DEVELOPMENT AND IMPLEMENTATION OF A COLLABORATIVE MENTAL HEALTH CARE PROGRAM IN A PRIMARY CARE SETTING: THE OTTAWA SHARE PROGRAM

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ABSTRACT

This article presents the results of a needs assessment of family physicians and residents concerning the provision of mental health care and an implementation evaluation of a multidisciplinary mental health service demonstration project, linking 2 family practices with mental health services of

This study was funded by the Ontario Ministry of Health and Long-Term Care Primary Health Care Transition Fund, Project G03-02606. Correspondence regarding this article should be addressed to J. Robert Swenson, 501 Smyth Rd., Ottawa, ON K1H 8L6; tel.: (613)737-8083; fax: (613)739-6667; email: jrswenson@ottawahospital.on.ca

a general hospital. Family physicians and residents reported that collaborative mental health care provision would enhance but not replace their management of patients with mental health problems. The implementation evaluation found that collaborative care provided by a multidisciplinary mental health team co-located with family physicians was accepted by patients and valued by family physicians. Because of a shortage of family physicians, few patients from the mental health system who lacked family physicians were able to gain access to primary care through this project.

Up to 40% of all patients attending family practices may have mental health problems (Ansseau et al., 2004). Furthermore, a recent survey of mental health services in the United States has shown that the rate of treatment of mental disorders in general medical services has grown faster than in the psychiatric or other mental health service sectors (Kessler et al., 2005). In Ontario, a survey of ambulatory mental health care in 2001–2 demonstrated that, among those who sought mental health care, the most commonly contacted provider was a general practitioner or family physician (Rhodes, Bethell, & Schultz, 2006). Despite the obvious need for close collaboration between primary care and mental health systems, several studies have identified problems in the relationship between psychiatric and primary care. A series of focus groups found that family physicians across Ontario cited: (a) poor communication with psychiatrists, (b) lengthy waits for consultation and treatment services for their patients, (c) poor continuity of care, and (d) a lack of support and respect for their contributions from psychiatrists (Chapeskie, 1996; Craven, Cohen, Campbell, Williams, & Kates, 1997). Difficulties identified by psychiatrists in their relationships with family physicians included: (a) inadequate evaluation of patients, (b) poorly written or inappropriate referrals, (c) unrealistic expectations, and (d) reluctance of family physicians to provide follow-up care to patients after discharge (Kates et al., 1997).

Recognition of the need for collaboration between psychiatrists and family physicians led to a joint statement by the Canadian Psychiatric Association and the College of Family Physicians of Canada which highlights the advantages of greater collaboration between family physicians and psychiatrists, and emphasizes the need for training to enable them to work effectively in a shared care model (Kates et al., 1997). It also suggests that one strategy to implement shared mental health care is for psychiatrists, along with other mental health disciplines, to function as members of mental health teams located in family physicians' offices. Setting up optimal collaborative services requires that programs: (a) be developed with the needs of primary care patients and their family physicians in mind, and (b) evaluated on whether they have been implemented in a manner that has enabled them to achieve their stated goals (Rossi, Lipsey, & Freeman, 2004).

In this article, we present the results of a needs assessment of family physicians and residents in two primary care practices with respect to their attitudes, beliefs, self-perceived knowledge, and comfort with the provision of mental health care. We also report on our evaluation of the implementation of the SHARE (Shared Mental Health-care Accessibility Research and Evaluation) program—a multidisciplinary mental health service demonstration project which linked two family practices with the mental health services of a general hospital through direct connection with a team of mental health professionals.

The SHARE demonstration project, which was carried out between September 2004 and December 2005, offered services to two family practices located in central Ottawa—the Ottawa Hospital Family Medicine Centre (FMC) and the Central Ottawa Family Medical Associates (COFMA). The FMC is an academic family health network with rostered patients and a capitation payment system. There are nine full-time academic family physicians with about 8,000 active patients. There are approximately 24 family residents training at the FMC, and four to six residents are on-site at any one time. During the project, COFMA had nine physicians with an average of 1,000 patients each. Characteristics of the physicians and their family practices involved in the demonstration project are presented in Table 1.

Table 1

Characteristics of Family Physicians (*n* = 18) (Excluding Residents) and Their Family Practices

