Research Article

Implementation of the Consultation-liaison Model in Quebec and its Impact on Primary Care Providers

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ABSTRACT

Background: With increasing resource scarcity in specialized mental healthcare, collaborative care models have been advanced in order to strengthen primary mental healthcare. The consultation-liaison model was introduced in conjunction with sweeping reform of the Quebec (Canada) healthcare system. Respondent-psychiatrists were hired to provide consultation and support to both general practitioners (GP) working in medical clinics and primary care MH teams. This study evaluates the impact of respondent-psychiatrists on the capacity of GPs and primary care teams to diagnose and treat MH disorders, and identifies barriers and facilitators to their deployment within the consultation-liaison model.

Methods: Eleven local networks provided the setting. Data collection included structured questionnaires completed by 29 respondent-psychiatrists and 33 managers, and semi-structured interviews with 102 network stakeholders. Mixed methods were employed, triangulating data from questionnaires, interviews and network-related documents.

Results: Respondent-psychiatrists collaborated more effectively with MH primary care teams than with GPs. Barriers to implementation of respondent-psychiatrists were identified, including poor comprehension of the model, inadequate provincial coordination, resistance from psychiatrists and GPs, lack of financial incentives for GPs, little knowledge of GP and patient needs in primary care, and physical distance between GPs and respondent-psychiatrists.

Conclusion: Although respondent-psychiatrists positively impacted MH primary care teams, the consultation-liaison model as implemented did not fully meet needs among GPs who treat most MH problems. Implementation called for better model indicators and provincial-level coordination. A more comprehensive model of collaborative care including integrated MH teams and psychosocial care managers might optimize the use of GPs in primary mental healthcare.

MeSH Headings/Keywords: Implementation; Consultation-liaison; Shared-care; Collaborative care; Respondent-psychiatrist; Primary care; Mental health disorders

Introduction

Mental health disorders (MHD) account for significant health-related disability worldwide, and engender greater healthcare burden than diabetes, tuberculosis, HIV and motor vehicle injuries [1]. MHD often co-occur with chronic physical or substance use disorders [2], and with social problems including poverty and homelessness, producing substantial challenges for service delivery, including costs [3,4]. Primary healthcare services and GPs especially, provide the first point of contact, treatment and referral for individuals with MHD [5,6]. GPs also treat about 80% of general populations in industrialized nations annually [7]. In the US, primary care GPs treat nearly 70% of MHD cases [8], mainly depression and anxiety, and prescribe 79% of antidepressant medications [9]. More accessible, cost-effective, and less stigmatizing than mental health (MH) services, primary care improves management of both mental and physical conditions [10,11]. Yet studies report limited ability among GPs to identify and treat MHD [7,12]; they diagnose 50% of MHD cases [13]. Moreover, half of patients diagnosed in primary care receive the recommended doses of medications, and only 10% adequate psychotherapy [9,14]. Patients referred by GPs to specialized MH services face lengthy waiting periods [8,11,15].

Integrated primary care models aim to improve MHD screening, diagnosis and treatment [16]; they include stepped-care [17], patient-centred medical homes [18], chronic care [19], collaborative or shared-care [20,21], and the consultation-liaison model [22]. Treatment intensity in stepped-care is based on patient outcomes [17]. Patient-centered medical homes, used primarily in pediatric care, include patient rostering and collaborative scheduling among GPs, psychosocial and specialized MH services [18]. The more holistic chronic care model encompasses six domains: (1) service delivery; (2) patient self-management; (3) clinical decision support; (4) clinical information systems; (5) community resources; and (6) healthcare integration [23]. Collaborative care and shared-care emanate from Wagner's chronic care model [19]. While shared-care recognizes collaboration between GPs and psychiatrists [24], collaborative care, developed subsequently, extends to collaboration between primary care and specialized MH services [3,8,21]. Both models comprise three core components: 1) systematic psychiatric assessment; 2) longitudinal monitoring, intervention and care coordination; and 3) specialist recommended stepped-care [25]. Their modalities

vary based on levels of professional integration [26,27]. Ideally, they includes a GP, care manager, and psychiatrist working with other professionals on MH cases typically involving depression or anxiety disorders [25,28] but also personality disorders [29] or bipolar disorders [30]. In both models, GPs are responsible for screening, diagnosis, drug prescription, and possible referral to specialized MH services [8]. Care managers, usually a nurse or social worker, support GPs with follow-up, while MH specialists, a psychiatrist or psychologist, offer clinical advice and support to providers [31]. The consultation-liaison model features regular, face-to-face case discussions between psychiatrists and primary care providers, including support for care management and referral [32]. The consultation-liaison model was implemented in Quebec without a care manager, and, as such, had a more educational role for primary care providers than a direct impact on patient care [22].

Integrated care models, especially shared-care, have been subject to considerable research. These models increase knowledge, skills and engagement among GPs working in MH [33,34], while improving population health and the care experience at reduced cost [25,28,31]. Patients with depression or anxiety were more satisfied with shared-care, and rated their quality of life higher, than those receiving standard MH care [31,35,36], although the evidence for patients with co-occurring MHD and chronic physical disorders was weaker [25,37]. While these models have demonstrated effectiveness, their implementation remains problematic [25,32] and requires substantial infrastructure support [20]. Fully integrated care involving a single team of professionals from primary care (GPs and psychosocial care managers), and from specialized MH services (psychiatrists or psychologists), is more difficult to implement than less collaborative models [3]. Facilitators for implementing integrated care models have been identified: shared culture and practices between primary care and specialized MH services [3], expedited access to specialized services [34], interest in MHD among GPs [34], supportive legislative/policy environment [3,33], clearly defined roles and expectations [33], appropriate resources [3], adequate payment or incentives [38], strong leadership [3,5], pre-existing relationships between primary care and specialized MH services [3], organizational stability [5] and adequate training [3,5]. These barriers and facilitators are common to all healthcare reforms, and may be organized according to key elements ranging from characteristics of the reform itself, to environmental, organizational and individual factors. For example, the Consolidated Framework for Implementation Research (CFIR) describes five major implementation domains in healthcare settings: 1) characteristics of the intervention (e.g. adaptability, complexity); 2) outer setting (e.g. external policies and incentives), 3) inner setting (e.g. structural characteristics), 4) individual characteristics; and 5) implementation process [39].

