Mental Health Treatment in Ontario: Selected Comparisons Between the Primary Care and Specialty Sectors

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Objective: Epidemiologic research has demonstrated that the majority of mental illness in the community is not treated. Primary care physicians and the specialty mental health sector each have an important role in the provision of mental health services. Our goal is to clarify the extent of undertreatment of selected mental illnesses in Ontario and to examine how treatment is divided between the primary care and specialty sectors. In particular, we are interested in both the relative numbers and the types—based on sociodemographic and severity indicators—of patients found in each sector, as well as in confirming the key role of primary care in the provision of mental health services.

Method: Data were taken from the Mental Health Supplement to the Ontario Health Survey, a community survey of 9953 individuals. All subjects who met DSM-III-R criteria for a past year diagnosis of mood, anxiety, substance abuse, bulimic, or antisocial personality disorders were categorized by their use of mental health services in the preceding year—into nonusers, primary care only patients, specialty only patients, and both sector patients. The 3 groups utilizing services were then compared by demographic, clinical, and disability characteristics.

Results: Only 20.8% of subjects with a psychiatric diagnosis reported use of mental health services, but 82.9% of these same individuals used primary care physicians for general health problems. Among those who used mental health services, 38.2% used family physicians only for psychiatric treatment, compared with 35.8% who used only specialty mental health providers, and 26.0% who used both sectors. The 3 groups of users showed only modest differences on sociodemographic characteristics. Patients in the specialty only sector reported significantly higher rates of sexual and physical abuse. On specific disability measures, all 3 groups were similar.

Conclusion: The vast majority of individuals with an untreated psychiatric disorder are using the primary care sector for general health treatment, allowing an opportunity for identification and intervention. Primary care physicians also treat the majority of those seeking mental health services, and individuals seen only by these primary care physicians are probably as ill as those seen exclusively in the specialty mental health sector. From a public health perspective, future policy interventions should aim to improve collaboration between the 2 sectors and enhance the ability of primary care physicians to deliver psychiatric services.

(Can J Psychiatry 1997;42:929–934)

Key Words: utilization, health services, research, mood disorders, primary care, epidemiology, psychiatric disability
disorders than specialists, but primary care providers deliver fewer visits (9–11). As well, problems with the low rates of recognition and possibly inadequate management of mental disorders by primary care physicians have been noted (12–15).

High mental illness prevalence and low treatment rates suggest a significant public health problem that requires both clarification and a concerted approach for resolution. While one solution might be vast increases in referrals to specialty mental health care, economic constraints and the decline in the numbers of psychiatrists being trained limit this potential solution (16). Moreover, other barriers to successful treatment by specialists exist, including patient stigma regarding referral, patient noncompliance, and disagreement over diagnosis and subsequent treatment planning (15).

Clarification of the key issues in undertreatment benefits from a systemic perspective that identifies at which points individuals interact with the health care system. Goldberg and Huxley (17) have developed a model that identifies the number of potential patients at various levels and follows their progress through system “filters” into increasingly specialized services. For instance, starting from the community prevalence of illness, diminishing proportions of the population progress through the filters of primary care, specialty outpatient care, and specialty inpatient care. Such a perspective allows both thoughtful analysis of sites of intervention at the health system level as well as comparisons among individuals treated only in the primary care sector, treated only in the specialty sector, or treated in both sectors.

With these aims in mind, we used a community epidemiologic survey—the Mental Health Supplement to the Ontario Health Survey—to pose a series of questions. 1) What are the treatment rates for mental illness? 2) How is treatment divided among the primary medical care sector, the specialty mental health care sector, and the both treatment sector? 3) Are there differences in severity as measured by disability or risk factors between patients treated in these 3 sectors? 4) How does major depression in particular illustrate these findings? We hypothesized that undertreatment of mental disorders would be common, that the primary care sector would play a large role in treatment delivery, and that the Goldberg and Huxley model, together with the characteristics of patients treated in each sector, would generate strategies for potential intervention.

Methods

The Supplement, a community survey of 9953 Ontario residents, has been described previously (18). It featured trained lay interviewers using a standardized instrument, the University of Michigan version of the Composite International Diagnostic Interview (UM-CIDI), to generate DSM-III-R diagnoses and included separate questions on demographic data, use of services, disability, and risk factors. From the original sample, an “adult” subsample of individuals aged 15 to 64 (n = 8116) was selected for analysis.

