

Clinical Practice Settings Associated with GPs Who Take on Patients with Mental Disorders

Liens entre établissements de pratique clinique
et omnipraticiens qui acceptent des patients
présentant des troubles mentaux



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Abstract

In light of current reforms to reinforce primary mental healthcare and service integration, this paper assesses general practitioners' (GPs) management of patients with mental disorders (PMD) and its associated practice settings and clinical characteristics. The study is based on a survey of 398 Quebec GPs. Results showed that GPs who receive patients with moderate and transient mental disorders (PMD-M) usually follow them on a continuous basis; conversely, only a quarter of GPs who see patients with severe and persistent mental disorders (PMD-S) provide follow-up. With the exception of walk-in clinics, all clinical settings are associated with GPs who take on PMD-M. No setting was found to be significantly associated with GPs taking on PMD-S. Competency, skills and confidence seem to be core factors in decisions to take on PMD. Group practice models (CLSCs, network clinics) and shared-care initiatives should be encouraged to manage more complex PMD cases.

Résumé

Dans la foulée des réformes actuelles qui visent à renforcer les soins primaires et l'intégration des services en matière de santé mentale, cet article évalue comment les omnipraticiens gèrent les patients présentant des troubles mentaux (PTM) ainsi que le lien avec les établissements de pratique et les caractéristiques cliniques. L'étude se fonde sur un sondage effectué auprès de 398 omnipraticiens du Québec. Les résultats montrent que les omnipraticiens qui reçoivent des patients présentant des troubles mentaux modérés ou transitoires (PTM-M) assurent habituellement le suivi sur une base continue; à l'inverse, seulement un quart des omnipraticiens qui reçoivent des patients présentant des troubles mentaux sévères et persistants (PTM-S) assurent le suivi. À l'exception des cliniques sans rendez-vous, tous les types d'établissements cliniques sont associés à des omnipraticiens qui acceptent des cas de PTM-M. Il n'y a pas d'association directe entre un type donné d'établissement et la prise en charge des PTM-S par les omnipraticiens. La compétence et la confiance des omnipraticiens envers leurs habiletés à prendre en charge les patients semblent être les facteurs centraux dans la décision d'accepter des cas de PTM. Les modèles de pratique de groupe (CLSC, cliniques-réseaux) et les initiatives de soins partagés devraient favoriser la gestion de cas plus complexes de PTM.

THE PREVALENCE OF MENTAL DISORDERS WORLDWIDE RANGES FROM 4.3% to 26.4% per year, confirming its considerable significance (WHO World Mental Health Survey Consortium 2004). The burden of mental disorders has prompted efforts to reinforce primary mental healthcare in many countries, including Canada (Craven and Bland 2006; WHO/WONCA 2008). Increasingly,

shared-care models involving collaboration between general practitioners (GPs), psychiatrists, and psycho-social professionals are recommended to assist GPs in the management of patients with mental disorders (PMD) (Kates and Ackerman 2002). GPs are the main points of access to mental healthcare for PMD; annually, they receive more PMD than psychiatrists do (Gagné 2005; Lesage et al. 2006). GPs mainly treat patients with moderate and transient mental disorders (PMD-M) such as depressive and anxious disorders or adaptation problems (Kushner et al. 2001; Brown et al. 2002). Current reforms call on them to treat stable patients with severe and persistent mental disorders (PMD-S) as well (WHO/WONCA 2008; MSSS 2005), such as psychotic or bipolar disorders, particularly in remote regions where psychiatric services are scarce. For patients, the advantages of such a shift are service proximity, greater accessibility, less stigmatization and a more holistic approach because physical problems are managed along with their mental disorder (Rothman and Wagner 2003).

This is a pivotal shift in the role of GPs, yet few studies have examined variables that enable or hinder GP management of PMD or the estimated proportion of PMD-M or PMD-S followed on an ongoing (rather than a one-time) basis. What socio-demographic, clinical practice and interorganizational collaboration profiles encourage GPs to take on PMD? Increasingly, GPs practise in a variety of established (hospitals, walk-in clinics) and novel settings (family medicine groups, network clinics). Do different settings bring about different forms of PMD management? Given the shortage of GPs in Quebec (nearly 25% of the population are without a family physician) (ICIS/CIHI 2005a) and the importance of care continuity for PMD (Adair et al. 2005), these questions are central to improving care.

