Editor's key points

- Patients admitted to hospital for mental health reasons usually have a psychiatrist as their main care provider. Psychiatrists often do not provide treatment for physical health concerns, and consequently they might depend on other colleagues for support in caring for their patients. This can lead to expensive and fragmented care as multiple specialists are consulted.
- This article describes a simple and novel collaborative program of care for patients with mental illness in a tertiary care setting, with consultations provided by family physicians. The authors assessed the consultations offered and the level of attachment patients had to community-based family physicians.
- Most of the physical health concerns seen in consultation—both chronic and acute—were addressed through primary care, with only 31% also being referred to other services.
- Implementing a family practice consultation service for patients admitted to hospital with mental health issues might lead to fewer referrals to specialist services, potentially reducing acute care costs, unnecessary investigations, and overtreatment.

Family doctors providing primary care to patients with mental illness in a tertiary care facility

Rita K. McCracken MD CCFP(COE) Laura Fung MD CCFP MB
Anna K. Stratis MD CCFP MSc Kimberley R. Cottick MD CCFP Sarah Dobson MSc

Abstract

Problem addressed Individuals with severe mental illness have an increased burden of physical comorbidities. Physical concerns of patients admitted to hospital for mental health reasons might be addressed by multiple specialists, leading to fragmented care and high costs to the system, when many of these concerns could be addressed by primary care.

Objective of program The Family Doctor Outreach Clinic (FDOC) aims to provide rapid consultations for common concerns, to provide consultations for complex chronic disease and addictions, and to identify gaps in community care that contribute to patients' potential readmission to hospital. The FDOC is a simple and novel collaborative program of care in a tertiary care setting.

Program description Members of the Department of Family Medicine at St Paul's Hospital in Vancouver, BC, have been providing consultation services for patients admitted to the 4 mental health wards (total of 108 beds). Using a prospective cohort of consecutive consultations (N = 104) from July to August 2014, the study team collected data on details of current admissions, connections to community primary care, and reasons for consultations.

Conclusion Including family physicians in the care of mental health inpatients, as is done at the FDOC, might avert referrals to specialist services and provide a bridge between acute care and community family practice.

Des médecins de famille qui prodiguent des soins à des patients atteints d'une maladie mentale dans un établissement de soins tertiaires

Rita K. McCracken MD CCFP(COE) Laura Fung MD CCFP MB
Anna K. Stratis MD CCFP MSc Kimberley R. Cottick MD CCFP Sarah Dobson MSc

Résumé

Problème à l'étude Les personnes qui souffrent d'un problème de santé mentale présentent souvent plusieurs autres problèmes sur le plan physique. Lorsque ces patients sont hospitalisés pour des raisons de santé mentale, leurs problèmes d'ordre physique risquent d'être traités par plusieurs spécialistes, ce qui entraîne des soins mal coordonnés et des coûts accrus pour le système, alors que plusieurs de ces problèmes pourraient être traités par des soins primaires.

Objectif du programme Le but de la Family Doctor Outreach Clinic (FDOC) est d'offrir des consultations rapides pour des problèmes de santé fréquents, des maladies chroniques et des problèmes de dépendance complexes, et d'identifier certaines failles dans la prestation des soins au niveau communautaire, susceptibles d'accroître les risques d'une nouvelle hospitalisation. La *FDOC* est un programme de soins innovateur et simple, basé sur la collaboration dans un contexte de soins tertiaires.

Description du programme Les membres du département de médecine familiale de l'hôpital St Paul à Vancouver ont instauré un service de consultations à l'intention des patients admis dans 4 unités de santé mentale (un total de 108 lits). Grâce à une cohorte prospective de consultations consécutives entre juillet et août 2014 (N = 104), les membres de l'équipe ont recueilli des données sur les détails et les raisons des admissions et sur les contacts avec les soins primaires communautaires.