Demographic questions included the basic variables of age, sex, marital status, education, income, and family benefits status. Early risk factors that were examined in this study included parental history of psychiatric disorder, personal history of sexual abuse or serious physical abuse, and any history of a psychiatric disorder prior to the past year.

The disorders selected included summary categories of any affective disorder (major depression, dysthymia, and manic episode), as well as any anxiety disorder (panic disorder, generalized anxiety disorder, and phobias). Other conditions included any alcohol or substance abuse or dependence disorder. Finally, under the category of any disorder, the above disorders were supplemented by questions ascertaining the presence of antisocial personality disorder and bulimia. Psychotic disorders such as schizophrenia were not included in these analyses.

Disability was ascertained by questions assessing dysfunction in the 30 days immediately preceding the interview. Three categories of dysfunction were identified: totally unable, partially unable, and functioning but only with extreme effort. Functioning was defined broadly to include performance at a job, performance of housework, and performance of leisure activities.

Utilization encompassed a number of health services including outpatient visits to family physicians, psychiatrists, psychologists, social workers, nurses, and occupational therapists. For purposes of this study, 3 groups based on utilization patterns were created. The first group consisted of individuals who had seen a family physician for mental health reasons, but had not seen any specialty mental health personnel (FP group). A second group consisted of those individuals who had seen both a family physician and a member of the specialty mental health sector (Both group). The third group included those individuals who had only seen a member of the specialty mental health sector (SO group). The specialty mental health sector was defined as one or more of a psychiatrist, psychologist, social worker, registered nurse, or occupational therapist, all being used specifically for a mental health reason. The 3 categories—FP, Both, and SO—are mutually exclusive.

Of special note is the fact that the initial prevalence data of the disorders were calculated using weighted data. Weighting is a procedure that compensates for complex survey designs to produce a more accurate estimate based on the population as a whole. Analysis was done using SUDAAN (19). Chi-squared tests and the nonparametric Mann-Whitney
Results

Table 1 documents the prevalence of key diagnostic categories and the treatment utilization of individuals within these categories. Individuals with a diagnosis vary considerably in their use of mental health services, from a low of 18.5% for those with substance abuse, to 50.9% for those with an affective disorder, with the overall majority reporting no treatment. At the same time, a large majority of these individuals visited primary care physicians for general health problems, from a low of 76.4% for those with substance abuse, to a remarkable 91.5% for those with an affective disorder.

The distribution of treatment type across the primary care and specialty mental health sectors for respondents with “any diagnosis” in the preceding year is displayed in Table 2. Overall, users were fairly evenly divided across the 3 categories. For mood-disordered respondents, however, family physicians were more involved as the Both group was larger and the SO group was smaller than for other diagnoses.

Demographic characteristics of respondents (with “any diagnosis” in the preceding year) by treatment group are displayed in Table 3. The groups are similar on sex distribution and educational attainment, with the majority of subjects being women and having completed high school. The SO group is significantly younger at 31.6 years, versus 39.3 years in the FP group and 36.3 years in the Both group. Further, the SO group has the smallest proportion of married subjects (43.8%). The Both group shows significant economic disadvantage with a high proportion reporting low family income (23.1%) and public assistance status (21.9%).

Description of the respondents with respect to risk factors and disability is found in Table 4. All groups have high rates of a parental history of any mental health problems, with a higher percentage in the Both group (77.1%) than in the SO (70.4%) or the FP group (61.1%) ($\chi^2 = 6.6, df = 2, P < 0.05$). Respondents in the SO group have the highest rates (36.8%) of serious physical abuse compared with the Both group (22.3%) and the FP group (18.1%), but this does not achieve statistical significance ($\chi^2 = 5.2, df = 2, P = 0.075$). For sexual abuse, a similar significant pattern emerges ($\chi^2 = 10.2, df = 2, P < 0.01$), with the highest rate in the SO group (42.3%) versus the Both group (17.5%) and the FP group (18.0%). The groups also differ on the presence of a prior lifetime history of any diagnosis, with the Both group having the highest percentage at 51.7%, versus the SO group at 35.1%, and the FP group at 27.7% ($\chi^2 = 19.8, df = 2, P < 0.001$). On the 3 measures of disability, all 3 groups were similar in the total and partial disability reported in the preceding 30 days, but “extreme effort” days just reached significance with an increase in the Both group.