Accordingly, this study aims to (a) estimate GPs' management frequency of PMD-M as compared to PMD-S on a one-time or continuous follow-up basis, (b) assess variables associated with GPs who take on PMD-M versus PMD-S and (c) assess clinical settings associated with GPs who take on PMD-M or PMD-S when other important correlates are taken into account. In light of current healthcare reforms, this study's findings may help decision-makers identify clinical practice settings and other covariates that favour PMD management and address shortcomings in the primary care management of PMD.

Method

The study (conducted using a cross-sectional design) targeted all GPs from nine Quebec local healthcare networks (LHNs) in five socio-sanitary regions, corresponding to 20% of the GP population in the province. With a population of about 7.5 million, Quebec has 7,199 equivalent full-time GPs (one GP per 1,041 inhabitants) (Savard and Rodrigue 2007). In Quebec, LHNs constitute the core of the healthcare system, where providers integrate services to provide a comprehensive care spectrum

(Fleury 2006). The LHNs selected for this study represent urban, suburban and rural areas and university, peripheral and intermediate settings. They encompass the whole range of practice settings: solo or group practice in private clinics; walk-in clinics; local health centres (CLSCs); family medicine groups (GMFs); network clinics (NCs); and hospital centres (acute, psychiatric or long-term). GMFs correspond to a primary care setting where patients are registered with GPs: here, nurses are responsible for patient screening, follow-up and referral. NCs are similar, but patients are not registered with GPs and nurses act mainly as liaison agents. A sample list of all GPs in these LHNs was provided by the Quebec Federation of General Practitioners (FMOQ), which represents all Quebec GPs. Every GP in these LHNs (n=1,415) was asked to participate in the study.

Study data were drawn from a self-administered questionnaire focusing on multiple variables potentially associated with PMD management (Figure 1, Table 1). The questionnaire, designed by a multidisciplinary research team (20 researchers, GPs, psychiatrists) based on a literature review of primary mental healthcare, was pre-tested on 10 GPs. It used continuous or categorical items or a five-point Likert scale and required 30 minutes for completion. It was mailed to GPs from September 2005 to February 2007, with letters of support from the Quebec College of Physicians and the FMOQ. There were three follow-ups: (1) mail, (2) phone calls from nurses and (3) contact by medical network administrators. The study was approved by the Douglas Institute research ethics board. The Régie de l'assurance maladie du Québec (RAMQ) data bank from 2006 was used to compare the study's sample with the GP population of Quebec as a whole wherever possible for the purpose of data validation (e.g., gender, age, PMD-M vs. PMD-S management).