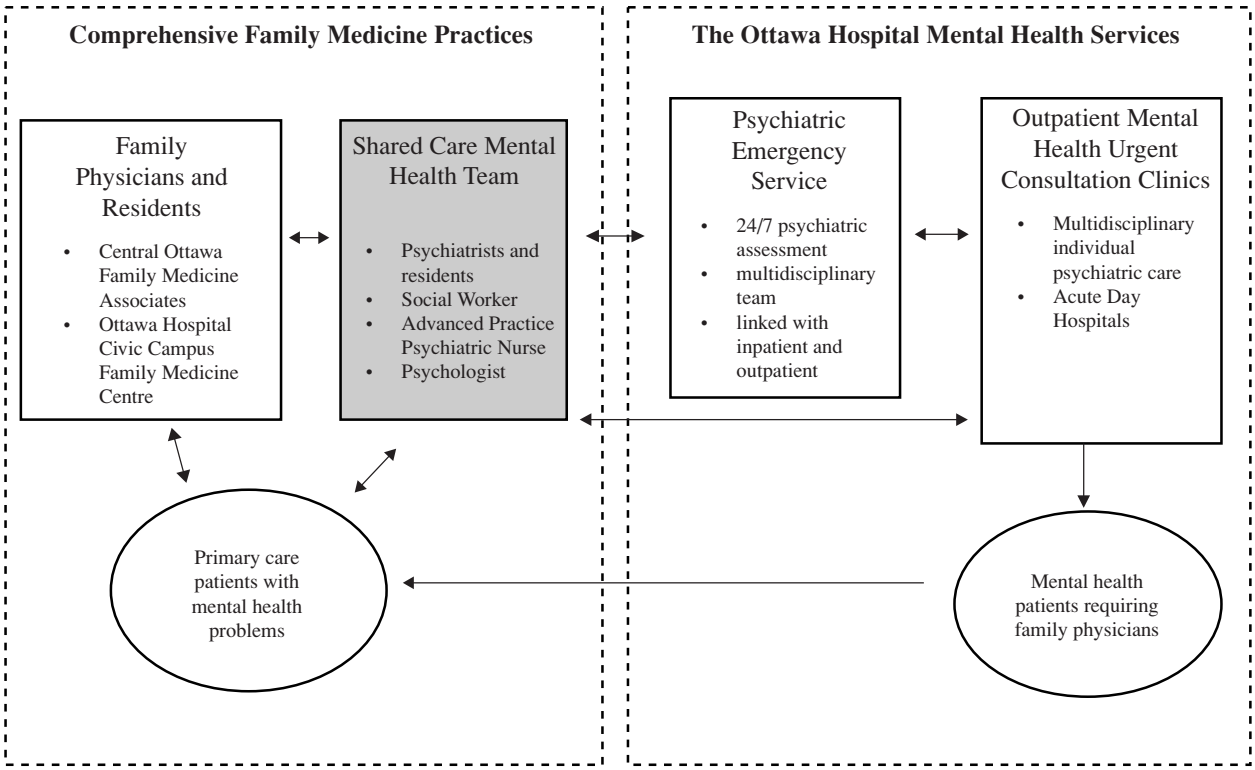
	Number (%)
Gender*	
• Male	11 (64.7)
• Female	6 (35.3)
Years of practice after residency	
• less than 10 years	4 (22.2)
• 10-20 years	3 (16.7)
• more than 20 years	11 (61.1)
Size of current practice*	
• less than 500 patients	5 (33.3)
• 500-1000 patients	5 (33.3)
• more than 1000 patients	5 (33.3)
Location of family practice	
• academic family medicine centre	9 (50.0)
• community family medicine centre	9 (50.0)
Hours per week providing mental health care*	
• less than 10 hours	13 (76.5)
• 10-20 hours	3 (17.6)
• more than 20 hours	1 (5.9)
Estimation of percentage of patients with identifiable mental health problem*	
• less than 10%	1 (5.9)
• 10–20%	9 (52.9)
• 21–50%	5 (29.4)
• more than 50%	2 (11.8)

Note. *Data not provided by some respondents

The members of the SHARE multidisciplinary team—a psychiatrist, an advanced-practice psychiatric nurse (APN), a psychiatric social worker, and a psychologist—spent at least 1½ days per week on the project, providing on-site services for at least 1 day per week at either of the two family medicine practices and another half day of either on-site or indirect care each week. Indirect services included telephone contact with patients, telephone or direct contact with family physicians or other health care staff, and charting. The rest of their clinical services were based in the outpatient mental health services of the hospital, thus providing a link between the family practices and hospital mental health system (see Figure 1).

Figure 1

The Ottawa SHARE Project



The goals of SHARE were: (a) to provide on-site mental health care to primary care patients, (b) to improve their access to hospital-based mental health services when needed, and (c) to improve access to primary care for mental health outpatients of the hospital who lacked a family physician. The evaluation of the demonstration project was intended to answer two questions: (a) Did SHARE serve the targeted population of people with moderate or severe mental health problems; and (b) was SHARE

implemented as planned—that is, did SHARE deliver mental health services to primary care patients, and primary care services to psychiatric outpatients of a general hospital?

METHOD

Both patients and health professionals gave informed consent prior to participating in the SHARE evaluation, and the study was approved by the Research Ethics Board of the Ottawa Hospital.

Needs Assessment

Prior to the start of the project, a self-report questionnaire was mailed to 18 family physicians and 30 family medicine residents. Non-respondents were telephoned at least twice. The questionnaire contained sections devoted to: (a) attitudes and beliefs about managing patients' mental health problems, (b) self-perceived knowledge of mental health care issues, (c) comfort level with mental health care issues, and (d) opinions about what would enhance their management of patients' mental health issues. The questionnaire was based on items from two mental health service needs surveys of family physicians conducted by Canadian programs providing mental health care in collaboration with family physicians (Paquette-Warren, Vingilis, Greenslade, & Newnam, 2004; Sully, 2003). For the purpose of analyses, the range of seven responses were grouped into one of three broader categories ("disagree, neutral, or agree" for questions on attitudes and beliefs; and "low, moderate, or high" for questions on self-reported knowledge and comfort level).

Implementation Evaluation

When evaluating whether the target patient population was being served by the SHARE program, the severity of mental health problems in patients referred to the program was considered. Given that there is no single accepted measure of the severity of mental health problems, patients were evaluated by both patient- and provider-rated measures relating to diagnosis and symptom severity. At intake, patients completed the Patient Health Questionnaire (PHQ), a screening measure that identifies the presence of different mental health problems according to standard diagnostic criteria. It has been used in large studies of mental health programs in primary care and has been found to be valid and reliable (Spitzer, Kroenke, & Williams, 1999).