Table 5 reports the distribution of respondents by health sector level according to the Goldberg and Huxley model, both for individuals with “any diagnosis” and those with major depression. In contrast to the previous tables, where weighted data were employed, this table displays the actual number of respondents. This is another way of looking at the health sector utilization in earlier tables, with some further detail. For the 1607 individuals with any diagnosis, just 93 (5.8%) reported use of an outpatient psychiatrist, and 26 (1.6%) were hospitalized. Similarly, for the 341 depressed individuals, 53 (15.5%) used an outpatient psychiatrist and 14 (4.2%) were hospitalized. Substantially larger percentages had seen a family physician for mental health reasons and especially for general health problems in the preceding year.

Discussion

Our study has examined 2 broad themes: overall treatment rates of psychiatric disorders and the division of delivery of mental health services by primary care and specialty mental health sectors. Our findings add Canadian data to earlier work which demonstrates that the majority of people with mental health disorders diagnosed in community settings are not treated and that the rates of treatment differ by disorder. We have further demonstrated that these untreated individuals are not entirely outside the health care system, but that the large majority of them are seen for general health disorders by
Table 3. Demographic characteristics of subjects with any diagnosis by treatment group

<table>
<thead>
<tr>
<th></th>
<th>FP only</th>
<th>Both</th>
<th>Specialty only</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (% female)</td>
<td>71.1</td>
<td>57.2</td>
<td>65.2</td>
<td>ns</td>
</tr>
<tr>
<td>Age (years)</td>
<td>39.3</td>
<td>36.3</td>
<td>31.6</td>
<td>(&lt; 0.0001^a)</td>
</tr>
<tr>
<td>Married (%)</td>
<td>71.0</td>
<td>55.0</td>
<td>43.8</td>
<td>(&lt; 0.001^b)</td>
</tr>
<tr>
<td>Finished high school (%)</td>
<td>71.4</td>
<td>63.2</td>
<td>65.7</td>
<td>ns</td>
</tr>
<tr>
<td>Low income (%)</td>
<td>22.4</td>
<td>23.1</td>
<td>11.3</td>
<td>(&lt; 0.05^c)</td>
</tr>
<tr>
<td>On public assistance (%)</td>
<td>7.5</td>
<td>21.9</td>
<td>11.8</td>
<td>(&lt; 0.01^d)</td>
</tr>
</tbody>
</table>

\(^a\)F = 14.5, df = 2.
\(^b\)X^2 = 17.9, df = 2.
\(^c\)X^2 = 6.3, df = 2. Low income was defined as either less than $12,000 or alternatively on a combination of income and household size.
\(^d\)X^2 = 9.3, df = 2.

Table 4. Risk factors and disability in subjects with any diagnosis by treatment group

<table>
<thead>
<tr>
<th></th>
<th>FP only</th>
<th>Both</th>
<th>Specialty only</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental disorder (%)</td>
<td>61.1</td>
<td>77.4</td>
<td>70.4</td>
<td>(&lt; 0.05^e)</td>
</tr>
<tr>
<td>Sex abuse (%)</td>
<td>18.0</td>
<td>17.5</td>
<td>42.3</td>
<td>(&lt; 0.001^d)</td>
</tr>
<tr>
<td>Serious physical abuse (%)</td>
<td>18.1</td>
<td>22.3</td>
<td>36.8</td>
<td>(&lt; 0.005^f)</td>
</tr>
<tr>
<td>Total disability days (mean)</td>
<td>2.86</td>
<td>3.46</td>
<td>2.89</td>
<td>ns</td>
</tr>
<tr>
<td>Partial days (mean)</td>
<td>4.97</td>
<td>4.99</td>
<td>3.55</td>
<td>ns</td>
</tr>
<tr>
<td>Extreme effort days (mean)</td>
<td>3.88</td>
<td>6.60</td>
<td>3.09</td>
<td>(&lt; 0.05^g)</td>
</tr>
</tbody>
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\(^e\)Parental disorder refers to respondent’s report of significant mental health problem in either parent, based on 10 specific questions.
\(^f\)X^2 = 6.6, df = 2.
\(^g\)Sex abuse was defined as any sexual act occurring during childhood and done by an adult, based on 4 specific questions.
\(^h\)X^2 = 22.5, df = 2.
\(^i\)Serious physical abuse involved any physical act occurring during childhood and done by an adult, based on 6 specific questions.
\(^j\)X^2 = 11.4, df = 2.
\(^k\)All disability questions involved only the 30 preceding days.
\(^l\)All disability measures used the Mann-Whitney U test.
\(^m\)X^2 = 6.1, df = 2.