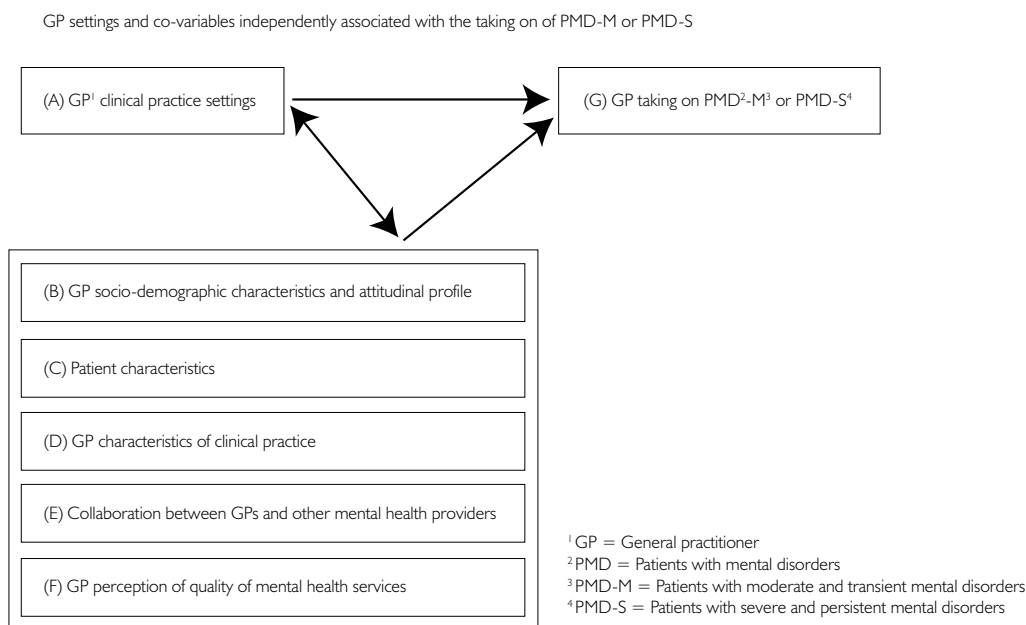
Variable definition and data analysis

The study assessed two categories of patients: (1) those with moderate and transient mental disorders (PMD-M – also called common mental disorders), including anxiety, depression, adaptation disorders, personality disorders and substance abuse co-morbid disorders and (2) those with severe and persistent mental disorders (PMD-S), excluding the above and for which three examples were provided: schizophrenia, bipolar disorder and delirious disorder. PMD-M differ considerably from PMD-S. PMD-M are generally employed; their problems are often less disabling though they may be recurrent, relapse or become chronic. PMD-S (2% to 3% of the population) are generally unemployed and need considerable help in many bio-psycho-social domains on a long-term basis (Nelson 2006).

The main independent variables were *GP clinical practice settings*. GPs were classified according to the practice setting where they spend 50% or more of their time. Other covariates considered in the analyses were organized in five categories: GP

socio-demographic and attitudinal profile, patient characteristics, GP clinical practice profile, collaboration between GPs and other mental health providers and GP perception of quality of mental health services (Figure 1, Table 1).

FIGURE 1. Conceptual framework



The dependent variables were the proportion of *PMD-M* or *PMD-S* taken on by GPs, measured on a continuous scale. “Taking on” patients refers to more than simply receiving patients during a medical visit; it entails care continuity and follow-up for an initial or subsequent condition (both for mental health and for physical problems) and includes medical tests, drug prescription, side-effect monitoring, psychotherapy or any kind of bio-psycho-social support (i.e., acceptance as the GPs’ own patients). “Patients received in consultation on a one-time basis only” refers to patients who visit a GP but are not followed over time by the physician. Both patient groups were identified by GPs as PMD (i.e., having a diagnosis of mental disorder or consultation for mental disorders).

Univariate, bivariate and multivariate data analyses were performed. Univariate analyses consisted in generating frequency distributions for categorical variables; bivariate analyses consisted in correlations and group comparisons using a t-test for continuous variables and a chi-square test for categorical variables. As illustrated by the conceptual model in Figure 1, bivariate associations were calculated between each

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TABLE 1. Independent and dependent variables included in the conceptual model (Figure 1)