Consultation-liaison was the model of choice for reforming the Quebec MH system [32], which is one of nine service programs within the overall health and social service system. The Quebec MH Reform 2005-2010 [40], extended until 2015, instituted multidisciplinary primary care MH teams within a new system of health and social service centers (HSSC), which replaced the former general hospitals, local community services centers and nursing homes. These MH teams, implemented in each HSSC, consisted of nurses and psychosocial professionals, but were also expected to include GPs. A one-stop service, or single point of entry for all MH services, was created in all MH teams located in service networks for areas of 50,000 or more inhabitants. The one-stop service provided clinical MH assessments for patients referred by GPs, community organizations, and inter-sectorial resources (e.g. substance use disorder rehabilitation centers: outside mental health), and for patients with severe MHD redirected from specialized MH services to primary care. The MH Reform also recommended hiring one respondent-psychiatrist at 3 hours per month for every 50,000 inhabitants to consult with, and support, GPs working in private clinics as well as primary care MH teams and one-stop MH services.

The main advantage of the consultation-liaison model is the more efficient use of specialized MH services in scarce resource environments [22,32]. Consultation-liaison also improves knowledge, skills and confidence among GPs to treat MHD patients and prescribe medications [36]. A meta-analysis found this approach more effective than standard care in terms of patient satisfaction and treatment adherence in depression, although its effectiveness for severe MHD was not determined [41]. However, few studies exist on barriers and facilitators in implementing the consultation-liaison model. This study was exploratory, and had two objectives: 1) to evaluate the impact of respondent-psychiatrists on the capacity of GPs and primary care MH teams, including MH one-stop services, to diagnose and treat MH patients; and 2) to identify barriers and facilitators in implementing the consultation-liaison model in Quebec, with possible implications for MH reform elsewhere.

Methods

Study Design and Context

Within a larger study evaluating implementation of the Quebec MH reform [40] this research employed mixed methods and data triangulation to evaluate consultation-liaison across 11 Quebec MH service networks. In 2005, the provincial health ministry restructured the health and social service system for Quebec's 8 million inhabitants, creating 95 service networks across rural, semi-rural and urban areas with populations ranging from 20 000 to 400 000 inhabitants. The networks were organized into 15 regions directed by regional agencies. One HSSC was created for each network, integrating all health services, both primary care and specialized services, and charged with insuring quality healthcare, including MH care, for the network. This reform promoted group practice among GPs, creating family medicine groups and network clinics that also included nurses working mainly with chronic care patients. In consultation with 20 key Quebec MH decision makers, the 11 networks were selected for the present study according to geographic area (urban, semi-rural, rural), and diversity of services and best-practices adopted (e.g. consultation-liaison model, case management). In terms of inpatient care, three networks had psychiatric hospitals, six had psychiatric departments in general hospitals (n=6), whereas two networks had no hospital-based MH care.

Data Collection

Data collection involved: 1) structured, self-administered questionnaires completed by respondent-psychiatrists and managers of primary care MH teams; and 2) semi-structured interviews conducted with key network stakeholders involved in the reform. A 20-member research advisory committee, including representatives of the Quebec Psychiatric Association, a leading respondent-psychiatrist, and 11 designated study participants from each network, assisted with data collection and validation of the instruments. Structured questionnaires and qualitative interview guides were developed for this study as is customary in all descriptive and exploratory research.

The questionnaires, completed between October 2013 and June 2014, included categorical and continuous items with five- or six-point Likert scale responses. The respondent-psychiatrist questionnaire included questions on: 1) respondent socio-demographics (e.g. age, gender, years of professional experience); 2) professional activities (e.g. monthly time allocation for visits to medical clinics, and case discussions); 3) patient characteristics (e.g. age, diagnosis, service use); and 4) respondent-psychiatrist impact on MH practices (e.g. GP ability to provide quality patient care; to make a diagnosis). This questionnaire was pre-tested and validated by three respondent-psychiatrists, then submitted to all respondent-psychiatrist participants.

The questionnaire for MH primary care team managers for each of the 11 networks included questions on network integration strategies (e.g. "To what extent have respondent-psychiatrists implemented on your team?), and on the frequency and satisfaction of interactions involving network teams/ organizations (e.g. "How often do you interact with respondent-psychiatrists on your team?"). There were also questions on: 1) patient characteristics (e.g. diagnosis), 2) team profile (e.g. number of professionals), and 3) clinical activities (e.g. time allocated to evaluation or treatment), not used in this article. The great majority of managers consulted with their teams, and with data banks, before completing the questionnaire, which was pre-tested by six managers. Respondent-psychiatrists and managers completed the questionnaires in 30 and 120 minutes respectively.

The qualitative interview guides were designed, pretested and validated in collaboration with the advisory committee, and included different versions for each stakeholder group: regional managers, directors or managers of primary care MH teams or hospitals, respondent-psychiatrists, GPs, and community organization directors. Interviews were conducted between March and June 2014, and addressed issues related to: 1) implementation of the MH Reform (e.g. "How was the respondent-psychiatrist function implemented in your team, clinic or network?"); 2) MH network integration (e.g. "How would you describe consultation-liaison activities in your territory"); and 3) facilitators and barriers to implementation of the MH Reform and integrated networks (e.g. "What were the main challenges encountered in implementing the respondent-psychiatrist function?"). Interviews also addressed issues around MH patient profiles not relevant to this article. Individual interviews lasting 30-60 minutes were conducted in person or by telephone, while 60-90 minute focus groups were conducted in person. Socio-demographic data were collected for all participants. Interviews were audio-taped and transcribed verbatim; anonymity and confidentiality were upheld.