Conclusion En faisant participer des médecins de famille aux soins des patients hospitalisés pour des problèmes de santé mentale, comme on le fait à la FDOC, on pourrait éviter des demandes de consultation en spécialité, assurant ainsi un lien entre des soins aigus et la pratique d'une médecine familiale communautaire.

Points de repère du rédacteur

- En général, les patients qui sont hospitalisés pour des problèmes de santé mentale ont un psychiatre comme principal responsable des soins. Souvent, les psychiatres ne traitent pas les problèmes de santé physique, si bien qu'ils pourraient demander à d'autres collègues de s'occuper de leurs patients. Cela pourrait entraîner des soins onéreux et fragmentés étant donné la participation de plusieurs spécialistes.
- Cet article décrit un programme de soins innovateur, destiné à des patients hospitalisés dans un établissement de soins tertiaires pour des problèmes de santé mentale, dans lequel des médecins de famille agissent comme consultants. Les auteurs ont évalué les consultations offertes et le niveau de confiance des patients envers les médecins de famille qui exercent dans leurs communautés.
- La plupart des problèmes de santé physique chroniques ou aigus qui ont fait l'objet de consultations ont été traités par l'entremise des soins primaires; seulement 31% ont aussi nécessité une demande de consultation dans un autre service.
- Le fait d'instaurer un service de consultation en médecine familiale pour des patients hospitalisés en raison d'un problème de santé mentale pourrait réduire le nombre de demandes de consultations en spécialité, le coût des services pour des problèmes de santé aigus, les examens inutiles et l'excès de traitements.

Individuals with severe mental illness have an increased burden of physical comorbidities, including hypertension, HIV and AIDS, and diabetes.[1-3] Although the burden of disease among such patients is higher owing to factors such as socioeconomic disadvantage, self-neglect, and substance use, these general medical conditions might go undiagnosed and possibly untreated.[1] This might be due in part to a gap between psychiatry and primary care.

Patients admitted to hospital for mental health reasons usually have a psychiatrist as their main care provider. Psychiatrists often do not provide treatment for physical health concerns,[4] and consequently they might depend on other colleagues for support in caring for their patients. Although acute care specialist services are typically available in-hospital, specialists might not have direct experience treating patients with active mental health issues. Furthermore, these patients might require consultations with several different specialist services, which can contribute to the length of stay (LOS), increase fragmentation of care, and reduce the chance of establishing longer-term comprehensive, patient-centred care.[5,6]

To bridge this gap, collaborative mental health care models between psychiatry and primary care have been widely introduced.[1,7-16] However, most such models described in the literature focus on outpatient services or on supporting family physicians treating mental health disorders in the community. Inpatients with chronic or severe mental illnesses can prove costly to the health care system without concurrent treatment from primary care. Further, without proper attachment to primary care in the community, these patients are at higher risk of readmission.[17]

Here we describe a simple and novel collaborative program of care in a tertiary care setting, the consultations it provides, and patients' level of attachment to community-based family physicians.

Objective of program

The Family Doctor Outreach Clinic (FDOC) provides family medicine consultation services on the psychiatric wards of an inner-city hospital in Vancouver, BC. The goals of the FDOC are to provide rapid, high-volume consultations for common concerns (eg, dermatology, genitourinary, and reproductive health), to provide consultations for complex chronic diseases, and to identify gaps in community care that contribute to patients' instability and potential readmission to hospital.

Providing rapid, high-volume consultations for common concerns avoids unnecessary specialist consultations and might ultimately prevent excessive investigation and overdiagnosis, which could lead to cost savings.[18] The family physician is also able to seamlessly integrate collateral information and, where appropriate, involve allied team members in the management plan.

Program description

Since 2012, members of the Department of Family Medicine at Providence Health Care in Vancouver, BC, have been providing consultation services to the psychiatrists working at St Paul's Hospital in the 4 mental health wards (approximately 108 beds) through the FDOC. The FDOC was developed to respond to acute and chronic (but not emergency) patient concerns reported by psychiatry staff. Before initiation of the FDOC, specialist services within the hospital (eg, internal medicine, urology, dermatology) were available to address these patient concerns. However, there were concerns about the diversion of specialist work flow from emergency work on other wards, the costs of relying on specialists for nonurgent consultations, and the fragmentation of care associated with relying on multiple specialists for an individual's care. The FDOC was implemented to address these concerns.

