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Family physicians' interest and involvement in interdisciplinary collaborative practice in Alberta, Canada

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Background: Teamwork and collaborative practice are acknowledged as key to strengthening primary health care. This study assessed Canadian family physicians/ general practitioners' (FPs/GPs) interest and involvement in interdisciplinary collaborative practice. **Methods:** From nine focus groups conducted with 46 FPs/GPs in the Capital Health region (Edmonton, Alberta) concerning the quality and capacity of services in family practice, the discussions related to collaborative practice and practice teams were extracted and qualitatively analysed. Based on this analysis, one section of a mail survey assessed FPs/GPs levels of interest and current involvement with 11 other types of health professionals. **Results:** In focus groups, FPs/GPs identified seven categories of issues related to interdisciplinary collaborative practice: quality and capacity of care, quality of work life, affordability, availability/accessibility of other health professionals, team-building processes, responsibility/accountability, and system resources. Survey responses from 300 of 583 FPs/GPs in the region (51%) showed substantial interest in working with other health professionals, but strikingly less frequent current working relationships. **Conclusions:** The large gap between the interest and willingness of FPs/GPs to collaborate and their current involvement in teamwork must be addressed if collaborative practice is to increase in line with the goals of primary care reform in Canada.

Key words: Canada; interdisciplinary teams; physicians; primary care

Introduction

Primary care reform or renewal is a key strategy in national and provincial initiatives to strengthen and sustain Canada's health care system (National Forum on Health, 1997; Standing Senate Committee on Social Affairs, Science and Technology, 2001; Premier's Advisory Council on Health, 2001; Commission on the Future of Health Care in Canada, 2002). It is estimated that over 90% of personal health services are delivered in community-based primary care (White *et al.*, 1961) and yet such services account for only about 35% of health service costs (Ontario Health Services Restructuring Commission, 2000). In international comparisons, a higher quality of primary care services has been shown to correlate with better health status indicators, higher satisfaction of the population, and lower costs of the health system (Starfield, 1994; 1998). Recent reviews (Macinko *et al.*, 2003; Schoen *et al.*, 2004) confirm the central role of primary care and indicate important issues to be addressed. Thus the rationale for developing a stronger and more integrated comprehensive primary health care system in Canada is on a firm foundation.

Canadian family physicians/general practitioners (FPs/GPs) provide first contact or primary care services in their offices for patients who choose to access these services. Patients are not required to enrol or

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register with a practice. There are no user fees or co-payment charges; physicians are paid by the provincial government on a fee-for-service basis. Any associated staff or other health professionals in the practice are paid by the FPs/GPs, with no subsidy or support from the system and no opportunity to bill for the services provided by other health professionals. This funding arrangement results in Canadian FPs/GPs having little opportunity to work with other health service providers, a situation that may lead to an assumption that they are not interested in interdisciplinary collaborative practice.

Interdisciplinary or multidisciplinary collaborative practice, involving a variety of health professionals, is a key feature of primary health care (College of Family Physicians of Canada, 2000; Pringle *et al.*, 2000). As the principal providers of primary care, it is essential to engage FPs/GPs in the development of a strengthened primary health care system. The purpose of this study was to determine how FPs/GPs view the issues associated with increased involvement in collaborative practice, as well as their current and potential future working relationships with other health professionals. The study was conducted among FPs/GPs in a large urban health region, the Capital Health region of Edmonton, Alberta, that provides health services to approximately 800 000 people.

In the Province of Alberta, geographical health regions with a single appointed regional board were constituted in 1994 to replace multiple existing hospital and public health unit boards.

The nine health regions are funded on a population basis to provide all publicly funded health services across the continuum of care as an integrated delivery system. Health regions do not, however, control payments for physicians' services, which are negotiated between the medical association and the provincial government, nor do they currently provide funding for infrastructure (staff and space) to support primary care delivered in the community. All Canadian provinces with the exception of Ontario have established regional or district health boards in the past decade as a model for integrated service delivery.