The severity of patients' mental health problems was also evaluated using the 7-item Threshold Assessment Grid (TAG), which is a provider-rated scale (Slade, Powell, Rosen, & Strathdee, 2000) in which the clinician makes an assessment of the level of concern about symptoms in a variety of domains—safety, risk, needs, and disabilities—with a range from 0 (indicating that there is no risk) to 4 (indicating an immediate and severe risk). The SHARE clinicians also rated their patients' severity of illness using the Global Assessment of Function Scale (GAF) which is designed to measure psychological, occupational, and social functioning along a continuum from 0 to 100, with a higher score indicating better levels of functioning (American Psychiatric Association, 1994).

To evaluate whether the SHARE program was being implemented as planned, data were collected about types of services provided by the SHARE program to patients charted in an electronic database,

and qualitative methods were used to assess the perceptions of family physicians and SHARE team members. As well, the eight-item version of the Client Satisfaction Questionnaire (CSQ-8) was administered to patients in a follow-up telephone interview (Attkisson, & Greenfield, 1996). Patients were also asked two open-ended questions, focusing on the strengths of the program and suggestions for improving the program.

An external evaluation team made up of four researchers collected the qualitative data by conducting: (a) two focus groups with primary care physicians; and (b) individual interviews with members of the SHARE team. Both focus groups were conducted by the same group facilitator, and participants' responses were transcribed by a co-facilitator. A total of 13 physicians attended the focus groups and one additional staff physician and two residents were interviewed by telephone using the same protocol as for the focus groups. All four members of the SHARE team were interviewed.

Focus groups were audio-taped, and the focus group co-facilitator took written notes. Interview responses were transcribed verbatim by the interviewer. The analyses and development of summaries of qualitative data were based on the process elaborated by Krueger (1998) for analyzing and reporting focus group results. Qualitative analyses of the data collected in the focus groups and interviews were conducted in four sequential steps: (a) dividing data into discrete elements; (b) preliminary coding of data; (c) reviewing and refining the coding categories; and (d) answering specific evaluation questions. The same member of the external evaluation team was responsible for the first two steps. The third step was accomplished by having the team together code a focus group and an interview. The fourth step involved having each member of the evaluation team answer specific evaluation questions from the pool of qualitative data. Following these four steps and prior to the final write-up, findings were shared, discussed, and reviewed by the evaluation team.

RESULTS

Needs Assessment

All 18 family physicians from both practices (100%) and 22 out of 30 family medicine residents (73%) completed the needs assessment questionnaire. Table 2 presents a breakdown of responses for family physicians and residents on each of the attitude and belief items. The majority of family physicians (89%) and residents (68%) reported that they believe they have the primary responsibility for provision of mental health care to their patients. Moreover, a majority of family physicians (67%) and residents (55%) reported that they would enjoy treating mental health problems more if they had access to back-up services such as access to consultations with mental health professionals and access to hospital-based mental health services when needed. However, over one third (39%) of family physicians and over three quarters (77%) of residents indicated that time constraints limited their ability to spend as much time with patients as they would have liked.

Table 3 provides a breakdown of responses by family physicians and residents on their self-perceived knowledge and comfort level regarding the provision of mental health care. More than one third of family physicians (44%) and more than one quarter of residents (27%) reported a low level of knowledge and a low level of comfort about prescribing psychotropic medication for patients with

Table 2

Attitudes and Beliefs of Family Physicians and Residents with Respect to Provision of Mental Health Care

	Disagree or strongly disagree *N* (%)		Neither agree nor disagree *N* (%)		Agree or strongly agree *N* (%)	
	Family Physicians*	Residents**	Family Physicians	Residents	Family Physicians	Residents
I enjoy dealing with mental health patients and their issues	1 (5.5)	2 (9.5)	12 (66.7)	17 (81.0)	5 (27.8)	2 (9.5)
I would enjoy treating mental health problems more if I had better access to back-up facilities	0 (0.0)	2 (9.1)	6 (33.3)	8 (36.4)	12 (66.7)	12 (54.5)
I feel uncomfortable when dealing with mental health problems	8 (44.4)	7 (31.8)	8 (44.4)	13 (59.1)	2 (11.2)	2 (9.1)
I try to avoid dealing with mental health problems	14 (77.8)	11 (50.0)	4 (22.2)	10 (45.5)	0 (0.0)	1 (4.5)
I frequently find I am too pressed for time to enquire about a mental health problem as much as I would like	5 (27.8)	0 (0.0)	6 (33.3)	5 (22.7)	7 (38.9)	17 (77.3)
I believe that treatment of mental health problems is my responsibility as a family physician	1 (5.6)	0 (0.0)	1 (5.6)	7 (31.8)	16 (88.8)	15 (68.2)
I should be able to treat the majority of mental health problems without referral to another agency/specialist	2 (11.1)	2 (9.1)	9 (50.0)	16 (72.7)	7 (38.9)	4 (18.2)

Notes. Some data not provided by all residents
*N = 18 Family Physicians; **N = 22 Residents

Table 3

Self-Reported Knowledge and Comfort Level of Family Physicians and Residents Concerning Provision of Mental Health Care

