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Article

Variables associated with general practitioners taking on patients with common mental disorders

Marie-Josée Fleury PhD
Assistant Professor, Department of Psychiatry, McGill University, Montreal, Quebec, Canada

Jean-Marie Bamvita MD PhD
Research Associate, Douglas Hospital Research Centre, Montreal, Québec, Canada

Lambert Farand MD PhD
Associate Professor, Department of Health Administration, Faculty of Medicine, Université de Montréal, Canada

Jacques Tremblay MD
Researcher, Assistant Professor, Douglas Hospital Research Centre, Montreal, Quebec, Canada

ABSTRACT

Objective The article assesses variables associated with general practitioners (GPs) taking on patients suffering from common mental disorders (CMD).
Method The study is based on a sample of 398 GPs, representative of the 7199 equivalent full-time GPs practising in Quebec, the second-largest province of Canada. GPs were asked to answer a 143-item questionnaire related to their socio-demographic profile, clinical practice, patient characteristics, perceived interprofessional relationships, quality of care, and support strategies for improving continuity of care. Descriptive, bivariate, and multivariate analyses were performed.
Results This study demonstrates that the following dimensions are associated with GPs taking on patients with CMD: (1) their interest and knowledge in dealing with such patients; (2) the relative simplicity of treating CMD cases; (3) the quality of, and interest in, mental healthcare collaboration; and (4) the availability of diversified services. The main enabling variable in GPs taking on CMD patients is their interest in mental disorders. Conversely, the principal impeding variable is their positive perception of relationships with psychiatric teams.
Conclusions In accordance with current healthcare reforms, this study reinforces the need to promote GP interest and training in mental health care. Increasing GP co-ordination with psychosocial services, along with developing integrated care models including specialised care, is strongly recommended.

Keywords: depression and anxiety, primary care, patients with mental disorders.

Introduction

Implementing innovative models of primary care, designed to optimise the role of general practitioners (GPs) in patient care, especially for chronic diseases, is viewed as an enabler of healthcare system reform. Countries that have focused on primary care reportedly achieve better healthcare outcomes than those that have invested in more expensive specialised services.[1–3] In Canada and the province of Quebec, the trend to reinforce primary care is at the core of current reforms.[4,5] Primary care models that

have been implemented to boost system efficiency include increasingly multidisciplinary physician group practices and family medicine groups (GMFs), which involve patient registration and, where nurses are responsible for patient screening, follow-up, and referral. Shared-care models,[6] and integrated service networks[7,8] are additional organisational innovations, both of which are evaluated to improve care co-ordination between GPs and psychiatrists, with multidisciplinary mental health providers, and within the healthcare system as a whole.

In such models, GPs play a leading role. They are the entry point to primary care services and are responsible for much care co-ordination and patterns of service use. In the course of a single year, about 80% of the population in western counties consult a GP, and between 20% and 30% of the visits are related to mental health.[9,10] The one-year prevalence of mental disorders reportedly ranges from 13% to 30%.[11] Only 40% of individuals facing mental problems seek help.[12,13] In Canada, of these, half visit a GP and a quarter consult other types of healthcare practitioners.[14] Mental illness is a major public health issue. In industrialised countries, it is ranked second among causes of disability, after cardiovascular disease and ahead of cancer. Mental disorders represent 12% of the disease burden worldwide.[15]

Despite the importance of treating mental disorders in primary care and the potential leading role of GPs in this area,[16] few studies exist on the variables that hinder or promote the involvement of GPs in mental health care.[3] Most studies in mental health are related to specialised care. Historically, there has been a separation of psychiatry from general medical care.[17] Mental health research involving GPs is focused on best practices for the treatment of common mental disorders (CMD), such as depression and anxiety, and on outcomes associated with these practices.[6,18] Lately, an increasing number of studies have been published on shared-care models, evaluating organisational issues of care co-ordination between GPs and psychiatrists, and patient and professional satisfaction.[6,19] No model investigating variables associated with GPs taking on CMD patients has been found in the literature. 'Taking on' patients is defined as following them beyond the initial medical visit over time for the same or subsequent condition, including medical tests and drug prescription (both physical and mental health), side-effect monitoring, psychotherapy or any kind of psychosocial support. In this study, CMD encompasses anxiety, depression, adaptation disorders, personality disorders, and substance abuse co-morbid disorders. Studies show that GPs treat CMD patients more frequently than patients with serious mental disorders (SMD), such as schizophrenia and bipolar disorders.[20,21] In Quebec, 92% of patients diagnosed with a mental disorder by a GP suffer from CMD. The remaining patients have SMD.[22]