Data Analyses

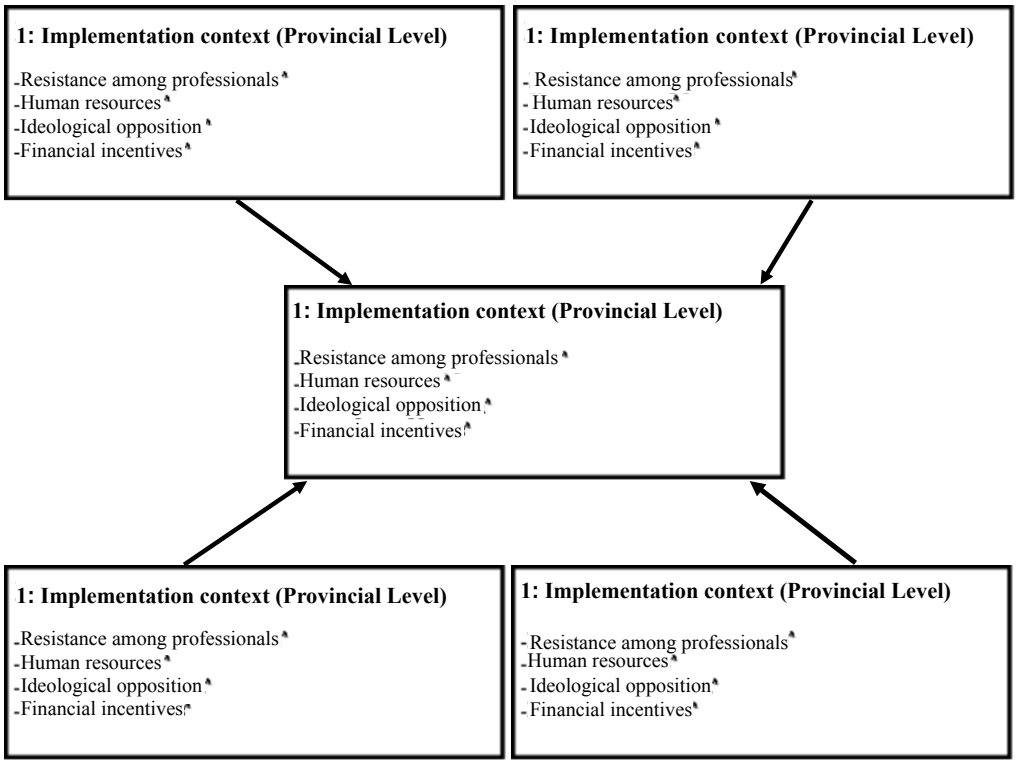
The mixed method approach provided complementary sources of data that were collected, then analyzed and integrated in an iterative and ongoing process [42]. Quantitative descriptive analysis using SPSS-17.0 software included calculation of frequency distributions for categorical variables and mean values for continuous variables. The quantitative investigation yielded information on the role and activities of respondent-psychiatrists in terms of time allocations and percentages per month; as well as their impact on GPs and on mental health teams. Spider figures or radars were drawn using Microsoft EXCEL, illustrating frequency and satisfaction of interactions (on a five-point scale) from the perspectives of primary care teams and based on data from the manager questionnaires. Qualitative analysis included: 1) transcription of interviews; 2) preliminary readings; 3) identification of classification units; 4) development of an analytical framework (coding tree); 5) separation of content into units of meaning; and 6) data management with N-Vivo software, version 10 [43]. Qualitative data mainly concerned barriers and facilitators in implementing the respondent-psychiatrist function. Guided by a conceptual framework (Figure 1) developed from existing implementation models [39,44] and the integrated care literature [3,5,36,38,45], barriers and facilitators to implementation of the Quebec consultation-liaison model were organized into four areas: 1) implementation context; 2) reform characteristics; 3) organizational characteristics; and 4) individual characteristics. The implementation context equates with the outer setting, and organizational characteristics with the inner setting, in the CFIR [39].

Results

In all, 33 respondent-psychiatrists and 35 MH service managers were recruited for the quantitative research; 29 respondent-psychiatrists and 33 managers participated, for a response rate of 91%. For the qualitative component, 110 key stakeholders were recruited; 102 completed interviews for a response rate of 94%. A total of 78 interviews were conducted: 63 individual interviews and 15 focus groups, each with four participants maximum (Table 1).

Activities of Respondent-psychiatrists

Respondent-psychiatrists found MH team members easier to work with than GPs, as the teams held regular meetings and were located in single locations easily accessible to respondent-psychiatrists. By contrast, GPs were dispersed throughout the territory, many working solo or in small groups, which hampered collaboration. For these reasons, respondent-psychiatrists dedicated more hours per month to primary care MH teams/ one stop services than to GPs, with whom they conducted telephone or face-to-face case discussions. However, they made fewer pharmacological recommendations to the teams than to GPs with whom they conducted more patient consultations. Respondent-psychiatrists allocated 2.4 hours/month on average for coordination with specialized MH services, and 1.2 hours for training with primary care MH teams or GPs (Table 2).



a: interviews (individual and focus groups)
b: questionnaires

Figure 1: Conceptual Framework.

Respondent-psychiatrists reported that the time allowances for performing their role met the needs of primary care MH teams more adequately than those of GPs. Respondent-psychiatrists also reported higher levels of satisfaction from their activities with the MH teams than with GPs. They rated their involvement in selecting appropriate therapeutic interventions, and decision-making on patient follow-up as satisfactory or very satisfactory. They were satisfied or very satisfied with support received from other psychiatrists. Their greatest source of dissatisfaction was lack of interaction with other respondent-psychiatrists (Table 3).