	Low Level *N* (%)		Moderate Level *N* (%)		High Level *N* (%)	
	Family Physicians*	Residents**	Family Physicians	Residents	Family Physicians	Residents
Self-reported knowledge of:						
Prescribing medication for:						
• Depression	0 (0.0)	2 (9.1)	8 (44.4)	13 (59.1)	10 (55.6)	7 (31.8)
• Anxiety	0 (0.0)	3 (13.6)	11 (61.1)	15 (68.2)	7 (38.9)	4 (18.2)
• Psychosis	8 (44.4)	6 (27.3)	9 (50.0)	14 (63.6)	1 (5.6)	2 (9.1)
Detecting mental health problems	0 (0.0)	0 (0.0)	10 (55.6)	18 (81.8)	8 (44.4)	4 (18.2)
Assessment/diagnosis of mental health problems	0 (0.0)	0 (0.0)	12 (66.7)	21 (95.5)	6 (33.3)	1 (4.5)
Counselling patients with mental health problems	0 (0.0)	2 (9.1)	14 (77.8)	18 (81.8)	4 (22.2)	2 (9.1)
Making appropriate referrals to community agencies/specialists	0 (0.0)	2 (9.1)	11 (61.1)	14 (63.6)	7 (38.9)	6 (27.3)
Comfort level with:						
Prescribing medication for:						
• Depression	0 (0.0)	2 (9.1)	6 (33.3)	12 (54.5)	12 (66.7)	8(36.4)
• Anxiety	0 (0.0)	2 (9.1)	11 (61.1)	15 (68.2)	7 (38.9)	5 (22.7)
• Psychosis	7 (38.9)	6 (27.3)	10 (55.6)	15 (68.2)	1 (5.5)	1 (4.5)
Detecting mental health problems	0 (0.0)	0 (0.0)	9 (50.0)	15 (68.2)	9 (50.0)	7 (31.8)
Assessment/diagnosis of mental health problems	0 (0.0)	0 (0.0)	12 (66.7)	18 (81.8)	6 (33.3)	4 (18.2)
Counselling patients with mental health problems	0 (0.0)	3 (13.6)	15 (83.3)	15 (68.2)	3 (16.7)	4 (18.2)
Making appropriate referrals to community agencies/specialists	0 (0.0)	1 (4.5)	12 (66.7)	15 (68.2)	6 (33.3)	6 (27.3)

Note. *N = 18 Family Physicians; **N = 22 Residents

psychosis. In contrast, a majority (> 85%) in each of the two groups endorsed a moderate or high level of knowledge and a moderate or high level of comfort managing depressive and anxiety disorders. Interestingly, a minority of family physicians (22%) and residents (9%) reported a high level of knowledge concerning counselling patients with mental health problems. Similarly, only a small proportion of family physicians (17%) or residents (18%) expressed a high level of comfort counselling patients with mental health problems.

In response to questions about measures that could help family physicians address mental health problems of their patients, the great majority of family physicians and residents endorsed various collaborative strategies to enhance their management of patients' mental health problems. These strategies included having: (a) a psychiatrist visit their offices; (b) telephone back-up by a psychiatrist; (c) in-office educational sessions led by psychiatrists; and (d) access to information or assistance with referral to community mental health agencies. Overall, the needs assessment suggested that family physicians and residents believed that collaborative mental health care provision with co-located mental health professionals would enhance but not replace their management of patients with mental health problems.

Implementation Evaluation: Was SHARE Serving the Targeted Population of People with Moderate or Severe Mental Health Problems?

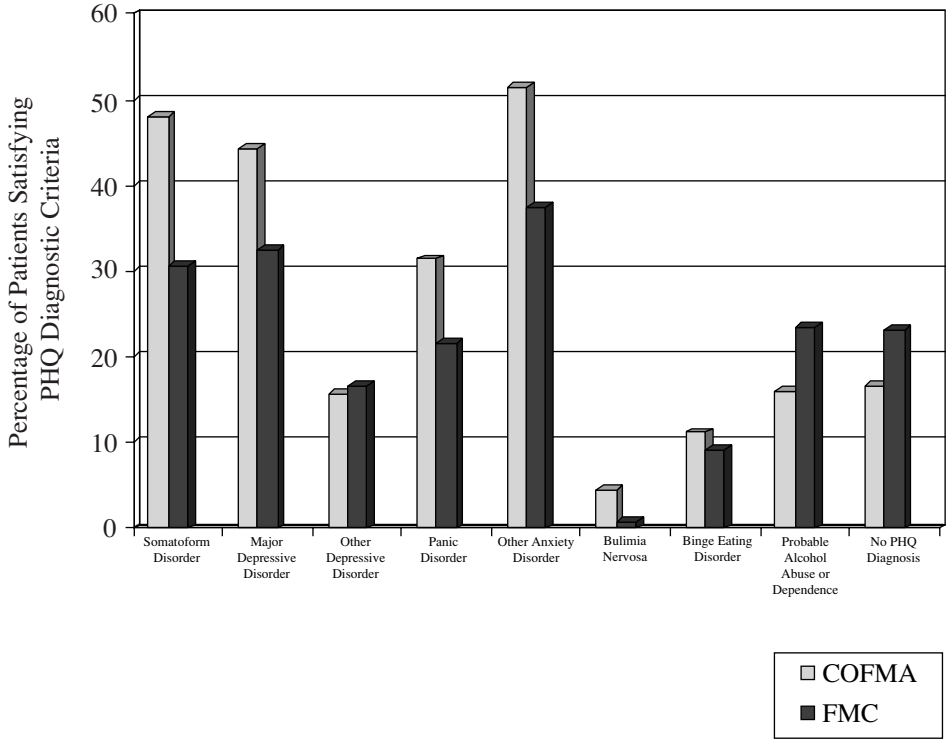
A total of 328 patients aged 16 and older were referred by their primary care physicians to the SHARE team over the duration of the project: 132 from COFMA (40%) and 196 from FMC (60%). Because both practices stopped taking on new patients just prior to the start of the SHARE Project, due to the departure of family physicians from each group, only four patients (three males and one female, mean age = 39.7 years) who lacked family physicians could be referred from the Outpatient Psychiatry Department of the Ottawa Hospital to primary care providers. Therefore, the final sample for the evaluation of the implementation of SHARE involved 256 patients: 252 referred from primary care and 4 referred from the mental health system. Overall, there were more women (58%) than men (42%) in the final sample. The average age of participants from FMC (46 years, SD = 13) was significantly higher than from COFMA (39.7 years, SD = 13), F (2,253) = 6.14, $p < 0.01$.