<p>INDEPENDENT VARIABLES – related to Figure 1</p> <p>A. General practitioner (GP) clinical practice settings <i>(i.e., GPs' principal practice setting where 50% or more of their time is spent)</i> solo private clinics^{***}, group practice in private clinics^{***}, walk-in clinics^{***}, local health centres (CLSCs)^{***}, family medicine groups (GMFs)^{***}, network clinics (NCs)^{***} or hospital-based practice (acute, psychiatric or long-term)^{***}</p> <p>B. GP socio-demographic characteristics and attitudinal profile Age*, gender 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 healthcare 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 healthcare professionals?^{**} Importance attributed to assuming care of patients with moderate and transient mental disorders (PMD-M)^{**} versus severe and persistent mental disorders (PMD-S)^{***}</p> <p>C. Patient characteristics Number of patients received in consultation per week (i.e., patient visits – typical week)^{***} Proportion of patients with mental disorders received in consultation per week^{***} Among patients with mental disorders, proportion of PMD-M (e.g., adaptation disorder, anxiety, depression)^{***} Among PMD-M, proportion of anxiety disorder^{**}, depressive disorder, depressive and anxiety disorder, personality disorder^{**}, adaptation disorder, substance abuse Among patients with mental disorders, proportion of PMD-S (e.g., schizophrenia, bipolar disorder, delirious disorder)^{***} Among patients with mental disorders, proportion of co-morbid conditions* (mental health and substance abuse^{***}, somatic disease^{**} or mental deficiency)</p> <p>D. GP characteristics of clinical practice Among PMD-M versus PMD-S, proportion of visits related to medication follow-up^{***}, support therapy and psychotherapy^{***} Yearly average number of times you receive in consultation your PMD-M and PMD-S^{***} 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 rate the following clinical or joint follow-up mechanisms: standardized 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</p> <p>E. Collaboration between GPs and other mental health providers Number of PMD-M^{**} versus PMD-S* referred weekly to other resources Among patients referred to other resources, proportion of patients (PMD-M and PMD-S) referred to hospital emergency services, psychiatric outpatient clinics, mental health teams of CLSCs*, psycho-social services of CLSCs, psychologist private offices*, crisis centres or community-based organizations Frequency of referrals of PMD-M versus PMD-S for diagnostic evaluation^{***}, pharmacological treatment suggestion^{**}, joint follow-up with psychiatrists^{***} or other resources^{***}, transfer to psychiatric services^{***} 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^{***}</p>

TABLE 1. Continued

<p>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?^{***}</p> <p>When your patient is hospitalized for mental disorders, what is your frequency of involvement in the following processes: emergency service admission, development of treatment plan including medication, hospital discharge planning, post-hospital follow-up?^{***}</p> <p>How do you rate your relationships with the following professionals for both PMD-M and PMD-S: hospital emergency service personnel, hospital psychiatric service personnel^{**}, CLSC mental health teams, CLSC psycho-social workers, psychologists in private offices^{***}, crisis centre professionals[*], community organization personnel</p> <p>When taking on PMD-M versus PMD-S, how important is it to work in collaboration with the following professionals: hospital emergency service personnel^{***}, hospital psychiatric service personnel^{**}, CLSC mental health teams^{**}, CLSC psychosocial workers^{**}, psychologists in private offices, crisis centre professionals, professionals at community-based organizations?^{**}</p> <p>F. GP perception of quality of mental health services</p> <p>For patients with mental disorders, how do you rate geographic service accessibility, service accessibility with regard to opening hours^{**}, different professional categories accessibility^{**}, quantity of available services^{**}, diversity of available services^{**}, service continuity^{**} and global service quality?^{**}</p> <p>Waiting period for feedback from psychiatrists when requesting expert opinion^{***}</p> <p>G. DEPENDENT VARIABLES – related to Figure 1</p> <p>Proportion of PMD-M versus PMD-S taken on by GPs [Question: “In a typical week, what proportion of patients diagnosed with or consulting for mental disorders in your medical practice do you follow on a continuous basis (i.e., accept as your own patients)?” In the questionnaire, patients are divided into two categories: PMD-M and PMD-S.]</p>
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*Significantly associated with clinical practice settings in bivariate analyses (alpha=0.10)

**Significantly associated with taking on of PMD-M in bivariate analyses (alpha=0.10)

***Significantly associated with taking on of PMD-S in bivariate analyses (alpha=0.10)

independent variable and the following variables: clinical practice settings; the proportion of PMD-M taken on; and the proportion of PMD-S taken on. Significant associations are marked by asterisks in Table 1 (alpha level=0.10). The final models were built using a multiple linear regression analysis, using the stepwise backward logistic regression technique, with successive block entry of variables that yielded significant associations in bivariate analyses with both clinical practice settings and the proportions of PMD-M and PMD-S taken on (alpha level=0.05).