While ever-increasing efforts have been made to develop optimal primary care integrated models, less attention has been paid to dimensions such as patient and practitioner profiles, medical practices, and local organisational characteristics – and how they interact in light of initiatives to improve the healthcare system. A better understanding of these dimensions, however, is a prerequisite for the development of integrated care models. Accordingly, this study aims to assess variables associated with GPs taking on patients suffering from CMD. It is designed to support current mental healthcare reforms, which focus mainly on reinforcing the role of GPs, enhancing access to care, and ensuring continuity of care. It is part of a larger research project on the role of GPs in the context of mental healthcare reforms in Quebec and Canada, which target increased integration in local territories.

Method

The study was carried out using a cross-sectional design, involving all GPs from nine Quebec territories, corresponding to 19% of the GP population in the province. With a population of about 7.5 million, Quebec has 7199 equivalent full-time GPs (one GP per 1041 inhabitants).[23] Selected territories represent urban, semi-urban, and rural areas – and include settings offering tertiary care (a university psychiatric hospital is present in three territories). GPs practising in different settings were included: solo or group practice in private clinics, local community-based service centres (CLSCs), hospitals (acute, psychiatric or long-term), walk-in clinics, family medicine groups (GMFs), and network clinics (similar to GMFs, but where patients are not registered with their GPs, and nurses act mainly as liaison agents). Participants were selected from a list provided by the Federation of General Practitioners of Quebec (FMOQ), the union representing Quebec GPs. The list included a total of 1415 GPs registered in the nine territories. Recruitment took place from September 2006 to February 2007. Each participant was required to sign a consent form approved by a university research ethics board.

For the purpose of the study, a questionnaire including six main domains and 143 items was designed by the research team, based on a review of the literature and validated by 20 experts (researchers, GPs and psychiatrists). The RAMQ (Régie de l'Assurance Maladie du Québec) data bank (for

2002 and 2006) – the public register for all GP medical acts – was also used (e.g. number of GPs' medical acts, percentage of patients with mental disorders) for the purposes of comparison. The questionnaire was pretested on ten physicians working in different settings not included in the sample. Its structure reflects our goal to cover every possible aspect of GP practice in mental health, without exceeding a maximum of 30 minutes to complete the questionnaire (no financial incentive was provided to respondents for their participation). Box 1 presents the six domains and items covered by the questionnaire. The latter includes either categorical

Box 1 Summary of domains and items explored

General practitioner (GP) socio-demographic and attitudinal profile

- Age, sex
- Years since graduation
- Proportion of income from fees for services, from monthly rate, from hourly fees
- Working hours per week*
- Number of practice settings*
- Number of medical education sessions in mental health attended in the 12 previous months*
  - Did these sessions enhance your knowledge in mental health?
  - Did these sessions enhance your ability to take on patients with mental disorders?
  - Did these sessions improve your collaboration with other mental health professionals?
- Importance attributed to assuming care of patients with common mental disorders versus serious mental disorders*

Patient characteristics

- Number of patients seen per week
- Proportion of patients with mental disorders seen per week
- Among patients with mental disorders, proportion of serious mental disorders (e.g. schizophrenia, bipolar disorder, delirium)
- Among patients with mental disorders, proportion of common mental disorders (e.g. adaptation disorder, anxiety, depression)
- Among patients with mental disorders, proportion of co-morbid conditions (mental health and substance abuse, somatic disease or mental deficiency)
- Among patients with common mental disorders, proportion of anxiety disorder, depressive disorder, depressive and anxiety disorder, personality disorder, adaptation disorder, substance abuse

Characteristics of clinical practice

- Proportion of patients taken on for common mental disorders versus serious mental disorders among patients visiting for mental disorders
- Among patients taken on for common mental disorders versus serious mental disorders, proportion of visits related to medication follow-up, support therapy and psychotherapy
- Average yearly number of times you see your patients with common mental disorders versus serious mental disorders
- Delay in receiving patients with mental disorders calling for help in a crisis situation
- When following a patient jointly with other professionals, how do you appreciate the following clinical or joint follow-up mechanisms: standardised referral forms, consultation report forms, follow-up and treatment protocols, medication protocols, intervention algorithm, giving access in your clinic to a professional on call, patient follow-up by phone?