Methods

This study reports on an examination of the issues of collaborative practice and teams within the larger Family Practice Quality and Capacity (FPQC) study conducted in the Capital Health region (Department of Family Medicine, 2000; 2001). The FPQC study received ethics approval from the Health Research Ethics Board of the University of Alberta. In the first phase of the study, a series of nine focus groups were held with 46 community-based FPs/GPs to determine the issues related to quality and capacity of primary care services in their practices. Qualitative analysis of the focus group transcripts revealed eight major themes related to FPQC. One prominent theme concerned practice teams and system infrastructure (supporting/investing in primary care). For this report, the sections of the transcripts related to this theme were separated and subjected to further qualitative analysis to identify categories (or sub-themes) describing issues relating to practice teams and system infrastructure. These transcripts consisted of about 10 000 words and were analysed by two authors independently using manual methods. Agreement on the categories was high (90%) and differences were resolved by discussion and consensus.

For the second phase of the FPQC study, a questionnaire was developed based on the focus group results, pilot tested, and sent to those FPs/GPs in the Capital Health region who reported at least 30% of their time spent in office general practice. Of 583 questionnaires sent to physicians in June 2001, 300 (51%) were returned. A slightly higher proportion of female FPs responded (43%) than were represented in the mail-out sample (39%) but the two groups were similar in age. Of the respondents, 69% were in group practice, 17% in solo practice, and 10% practised with specialists (4% did not indicate). The questionnaire took about 45 minutes to complete and response rates for all questions were 95% or greater. The responses were entered into a SPSS data file and a structured data validation process was completed to ensure data accuracy. One section of the questionnaire dealt with interdisciplinary collaborative practice. Physicians were asked to indicate their level of interest in working with other health care professionals linked to their practice, assuming that there would be no increase in their office overhead expenses and no decrease in their income. Physicians were then asked if they already had a current working relationship with a particular health care professional although the detail of these relationships was not specified. The Pearson

correlation coefficient between the current working relationship and the level of interest in a working relationship with other professionals was calculated. For best fit, the log transformation of the current working relationship was used.

Results

Focus group results

Seven categories of issues were identified in relation to how FPs/GPs view potentially increased involvement in collaborative practice teams (Table 1). Quotes illustrating these categories are provided in the text with additional quotes shown in Table 2. Focus group discussions with FPs/GPs indicated their perceptions that collaborative practice involving teams has the potential to enhance their professional work and personal lives in a variety of ways but that such initiatives require substantial changes in the organization, management, and funding of the health system.

Table 1 Collaborative practice/teamwork categories

1. Quality and capacity of care
2. Quality of work life
3. Affordability
4. Availability/accessibility
5. Team-building process
6. Responsibility/accountability
7. System resources

Quality and capacity of care in family practice were seen to benefit from increased teamwork. As one participant stated:

> … I think we all want a multidisciplinary group. That would include a nurse practitioner, maybe a physiotherapist, maybe a nutritionist, working with several family docs in an appropriate setting. That [multidisciplinary team] provides real good quality of care …

Another practitioner indicated: 'I could do significantly more than I do already. I could manage more patients than I do if I had the kind of resources that would allow me to have a full team.' FPs/GPs also perceived that the *quality of their work life* could be significantly improved by sharing

Table 2 Additional quotes from categories

1. Quality of care
… I have the opportunity to work in a team in the geriatric unit – with incredibly difficult, fragile elderly patients. I know that I can provide far better service and I am a much better physician for that experience over the last five years. I'm a better physician for having that teamwork and being able to delegate things and interface with other professions …

2. Quality of work life
… I'm hearing about the impact on the quality of our lives, not just the quality of patient care. So I think that has to be brought up as an issue as well …

3. Affordability
… But that's something that we should be able to delegate to someone else. I shouldn't have to pay that somebody else to do it. I don't think that it's right that it comes out of my pocket – that I have to pay extra for a nurse whose job it is to educate my patients …

4. Availability/accessibility
… Access – preferably in the office, even part-time – to all the team people. Part-time social worker, psychologist, dietician, all the other providers who are so important …

