45.7)
• Nurse practitioner	12 (15.0)*	0*
• Nutritionist	31 (38.8)	20 (28.6)
• Social worker	37 (46.3)†	16 (22.9)

SD—standard deviation.
*$P < .001$.
†$P < .05$.

Participants and non-participants differed in several respects. Before the project, participants were relatively more likely to be members of HSOs, to practise in larger groups, to employ nurse practitioners and social workers, and to report seeing more patients in a typical workday than non-participants. On multiple logistic regression, two factors remained associated with participation: number of physicians in the practice (odds ratio [OR] 2.137, 95% confidence interval [CI] 1.313 to 3.480, P .002) and number of patient visits in a typical workday (OR 1.060, CI 1.017 to 1.104, P .006).

Motives for participation

Table 3 shows the distribution of respondents' primary and secondary motives for participation. Similar numbers of physicians rated the four broadly defined categories of improved information technology (IT), patient care, working conditions, and financial remuneration as their most important reason for participating. Among physicians who chose improved remuneration, proportionally more (88.2%, P .005) came from fee-for-service settings. Among those who chose improved IT, fewer (33.3%, P.02) came from fee-for-service settings.

Among proposed secondary motives, two categories explored physicians' objectives for their newly acquired IT: one focused on the system features they deemed most important, and the other asked about their expectations for the system. Most physicians (45%) ranked the electronic patient record as the most important feature. In terms of payment, more than half the participants (60%) valued the prospect of a more predictable income. Not surprisingly, most of these physicians came from fee-for-service settings (69.8% vs 42.3% HSO, P .05).

Perceived effects on practice

One third of subjects, a greater proportion of whom came from fee-for-service settings than HSOs (44.4% vs 20.6%; P .03), anticipated that their personal practice style would change under PCR. Most comments suggested a combination of fewer and longer patient encounters, more telephone advice, and improved preventive care (**Table 4**).

Patient enrolment, time demands, problems

The 74 (90%) physicians who had registered patients enrolled an average of 78% (SD 18.2, median 82%) of the mean estimated 2060 (SD 712.2, median 2000) patients they hoped to roster. To that point, a mean estimated 3% (SD 3.8, median 1%) of patients had declined enrolment. Reported acceptance rates were similar for fee-for-service and HSO physicians.

Estimates from 71 physicians of hours per week spent on project activities since signing a PCN agreementwork out to a mean of 5 (SD 4.1, median 4). Those who had spent the sample median of 214 days or more in the project reported greater demands than those who had been enrolled for less time (mean 6.0 [SD 4.9] vs 4.0 [SD 3.0] hours weekly, respectively; P .05).

Table 5 lists the challenges physicians faced during implementation. Most problems (60%) fell into three broad categories: organization and coordination of PCN activities; patient registration; and IT. Two thirds of comments implied a need for better

Table 3. Primary and secondary motives for participating in the pilot project: *Includes only those who ranked options (N = 77).*

CATEGORY	N (% OF RESPONDENTS) PRIMARY	SECONDARY
IMPROVED INFORMATION TECHNOLOGY (IT)	21 (27.3)	
What proposed component was most important to you?		
• Electronic patient records		34 (45.3)
• Financial support for IT		14 (18.7)
• Medication management		9 (12.0)
• Prevention profiling		5 (6.7)
• Practice management		5 (6.7)
• Delivery of laboratory test results		4 (5.3)
• Record security		3 (4.0)
• Local area network and communications		1 (1.3)
What expectation was most important to you?		
• Improved efficiency for staff		24 (32.0)
• Reduced paperwork time		24 (32.0)
• Quicker access to x-ray, laboratory, and hospital reports		13 (17.3)
• Improved information transfer (eg, patient information from emergency departments, consultants)		11 (14.7)
• Other (improved patient records, record management, patient management)		3 (4.0)
IMPROVED PATIENT CARE	19 (24.7)	
What proposed improvement was most important to you?		
• Patient satisfaction in general		21 (28.8)
• Preventive care		16 (21.9)
• Patient access to telephone advisory service		15 (20.5)
• After-hours coverage		14 (19.2)
• Coordination of care (eg, hospital admissions, home care support, specialist appointments)		5 (6.8)
• Mental health care		2 (2.7)
IMPROVED WORKING CONDITIONS	18 (23.4)	
What potential improvement was most important to you?		
• Easier access to time away from office for continuing medical education, illness, or personal		32 (43.8)
• Less time on call		23 (31.5)
• More and easier access to holiday time		18 (24.7)
IMPROVED FINANCIAL REMUNERATION	17 (22.1)	
What aspect of the compensation package was most important to you?		
• Prospect of a more predictable income		41 (60.3)
• Prospect of a higher income		20 (29.4)
• Targeted support for preventive care		4 (5.9)
• Targeted support for team consultations		2 (2.9)
• Improved remuneration for care provided in hospital		1 (1.5)