Results

Sample

Of the 1,415 targeted GPs, 353 were excluded because they had retired or moved to another area, or could not be reached either by phone or e-mail. Subsequently, 37 questionnaires were excluded because they were not duly completed. The final sample comprised 398 subjects for a response rate of 41%. The sample was compared to non-responding GPs for gender distribution, which yielded a non-significant result ($\chi^2=3.44$; $df=1$; $p=0.0637$). Comparisons were also made between the study sample and Quebec’s GP population as a whole, regarding gender, age, clinical practice set-

tings, territory of practice, income level from fee-for-services and volume of patients with mental disorders. When data were available, comparisons were made between the GP population in Quebec and in Canada. No significant difference was found in any of these comparisons (Fleury et al. 2008). Significant differences, however, were found between the study sample and Canadian GPs regarding gender (51.3% female in the sample vs. 36.7% for Canadian GPs; $\chi^2=3.98, p=0.046$) and income from fee-for-services (65% vs. 51%; $\chi^2=4.02, p=0.045$) (ICIS/CIHI 2005b; CMFC 2007).

Profile of GPs who take on PMD

For a better understanding of GP management of PMD, physicians were divided into three groups, reflecting their level of involvement (Table 2), namely, absence of involvement (the “0% group”), intermediate involvement (the “1% to 74%” group) and significant involvement (the “75% to 100% group”). Eleven per cent of GPs do not take on PMD-M; however, the great majority of them (78%) take on 75% to 100% of such patients. Twenty-three per cent of GPs do not take on PMD-S, while 25% of them take on 75% to 100% of these patients.

TABLE 2. Distribution of GPs* with regard to the proportion of PMD** they receive in consultation (one-time basis) compared to treating these patients on a continuous basis

% of PMD in GP clientele	PMD-M***		PMD-S****	
	GPs who receive in consultation PMD-M [n (%)]	GPs who take on PMD-M [n (%)]	GPs who receive in consultation PMD-S [n (%)]	GPs who take on PMD-S [n (%)]
0%	8 (2.0)	44 (11.1)	29 (7.3)	93 (23.4)
1%–74%	280 (70.4)	42 (10.5)	366 (92.0)	204 (51.3)
75%–100%	110 (27.6)	312 (78.4)	3 (0.8)	101 (25.4)
Total	398 (100)	398 (100)	398 (100)	398 (100)

* GPs = general practitioners; **PMD = patients with mental disorders

*** patients with moderate and transient mental disorders

**** patients with severe and persistent mental disorders

For both PMD-M and PMD-S, differences were assessed between GPs who do not take on PMD and GPs who do so frequently.

- *GPs who do not take on PMD-M* (11%) practise in walk-in clinics; are younger; receive fewer patients; report shorter waiting periods in receiving feedback from psychiatrists; view collaboration with psychiatrists, emergency services and CLSCs as very important; and practise in fewer clinical settings.

- GPs who do not take on PMD-S (23%) have the same profile with the exception of the last characteristic. In addition, they spend fewer hours on duty, earn a lower proportion of income from fee-for-services and spend less time on continuing medical education (CME).
- GPs who take on 75%–100% of PMD-S (25%) present a reverse profile with regard to hours, income and CME; in addition, they receive more patients per week, report longer waiting time in receiving feedback from psychiatrists and work more frequently in suburban and rural areas.

Settings associated with GPs who take on patients

Clinical settings and covariates independently associated with GPs who take on PMD-M or PMD-S are displayed respectively in Tables 3 and 4. The only setting that does not favour the taking on of PMD-M is the walk-in clinic. This model accounts for 43% of the variance ($F=24,407, p<0.001$). No setting is associated with the taking on of PMD-S; the model accounted for 17% of the variance ($F=41,407, p<0.001$).

Discussion

The study found that the severity of mental disorder has an impact on GPs' decision to take on patients. The great majority of GPs who receive PMD-M also take them on. By contrast, only a quarter of GPs who receive PMD-S take these patients on, even if continuity of care is recognized as a vital component in PMD-S recovery (Adair et al. 2005). Numerous studies have reported the pivotal role GPs play in managing PMD-M and their discomfort in taking on PMD-S (Carr et al. 2004; Walters et al. 2008).