Table 5. Health care utilization based on system level of actual respondents (unweighted)

<table>
<thead>
<tr>
<th>Level</th>
<th>Any diagnosis (actual number; (%) of 1607)</th>
<th>Major depression (actual number; (%) of 341)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In community</td>
<td>1607 (100%)</td>
<td>341 (100%)</td>
</tr>
<tr>
<td>2. Seeing family physician for general health problem</td>
<td>1328 (82.6%)</td>
<td>307 (90.0%)</td>
</tr>
<tr>
<td>3. Seeing family physician for mental health</td>
<td>199 (12.4%)</td>
<td>121 (35.5%)</td>
</tr>
<tr>
<td>4. (a) Seeing outpatient mental health provider</td>
<td>204 (12.7%)</td>
<td>109 (32.0%)</td>
</tr>
<tr>
<td>(b) Seeing outpatient psychiatrist</td>
<td>93 (5.8%)</td>
<td>53 (15.5%)</td>
</tr>
<tr>
<td>5. Psychiatric hospitalization in past year</td>
<td>26 (1.6%)</td>
<td>14 (4.2%)</td>
</tr>
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</table>

Beyond entry into treatment are the special problems of treatment within the health system. Our description of the division of service utilization for mental health care by primary and specialty mental health care sectors reveals a number of compelling observations. First, almost equal numbers of individuals—just over one-third of the total sample each—utilize either family physicians alone or the specialty mental health sector alone for their mental health needs. Just under one-third of utilizers reported use of both sectors. Thus, approximately two-thirds of the users engage their primary care physicians in the provision of mental health care, again highlighting a vital role for primary care in mental health delivery.

Second, when subjects with a diagnosis are compared by treatment sector, only modest differences emerge among the groups. It is possible that the SO group is younger and less likely to be married as a function of younger respondents being sent to the specialty sector, either because the patient or the family physician recognizes needs that are more difficult to meet in the primary care sector (since our sample includes individuals as young as 15 who may have been referred to specialized adolescent services). Similar perceptions of need may explain the higher rates of sexual abuse in those seen in the specialty sector. Given the similar rates of disability in all 3 groups, however, it is difficult to identify any one group as being “more ill” or more in need of services than the other. The finding that the Both group has the highest rates of other lifetime diagnoses and the highest rates of economic disadvantage, however, suggests that this group may be the most in need of service.

A third disturbing finding from the treatment sector analysis is the fact that the Both group is the smallest of the 3 (although these numbers do not reach statistical significance). This runs counter to the expectation that in Canada’s health care system, where the structure is designed to reflect collabo-
ration between primary care and specialty care, the Both group would be expected to be the largest, or at least larger than the specialty only sector. Again, while all the differences are not statistically significant, the fact that the Both group has the highest absolute rates for low income, public assistance, and disability suggests significant need for enhancing collaboration among sectors.

Important limitations to our study include the fact that only selected diagnoses were considered and that disability was narrowly determined. Individuals with subthreshold disorders and those within other major diagnostic entities such as schizophrenia were not considered because of limitations in the diagnostic instrument. Individuals such as dementia were specifically excluded from the survey. Our measures of disability do not capture the full extent of the morbidity of a disorder, which reduced our ability to precisely characterize the functional ability and illness severity of individuals in each treatment group. Disability days are now widely used as a key measure of impairment and, therefore, provide useful information.

Previous research cited earlier has demonstrated significant concerns about underrecognition of mental health disorders in primary care settings and poor management of psychiatric disorders even when diagnosed. At the same time, a substantial body of research in continuing medical education (CME) has demonstrated the ability to alter practitioner behaviour and performance, as summarized by Davis and colleagues (20). It is interesting to note that major depression, which has been the subject of a number of major CME initiatives, both at the medical professional level and at the pharmaceutical industry level, is more likely to be treated than the other disorders, suggesting a possible link between CME and practice. Our findings have emphasized that the majority of those with a mental health disorder—including the untreated—are in actuality utilizing primary care services for general health problems. When family physicians do treat mental health problems, they actually see greater numbers than those seen in the mental health sector. Furthermore, by measures of severity or need, the mental health patients of family physicians are only modestly different from those of the specialty sector. Woven together, all these observations suggest that improving the care of individuals with mental health problems should involve strategies that strengthen the role of the primary care physician and allow for improved collaboration between the primary care and specialty mental health sectors. Educational strategies for mental health specialists and health system design efforts should target the need to build better collaboration and enhance the treatment capability of the primary care sector. A number of models to achieve this exist, including those of Strathdee (21) and Horder (22) in the United Kingdom and Kates and others in Canada (23). Further implementation and evaluation of these models are warranted to improve the treatment of psychiatric illness in our society.