Table 4. Perceived changes in personal practice style under PCR

PERCEIVED CHANGE	N (% OF RESPONSES)*
More advice, prescription renewals by telephone	9 (22.5)
Fewer patient visits per day, more time per encounter, less frequent visits for chronically ill patients	8 (20.0)
Greater emphasis on preventive care	7 (17.5)
Improved practice organization and efficiency	4 (10.0)
Improved documentation	4 (10.0)
Less paperwork	3 (7.5)
More time off	2 (5.0)
More referrals, continuing education	1 (2.5)
Less counseling	1 (2.5)

**Multiple responses permitted.*

information and support both for rostering patients and for selecting IT.

Table 6 lists reasons physicians gave for not joining the pilot project. One third cited "practical barriers and working conditions" as their most important motive. About 18% supplied their own reasons; among these were retirement, health problems, and concerns about the size of the PCNs.

Suggestions for change

Sixty (73%) participants and 19 (26%) non-participants supplied the suggestions summarized in **Table 7**. Participants' suggestions focused mainly on preparation for rostering, meeting and administration time, and IT. While 11 (13%) advised colleagues to join the project immediately, seven (9%) favoured delaying participation until "…the bugs were ironed out." Non-participants mentioned topics ranging from a need for more inclusive entry criteria to resolution of participants' concerns.

DISCUSSION

Despite broad interest in and the number of PCR initiatives under way in Canada, little is known about who is participating in these projects and why, or what their experience has been. Even less is known about those who have chosen not to participate. In this survey of physicians from Ontario's largest pilot project site, we found that, despite prior experience with capitation practice, after controlling for other factors, HSO physicians were no more likely to join than their fee-for-service colleagues. Physicians who had worked in larger group

Table 5. Challenges and problems encountered in the pilot project

CHALLENGE OR PROBLEM	N (% OF RESPONSES)*
Unrealistic expectations of, and problems with, information technology	25 (20.8)
Patient registration process daunting (eg, time commitment, finding patients, obtaining informed consent, cost)	23 (19.2)
After-hours coverage issues	13 (10.8)
Organizing, coordinating, and working with members of a large primary care network	12 (10.0)
Slow pace of implementation: Ministry of Health delays, protocol changes	9 (7.5)
Roster size: achieving personal targets, limit on size	8 (6.7)
Telephone health advisory service unavailable	5 (4.2)
Delays in and questions about payment process (eg, during initial conversion, continuing medical education, prevention bonuses)	5 (4.2)
No remuneration for administrative activities	5 (4.2)
Financial burden of information technology	4 (3.3)
Communication with the Ministry of Health	4 (3.3)
No problems encountered	4 (3.3)
Choosing suitable hardware and software	3 (2.5)

**Multiple responses permitted.*

practices and reported seeing more patients per day were significantly more likely than others to participate.

Both participants and non-participants had concerns about disrupting call groups, burdening office staff, the time demands of participation, and whether project objectives could be achieved. Another key finding was the prevalence of unrealistic expectations regarding both the demands of participation and the capabilities of currently available IT. Our results show that, even for physicians who were experienced with patient registration, participation took considerable time and effort. Subjects reported an average of 5 hours of extra administrative activity weekly at a time when many had not even begun to implement electronic patient records. Also, many entering the project had limited experience with computers and were surprised to learn that much of what they hoped to accomplish with their new technology either could not be achieved or would have to wait. These gaps suggest opportunities for better information, communication, and support.