The FDOC was designed to be simple, requiring minimal administration or coordination. The consultation service operates 4 half-days per week, with 4 family doctors sharing the schedule. They are paid an hourly rate and each provides consultations on the same afternoon each week. Follow-up is organized by FDOC clinicians and usually consists of the following: interpretation of a laboratory test result, providing guidance to a psychiatrist in a chart note, or asking an FDOC colleague to see a patient the following day. All consultation requests come from the attending psychiatrists.

Program evaluation

The objectives of the evaluation were to characterize the consultation requests received by the FDOC and to assess patient attachment to community-based family physicians. Using a prospective cohort of consecutive consultation requests (N = 104) from July to August 2014, the study team collected data on details of current admissions, connection to community primary care, and reasons for consultations.

A certificate of ethics approval was obtained from the University of British Columbia Providence Health Care Clinical Research Ethics Board (REB). Because patients admitted to the units included in this study are certified under the BC *Mental Health Act* (Section 22: Involuntary Admissions),[19] the REB required using de-identified consultation data, and therefore the unit of analysis was the consultation rather than the individual.

All data were collected by the consulting family physician immediately after the patient encounter on unlinked data sheets and all personal identifiers were removed. Pearson χ^2 was used to test categorical variables (attachment to community-based family physician, chronic disease concern, additional consultations). Descriptive statistics were calculated using SPSS, version 22.

As part of usual care, the FDOC doctors ask patients about their attachment to a community-based family physician. We asked each patient, "Do you have a regular

family doctor in the community?" If the patient answered in the affirmative, we asked for the name of the physician. The reported family physician was contacted to verify the attachment, inform him or her of the patient's admission, confirm willingness to provide care after the patient's discharge, and provide any collateral information about the concern and treatment plan for the issue that was identified in the consultation. This information was added to the patient chart for use by the psychiatry team for ongoing care and discharge planning.

Results

Characteristics of the 104 consecutive consultations in the FDOC are described in **Table 1**.[19] Overall, consultations conducted involved mostly men, with a median age of 51. For most consultations (63%) attachment to a family physician in the community was identified. The validation process—calling the family physician identified by the patient—also revealed that family physicians in the community are not routinely contacted by the mental health team. The consultations that identified no attachment to a community-based family physician involved patients with a significantly younger median age (43 vs 51 years, $P<.001$).

The median (interquartile range) LOS from the time of admission to consultation with the FDOC was 16 (7 to 34) days. Reasons for consultation were evenly distributed between acute and chronic primary care issues. The frequency of primary care concerns is shown in **Figure 1**. Thirty-one percent of the primary care consultations also had referrals made to other specialty services, and 8% were referred to addictions services. Consultations for patients attached to a community-based family physician were significantly more likely to include referrals to other services ($P=.002$).

Thirty-one percent of the consultations identified more than 2 visits to the emergency department (ED) in the previous year. There was no significant difference ($P=.59$) in the number of ED visits in the previous 12 months in the consultations for patients attached to a community-based family physician compared with consultations for unattached patients. Likewise, there was no significant difference in the median LOS for consultations for attached patients compared with unattached patients ($P=.17$).

Discussion

This program highlights the role of family physicians in addressing the physical health needs of patients admitted to hospital with mental health issues. Family physicians addressed common concerns for acute issues such as wound care and musculoskeletal pain, as well as chronic issues such as diabetes and cardiovascular disease. In our evaluation, most of the physical health concerns seen in consultation—both chronic and acute—were addressed through primary care, with just 31% also being referred to other services.