Figure 2 shows the percentage of patients from the two referring family practices that satisfied diagnostic criteria for different disorders using the PHQ. Eighty per cent of patients presented with a diagnosable mental disorder on the PHQ. The most common difficulties reported by patients referred to the SHARE team were depression, anxiety-related problems, and somatic symptoms. More than half of the patients satisfied the PHQ criteria for either "major depressive disorder" or "other depressive disorder." As well, more than half the patients reported symptoms on the PHQ that were consistent with the presence of an anxiety disorder.

Based on the GAF scale, the SHARE psychiatrist rated 23% of participants as having moderate (a GAF score of 51 to 60) or serious (a GAF score of less than 50) symptoms or impairment. Almost half of the patients (48%) were assessed as having some mild symptoms or some difficulty in social or occupational functioning (GAF score between 61 and 70), and 22% were assessed as having transient symptoms (GAF score between 71 and 80). Eight percent of patients were assessed as having minimal or no functional impairment (GAF score between 81 and 90).

Figure 2

Percentage of Patients from Each Referring Primary Care Practice Satisfying the Patient Health Questionnaire (PHQ) Diagnostic Criteria



Using the TAG scores, the most common symptom domains on which patients were assessed by psychiatrists as having moderate, severe, or very severe levels were psychological distress (43%) and impaired social relationships (38%). Only small numbers of patients were rated in the moderate, severe, or very severe risk categories in the symptom domains of self-harm (3%), risk to others (2%), risk from others of abuse (4%), or survival risk due to a lack of resources (3%).

Implementation Evaluation: Was SHARE Implemented as Planned?

Characteristics of services delivered. Because of the multidisciplinary make-up of the team, it was expected that the SHARE program would offer a variety of services to patients. Most patients (93%) received an assessment and recommendations for continuing patient care that were communicated to the referral source (the primary care physicians) from SHARE team members. Two thirds of the patients (67%) also received some form of counselling or therapy. Slightly less than half of the referrals (46%) were provided with supportive therapy. Participants also received a range of other therapies including cognitive-behavioural therapy (24%), interpersonal therapy or problem-solving therapy (8%), and individual counselling or therapy of unspecified orientation (12%). The team also

provided other services such as bereavement, family, or couples counselling. A large number of participants (52%) also received client education. Only 12 patients (5%) seen by the SHARE team were referred to hospital-based mental health services for more intensive psychiatric intervention, most often the day hospital program.

Perceptions of family physicians. In the focus groups, family physicians reported that they found the consultations provided by the SHARE team useful. Physicians from both practices said that they used the service: (a) for help with medication (particularly when a patient was not showing signs of improvement); (b) for help with diagnosis; and (c) for the development of treatment plans that included multiple options. They further noted that easy access to SHARE team members enabled them to make use of informal consultations—which saved them both time and the need for a formal referral.

The physicians reported that the consultations had an educational benefit. In particular, they felt that the contact with the SHARE team had enhanced their knowledge of psychotropic medications and expanded their treatment options. As a result of using the team, they felt more competent to deal with patients with mental illness. Physicians also noted that the informal and formal consults provided by the SHARE team increased their knowledge of local community resources and potential referral sources.

Family physicians reported that the multidisciplinary team facilitated the delivery of a wide range of mental health services. For example, one physician observed in the focus group that "the whole idea is to share care … everyone has a different skill set … the patients can get what they need from the person who can best offer it." Another physician commented that it was "helpful in a multidisciplinary approach to get someone else in on the diagnosis."

There was consensus among family physicians that consultations delivered by the SHARE team met their needs. Having both primary care and mental health services in the same location enabled them to have higher levels of contact with mental health specialists and to receive more detailed information about the treatment of their patients. For some physicians, however, there was a mismatch between the mandate of the SHARE team and the physicians' requirements. Some felt that their patients needed a longer-term solution to their problems and were disappointed with the time-limited treatment plans delivered to their patients by the SHARE team. In some cases, physicians felt that the SHARE team should have taken over responsibility for the patient. Some family physicians indicated the triage system was not working optimally when referrals were being made to several SHARE team members at once, using up valuable time and resources that could have been used with other patients

Perceptions of SHARE team members. Interviews with SHARE team members identified specific work being done by the different disciplines. In particular, the psychiatrist dealt predominantly with consultation questions concerning diagnosis and medications. The psychologist focused primarily on providing psychological assessments and short-term cognitive-behavioural therapy for anxiety and depression problems. The social worker also conducted assessments, provided some individual counselling and couples therapy, co-ordinated bibliotherapy, and engaged in case management. According to the psychiatric nurse, her clinical role was less well-defined: half her time was spent in clinical care through providing psychoeducation, making referrals to outside services, engaging in counselling, and providing case management; the remaining time was spent in administration and co-ordination of patient care with the SHARE team and family physicians.