Somewhat at odds with the government's objectives for PCR, just one quarter of subjects identified

Table 6. Main reason for not participating in pilot project: *Respondents who were eligible to participate and who ranked options (N = 67)*

EXPLANATION OF FAILURE TO PARTICIPATE*	N (% OF RESPONDENTS)
PRACTICAL BARRIERS AND WORKING CONDITIONS	22 (32.8)
• Burden for staff of rostering, learning new system	13
• Partner(s) not interested	12
• Would mean disrupting or disbanding established on-call group	12
• Could mean more time, busier on-call schedule	10
• Time required for meetings, computers, learning new system	9
• Discomfort with legal contracts with primary care network members	8
CHARACTERISTICS OF PRACTICE AND FINANCIAL CONSIDERATIONS	10 (14.9)
• Practice too small	4
• Practice specialized (eg, psychotherapy, sports medicine)	2
• Large proportion of patients transient, mobile, out-of-town	2
• Large proportion of patients unable or unwilling to consent	2
• Other: no monetary gain, high geriatric population	2
PHILOSOPHIC OBJECTIONS	10 (14.9)
• Loss of control over hours worked, on-call duties, practice size, etc	5
• Perceived change in physician-patient relationship	3
• Loss of freedom of choice for patients and physicians	3
• Other: encourages "cherry picking"	1
TOO MANY "UNKNOWNS"	9 (13.4)
• Question capability of available information technology	5
• Question achievability of project objectives	3
REQUIREMENT FOR INFORMATION TECHNOLOGY	2 (3.0)
• Do not wish to computerize to extent necessary	2
• Costs to computerize prohibitive	1
DISTRUST GOVERNMENT'S MOTIVATIONS	2 (3.0)
OTHER	12 (17.9)
• Retiring	3
• Medical and health reasons	2
• Concerns about large group, network practice	2
• Currently health service organization member; no advantage to changing	2
• Lack of patient accountability	1
• Strong belief in fee-for-service model	1

**Excluding "other," multiple responses permitted.*

Table 7. Respondents' advice to colleagues and organizers and suggestions for change

ADVICE OR SUGGESTION	N (% OF RESPONSES)*
PARTICIPANTS	
Carefully consider information technology options; seek fully capable computer systems	11 (15.0)
Join as soon as possible	11 (15.0)
Extend rostering period; begin rostering before official conversion to primary care reform	9 (12.3)
Prepare for considerable time burden for administration, meetings, rostering, etc	8 (11.0)
Do not join; wait for bugs to be ironed out	7 (9.6)
Telephone health advisory service must be implemented	7 (9.6)
Better financial support for rostering, information technology	4 (5.5)
Choose primary care network members carefully	3 (4.1)
More options and methods needed for patient registration	2 (2.5)
Hire outside and non-office staff to assist with patient registration	2 (2.5)
Capitation rate does not fairly compensate for complex patients	2 (2.5)
More financial incentive needed to maintain procedures; expect referrals to rise	2 (2.5)
Be patient	2 (2.5)
Clarify on-call expectations at outset	1 (1.4)
Patient accountability measures needed	1 (1.4)
NON-PARTICIPANTS	
Greater accommodation needed for variation in practice type, style (eg, fairer remuneration for complex patients such as the elderly and seriously mentally ill); allowance for psychotherapy billings for "outside" patients (rostering patients outside established geographic boundaries, etc)	6 (19.4)
Freedom to operate smaller primary care networks	5 (16.1)
Fully developed and tested software, computer systems	4 (12.9)
Better accommodation of established on-call groups	3 (9.7)
Fully developed protocol with all project elements in place (eg, telephone triage, information technology)	3 (9.7)
Better financial support to computerize office	3 (9.7)
Remuneration for project-related administration, meeting time	3 (9.7)
Need for patient accountability	2 (6.5)
Guarantee that income will not decline	2 (6.5)

**Multiple responses permitted.*

"improved patient care" as their primary motive for participating. For similar numbers of physicians, more important reasons were improved IT, better working conditions, and better pay. This might have contributed to some of the challenges physicians faced throughout the pilot project, including difficulties coordinating network activities, varying levels of satisfaction, and project delays.