Figure 2 presents the frequency of interactions between respondent-psychiatrists and primary care teams, as well as other services and organizations based on the responses of managers/coordinators. Respondent-psychiatrists were the providers most frequently contacted by primary care MH teams, followed by GPs in medical clinics and crisis center staff (Radar 1, Figure 2). They were also rated most satisfying to work with by MH teams, followed by staff at crisis centers and at HSSC one-stop services (Radar 2, Figure 2).

Patient Profiles in Case Discussions

Case discussions between respondent-psychiatrists and primary care MH teams or GPs mainly concerned personality disorders, followed by substance use disorders, depression, anxiety disorders and adjustment disorders; few case discussions concerned bipolar or psychotic disorders (Table 4). Many patients were suffering from multiple or chronic MH episodes, problems in daily living (e.g. social isolation), and physical health problems which qualified them as heavy service users. Moreover, most of these patients had no GP: that is, they had access to walk-in clinics and could consult with attending GPs, but were without a "family physician" to insure continuous care. Respondent-psychiatrists cited the main reasons for referral to specialized MH services as MHD severity or complexity and/or need of a specialized program.

Impact of Respondent-psychiatrist Activities

Respondent-psychiatrists rated the impact of their activities higher for MH primary care teams than for GPs. They rated their coordination with, and impact on, primary care MH teams in providing quality treatment and patient referral as high or very high. They were less positive about their impact on patient evaluation skills in the teams, and on the quantity of follow-up provided. They were even less positive about their impact on GPs in terms of these same activities (Table 5).

Study participants noted a decrease in GP requests for hospital assessments of their patients, identifying this as the area where respondent-psychiatrists had the greatest impact, and as their greatest achievement:

"…with respondent-psychiatrists on rotation every week in the network clinics, they try to educate and guide staff on things that can be done. They will say: "I'll be back in two weeks, we'll talk to your patient; we'll see if we should increase the medication or not". In effect, this assistance allows GPs to retain patients with MH problems." (79, psychiatric hospital coordinator)

Respondent-psychiatrists also arranged for some patients with severe MHD to receive care in the community, which spared individuals living in semi-urban areas from travelling long distances for MH services.

Table 1: Socio-demographic Description of Professionals.

Variables	Categories	Questionnaires completed by managers/ Coordinators of primary care MH teams (N=33)	Questionnaires completed by respondent-psychiatrists (N=29)	Interviews (individual and focus groups) (N=102)	Total:164
Average age [Mean (SD)]		42.2 (9.4)	49.5 (10.9)	50.7 (8.8)	47.34 (11.6)
Gender [n (%)]	Female	25 (75.7)	11 (37.9)	69 (67.6)	105 (4.0)
	Male	7 (21.2)	18 62.1)	33 (42.4)	58 (35.4)
Current position [n (%)]	Psychiatrists	-	29 (100)	7 (6.9)	36 (22.0)
	General practitioners (GP)	-	-	10 (9.8)	10 (6.1)
	Psychosocial clinicians	7 (21.2)	-	4 (3.9)	20 (12.2)
	Regional managers		-	4 (3.9)	4 (2.4)
	Directors	-	-	35 (34.3)	38 (21.3)
	Program administrators/ Coordinators	26 (78.8)	-	42 (41.1)	113(40.1)
Years of experience [Mean; SD]	In current position	5.7 (8.6)	4.0 (4.7)	7.9 (6.2)	5.9 (7.7)
	In psychiatry	-	16.9 (9.9)	-	16.9 (9.9)
	In health and social services	-	-	23.1 (12.5)	23.1 (12.5)
	In MH*	-	-	19.4 (14.1)	19.4 (14.1)
	With adult populations (MH)	-	-	19.5 (12.6)	19.5 (12.6)
Organizations [n; %]	Regional agencies			10 (9.8.)	10 (6.1)
	Psychiatric hospitals (PHs)	-	6 (20.7)	20 (19.6)	26 (15.9)
	General hospitals (GHs)	-	3 (10.3)	13 (12.7)	16 (9.8)
	Health and social service centers	33 (100)	20 (69.0)	34 (33.3)	87 (53.7)
	Medical clinics	-	-	7 (6.9)	7 (4.3)
	Community organizations	-	-	18 (17.6)	18 (11.0)
Types of territories[n;%]	With a PH	15 (45.4)	6 (20.7)	37 (36.3)	58 (35.4)
	Without specialized MH services	2 (6.1)	1 (3.4)	16 (15.7)	19 (11.6)
	> 200 000 inhabitants, with a psychiatric department in a GH	12 (36.4)	11 (37.9)	21 (20.6)	44 (26.8)
	< 200 000 inhabitants, with a psychiatric department in a GH	4 (12.1)	11 (37.9)	28 (27.4)	43 (26.2)

*MH: mental health:

Barriers and facilitators to implementation of the respondent-psychiatrist function

Implementation context: Among the reported barriers to implementation of the respondent-psychiatrist function at the provincial level was resistance among psychiatrists themselves. While the Quebec MH Reform was introduced in 2005, financial incentives for respondent-psychiatrists were ratified only in 2009 following intense negotiations between the Quebec Ministry of Health and Social Services and the Quebec Psychiatric Association. While the respondent-psychiatrist function was slowly implemented in some areas prior to agreement on remuneration, the first formal appointments were not made until 2010. Psychiatrists supporting a hospital-centered model were particularly reluctant to undertake the respondent-psychiatrist role, fearing neglect of

Table 2: Respondent-psychiatrist Practice Profile (N=29).