One of the SHARE team members suggested that providing services as part of a multidisciplinary team resulted in greater efficiency where there was a specific role for each player and the roles were co-ordinated. Another SHARE team member suggested that the team's wide range of expertise fostered greater confidence and, when necessary, a sense of shared responsibility. For optimal team functioning, members stressed the need for: (a) good levels of communication among team members, (b) a high level of cohesion within the team, and (c) excellent administrative support for the team.

Perceptions of patients. Of the 328 patients referred to the SHARE team by the two family practices, 76 patients did not enter the evaluation study. The reasons included refusal to sign or revocation of consent ($N = 15$), triage by APN to more appropriate service ($N = 12$), referral declined when contacted ($N = 12$), failure to keep the appointment ($N = 17$), and cancellation of referral by family physician ($N = 17$).

Eighty-one per cent ($N = 207$) of the patients enrolled in the study participated in the follow-up telephone interview asking about their satisfaction with the SHARE program. Eighty-nine per cent of respondents reported that they would rate the SHARE team service as excellent or very good; 88% of respondents indicated that they would likely use the program again if they needed help; 86% said that they would recommend the service to a friend; and 84% said that the services that they had received had helped them to deal more effectively with their problems.

In addition, 81% of respondents indicated that they had received the kind of service that they wanted, and 77% of respondents indicated that they were generally satisfied with the service. Further, 72% of individuals reported that the SHARE team service had met their needs, and 72% of the patients who responded stated that they were happy with the amount of help they had received. SHARE patients' levels of satisfaction on the CSQ-8 were not significantly different from satisfaction levels of clients at a mental health service setting (Nguyen, Attkisson, & Stegner, 1983), counselling service setting (Greenfield, 1983), or clients at a primary care setting (Attkisson, Roberts, & Pascoe, 1983).

In response to the open-ended question about the SHARE service, patients liked: (a) the speed and flexibility of the referrals; (b) the composition, attitude and competency of the team members; (c) the high level of support and understanding offered to patients; and (d) the advantages of excellent communication between the family doctor and the team. A number of patients described the relief of finally getting treatment.

The three main issues that patients wanted to improve about the SHARE service were: (a) the accessibility of service; (b) the number and length of sessions; and (c) the nature of the treatment. Some patients, especially those who worked, found the scheduling of SHARE appointments to be restrictive. Some patients found there was a delay in getting a first appointment once the referral had been sent in. A number of patients wanted more sessions, longer sessions, and more follow-up—even if it was provided over the telephone. Some patients felt the short session did not allow the doctor time to get into the patient's problems.

Some patients questioned the appropriateness of their referral to the team or to the most appropriate team member. One patient pointed out that the program "was not explained properly by my family

physician," and another suggested that one of the central issues in improving the program was "managing people's expectations of what will actually happen."

DISCUSSION

Overall, chart data on the services combined with perceptions of SHARE team members and family physicians suggested that the range of services being delivered by the SHARE team corresponded to those originally planned. Patients expressed a high level of satisfaction with the services they received from the SHARE team that was comparable to the levels of satisfaction reported by patients receiving services in other health care settings.

The needs assessment of family physicians and residents undertaken prior to the project endorsed the provision of mental health care in collaboration with mental health professionals, an essential element for the potential success of the Ottawa SHARE demonstration project. Co-location of the mental health team in the primary care setting allowed regular and easy access to the team and also allowed the team to record their assessment and follow-up notes in the primary care clinical chart. Evidence supporting co-location as a critical success factor of collaborative mental health care is provided by a systematic review of 38 studies that investigated the impact of collaborative mental health care (Craven & Bland, 2006).

With respect to the target population being served, 252 of the 328 patients referred from primary care (77% of total referrals) consented to receive care by the SHARE program in collaboration with their family physicians, which suggests that this model of care was acceptable to the majority of primary care patients at the time of their referral. Over the 16 months of the project, the total of 1.2 full-time equivalent mental health staff (4 professionals each devoting 1.5 days per week to the project) was able to provide assessment and consultation services and, in some cases, short-term psychosocial interventions for patients referred from a primary practice population of approximately 17,000 patients. This suggests that this model of care does not require unrealistic numbers of full-time mental health staff per primary practice, and the staffing level is consistent with a comparative Canadian model of collaborative mental health care (Kates, Crustolo, Farrar, & Nikolaou, 2002). Unfortunately, shortages of family physicians precluded acceptance of any new patients, including those from the mental health system.

Overall, our findings suggest that SHARE patients were experiencing mental health difficulties of varying severity at the time of referral. A majority of participants reported symptoms of depression and/or anxiety that met diagnostic criteria for a mental health disorder, suggesting that the referrals were appropriate. However, using the GAF scale, the large majority of patients were assessed by SHARE team members as experiencing symptoms of a mild or transient nature. Among patients experiencing difficulties that were moderate, severe, or very severe in nature according to their TAG ratings, the presence of psychological distress or socially-impaired relationships was particularly prevalent, but only a small numbers of patients were rated as being at high risk with respect to self-harm or acting out against others.

A plausible interpretation of the clinical characteristics of patients referred to the program is that they were being seen by the SHARE team at early stages of their mental disorders, which were severe enough to meet diagnostic criteria but not prolonged enough to result in severe functional impairment. A collaborative care service such as that delivered by the SHARE program facilitates early intervention, which can then prevent mental health problems from becoming more severe. Other sources report that treatment of mild and moderate cases of mental illness in a primary care setting will prevent more severe cases (Dewa, Rochefort, Rogers, & Goering, 2003; Kessler et al., 2003) and supports our conclusion that an appropriate target population was served by the program.