In this study, walk-in clinics – highly developed in Quebec and the rest of Canada (Jones 2000) – were associated with a smaller proportion of PMD-M taken on, or less care continuity (Trottier et al. 2003). Walk-in clinics, however, favour access to care (Barbeau et al. 2001). Suburban and rural areas are settings where GPs are more likely to take on PMD-S, possibly because of the scarcity of psychiatric services (Bambling et al. 2007). Also, the shorter the waiting period for responses from psychiatrists, the fewer patients taken on. GPs who considered interprofessional relationships with specialized care and local health centres (CLSCs) to be very important were also less willing to take on PMD. These surprising findings may be explained by PMD profiles, for example, treatment complexity, physical and social co-morbidity, time-consuming appointments, stigmatization of mental health (Kisely et al. 2006; Balanchandra et al. 2005) and competing patient demands, particularly given the current severe GP shortage in Quebec and in Canada. In addition, even if shared-care models are considered central to current reforms, few such initiatives have been implemented to encourage GPs to take on complex mental disorder cases (Pawlenko 2005).

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TABLE 3. GP* clinical practice settings and covariables independently associated with the taking on of PMD-M**

	Model	B	t	Sig.	95% CI for B	
					Lower bound	Upper bound
	(Constant)	35.969	7.101	<0.001	26.009	45.928
Profiles	Solo practice in private clinics	13.651	3.001	0.003	4.706	22.595
	Group practice in private clinics	9.377	2.205	0.028	1.014	17.739
	Local health centres (CLSCs)	16.198	3.114	0.002	5.969	26.426
	Family medicine groups (GMFs)	9.914	2.324	0.021	1.525	18.303
	Network clinics	16.160	2.479	0.014	3.342	28.979
	Hospitals	12.371	2.653	0.008	3.203	21.539
Covariables	Number of patients received in consultation	0.059	1.700	0.090	-0.009	0.126
	Proportion of PMD and substance abuse disorders	-0.525	-4.046	<0.001	-0.780	-0.270
	Proportion of PMD-M visiting for support therapy	0.410	10.643	<0.001	0.334	0.485
	Perception of good relationships with psychologists	3.406	3.254	0.001	1.348	5.464
	Perception of good relationships with crisis centres	-1.974	-2.128	0.034	-3.798	-0.150
	Waiting time for feedback from psychiatrists	0.063	2.078	0.038	0.003	0.122

$R^2=0.434$; $F=24.407$; $p<0.001$

* GPs = general practitioners; ** PMD = patients with mental disorders; PMD-M = patients with moderate and transient mental disorders

TABLE 4. GP* clinical practice settings and covariables independently associated with the taking on of PMD-S**

	Model	B	t	Sig.	95% CI for B	
					Lower bound	Upper bound
	(Constant)	26.646	7.580	<0.001	19.735	33.557
Covariables	Proportion of PMD-S visiting for support therapy	0.417	9.047	<0.001	0.326	0.508
	Perception of good relationships with psychologists	-2.724	-2.291	0.022	-5.061	-0.386

$R^2=0.174$; $F=41.407$; $p<.001$

* GPs = general practitioners; ** PMD = patients with mental disorders; PMD-S = patients with severe and persistent mental disorders

Younger GPs were less likely to take on PMD-M. GPs with less CME in mental healthcare were less likely to take on PMD-S. GPs who saw higher volumes of patients (possibly linked to fee-for-services income and working hours) were more likely to take on PMD. Previous studies have shown that GPs' confidence and ability to treat patients are associated with fewer referrals (Younes et al. 2005; Kravitz et al. 2006), a finding that may be due to seniority, training and patient volume. In fact, GPs who receive more PMD in their practice are more likely to take them on. A GP's recognized willingness to manage these patients may also be a positive contributing factor.