Collaboration between GPs and other medical or non-medical professionals

- Number of patients with common mental disorders versus serious mental disorders referred weekly to other resources
- Among patients referred to other resources, proportion of patients referred to hospital emergency services, psychiatric outpatient clinics, mental health teams of CLSC, psychosocial services of CLSC, psychologist private offices, crisis centres or community organisations

- Frequency of referrals of patients with serious mental disorders versus common mental disorders for diagnostic evaluation, pharmacologic treatment suggestion, joint follow-up with psychiatrists, transfer to psychiatric services or joint follow-up with other resources
- Frequency of patient transfer due to case complexity, case seriousness, lack of expertise in mental health, lack of support from psychiatrists, insufficient financial incentives or lack of interest in patients with mental disorders
- When following a patient jointly with other professionals, what is the frequency of your contacts with psychiatrists, psychiatric teams, CLSC professionals or psychologists in private offices?
- When your patient is hospitalised for mental disorders, what is your frequency of implication in the following processes: emergency service admission, elaboration of treatment plan including medication, hospital discharge planning, post-hospital follow-up?
- How do you appreciate your relationships with the following professionals: hospital emergency service personnel, hospital psychiatric service personnel, CLSC mental health personnel, CLSC psychosocial workers, psychologists in private offices, crisis centre professionals, community organisation personnel?
- When taking on patients with common mental disorders versus serious mental disorders, how important is it to work in collaboration with the following professionals: hospital emergency service personnel, hospital psychiatric service personnel, CLSC mental health personnel, CLSC psychosocial workers, psychologists in private offices, crisis centre professionals, community organisation personnel?

GP perception of quality of health services

- For patients with mental disorders, what is your appreciation of geographic service accessibility, service accessibility as regard opening hours, different professional categories accessibility, quantity of available services, diversity of available services, service continuity and global service quality?
- Delay in receiving feedback information from psychiatrists when asking for expertise

GP opinions about supportive strategies to be promoted for better care integration

Among interprofessional collaboration strategies, which one should be promoted:

1 clinical working mechanisms, including: consultation reports, hospitalisation reports, standardised referral forms
2 continuing medical education and consultation support from psychiatrists
3 strategies aimed at improving continuity, integration and accessibility in the mental health system?

The third category (number 3) included:

a providing access to GP clinics to other health professionals practising in the same territory, such as psychologists (in CLSCs or private offices), psychosocial workers in CLSCs, case managers and liaison agents
b giving GPs access to a psychiatrist for telephone consultations, from nine to five, Monday to Friday
c giving GPs access to a psychiatrist on call in an outpatient clinic for semi-urgent telephone consultations, from nine to five, Monday to Friday
d providing access to psychiatrist consultation for GPs once a month.

* Can also be classified in the domain related to characteristics of clinical practice

or continuous items or five-point Likert scales (1 = strongly disagree to 5 = strongly agree).

The questionnaire was mailed with accompanying letters of support from the Quebec College of Physicians and FMOQ. Each questionnaire was assigned a tracking number. Three follow-ups were made. The first was conducted by mail. In the second follow-up, a nurse called the GPs. The third follow-up involved contact from the network medical administrators responsible for care co-ordination in the target territories.

Statistical analyses

Analyses were performed using SPSS-15® software. There was less than 5% missing data by variable, replaced by the mean of one of the seven GP practice groups (e.g. solo practice, CLSCs). In univariate analyses, every continuous variable was assessed in relation to normal distribution assumption, using kurtosis and skewness tests. Mean values and standard deviations were calculated. Dichotomous variables were analysed for frequency distribution. In

bivariate analyses, correlation analyses were used to estimate associations and unveil collinearities. When two variables were highly correlated, only one (chosen on a conceptual basis) was considered for further analyses. The proportion of CMD patients taken on by GPs was the dependent variable. It was based on GPs' answer to the following question: 'Among patients seen for mental disorders in your medical practice every week, what is the proportion of patients with CMD whom you follow on a continuous basis?'. Patients diagnosed with SMD such as schizophrenia and bipolar disorder were not considered in the analyses. Potential variables were grouped in five sets: (1) GP socio-demographic and attitudinal profile; (2) patient and GP clinical practice characteristics; (3) interprofessional and inter-organisational collaboration features; (4) quality and importance of interprofessional and inter-organisational relationships; and (5) appreciation of services. Interactions and associations between independent variables and the dependent variable were verified using analysis of variance (ANOVA) *t* test statistic.