Being able to offer patients choice about treatment modalities may be another important success factor for collaborative mental health care (Craven & Bland, 2006). As planned, a multidisciplinary team enabled the SHARE program to provide a range of therapeutic options in addition to psychiatric assessment and recommendations concerning medication management. Providing a choice of psychotherapy instead of, or in addition to, medication for treatment of depression in primary care patients has been found to be popular and effective in randomized trials (Rost, Nutting, Smith, Elliott, & Dickinson, 2002; Unützer et al., 2002).

Qualitative methods may be especially valuable in measuring the degree of collaboration between family physicians and mental health professionals (Whitley & Crawford, 2005). Many dimensions should be evaluated, including: (a) frequency of collaboration, (b) interdisciplinary co-ordination, (c) primary care provider attitudes toward provision of mental health care, (d) operational integration of mental health services into primary care, and (e) the mental health team's motivation and satisfaction (Pautler & Gagné, 2005). The quality of collaborative relationships can be measured using indicators such as: (a) the primary care providers' satisfaction with mental health providers' care, (b) communication between primary care providers and the mental health team, (c) types of communication during different modes of care, and (d) timeliness of the mental health consultation. Despite concerns expressed by some family physicians about the organization of the program, particularly when the SHARE program was initiated and the amount and duration of support it could offer patients was limited, the majority of family physicians and residents reported that the program met their needs and the needs of their patients.

The SHARE program clearly did not succeed in referring patients from the mental health system to primary care. Although the evident reason in this demonstration project was lack of availability of family physicians accepting any new patients into their practices, others suggest that patients with severe mental illness have particular difficulty gaining access to adequate medical care (Koran et al., 1989; Shore, 1996). Some patients with severe mental illness may be unable to effectively understand their medical problems or be unco-operative with diagnosis and treatment. For example, data from a community-based sample of individuals with severe mental illness indicated that over 60% reported difficulty with taking medications, keeping medical appointments, and recognizing symptoms (Skinner et al., 1999). Whether the presence of a mental health team working with family physicians in a collaborative care arrangement would mitigate these difficulties is an area for future research. In addition, it is possible that family physicians would be more willing to accept patients with severe mental

illness into their practice knowing that they would have the back-up of mental health specialists as part of a collaborative mental health care arrangement.

CONCLUSION

The evaluation of implementation of the Ottawa SHARE program suggested that the needs of the target population of primary care patients and their family physicians were being met and that the program was largely implemented as planned. Co-location of a multidisciplinary mental health team providing on-site services in a primary care environment was found to be feasible and acceptable to both patients and family physicians. The majority of patients referred to the program reported symptoms which met criteria for psychiatric disorders according to standard diagnostic criteria, yet few patients required referral for more intensive hospital-based services. These findings suggest that most primary care patients with mental disorders can be treated with short-term interventions in the primary care environment using a collaborative mental health care model. Finally, the availability of mental health professionals trained in nursing, social work, psychology, and psychiatry in a collaborative care model could provide comprehensive mental health services, and this proved to be particularly valued by the referring family physicians. However, a shortage of family physicians prevented mental health system patients lacking family physicians from gaining access to primary care during the period of this demonstration project.

RÉSUMÉ

Cet article présente les résultats d'une évaluation des besoins qu'ont les médecins de famille et les résidents en médecine familiale dans le cadre des soins à offrir en santé mentale, de même que l'évaluation d'un projet pilote de services multidisciplinaires de soins de santé mentale, au cours duquel les médecins de famille de deux cliniques ont travaillé en équipe avec les services de santé mentale d'un hôpital général. Selon les médecins de famille et les résidents qui ont participé au projet, les soins de santé mentale axés sur la collaboration améliorent mais ne remplacent pas le traitement qu'ils offrent à leurs patients ayant des problèmes de santé mentale. L'évaluation du projet indique que les patients ont bien accepté les soins axés sur la collaboration, et que les médecins ont apprécié cette approche. On note toutefois qu'à cause du manque de médecins de famille, peu de patients traités par les services de santé mentale et n'ayant pas de médecin de famille ont pu avoir accès à des soins primaires grâce au projet.

REFERENCES

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Ansseau, M., Dierick, M., Buntinkx, F., Cnockaert, P., De Smedt, J., Van Den Haute, M., et al. (2004). High prevalence of mental disorders in primary care. *Journal of Affective Disorders, 78*, 49-55.

Attkisson, C.C., & Greenfield, T.K. (1996). The Client Satisfaction Questionnaire (CSQ) scales and the Service Satisfaction Scale-30 (SSS-30). In L.I. Sederer & B. Dickey (Eds.), *Outcomes assessment in clinical practice* (pp. 120-127). Baltimore: Williams & Wilkins.

Attkisson, C.C., Roberts, R.E., & Pascoe, G.C. (1983). The evaluation ranking scale: Clarification of methodological and procedural issues. *Evaluation and Program Planning, 6*, 349-358.

Chapeskie, K.K. (1996, October). *Mental health practices of Ontario family physicians* (Briefing Note No. 96-01-BN). North York, ON: Institute for Clinical Evaluative Sciences.

Craven, M.A., & Bland, R. (2006). Better practices in collaborative mental health care: An analysis of the evidence base. *Canadian Journal of Psychiatry, 51*(Suppl. 1), 7S-72S.