All practice settings, with the exception of walk-in clinics, were found to be positively associated with GPs who take on PMD-M, but none with GPs who take on PMD-S. In this study, CLSCs and network clinics (NCs) were the practice settings most frequently involved in offering care continuity to PMD-M. With regard to CLSCs, this finding may be explained by the presence of mental healthcare teams on

site. As for NCs in Quebec, they accept patients who do not have access to a regular GP, and benefit from liaison agents and a variety of specialized resources that favour PMD-M management. Solo private practice, followed closely by hospital-based practice, ranked three and four, respectively, with

The study's multivariate analyses show that good working relationships between GPs and psychologists enhance the likelihood that GPs will take on patients with moderate and transient mental disorders.

regard to the taking on of PMD-M. In a recent study comparing GP practice settings, solo practice was associated with ongoing continuity of care and patient satisfaction (Pineault et al. 2008). Closer relationships between patients and GPs, and the fact that antidepressant medication, psychotherapy or both represent potentially effective treatment for most such disorders (CANMAT 2001), may account for the high level of PMD-M management reported for solo practice. As for GPs in hospital-based practice, the proximity and availability of psychiatric resources may explain their propensity to take on PMD-M.

Surprisingly, family medicine groups (GMFs) and group practice in private clinics do not yield the most conclusive association with PMD-M management. A possible explanation is that GMFs are not yet fully implemented, and that they focus largely on treating physical problems (MSSS 2009). As for group private practice, this model was developed mainly through management initiatives (e.g., shared office staff) (Pineault et al. 2008), which may be why such settings do not take on more PMD-M. The decision to treat PMD-S may be affected by GPs' perception that such disorders

require expertise beyond what is available in primary care (Stewart 2000). The willingness of GPs to take on PMD-S appears to be based on their individual interests and network of mental healthcare contacts.

The study's multivariate analyses show that good working relationships between GPs and psychologists enhance the likelihood that GPs will take on PMD-M. GPs who offer supportive therapy are also more likely to take them on. It may be that psychotherapy and supportive therapy (with or without the use of medication) are the most suitable treatment for PMD-M (Williams et al. 2007; Fournier et al. 2008). GPs who offer such treatment or have access to psychologists will then take on more PMD-M. There is a negative association between crisis centres (CCs) and GPs taking on PMD-M, which may suggest that CCs are effective in resolving crises and reducing the need for follow-up by a GP. The complexity of treating concurrent mental disorders and substance abuse disorder may suggest why GPs are reluctant to take on such cases (RachBeisel et al. 1999).

Conclusion

While this study is among the first to investigate GP management of PMD in Quebec or in Canada based on an extensive sample, it does have some limitations. The study has a cross-sectional design. Data were collected from self-administered questionnaires and should be considered an approximation of actual mental healthcare practice. No data were collected on the effectiveness of GPs' treatment of patients with mental disorders, a major issue. Only Quebec GPs were surveyed. Further study across Canada is desirable, especially as healthcare is a provincial jurisdiction.

The study, however, points to relevant political implications. It highlights GPs' significant involvement in mental disorder care management, mainly for PMD-M, in which all practice settings, save walk-in clinics, are active. This finding addresses the erroneous belief that GPs are relatively uninvolved in mental healthcare. Group practice models such as CLSCs and network clinics take on more PMD-M, perhaps because of greater available psycho-social resources. These clinical settings may be better equipped to treat complex PMD-M cases requiring more psycho-social care.

As for PMD-S, GPs' involvement is based on their interest in mental healthcare and mental health networking more than on practice settings. At least one-quarter of GPs take on PMD-S. Competency, skills and confidence seem to be core factors in decisions to treat or to decline treating PMD. Access to specialized resources seems to inhibit GPs from taking on PMD; this finding may be a result of the severe shortage of GPs and the stigmatization of mental disorders. Consequently, the need to develop shared-care models is more pressing. Shared-care models should include strong multimodal incentives (e.g., psycho-social resources working closely with GPs, clini-

cal guidelines, medical education sessions) to help GPs who deal with more complex mental disorder cases, for which prompt consultation with psychiatrists and bio-psycho-social interventions are needed. Stabilized patients with more complex mental disorders ought to have the same access to care and follow-up as the general population (both for physical and mental problems) and to services that are the least stigmatizing.

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