5. Team-building process
… So I think if you want to build teams, you have to respect what people are doing and what their roles are. By focusing on the patient I think you could make it quite equitable in terms of what you do and get rid of the hierarchy …

6. Responsibility/accountability
… You know I hear about so many burdens that are still on family physicians. It is so hard to do this job because I carry the can all the time. With teamwork it's the whole team carrying the can. You are sharing the load …

7. System resources
… Part of a functioning healthy team is having the money there to have a functioning healthy team and run the team well and that's something any organizational structure would need. I think the region has to come up with the money …

responsibilities. For example, one stated: 'What I found about working with teamwork is that when we do it – the stress is gone. The stress is relieved because you are sharing responsibility.'

The inability of FPs/GPs to personally fund associated health professionals in the existing fee-for-service system (*affordability*) was seen as an obvious barrier to collaborative practice. A typical comment was:

> … We're under-funded. We can't afford a nurse practitioner. It would be nice to have a dietician in our office. If you have a group of physicians working together you would be able to afford this kind of thing. If we were properly funded …

The lack of *availability and accessibility* of other health service providers to provide continuity of care and integrated services in association with FPs/GPs was another challenge that physicians believed would require changes in system organization, support, and human resource planning. Human resource issues identified by physicians included the need for better education, training, and role modelling for interdisciplinary work. Addressing the perceived shortages of FPs and other health professionals will be a challenge. Participant comments included:

> … We can't access the other health service providers. We should be able to really work in a team with nurse practitioners, physical and occupational therapists. I get to do that at the hospital. But in the community, where I need it the most, I can't get it …

FPs clearly recognized the *team-building process* as a substantial undertaking requiring systemic, attitudinal, and skill changes. It involves increasing respect for other providers, focussing on the patient-centred approach, and sharing leadership responsibilities. As one physician described the situation:

> … It is very difficult to imagine that that (team care) can happen without huge change – a huge change in time and in remuneration for what you do. (It means) quite a mind set change for patients, for doctors, for pharmacists, for home care nurses. For everybody …

Another indicated: 'I don't have to lead the team. I want to lead the medicine part, the family medicine, because that's what I like and that's what I'm trained to do. I'm all for delegation.'

A related category involved discussion about *responsibility and accountability* within a practice team including liability issues. One comment was:

> … I think that physicians should be responsible for the total outcome of the patient. So therefore they have to have communication – whether it's with a physiotherapist or a nutritionist or whoever is giving the advice – the physician has to be made aware of it because they are going to take ultimate responsibility …

The need for *health system resources* was the final category. Additional resources provided through the regional health authority for the necessary infrastructure for primary health care were seen as critical. These resources should include support of collaborating health professionals, electronic linkages, and management of service co-ordination. Two comments exemplify this issue:

> … If you are going to do delegation you are going to have to train people. And you are going to have to have that time to spend with them if you want sharing of information. There is going to have to be a system that supports you in order to delegate. So delegation is not just a time saving event …

> … You need space, you need resources. We need outside energy. We need money and resources from the regions if we are ever going to get teams. We need to be heard by the regions. A big thing in primary care, I think, is that we can't build teams because we are invisible to the Region. So they have no way of linking with us …

Survey results

The results, as shown in Table 3, indicate a high level of interest among FPs in working with other health care professionals in a collaborative manner. FPs showed the highest level of interest in working with dieticians (87.7% interested/very interested), psychologists (85.0%) and home care

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Table 3 Interest of family physicians in collaborating and currently involved in collaboration with selected health professionals (%)