The level of patient self-reported attachment to primary care in the community was higher than expected. In our validation study, however, we were unable to reach more than one-third of the family physicians listed by the patients as their primary care providers. This might complicate the transition back into the community after discharge. Those family physicians we were able to reach indicated the desire to maintain involvement with their patients.

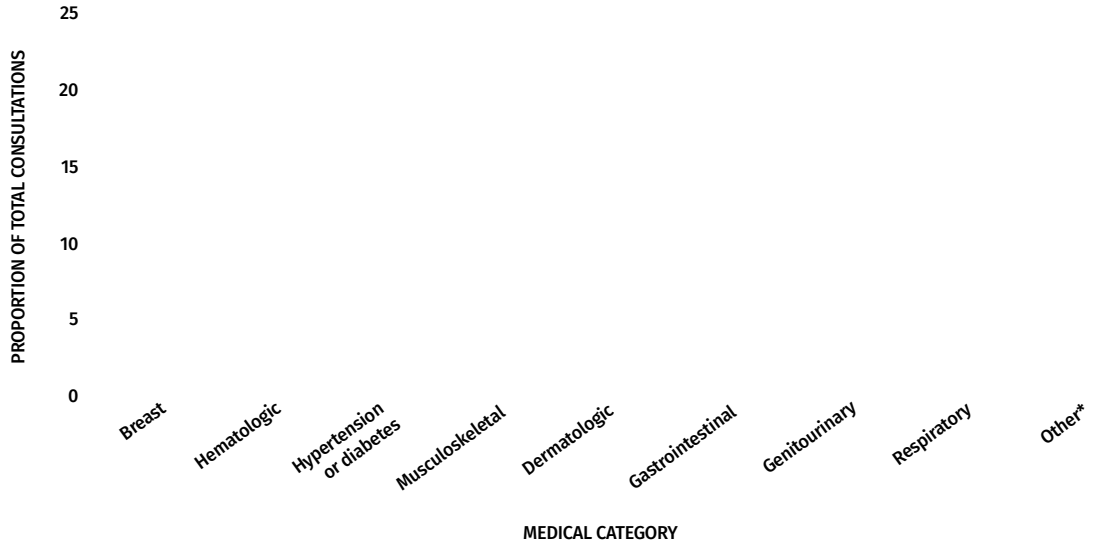
Ideally, patients with a mental health issue requiring hospitalization would have long-term primary care providers in the community who were familiar with both their mental health and their physical conditions. This is not always possible for a variety of reasons, including a local shortage of family physicians providing longitudinal,

Table 1. Characteristics of FDOC consultations compared by attachment to community-based family physicians

CHARACTERISTIC	ATTACHED TO COMMUNITY BASED FAMILY PHYSICIAN (N 65)*	NO COMMUNITY BASED FAMILY PHYSICIAN (N 39)*	TOTAL CONSULTATIONS (N 104)*	*P* VALUE
Male sex, n (%)	39 (62)	20 (51)	59 (58)	
Chronic disease concern,† n (%)	12 (19)	4 (10)	16 (15)	.26
Additional consultations, n (%)				
• Any specialist service	26 (42)	5 (13)	31 (31)	.002
• Addiction medicine	6 (9)	2 (5)	8 (8)	.002
Median (IQR) age, y	51 (40-62)	43 (29-47)	46 (35-61)	<.001
Median (IQR) LOS,‡ d	20 (8-35)	14 (6-30)	16 (7-34)	.17
Median (IQR) no. of ED visits in previous 12 mo§	2 (1-3)	1 (1-3)	2 (1-3)	.59

ED—emergency department, FDOC—Family Doctor Outreach Clinic, IQR—interquartile range, LOS—length of stay.
*Data were gathered for unique consultation requests, not unique patients, because of ethical limitations regarding gathering of any unique identifiers for patients admitted under the BC *Mental Health Act* (Section 22: Involuntary Admissions).[19] Not all data were available for all consultations; proportions were calculated based on available data.
†Chronic disease concerns were defined as diabetes, hypertension, or cardiovascular risk factors.
‡The LOS was recorded as of the day the consultation was made by the FDOC service.
§Visits to the ED were only calculable for the same facility in which patients were admitted, not all EDs in the region.