In each of the five sets, variables found to be sufficiently associated with the response variable in bivariate analyses ($P < 0.10$) were tested in a multiple linear regression model using the backward stepwise method ($P < 0.05$). Variables that were not rejected in these partial models were included in the final multiple regression model ($P < 0.05$), which was tested for goodness of fit, proportion of variance explained, and collinearity diagnosis.

Results

Sample

Of the 1415 targeted GPs, 183 were excluded since they could not be traced for reasons unknown (e.g. retirement or departure). Another 170 subjects were excluded because they could not be reached either by phone or email to verify questionnaire reception. Of the remaining 1062 questionnaires sent, 435 were returned to our research team, giving a response rate of 41%. Subsequently, 37 questionnaires were excluded (26 because GPs were not clinically active and 11 that were not duly completed). The 627 GPs who did not return the questionnaire were considered as refusals. The final sample comprised 398 GPs.

Because of available information, comparison with non-respondent GPs could be made only with regard to sex distribution, yielding a non-significant result (χ^2 = 3.44, degrees of freedom (df) = 1, P = 0.0637). Thanks to information gathered in previously published papers,[23] many comparisons could be made between our sample and the Quebec GP population as a whole, regarding sex, age, clinical practice settings, territory of practice, income level from fee-for-services, and volume of patients with mental disorders. Where possible, comparisons were made between Quebec and Canada GPs;[24,25] no significant difference was found in any of our comparisons. Results are displayed in Table 1.

GP profiles

GP distributions by age sets and sex are presented in Table 1. In Table 2, pertinent information is provided on GP clinical and interprofessional collaboration profiles regarding the management of patients with CMD, and on their perception of the quality of the mental healthcare system. Overall, GPs reported taking on the great majority of patients with CMD seen in their practice (mean: 69%). Long-term management of these patients consisted mostly of medication follow-up (mean 61.1%; standard deviation (SD): 37) and supportive therapy (mean: 59%; SD: 37), with GPs seeing these patients on average nine times (SD: 6) annually. GPs reported referring a mean of 17% of patients with CMD mainly to psychologists in private practice, CLSC mental health services, and – when in need of advice on medication and diagnostic evaluation – psychiatric services. Severity of the disorder and case complexity are the main reasons for patient transfer. The mental healthcare system was deemed to be in need of considerable improvement, especially with regard to waiting time for access to psychiatric care.

Variables associated with GP taking on patients with CMD

The multiple regression analysis yielded 12 variables independently associated with GPs taking on CMD patients, organised in three sets, as shown in Table 3. The first set, related to GP socio-demographic and attitudinal profile, contains the most strongly associated variable, namely, perceived importance given by GPs to taking on CMD patients. GPs who practised in multiple places demonstrated a greater willingness to take on CMD patients. Two other variables are included in this set: (1) perception that continuing medical education (CME) in mental diseases has enhanced GPs' ability to take on CMD patients; and (2) number of years of practice since graduation. The second set relates to mental health patient characteristics and GP clinical practice profiles, with three

Table 1 Comparison between our general practitioner (GP) sample and the Quebec GP population (and Canada) as a whole

	Sample (%)	All Quebec GPs (%)	Sample versus all Quebec GPs			All Canada GPs (%)	Quebec GPs versus all Canada GPs		
			χ^2	df	*P*		χ^2	df	*p*
Age categories (years)			20.00	16	0.22		20.00	16	0.22
<35	8.3	13.7				13.25			
35–44	32.9	27.5				30.95			
45–54	41.5	35.0				32.6			
55–64	14.6	18.3				17.35			
65+	2.8	5.5				5.85			
Sex distribution			3.44	1	0.06		1.32	1	0.250
Male	48.7	55.1				63.3			
Female	51.3	44.9				36.7			
Clinical setting									
Private medical offices	80.1	69.8	2.67	1	0.10				
CLSCs	23.6	27.3	0.24	1	0.63				
Hospitals	49.4	57.3	1.28	1	0.26				
Emergency services	17.3	25.2	1.93	1	0.16				
Practice area			1.34	1	0.25		2.49	1	0.11
Urban	66.3	74.9				84.2			
Rural	33.7	25.1				15.8			
Presence of a university hospital			1.29	1	0.26				
Yes	51.0	58.6							
No	49.0	41.4							
Income level from fee for service	65.0	74.0	1.90	1	0.17	51.0	1.28	1	0.257
Percentage of patients presenting with a mental disorder in the GP clientele	24.9	20.0	0.47	1	0.49				