Consistent with population-based surveys showing Ontario residents' high rates of identification and satisfaction with a particular family doctor[2] and rostering efforts elsewhere,[10,11] fewer than 5% of patients in this study reportedly declined enrolment in a PCN. Two largely unexplored issues are how enrolment method affects the proportion and characteristics of patients who accept registration. Fee-for-service doctors relied mainly on their own billing records to generate their initial patient lists. Then, physicians and office staff approached patients as they attended the practice and contacted nonattenders by mail or telephone to obtain written consent.

For our subjects, this process was less than ideal, particularly for reaching infrequent attenders. Where new practices are being established, others have found that negative-option registration produces very different rosters from those produced by self-selection methods.[12] These findings suggest that various strategies and routes for registration need to be explored. While relatively few of our subjects anticipated changes in practice style under PCR, given the prevalence of perceived changes that would have uncertain benefits for patients (such as fewer visits for chronically ill patients and more telephone advice), our results also highlight the importance of including a range of outcome measures in future studies of PCR; among them, measures of patient visits, counseling activity, office-based procedures, and rates of referral.

Strengths and limitations

This study has both strengths and limitations. Our survey achieved an overall response rate that is reasonable given the methods we used. Thus, although our sample slightly overrepresents CFPC certificants, the findings should be generalizable to primary care physicians in the Hamilton area at the time of the survey. The importance of including both study groups is emphasized by Norwegian surveys in which participants in PCR pilot projects were highly supportive of continuing reforms,[13] whereas neighbouring nonparticipants were strongly opposed.[14]

Limitations include the fact that we studied only one pilot site and assessed attitudes only once. Given the region's experience with capitation practice, physicians in other communities might have different

attitudes toward PCR. Also, over the course of the project, attitudes could change. On the other hand, a more traditional closing survey would miss subjects who withdraw from the study and might not accurately capture attitudes toward early events.

Other limitations include our measure of patients' acceptance of PCR, and a possibility that the attitudes expressed during a pilot study might not hold outside the context of "research." These issues could be explored in the Ministry of Health's formal evaluation of Ontario PCR.

CONCLUSION

While an important proportion of Hamilton-area physicians were eligible and willing to participate in a PCR pilot project, many were not. Our findings suggest opportunities for physicians and government to clarify their expectations for PCR, and a need to look for better ways to register patients on rosters and select IT.

Acknowledgment

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Author contributions

All of the authors helped to conceptualize the study, collect and interpret data, and write the report. **Mr Paterson** *analyzed the data and drafted the report.*

Competing interests

None declared

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Editor's key points

- This primary care reform project in the Hamilton-Wentworth area is the largest in Ontario.
- About 37% of eligible family physicians agreed to join the project. Physicians who had worked in health service organizations were no more likely than their fee-for-service counterparts to join.
- Participants were most challenged by the failure of information technology to meet expectations, the task of rostering patients that burdened office staff, and the large workload involved in creating new practice structures.
- Non-participants were also concerned about the extra workload and the loss of control and uniqueness of their practice and financial arrangements.
- Suggestions from both groups included choosing computing systems carefully, making the rostering process more flexible, and budgeting time and compensation for the extra work involved.

Points de repère du rédacteur

- Cette étude d'un projet de réforme des soins de première ligne dans la région d'Hamilton-Wentworth est le projet de cette nature qui a la plus grande envergure en Ontario.
- Environ 37% des médecins de famille admissibles ont accepté de se joindre au projet. Les médecins qui avaient travaillé dans des organisations de services de santé n'étaient pas plus enclins que leurs collègues rémunérés à l'acte à participer au projet.
- Les plus importants défis qu'avaient à relever la participants étaient l'échec de la technologie de l'information à répondre aux attentes, la tâche requise pour l'inscription des patients qui imposait un fardeau au personnel administratif ainsi que la lourde charge de travail requise pour créer de nouvelles structures de pratique.
- Les non-participants se préoccupaient aussi de la charge de travail supplémentaire ainsi que de la perte de contrôle et de l'identité unique de leur pratique et de leurs arrangements financiers.
- Les suggestions offertes par les deux groupes comportaient un choix avisé des systèmes informatiques, prolonger le délai d'inscription et rendre le processus plus flexible, et prévoir au budget du temps et la rémunération du travail supplémentaire.

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