**Clinical Implications**
- Patients with untreated psychiatric disorders are usually utilizing their family physicians for general health reasons.
- Family physicians treat more individuals with psychiatric problems than mental health specialists do.
- Collaboration between family physicians and specialists to enhance psychiatric treatment in the primary care setting should be a public health priority.

**Limitations**
- The survey was based on the retrospective recall of participants, possibly reducing the accuracy of both diagnosis and treatment utilization.
- Only a small number of diagnoses were considered.
- Limited measures of disability were employed, possibly underestimating the differences between patients treated in different treatment sectors.

**Acknowledgements**

The Mental Health Supplement to the Ontario Health Survey was supported by grants from the Ontario Ministry of Health and the Ministry of Community and Social Services to the Ontario Mental Health Foundation.

**References**


Résumé

Objectif : Des recherches épidémiologiques ont démontré que la majorité des maladies mentales dans la communauté n’est pas traitée. Les médecins de soins primaires et les spécialistes en santé mentale ont chacun un rôle important à jouer dans la prestation des services de santé mentale. Le but de la présente étude est de préciser l’étendue du sous-traitement de certaines maladies mentales en Ontario et d’examiner comment sont répartis les traitements, entre le secteur des soins primaires et celui des soins spécialisés. En termes plus précis, nous cherchons à déterminer le nombre relatif et le type — d’après des indicateurs socio-démographiques et des indicateurs de gravité — de patients dans chaque secteur de soins, ainsi qu’à confirmer le rôle déterminant des intervenants de soins primaires dans la prestation des services de santé mentale.

Méthode : Des données ont été tirées du supplément sur la santé mentale de l’Étude familiale en Ontario — une enquête communautaire menée auprès de 9 953 personnes. Tous les sujets répondant aux critères du DSM-III-R relativement à un diagnostic de trouble du sommeil, d’anxiété, d’abus d’intoxicants, de boulimie ou de trouble de personnalité antisocial posé au cours de la dernière année, ont été répartis selon leur utilisation des services de santé mentale au cours de la dernière année, entre les 4 catégories suivantes : non-utilisateurs, soins primaires seulement, soins spécialisés seulement, et patients utilisant les deux secteurs de soins. Les 3 groupes d’utilisateurs de services ont ensuite été comparés, sur la base de caractéristiques socio-démographiques et cliniques et de leur invalidité.

Résultats : Seulement 20,8 % des patients chez qui un diagnostic psychiatrique a été posé ont déclaré avoir utilisé des services de santé mentale, mais 82,9 % de ces personnes avaient consulté un médecin de soins primaires pour des problèmes généraux de santé. Parmi les personnes ayant eu recours à des services de santé mentale, 38,2 % ont consulté uniquement leur médecin de famille pour l’obtention de soins psychiatriques, contre 35,8 % qui ont consulté seulement un spécialiste en santé mentale et 26 % qui ont consulté des professionnels des deux secteurs. Seules des différences modestes au plan des caractéristiques socio-démographiques ont été observées entre les trois groupes d’utilisateurs. Des taux nettement plus élevés d’abus physique et sexuel ont toutefois été observés chez les patients ayant consulté uniquement un spécialiste. En ce qui a trait aux mesures de l’invalidité, des résultats similaires ont été obtenus pour les 3 groupes.

Conclusion : La grande majorité des personnes qui souffrent d’un trouble psychiatrique non traité consulte un médecin de soins primaires en rapport avec un problème général de santé, ce qui offre la possibilité de déceler les problèmes et d’intervenir. Les médecins de soins primaires sont également ceux qui traitent la majorité des personnes qui veulent obtenir des soins psychiatriques et les personnes vues uniquement par ces médecins sont probablement aussi malades que celles traitées exclusivement par des spécialistes. Dans une perspective de santé publique, les interventions futures au niveau des politiques devraient viser à améliorer la collaboration entre les 2 secteurs et à rendre les médecins de soins primaires mieux aptes à dispenser des services psychiatriques.