Health professional	Currently collaborating (%)	Level of interest (%)			
		Interested/ very interested	Neutral	Uninterested/ very uninterested	Undecided/ no response
Office/clinical nurse	47.7	77.6	8.0	5.6	8.6
Pharmacist	41.3	78.3	13.3	3.0	5.3
Home care nurse	32.0	80.0	11.3	4.0	4.6
Physical therapist	23.3	78.0	15.0	4.3	4.6
Dietician	22.3	87.7	7.7	1.7	3.0
Psychologist	17.7	85.0	9.3	2.0	3.7
Public health nurse	15.0	68.3	21.0	5.3	5.3
Social worker	13.7	72.4	18.0	6.0	3.7
Nurse educator	9.3	67.0	18.7	9.0	5.3
Nurse practitioner	5.0	51.6	28.3	16.3	3.7
Physician assistant	3.0	42.3	32.0	18.7	7.0

nurses (80.0%), followed closely by pharmacists (78.3%), physical therapists (78.0%), office/clinical nurses (77.6%), social workers (72.4%), public health nurses (68.3%), and nurse educators (67.0%). There was less, but still substantial, interest in working with nurse practitioners (51.6%) or physician assistants (42.3%).

When asked about current involvement in working relationships with the same health professionals, the numbers were strikingly lower (Table 3). For example, 22.3% of FPs were currently working with a dietician, 17.7% with a psychologist, 13.7% with a social worker, 15.0% with a public health nurse, and 5.0% with a nurse practitioner. Clearly, there are large gaps between the interest and current involvement of FPs in collaborative practice. The current level of involvement of FPs/GPs with other health professionals (considered as an independent variable) correlated with the level of interest in developing such working relationships ($r = 0.87$, $P < 0.01$), suggesting that lack of experience was a factor in the lower levels of interest in certain relationships (e.g., with nurse practitioners).

Discussion

The vast majority of Canada's approximately 19 000 active primary care physicians are not currently integrated into a comprehensive primary health care system. Consequently, it is often assumed that FPs/GPs are not interested in collaborative practice. However, the results of our focus group discussions and regional physician survey show clearly that this is not the case.

Experience in other Canadian primary health care settings and in other countries supports this finding. FPs working in approximately 300 Community Health Centres in Canada (Association of Ontario Health Centres, 2000) routinely practice with a variety of other health professionals. Within Alberta there are projects involving community-based FPs paid by alternative (to fee-for-service) payment methods, working in partnership with their regional health authorities and integrating regional health professionals, such as public health nurses, into their practices (Alberta Health and Wellness, 2000). A major feature of these projects is the funding provided for these health professionals. The College of Family Physicians of Canada has endorsed interdisciplinary teams and collaborative practice as an important component of proposed FP networks involved in primary care renewal (College of Family Physicians of Canada, 2000). For more than 30 years, GPs in the UK have worked with other health professional team members in their practices and the resources to support collaborative practice have come from the National Health Service (Hutchison and Gordon, 1992; Robinson *et al.*, 1993; Robison and Wiles, 1994; Bennet-Elmslie and McIntosh, 1995; Ingram and Desombre, 1999; Bindman *et al.*, 2001).

The benefits of teamwork have been described in four general areas: learning and development (for those involved); resource planning; task

performance; and communications (Ingram and Desombre, 1999). More specifically, better communication between professionals leads to better co-ordination of services, a more patient-centred approach to needs, and improved satisfaction with professional work (Robison and Wiles, 1994; Bennet-Elmslie and McIntosh, 1995). FPs/GPs in our focus groups also referred to the potential for collaborative practice to improve quality and capacity of care, as well as quality of their work life. In Canada, experience with collaborative practice between FPs and nurse practitioners is limited, but was described positively some years ago (Moore, 1994; Way and Jones, 1994). More recently, issues that need to be addressed to enhance this practice were identified (Way *et al.*, 2001). A systematic review (Horrocks *et al.*, 2002) indicates that nurse practitioners can achieve health outcomes that are similar to those of GPs. In contrast to the expectations expressed by FPs/GPs in the present study, however, Lawrant *et al.* (2004) have shown in a randomized-controlled trial in the Netherlands that nurse practitioners do not reduce GPs' workload and are not a substitute for physicians, but instead provide a wider range of services than was previously available. Greater efficiency of services can be achieved only if GPs do not continue to provide the services that they delegate to nurse practitioners (Richardson, 1999).