Craven, M.A., Cohen, M., Campbell, D., Williams J., & Kates, N. (1997). Mental health practices of Ontario family physicians: A study using qualitative methodology. *Canadian Journal of Psychiatry, 42,* 943-949. Retrieved November 11, 2008, from: https://ww1.cpa-apc.org/Publications/Archives/PDF/1997/Nov/CRAVEN.PDF

Dewa, C.S., Rochefort, D.A., Rogers, J., & Goering, P. (2003). Left behind by reform: The case for improving primary care and mental health system services for people with moderate mental illness. *Applied Health Economics and Health Policy, 2,* 43-54.

Greenfield, T.K. (1983). The role of client satisfaction in evaluating university counseling services. *Evaluation and Program Planning, 6*, 315-327.

Kates, N., Craven, M., Bishop, J., Clinton, T., Kraftcheck, D., LeClair, K., et al. (1997). Shared mental health care in Canada [Position paper]. *Canadian Journal of Psychiatry, 42*(8) [outsert]. Retrieved November 11, 2008, from: http://ww1.cpa-apc.org:8080/Publications/Position_Papers/Shared.asp

Kates, N., Crustolo, A.M., Farrar, S., & Nikolaou, L. (2002). Counsellors in primary care: Benefits and lessons learned. *Canadian Journal of Psychiatry, 47,* 857-862.

Kessler, R.C., Demler, O., Frank, R.G., Olfson, M., Pincus, H.A., Walters, E.E., et al. (2005). Prevalence and treatment of mental disorders, 1990 to 2003. *New England Journal of Medicine, 352,* 2515-2523.

Kessler, R.C., Merikangas, K.R., Berglund, P., Eaton, W.W., Koretz, D.S., & Walters, E.E. (2003). Mild disorders should not be eliminated from the *DSM-V*. *Archives of General Psychiatry, 60,* 1117-1122.

Koran, L.M, Sox, H.C., Jr., Marton, K.I., Moltzen, S., Sox, C., Kraemer, H.C., et al. (1989). Medical evaluation of psychiatric patients. 1. Results in a state mental health system. *Archives of General Psychiatry, 46*, 733-740.

Krueger, R.A. (1998). *Analyzing and reporting focus group results.* Thousand Oaks, CA: Sage Publications.

Nguyen, T.D., Attkisson, C.C., & Stegner, B.L. (1983). Assessment of patient satisfaction: Development and refinement of a service evaluation questionnaire. *Evaluation and Program Planning, 6*, 299-313.

Paquette-Warren, J., Vingilis, E., Greenslade, J., & Newnam, S. (2004). *Process evaluation of the Hamilton HSO Mental Health & Nutrition Program.* London, ON: University of Western Ontario, Population and Community Health Unit. Retrieved November 11, 2008, from: http://www.uwo.ca/fammed/pchu/Final%20Process%20Evaluation.pdf

Pautler, K., & Gagné, M.A. (2005). *Annotated bibliography of collaborative mental health care.* Mississauga, ON: Canadian Collaborative Mental Health Initiative. Retrieved November 11, 2008, from: http://ccmhi.ca/en/products/documents/03_AnnotatedBibliography_EN.pdf

Rhodes, A.E., Bethell, J., & Schultz, S.E. (2006). Primary mental health care. In L. Jaakkimainen, R. Upshur, J.E. Klein-Geltink, A. Leong, S. Maaten, S.E. Schultz et al. (Eds.), *Primary care in Ontario: ICES Atlas* (pp. 141-160). Toronto: Institute for Clinical Evaluative Sciences. Retrieved November 11, 2008, from: http://www.ices.on.ca/file/PC_atlas_chapter9.pdf

Rossi, P.H., Lipsey, M.W., & Freeman, H.E. (2004). *Evaluation: A systematic approach* (7th ed.). Thousand Oaks, CA: Sage Publications.

Rost, K., Nutting, P., Smith, J.L., Elliott, C.D., & Dickinson, M. (2002). Managing depression as a chronic disease: A randomized trial of ongoing treatment in primary care. *BMJ (British Medical Journal), 325,* 934. Retrieved November 11, 2008, from: http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=130058&blobtype=pdf

Shore, J.H. (1996). Psychiatry at a crossroad: Our role in primary care. *American Journal of Psychiatry, 153,* 1398-1403.

Skinner, E.A., Steinwachs, D.M., Handley, K., Lehman, A., Fahey, M., & Lyles, C.A. (1999). Met and unmet needs for assistance and quality of life for people with severe and persistent mental disorders. *Mental Health Services Research, 1*,109-18.

Slade, M., Powell, R., Rosen, A., & Strathdee, G. (2000). Threshold Assessment Grid (TAG): The development of a valid and brief scale to assess the severity of mental illness. *Social Psychiatry and Psychiatric Epidemiology, 35*, 78-85.

Spitzer, R.L., Kroenke, K., & Williams, J.B. (1999). Validation and utility of a self-report version of PRIME-MD: The PHQ primary care study. *Journal of the American Medical Association, 282*, 1737-1744.

Sully, P. (2003). *Shared Mental Health Care (SMHC) service: Evaluation project—2002: Final report*. Calgary, AB: Alberta Mental Health Board and Calgary Health Region. Retrieved November 11, 2008, from: http://www.shared-care.ca/pdf/Calgary_outcomes.pdf

Unützer, J., Katon, W., Callahan, C.M., Williams, J.W., Jr., Hunkeler, E., Harpole, L., et al. (2002). Collaborative care management of late-life depression in the primary care setting. *Journal of the American Medical Association, 288*, 2836-2845.

Whitley, R., & Crawford, M. (2005). Qualitative research in psychiatry. *Canadian Journal of Psychiatry, 50*, 108-114.