		Mean	SD
Hours approximately allocated per month for	Telephone consultations with general practitioners (GP) in medical clinics	3.1	5
	Telephone consultations with mental health (MH) teams/one-stop service	5.1	15.3
	Visits to medical clinics	2.7	6.3
	Meetings with adult MH* team/one stop service	8.2	6.8
	Patient meetings with GPs in medical clinics	3.1	8.5
	Patient meetings with professionals from MH teams/one stop service	2	3.4
	Patient meetings without GP or MH team/one stop service, but within the scope of duties as respondent psychiatrists	0.7	1.4
	Coordination with specialized MH services	2.4	5.6
	Supplementary clinical activities (preparing meetings, case notes, etc.) with GP or MH team/one stop service	2.4	5.5
	Training activities other than case discussions (as included above) with MH team/ At one stop service or with GPs	1.2	2.2
	Travel	1.8	1.9
% of time allocated per month for	**With GPs :**	**%**	**SD**
	Case discussions/knowledge transfer on MH issues and problems	37.1	21.9
	Supplementary clinical activities (preparing meetings, case notes, etc.)	6.3	4.4
	Case recommendations and diagnoses	17.8	11.8
	Pharmaceutical recommendations	28.6	17.3
	Exploration of treatment avenues	16.6	8.2
	With MH professionals on the MH teams/one stop service:	**%**	**SD**
	Case discussions/knowledge transfer on MH issues and problem	54.5	20.4
	Supplementary clinical activities (preparing meetings, case notes, etc.)	5	3.6
	Case recommendations and diagnoses	11.7	6.7
	Pharmaceutical recommendations	8.7	6.5
	Exploration of treatment avenues	20.8	10.7

*MH: mental health:

their practices that would increase wait times at specialized MH services. The trend was actually the opposite, however:

"Some psychiatrists agree that services wouldn't be offered here in specialized care because the coaching could be done in primary care. According to everything I have heard, whether by telephone or face to face with those who dared to make the move, wait lists have been reduced by 80 to 100%" (76, respondent-psychiatrist).

Insufficient and poorly distributed human resources were another important barrier. Nearly half of Quebec psychiatrists lived in Montreal or in the national capital (Quebec City) region; psychiatrists in those areas had few contacts with primary care. In smaller regions with fewer psychiatrists, the increasing incidence of severe MHD tended to overwhelm the system and make full implementation of the respondent-psychiatrist difficult.

"This region developed the function of respondent-psychiatrist only partially. They clinched the position last summer, yet the respondent-psychiatrist offered few hours in support of the primary care team" (40, HSSC coordinator).

Finally, financial incentives convinced many psychiatrists to become respondents, facilitating the implementation of consultation-liaison. Yet the lack of compensation for GPs involved in the consultation-liaison model likely fueled their resistance to working with the newly installed respondent-psychiatrists.

Reform Characteristics

Other implementation barriers were rooted in the reform itself. According to most participants, the respondent-psychiatrist role was not well defined in the Quebec MH Reform, nor was it properly understood by psychiatrists and other clinicians:

"Before deploying respondent-psychiatrists to primary care, it would have been better to establish the real needs and priorities, and then make a plan that says: Okay, we will have respondent-psychiatrists but what will be their role? To what needs should they respond? How do they identify those needs?" (49, HSSC coordinator).

Psychiatrists did not have the necessary training to assume the respondent-psychiatrist function; while the absence of implementation guidelines resulted in a lack of uniformity in practice, and created a culture shock in certain networks between respondent-psychiatrists and primary care MH teams:

"Respondent-psychiatrists would write evaluation reports

Table 3: Practice Assessment according to Respondent-psychiatrists (N=29).

How adequate is the number of hours (3.5/month per 50 000 inhabitants) provided for meeting the following needs in your territory?	Inadequate/ Very inadequate impact	Neutral	Adequate/Very adequate
	N (%)	N (%)	N (%)
Needs of general practitioners (GP) in medical clinics	8 (27.6)	5 (17.2%)	11 (55.2)
Needs of professionals on the MH* Teams/one stop service	2 (6.9)	7 (24.1)	20 (69.0)
As a respondent-psychiatrist, how do you rate your satisfaction with the following aspects of care?	Unsatisfactory/ Very unsatisfactory	Neutral	Satisfactory/ Very Satisfactory
Aspects related to GPs in medical clinics:	**N (%)**	**N (%)**	**N (%)**
Number of telephone consultations	14 (48.3)	7 (24.1)	8 (27.5)
Duration of telephone consultations	6 (20.7)	8 (27.6)	15 (51.7)
Pertinence of consultations/collaboration	2 (6.8)	4 (13.8)	23 (79.3)
Level of collaboration	4 (13.8)	7 (24.1)	18 (62.0)
Assessment of your contributions	5 (17.2)	8 (27.6)	16 (55.1)
Aspects related to the MH Teams/one stop service:	**N (%)**	**N (%)**	**N (%)**
Number of telephone consultations	6 (20.7)	1 (3.4)	22 (75.9)
Duration of telephone consultations	3 (10.3)	4 (13.8)	22 (75.9)
Pertinence of consultations/collaboration	2 (6.9)	3 (10.3)	24 (86.2)
Level of collaboration	1 (3.4)	2 (6.9)	26 (89.7)
Assessment of your contributions	3 (10.3)	1 (3.4)	25 (86.2)
Other aspects:	**N (%)**	**N (%)**	**N (%)**
Clarity of your role/mandate	5 (17.2)	10 (34.5)	14 (48.2)
Clarity of civil responsibility connected to your role	4 (13.7)	18 (62.1)	7 (24.1)
Support among hospital psychiatrists for your role	4 (13.7)	9 (31.0)	16 (55.1)
Opportunities for exchanges with other respondent-psychiatrists	14 (48.2)	9 (31.0)	6 (20.7)
Degree of involvement in choosing therapeutic for case discussed	0 (0.0)	4 (13.8)	25 (86.2)
Degree of involvement in deciding about patient orientation for cases discussed	1 (3.4)	6 (20.7)	22 (75.9)
Margin of maneuver for improving MH services in your territory	7 (24.1)	11 (37.9)	11 (37.9)

*MH: mental health:

on case discussions, when that had not been requested. This led to a situation where we had to clarify the role of each member on the MH team". (07, HSSC coordinator)

Organizational Characteristics

Implementation of the respondent-psychiatrist was facilitated in some networks where psychiatrists and primary care providers had worked collaboratively prior to the reform. In such cases the MH Reform simply formalized existing practice. Yet primary care MH team providers were quick to point out that the number of patients without a regular GP would undermine the effectiveness of respondent-psychiatrists. Moreover, as most primary care MH teams had no GP, pressure was put on respondent-psychiatrists to become both treating psychiatrist and physician for patients with MHD who did not have their own GP:

"The word is that they want more, not less. […] They want the psychiatrist to become a GP and to do both psychiatry and primary care. We must be careful not to slip into that area because the benefit of the respondent-psychiatrist will be lost" (60, respondent-psychiatrist).