In the present study, it is important to note that the interest of FPs in working with other professionals was expressed in the context of this collaboration not resulting in an increase in their practice expenses or a decrease in income (affordability category). Where interdisciplinary collaboration is a regular feature of primary health care services, such as community health centres (Canada) or primary care groups/trusts (UK), the financial cost of collaborative teams is not borne predominately by the FPs. The low rate of involvement in collaborative practice of FPs observed in this study is due in large part to the lack of financial support of the infrastructure for primary care. Those community-based FPs/GPs involved in collaborative practice do so by using fee-for-service fees for individual medical services to employ other professionals whose services are not compensated by the current system. This funding system is in marked contrast to hospital-based health services where multidisciplinary teams are routinely paid for by the health region. The range and complexity of comprehensive primary health care services requires investment in the infrastructure needed to support interdisciplinary/interprofessional collaborative practice.

In addition to the financial resources to support practice teams in primary health care, it was recognized by the participating FPs/GPs that substantial effort and change would be needed to develop suitable organizational structures, processes, and interprofessional relationships to enhance teamwork and collaborative practice. Starfield (1998) refers to three models for teamwork in primary care practice: the delegated model, the collaborative model, and the clinical consultative model. In a study of the collaborative model, Pearson and Spencer (1995) found that four indicators of effectiveness were particularly important: agreed aims and objectives; effective communication; patients receiving best possible care; and individual roles defined and understood. The rationale for a small-core primary health care team for continuity of care and efficient communication has also been provided (Stott, 1995). Effective decision-making is critical for successful teamwork and requires attention to both formal and informal features of team organization (Ovretviet, 1995; Cook *et al.*, 2001). Barriers to team building and useful approaches to overcome them in practice have been described (Field and West, 1995).

Focus group participants in our study indicated awareness of several of these issues: the need for training in team building; the clarification of decision making and sharing of responsibility in teams; and the scope of the changes required to facilitate access to other team members and to build organizational support for teams. The lack of experience of these FPs/GPs in collaborating with a wide variety of health professionals was striking, ranging from 5% who were working with a nurse practitioner to 48% working with an office/clinical nurse, and these experiences correlated directly with their level of interest in such collaborations. Obtaining more experience with these collaborative working relationships would be an important step. A large Canadian study of interdisciplinary collaboration in 150 Quebec Community Health Care Centres described the modest results achieved over 25 years and noted the important role of internal working group dynamics (Sicotte *et al.*, 2002). The formalization of functions and processes for the interdisciplinary groups had an

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important positive effect on collaboration, perhaps by counteracting the traditional professional frameworks (Sicotte *et al.*, 2002). It is apparent that much has been learned about effective teamwork and interdisciplinary collaboration in primary health care; now is the time to take advantage of the interest shown by Canadian FPs to expand their involvement in this area.

Limitations of this study include the effect of the local context on the qualitative research findings and the consequent difficulty in drawing provincial or national conclusions. Also, the information from the survey questions did not provide details about the current relationships with other health professionals. Nevertheless, the focus group discussions identified a wide range of important issues related to collaborative practice and the survey results confirmed very substantial levels of interest among a large group of Canadian urban FPs/GPs in expanding their current limited working relationships to include other health professionals.

Conclusion

A review of primary care in Canada described 'so much innovation, so little change' and highlighted the need for investment in primary care infrastructure (Hutchison *et al.*, 2001). There is an excellent, and perhaps unique, opportunity in the proposed primary health care renewal and reform now occurring across Canada, to address the gap between the interest and current involvement of FPs in interdisciplinary collaborative practice. A concerted effort to establish effective connections (organizational, interpersonal, and electronic) between FPs and other health professionals is timely and important. One should not assume that the current lack of FPs' participation in interdisciplinary collaborative practice is due to attitudes resistant to change. It is encouraging to report that since the completion of this study, the Alberta provincial government, the medical association, and the regional health authorities have agreed on funding for primary care initiatives that will support other health professionals to work in collaboration with FPs/GPs. Support for strengthening the linkages between primary care physicians and other health professionals must continue to be a significant component of initiatives to enhance comprehensive primary health care services in Canada.

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