positively associated variables: (1) proportion of patients with CMD, and with depressive disorders and anxiety in the GP mental health clientele; (2) proportion of medical visits related to supportive therapy and medical visits pertaining to medication follow-up; and (3) mean number of annual medical visits for a patient with a CMD. Patients were less likely to be taken on by GPs when they had a concurrent diagnosis (e.g. mental health and substance abuse). Finally, GPs who considered working in partnership with hospital psychiatric teams as very important, and those who stated that their relationships with them were very satisfying, were less likely to take on CMD patients. The model fit is statistically significant (F = 40.794, $P<0.01$), with 57% variance explained.

Discussion

This study aimed at assessing variables associated with GPs taking on patients with CMD. The findings

Table 2 General practitioner (GP) characteristics and aspects of their interprofessional collaboration

GP characteristics	
Clinical characteristics	
GPs' age (years), mean (SD)	48 (9)
Hours spent on duty per week, mean (SD)	43 (13)
Number of practice places, mean (SD)	2 (1)
Number of patients seen in a week for any reason, mean % (SD)	90 (42)
Proportion of medical consultations related to mental disorders, mean % (SD)	25 (19)
Proportion of patients with common mental disorders among GP patients with mental disorders, not including concurrent diagnosis (i.e. depression and/or anxiety disorders, adaptation disorders, personality disorders, substance abuse), mean % (SD)	54.7 (25)
Proportion of patients with serious mental disorders diagnosed among GP patients with mental disorders, not including concurrent diagnosis (i.e. schizophrenia, bipolar disorder), mean % (SD)	11.7 (13)
Proportion of patients with concurrent diagnosis among patients with mental disorders seen by GP patients, mean % (SD):	
patients with mental disorders and substance abuse	9.8 (11)
patients with mental disorders and somatic problems	19.4 (19)
patients with mental disorders and intellectual deficiency	4.2 (7)
Proportion of patients with common mental disorders taken on, mean % (SD)	69 (33)
Proportion of patients with common mental disorders taken on by GPs for, mean % (SD):	
medication follow-up	61.1 (37)
supportive therapy	59 (37)
psychotherapy	17.2 (29)
Number of times GPs received their patients with common mental disorders annually, mean (SD)	8.9 (6)
Number of patients visiting GPs per week for mental disorders, mean	23
GPs' interprofessional collaboration	
Number of patients referred to other resources (among patients visiting GPs per week for mental disorders), mean (SD)	3 (3)
Proportion of patients with common mental disorders referred to other resources (among patients visiting GPs per week with mental disorders) mean % (SD)	17.22 (16)
Proportion of GPs who refer their patients with common mental disorders for, %:	
advice on medication	70.7
diagnostic evaluation	62.7
Proportion of GPs who transfer patients with mental disorders for, %:	
severity of the disorder	94
case complexity	93
lack of support from psychiatrists	63
insufficient mental health expertise	59
lack of interest in mental health	12
insufficient financial incentives	12
Proportion of patients with common mental disorders referred by GPs per week to, mean % (SD):	
psychiatric services	13 (23)
psychologists in private practice	31 (31)
CLSC mental health services	20 (26)
voluntary sector	3 (10)

Table 2 Continued

GPs' perception of mental healthcare system, %	
The overall quality of the mental healthcare system is adequate or very adequate	55.0
Geographical accessibility is adequate or very adequate	64.0
Opening hours are adequate or very adequate	59.0
Service diversity is adequate or very adequate	54.0
Service continuity is adequate or very adequate	46.0
Service availability is adequate or very adequate	35.0
Accessibility of mental health professionals is adequate or very adequate	27.0
Average days of waiting time for access to psychiatry, mean (SD)	60 (45)

Table 3 Variables independently associated with general practitioners (GPs) taking on CMD patients