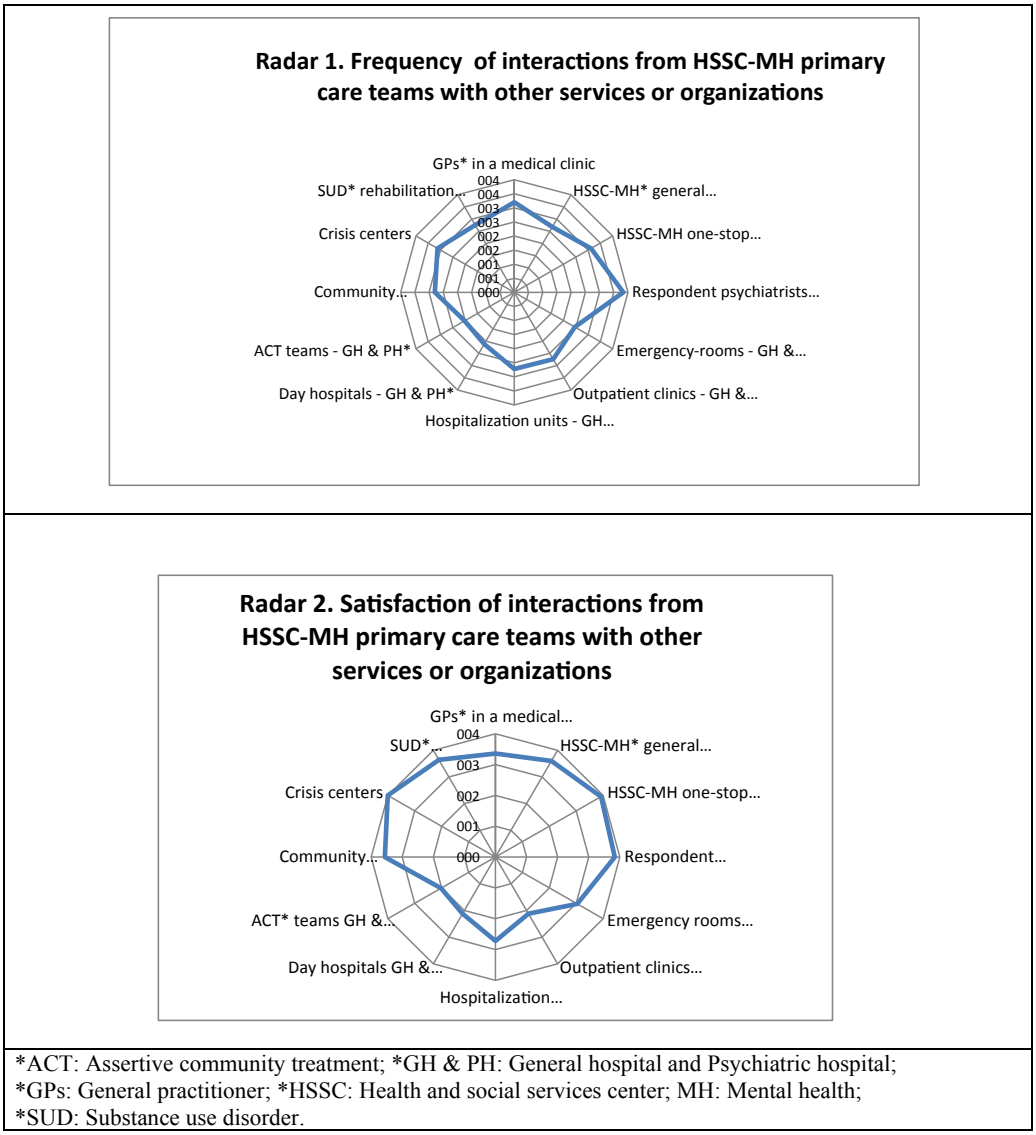
As well, some respondent-psychiatrists hesitated to advise on diagnosis and treatment or make referrals to specialized MH services for patients unknown to them due to liability concerns. While respondent-psychiatrists were relatively well accepted by most primary care MH teams, they had more difficulty with medical clinics. In some networks few clinics opened their doors to respondent-psychiatrists, and the experience was sometimes short-lived: "They did an experiment in a family medicine group, where a psychiatrist came in, as provided for in the MH Reform. At the beginning a few GPs showed interest, but after a few meetings they dwindled to only one and the service was stopped. The formula did not seem to agree with the GPs" (42, respondent-psychiatrist).

Individual Characteristics

Participants viewed the lack of interest in MH among many GPs as the main barrier to implementation of the respondent-psychiatrist. GPs tended to avoid consulting respondent-psychiatrists, either face to face or by telephone. Some stated that the respondent-psychiatrist simply did not meet their needs:

"Yes, there is a psychiatrist with whom we can speak and meet, who can help out if we are ill. […] Even after two years this service has never really been helpful" (38, general practitioner).

GPs not amenable to working with MHD preferred direct access to general hospitals for psychiatric evaluations



*ACT: Assertive community treatment; *GH & PH: General hospital and Psychiatric hospital;
*GPs: General practitioner; *HSSC: Health and social services center; MH: Mental health;
*SUD: Substance use disorder.

Figure 2: Radars. Interactions from HSSC-MH primary care teams with other services or organizations (Mean score: min: 0; max: 5; Higher= positive).

hoping that referred patients would be retained there. The introduction of respondent-psychiatrists caused an upheaval in their culture and practice:

"We must give them time to adhere to these new practices, and for them to get to know us. They have established trusting relationships over the years with outpatient clinics, and their practices are based there; so all these changes shake things up a bit" (49, HSSC coordinator).