Figure 1. Frequency and category of medical concerns assessed by the Family Doctor Outreach Clinic



*Other includes cardiovascular risk factors or symptoms, ophthalmologic, polypharmacy, and contraception.

community-based primary care and instability in the patients' lives that might hinder their ability to maintain a relationship with a family physician or clinic.

Local[20] and international evidence[6] shows that having a family physician who provides longitudinal care will improve health outcomes and lower costs. Strong communication between the in-hospital family practice consultation service and the community clinician provides an opportunity to offer continuity for the patient and ease the transition into community care.

While we found no significant difference in the LOS or frequency of ED visits for consultations for attached versus unattached patients, we noted that the consultations for attached patients had a median patient age of 51 years while the consultations for unattached patients had a median patient age of 43 years. Although younger patients typically have fewer chronic care needs than older patients do, unattached younger patients with mental health issues might have difficulty obtaining appropriate continuous care in the community.

Indeed, in our evaluation, consultations involving patients without a community-based family physician were significantly less likely to include referral to other services. This finding might suggest that the physical concerns of patients who were unattached to a community-based family physician were common enough to be addressed just through primary care. Or, it could be that these patients were unable to address those concerns outside of an acute care setting owing to the general level of instability in their lives associated with their mental health.

Limitations. This program evaluation had several limitations. We used a convenience sample of consecutive consultations with no control or comparison group. Our REB required that we remove all patient identifiers, which meant that we could not track repeat consultations for the same patient. This requirement exposed us to a methodologic bias due to the possibility that multiple consultation requests were generated for the same patient. We also relied on patient self-reporting of attachment to a family physician in the community, which proved difficult to confirm.

Finally, patients seen in consultation were involuntarily admitted under the BC *Mental Health Act*. The inclusion of the patient's perspective in evaluation of service is recognized as important in psychiatric care, but leads to additional challenges related to altered perception.[21] Often, as is the case in our study, admission decisions are made while patients have been deemed incapable of making their own health decisions.[21] Ideally, the design of treatment programs would include active contribution from patients to better understand the patient experience, but we did not ask about or include patients' experiences in this evaluation. Future work that includes patient experiences with psychiatric inpatient care would benefit from a tool such as the one developed by Evans and colleagues.[22]

Conclusion

Our results suggest that the involvement of family physicians in the care of patients admitted to hospital with mental health issues might avert referrals to

other specialist services, potentially reducing acute care costs, unnecessary investigations, and overtreatment. We are not aware of any similar programs operating in Canada. This might be owing to the limited role that family physicians now play in urban acute care facilities. The results of our evaluation are promising and might be helpful for those designing future interfaces between acute and primary care.

Implementing a family practice consultation service for patients admitted to hospital with mental health issues might provide a bridge between acute care and community family practice. This simple approach can be easily replicated in any urban acute care facility. Future evaluations should consider patient experiences and find ways to engage patients in a participatory evaluation process. Further study is required to understand the effects of such a service on the rate of readmission and potential cost savings within the health care system.

Dr McCracken is Clinical Assistant Professor at the University of British Columbia in Vancouver, Associate Department Head in the Department of Family Medicine at Providence Health Care, and a doctoral candidate in Family Practice (Experimental Medicine) at the University of British Columbia. **Dr Fung** is a family physician at Anishnawbe Health Toronto in Ontario. **Dr Stratis** is a family physician in New York, NY. **Dr Cottick** is a family physician with the Department of Family Medicine at Providence Health Care in Vancouver. **Ms Dobson** is a consultant based in Vancouver.

Contributors
All authors contributed to the concept and design of the program; data gathering, analysis, and interpretation; and preparing the manuscript for submission.

Competing interests
None declared

Correspondence
Dr Rita McCracken; e-mail **rita.mccracken@ubc.ca**

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