	Beta	*t* test	*P*
GP socio-demographic and attitudinal profile			
Number of years since graduation	0.27	1.898	0.03
Number of practice places	5.77	4.040	0.01
Perceived importance of taking on CMD patients	8.77	3.730	0.01
Perception that continuing medical education in mental diseases has enhanced ability to take on CMD patients	2.41	0.398	0.01
Patient and GP clinical practice characteristics			
Proportion of patients 'with CMD' in GP practice	0.21	4.043	<0.01
'with depressive disorders and anxiety'	0.23	2.656	0.01
'with concurrent diagnosis' (substance abuse and mental illness)	–0.25	–0.083	0.03
Proportion of medical visits related to medication follow-up	0.15	1.718	0.01
Proportion of medical visits related to supportive therapy	0.21	4.959	<0.01
Mean number of annual medical visits for your patients with CMD	1.24	5.248	<0.01
Perceived interprofessional relation profile			
Perceived importance of working together with hospital psychiatric teams	–4.41	–3.597	0.01
Perceived quality of relationship with hospital psychiatric teams	–2.23	–2.158	0.05

$F = 40.794$ ($P < 0.0001$); $R^2 = 0.566$

show that three main sets of variables should be taken into account: (1) GP socio-demographic and attitudinal profile; (2) patient characteristics and GP clinical practice features; and (3) perceived interprofessional relationships. Not surprisingly, the main characteristic of GPs who take on CMD patients is their interest in mental health care. The main variable that reduces the likelihood of GPs taking on CMD patients is positive perception of their relationships with psychiatric teams.

Few studies exist on variables associated with CMD patients taken on by GPs. The main dimensions studied relate to patient characteristics. Variables were also assessed, above all with regard to their impact on GPs' referral process; referrals are difficult to interpret in relation to taking on patients. They can signal transfer to specialised care or better co-ordination with specialised care in order to improve GP patient care. They can hide failure to refer as well as unnecessary referrals.[26] To our knowledge, this study is the first to focus solely on GPs taking on CMD patients, comprising extended dimensions related to GP socio-demographic, clinical, and collaboration profile, patient characteristics, and quality of care. One of the study's strengths consists in considering not only depression or anxiety, but also the most common diagnoses related to CMD. Moreover, this research is based on a quite representative sample of Quebec GPs as a whole, who share similar features to GPs in other industrialised countries.

This study, however, has some limitations. First, data collected in the study are mostly from GPs' self-reports and should be considered as an approximation of the actual medical practice in mental health. Second, respondents are probably GPs with special interest in mental health – even if the mean percentage of patients presenting with a mental disorder in the GP clientele found in our survey does not differ significantly from the one in the RAMQ data bank. Third, our questionnaire was complex, which may have discouraged some GPs from participating. As a result, the response rate was limited, but not substantially lower than that reported in other surveys involving GPs.[26–29] Fourth, our study has a cross-sectional design, which does not permit causal inference as in an experimental study. Finally, no data were collected on the adequacy of GPs in diagnosing and treating CMD patients, which is considered a major issue,[29–33] and for which conflicting results are reported in the literature.[30–33]

Our results show that GPs are more likely to take on patients with less complex problems – as in previous studies.[34–37] Conversely, GPs refer patients with more complex disorders to specialists. They favour patients with depression or anxiety over those with a co-morbid diagnosis, especially mental disorders and substance abuse, and SMD. They reported taking on the great majority of the patients they see in their practice (i.e. they assume care follow-up for physical and mental health with emphasis on the former).

As in earlier studies,[12,30,34,38] ours found that GPs' confidence in their ability to treat CMD is highly correlated with taking on patients. Conversely, advice on treatment, diagnostic evaluation, and need for specialised treatments is closely linked to referrals. GP confidence in treating patients may be related to their attendance at CME in mental health. Consequently, CME experience may enhance GPs' ability to deal with these patients.[38] Attendance at CME sessions, and consequently increased GPs' ability in mental health, may also be associated with fewer referrals,[39,40] or with greater use of medication and non-pharmacological treatment and the intensity of patient follow-up (for both physical and mental health care).[41–43] In accordance with our findings, several studies have stated the importance of training in mental health care as a means of improving care to patients with mental disorders – all the more if it is included in a multimodal strategy.[44–48]

The finding that the number of practice places is associated with GPs taking on patients may be due to the resulting expansion of their network and increased opportunities in finding adequate support for treating patients. More specifically, it may be related to the extent of GP involvement in hospital practice – in Quebec, close to 60% of GPs have a hospital practice.[23] Rothman and Wagner have reported that specialised care settings favour knowledge acquisition in the management of complex conditions and the use of tests and medications in accordance with guidelines.[49]