Certain respondent-psychiatrists initiated training programs for GPs who seemed appreciative of the opportunity to work on their skills; yet this practice was not systematized. In the end, acceptance of the respondent-psychiatrist by primary care providers depended largely on the doctor's personality and professional standing:

"I adapt to whatever is presented. It's no honeymoon; but when we have problems we start looking for solutions. So, really, I am part of the team. […] I'm not a visitor who just lands there and takes off again" (45, respondent-psychiatrist).

Discussion

With implementation of the consultation-liaison model at an early stage in Quebec, a definitive assessment of how respondent-psychiatrists impacted primary care providers and their practices would be premature. Successful innovation in healthcare systems takes time, especially initiatives like collaborative care that challenge pre-existing professional roles and ways of working [28]. In fact, implementing consultation-liaison involves a radical shift in the healthcare system [38] due, in part, to the difficulty of integrating primary care and specialized MH services with their different priorities and approaches [36,46]. Moreover, the Quebec MH Reform lacked some important prerequisites for implementing consultation-liaison, such as good comprehension of the model, acceptance among MH professionals, appropriate financial incentives, knowledge of issues affecting GPs, and careful targeting of patient populations [3]. These elements were glaringly absent,

Table 4: Patient Profiles in Case Discussion with Primary Care Mental Health (MH) Teams or GPs According to Respondent-psychiatrists (N=29).

		Minimum	Maximum	Mean (%)	SD
Age	18-30 years old	20	50	33.8	9.6
	31-64 years old	30	98	49.4	13.2
	65 years old and older	0	40	18.7	10.8
Civil status	Single, widowed, divorced	0	90	50.2	18.9
	married/common law	0	80	46	18,6
Income level	High	0	20	6.7	5
	Medium	9	8	35.6	18.6
	Low (poverty level)	15	90	59.2	19.9
MH diagnosis	Personality disorder	10	90	38.7	18.4
	Substance use disorder	5	70	31.9	19
	Depression	5	60	30.5	15.4
	Anxiety disorder	5	60	27.1	13.5
	Bipolar disorder	0	40	12.7	8.6
	Adjustment disorder	10	60	27	12.3
	Psychotic disorder (e.g. schizophrenia, delusional disorder etc.)	1	40	11.7	8.7
	Attention deficit disorder or hyperactivity	0	25	8.4	6.4
	Chronic pain disorder/syndrome	0	20	6.8	5.4
	Intellectual disorder/pervasive developmental disorder	0	15	5	4.1
	Eating disorder	0	10	3.8	3.1
MH Episodes	One episode	5	75	25.5	18.3
	Two or more episodes	0	60	35.7	14.1
	Multiple or chronic episodes	10	80	38.9	20.6
Psychosocial issues	Social isolation	10	70	32.7	14.3
	Problems involved with activities of daily living	5	75	32.4	16.3
	Physical health problems (chronic illness)	10	50	26.1	10.4
	Housing insecurity	5	50	15.8	9.9
	Elevated risk of suicide	0	40	12.9	11.3
	Elevated risk of aggressive behavior	0	40	10	8.4
Service utilization	Sees a primary care clinician on the MH team	10	100	62	31.7
	Has a general practitioner	0	80	49.3	19.5
	Participates actively in a community organization for MH	0	75	21.1	16.3
	Qualifies as a heavy user of MH services overall	0	60	20.4	14.3
	Receives service for substance use disorder	5	50	17.3	10.7
	Sees a private psychologist	0	50	11.2	11.8

creating major obstacles to uptake of the respondent-psychiatrist function, and suggesting why preliminary results were quite mixed.

Overall, implementation of respondent-psychiatrists suffered from lack of attention to operational mechanisms, and, as Kisely and Campbell suggest [36], strategies that would combine practice guidelines for respondent-psychiatrists with other implementation strategies. Training for respondent-psychiatrists and provincial coordination were particularly poor, leading to lack of uniformity and integration of practices across the networks.

Consultation-liaison is untenable without stakeholder endorsement [47]. As such, resistance to respondent-psychiatrists occurred among psychiatrists and GPs alike, and spanned different levels of the system. Province-wide opposition among psychiatrists gave way to better acceptance with ratification of the respondent-psychiatrist role by the Quebec Psychiatric Association; yet some psychiatrists

Table 5: Impact of Respondent-psychiatrists (N=29).

		No/weak impact	Average Impact	High/very high impact
		N (%)	N (%)	N (%)
On general practitioners (GP) working in the territory	Improved ability to make a diagnosis	9 (31.0)	14 (48.3)	6 (20.6)
	Improved quality of patient care	7 (24.1)	17 (58.6)	5 (17.2)
	Improved numbers of patients taken into care	9 (31.0)	14 (48.3)	6 (20.6)
	Improved capacity to orient patients to services	5 (17.2)	14 (48.3)	10 (34.5)
	Improved coordination with MH* teams/ one stop service	8 (27.6)	11 (37.9)	10 (34.5)
On professionals working on MH teams and one stop services	Improved ability to evaluate patients	3 (10.3)	12 (41.4)	14 (48.2)
	Improved quality of patient care	1 (3.4)	9 (31.0)	19 (65.5)
	Improved numbers of patients taken into care	6 (20.7)	13 (44.8)	10 (34.5)
	Improved capacity to orient patients to services	1 (3.4)	7 (24.1)	21 (72.4)
	Improved coordination with specialized services	3 (10.3)	7 (24.1)	19 (65.5)
Overall Impact	Increase in MH services provided in the territory	6 (20.7)	15 (51.7)	8 (27.5)
	Improved effectiveness of services to patients	5 (17.2)	12 (41.4)	12 (41.4)
	Improved health and wellbeing among patients	3 (10.3)	17 (58.6)	9 (31.0)

*MH: mental health:

continued to endorse a hospital-centered model. Furthermore, the novelty of consultation-liaison in Quebec, and the fact that psychiatrists didn`t receive training for the respondent-psychiatrist role either in medical school or continuing education, impeded implementation.