Conflicting results were found on the role of age and years of practice with regard to the incidence of GPs taking on patients with mental disorders, or referring such patients to specialised care.[34,37,50] Considering our results, we hypothesise that senior GPs are more at ease taking on CMD patients due to their greater experience. As to mental clientele volume, or GP interest in mental health, we did not find any publication that can be linked to our study. It is to be expected, however, that GPs who receive a larger proportion of patients with CMD in their daily practice (including at walk-in clinics, which are prevalent in Quebec and Canada) are more likely to take these patients on (i.e. follow them over time). The same is true regarding their interest in mental health care: GPs who believe that managing CMD patients is important should be more likely to take them on. Indeed, Byng has recommended targeting GPs with a special interest in mental health as part of efforts to implement shared-care models.[51]

The negative association between GPs' perceived importance of working with hospital psychiatric teams (or the quality of their relationships with them) and the reduced likelihood of taking on CMD patients is paradoxical. In fact, all associations with specialised services (or perceived quality of services) and GPs taking on CMD patients, in our bivariate analysis, suggest that GPs would transfer these patients to specialised services if they could do so. Their poor evaluation of the Quebec mental healthcare system prevents GPs from redirecting these patients to specialised care settings. Delay in receiving feedback support from psychiatrists, which is associated positively with GPs taking on CMD patients, plays a similar role – forcing GPs to provide care for patients alone. It is worth mentioning that the Canadian healthcare system no longer ranks among the best in the world,[52] mainly due to long waiting times to see GPs and specialists. In Quebec, about 25% of the population is estimated to be without a GP – walk-in clinics are therefore the sole care solution for many people.[53] There is a dramatic shortage of GPs in Quebec, which may account for the tendency of transferring CMD patients whenever possible (i.e. when the quality of the relationships between GPs and the system allows). Conversely, all associations in our bivariate analysis suggested that relationships favouring a wide range of complementary services play a positive role in GPs taking on patients with CMD, as compared to hierarchical services (links between primary and specialised care). In our study, psychologists in private practice and CLSC mental

health services are reported to be the most important GP partners for managing CMD patients – a finding that echoes other studies.[13,54]

The lack or poor quality of collaboration between GPs and psychiatry services, the challenges in dealing with CMD patients (e.g. they are difficult to treat, time consuming, and have often interrelated physical or social problems), and the competing demands of other patients are reported throughout the literature as major impediments in GPs taking on patients with mental disorders.[19,54,55] These reasons help explain our results, especially in the context of the current shortage of GPs in Quebec. The historical separation between psychiatry and primary care,[17] or GPs' limited training or experience with effective team practice,[56] may also justify their hesitation at taking on CMD patients when they feel that hospital psychiatric teams would be more appropriate.

Conclusion

This study has shown that many variables are strongly associated with GPs taking on patients with CMD: interest and knowledge in mental health, relative simplicity of CMD cases, quality and interest in mental healthcare collaboration, and availability of diversified services. The importance of primary care system reinforcement and the crucial role played by GPs in mental health care are repeatedly mentioned in the literature. However, the scarcity of studies exploring determinants of GPs taking on CMD patients is striking, particularly in light of current healthcare reforms. Our findings emphasise the need to promote, as a priority, GP interest and training in mental health care to enhance their confidence in treating CMD patients, and encourage team practice and integration between primary care and mental health services. Reforms should also invest in increasing GP co-ordination with psychosocial services, complementing GP work in parallel with investing in the development of shared-care models – hierarchical services, targeting mostly links between GPs and psychiatrists. Group practice models, such as the GMF model, with nurses working closely with GPs to assist them in addressing complex patient needs, performing screenings and follow-up, developing clinical protocols and serving as liaison agents between services, may finally be the basis of more refined integrated care models in mental health care.

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CONFLICTS OF INTEREST

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ADDRESS FOR CORRESPONDENCE

Marie-Josée Fleury, Assistant Professor, Department of Psychiatry, McGill University, Douglas Hospital Research Centre, 6875 LaSalle Boulevard, Montreal, Québec, Canada H4H 1R3. Tel: +1 514 761 6131 ext 4344; fax: +1 514 762 3049; email: flemar@douglas.mcgill.ca

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