Among local GPs, many opposed implementation of respondent-psychiatrists due to perceptions that their particular needs were not well served. In general, GPs didn't sufficiently understand the purpose or utility of respondent-psychiatrists, including how they might improve access to various services. GPs differed widely in terms of their interest in mental healthcare, and related skills. Many expected respondent-psychiatrists to provide direct consultation and guidance with patients. In a previous study [16], Quebec GPs described an idealized collaborative care model where they would work closely with a team of psychiatrists and psychosocial professionals, sharing responsibility for patient care and benefitting from appropriate and widely accessible training. A more comprehensive collaborative care model, including care managers and stepped-care, may better meet the expectations of GPs than the consultation-liaison model introduced in Quebec.

There were also significant concerns about the burdens of increased MH cases in primary care, due to their complexity and high treatment requirements. While resistance among GPs to consultation with respondent-psychiatrists may have signaled their confidence in managing depression and anxiety disorders [48-50], most felt totally unprepared to deal with more severe or co-occurring MHD without assistance [50], and made routine referrals to specialized MH services. Discouraging these referrals, and bringing about enduring changes in practice, required respondent-psychiatrists to provide GPs with training and various types of support, measures largely overlooked in the MH Reform [26,36]. No provincial resources were allocated, or coordination provided, for training in MH, by either respondent-psychiatrists or primary MH teams; what training did occur resulted from local initiatives. Finally, to the extent that incentive payments determined the approval and involvement of psychiatrists, equivalent incentives were needed for GPs in order to break their resistance to working with respondent-psychiatrists [16]. Financial issues are known to hinder implementation of collaborative care [38,51].

Findings also revealed that respondent-psychiatrists collaborated more effectively with primary care MH teams than with GPs, perhaps because many clinicians on the teams were transfers from specialized MH services where they had previously worked with psychiatrists. Pre-existing relationships tend to facilitate implementation of collaborative care [36]. By contrast, GPs in this study had little prior contact with specialized MH services; and according to a previous Quebec survey, 50% of GPs had no contact with any MH professionals [16]. Yet, unlike professionals in MH teams, GPs treat many health issues other than MHD, coordinating with other physicians and allied professionals.

Finally, knowledge of patient profiles and pathways to care are crucial for effective collaborative care [3]. Respondent-psychiatrists were more often consulted on personality disorders

and substance use disorders than depression or anxiety disorders, reflecting the prevalence and importance of these diagnoses in primary care. Cases involving personality and substance use disorders are more complex and problematic for GPs; they are associated with elevated risk for self-harm and suicidal ideation, and involve heavy service use [52]. Psychotherapy and integrated treatment are indicated in these cases [29]. However, as brief consultation is the rule in primary care [36], GPs have little time to provide therapy [7]. GPs agreed to treat patients for depression or anxiety disorders, but usually avoided accepting more complex or serious cases, depending on their training, skills and personal interest in MHD [7,53], and received inadequate support from MH resources as well as few positive incentives. However, depression and anxiety disorders also provided a frequent topic of discussion between respondent-psychiatrists and GPs as these disorders account for considerable treatment resistance in primary care [54,55].

Alternative models are needed for the management of primary care patients with complex or serious disorders in order to provide adequate and consistent psychosocial intervention. Collaborative care with a care manager is a prime example of best practice. The MH Reform prioritized intensive case management and assertive community treatment [40] for patients with serious MHD; yet these evidence-based practices were not fully implemented across the networks. Moreover, the large number of patients without a regular GP, estimated at 21% in the Quebec population [56], challenged the effectiveness of the consultation-liaison model. Finally, primary care MH teams, GPs and respondent-psychiatrists should ideally work at the same site.

Limitations

This study had certain limitations. First, the results reflect characteristics of the selected networks and may not be generalizable to other areas of Quebec, or countries with divergent healthcare systems. Second, the number of respondent-psychiatrists and GPs who participated in the study was low, and their perceptions may not always reflect a majority view. The findings from this exploratory study concerning how respondent-psychiatrists impacted GP practices, in the context of an overall study of implementation processes, should thus be interpreted with caution, particularly in the absence of quantitative investigations that could corroborate the views of GPs. Third, the study did not investigate the impact of consultation-liaison on patient outcomes. Finally, participants offered relatively few diverging viewpoints; rather, findings tended to be complementary or convergent.

Conclusion

This exploratory study was the first to evaluate the impact of respondent-psychiatrists on the capacity of GPs and MH primary care teams to diagnose and treat individuals with MHD in Quebec, and to identify barriers and facilitators to implementation. Results demonstrate that respondent-psychiatrists had a positive impact on primary care MH teams but less so on GPs working in medical clinics. Several factors hindered implementation of the respondent-psychiatrist function, most notably resistance among GPs and psychiatrists. Several recommendations suggest ways of reducing barriers to implementation of the consultation-liaison model, or enhancing other integrated care initiatives: 1) reform payment modalities for GPs to better reflect the complexity of caseloads and remunerate them for collaborative care activities; 2) improve understanding of GP needs, and restructure consultation-liaison accordingly; 3) reduce the number of patients without a regular GP, and integrate GPs into all primary care MH teams; 4) promote closer working relationships between primary care MH teams and GPs, and create shared work sites; and 5) introduce a MH psychosocial care manager to work closely with GPs and improve services for patients with severe or complex MHD. Inclusion of the care manager is the critical missing element in the Quebec MH system, and key to successful collaborative care. Related implementation strategies such as training and diversified supports also need to be better defined, coordinated and sustained at the provincial level. In short, a more comprehensive collaborative care model may have important advantages over the consultation-liaison model, and provide a better fit with both GP and patient needs.

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