The Use of Mental Health Services in Ontario: Epidemiologic Findings

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Objective: To describe the distribution and predictors of mental health service use for a survey of Ontario household residents aged 15 to 64 years.

Method: Service use was defined as any past-year contact with formal or informal health care providers for mental health reasons. Data from the Mental Health Supplement (the Supplement) to the Ontario Mental Health Survey were used to compare the sociodemographic, geographic, and diagnostic status characteristics of service users with these characteristics among nonusers.

Results: Mental health services were used by 7.8% of respondents in the past year. The majority (57.8%) had a past-year University of Michigan Composite International Diagnostic Interview (UM-CIDI) diagnosis, although 27.1% had never met diagnostic criteria. Other significant predictors were marital status, household public assistance, gender, age, and urban/rural residence.

Conclusion: Although diagnosis is the strongest predictor of use, the fit between “need” and “care” in Ontario is not perfect. Help seeking differs within specific sociodemographic and geographic groups. Furthermore, the association of marital disruption and economic disadvantage with utilization indicates that prevention and intervention should address needs beyond the medical or psychological.

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Key Words: mental health service utilization, needs assessment, epidemiologic survey

Information about patterns of health care use is increasingly employed to design service programs intended to be socially responsible and fiscally sound. This report describes the use of services for mental health reasons in Ontario using data from a province-wide community survey.

Health care in Ontario is based on universal access and is largely a single-payer system. All legal residents, regardless of health or employment status, are eligible for the provincial health plan, which fully covers the majority of diagnostic and treatment services for both physical and mental problems.

The design of this survey, its methodology, and its findings on the prevalence of psychiatric disorder and associated disability are described in the companion articles to this report (Part I, p 549; Part II, p 559; Part III, p 564).

The Supplement provides a unique opportunity to investigate the use of services for mental health reasons. It is a community survey using a structured diagnostic interview. A substantial portion of the questionnaire is devoted to service use and includes questions about the type and location of service, recency and frequency of use, attitudes towards help seeking, and perceived barriers. It also covers an entire geographic area—a characteristic shared by few other surveys (1–3). Consequently, it provides detailed utilization information for the entire province while also allowing the examination of particular subgroups and local variations.

The focus of this paper is the relationship between utilization and broad, census-type indicators. Our report describes the distribution of service use for mental health reasons across sociodemographic, geographic, and diagnostic status groups.
It also explores the value of these variables as predictors of demand for service. Comparisons with other jurisdictions and implications for policy and planning will be discussed.

Method

The Supplement, designed to assess the prevalence of psychiatric disorders, associated risk factors, disability, and utilization patterns across Ontario, surveyed 9953 household residents in the province. A stratified, multistage sampling design was used (p 549). For reasons described in the second article in this series (p 559), results reported here are based on the 15- to 64-year-old portion of the sample (raw n = 8116). Poststratification weights were used to adjust for nonresponse and to reconcile the sample’s age and sex distribution with that of the 1990 provincial population.

All analyses used weighted data. Because of the complex sampling design, confidence intervals and significance tests were calculated using statistical procedures from SUDAAN (4). Significance was set at the 0.01 level to adjust for the multiple comparisons.

Seeking services for mental health reasons was the dependent variable. “Service user” was defined broadly as any respondent who in the past year had been admitted overnight, consulted with a professional, or used “other” services because of problems with his/her emotions, nerves, or use of alcohol or drugs. The list of professionals included general and specialty physicians; other health care professionals such as psychologists, social workers, nurses, and occupational therapists; and other professionals such as clergy, spiritualists, herbalists, and faith healers. “Other” services included hot lines, self-help groups, and vocational programs.

The independent variables were chosen based on their relevance to policy and their prominence in the literature. Standard demographic variables of age, gender, and marital status were included, along with measures of socioeconomic status (education, receipt of public assistance in the past year). Immigrant status was also examined.

Geographic variables included urban versus rural residence (as defined by Statistics Canada) (5) and region, which was defined as the Ministry of Health planning area where the respondent lived (6). Because of small sample numbers, the North East and North West regions were collapsed for analysis.

Diagnostic status was assessed using the UM-CIDI, a structured interview administered by lay interviewers (p 559;1,7) that produced DSM-III-R–based classifications (8). For this report, respondents with a “past-year diagnosis” were those meeting the one-year criteria for any DSM-III-R Axis I disorder or the lifetime criteria for an Axis II disorder. Axis I disorders included anxiety (panic, agoraphobia, social and simple phobias, generalized anxiety disorder), affective (unipolar, bipolar, dysthymia), and substance disorders (abuse of or dependence on alcohol or other substances). Schizophrenia, although assessed in the Supplement, was excluded from analysis because the numbers were too small to provide reliable estimates. Axis II disorders were antisocial personality disorder and adult antisocial behaviour.

The relationship to service use of each independent variable was examined individually. A multivariate analysis then assessed their combined value as predictors of service demand.

Results

When respondents were asked about the year before the interview, 7.8% (representing 509400 individuals in the provincial population) reported seeking services for mental health reasons. Table I compares the 6-month and one-year utilization rates with those found in other cross-sectional community surveys. The only result similar to the Supplement’s is the 6-month Epidemiologic Catchment Area (ECA) rate (9). Otherwise, the Supplement rate (whether 6-month or one-year) is noticeably lower than those reported from Edmonton, Montreal, New Zealand, and the recent United States National Comorbidity Survey (NCS) (1.10–12).

Among respondents seeking mental health services in the past year, 57.8% had a past-year UM-CIDI/DSM-III-R diagnosis, an additional 14.2% met criteria for a prior diagnosis, and 27.1% never had a diagnosis. The overwhelming majority (93.6%) consulted professionals on an outpatient basis. Of these, nearly half (49.9%) reported seeing either a general practitioner or their family doctor. The next most frequently consulted professionals were psychiatrists (24.1%) and social workers (22.0%). Psychologists and the clergy were each seen by approximately 10% of the help-seeking respondents, and the smallest percentages (less than 10%) saw nurses, occupational therapists, or other types of physicians. (Because respondents could indicate multiple providers, totals are greater than 100%.)
In terms of “other” services, 15.6% went to self-help groups, 4.4% used inpatient facilities, 4.3% called hot lines, and less than 4% used vocational programs.

Table II shows the distribution of mental health service use across sociodemographic, geographic, and diagnostic status groups. The strongest predictors of use were being female; being separated, divorced, or widowed; receiving public assistance; and having a past-year UM-CIDI/DSM-III-R diagnosis. Higher proportions of service seekers were also found among 25- to 44-year-olds and Ontarians living in urban areas. Education, immigrant status, and region were not significant predictors of use.

To examine the relative contributions of the independent variables in predicting service use, a logit model was developed using the SUDAAN LOGISTIC procedure (4). All statistically significant variables in Table II were included. Because of provincial interest in planning for sociodemographic and geographic subgroups, a nonhierarchical approach (13) was chosen because it maximized the possibility of detecting interactions. Two separate logistic analyses were done for all main effects and all possible 2-way interactions. The significant terms from each were then combined and used to create the logit model.

The final model, consisting of 6 terms, is shown in Table III. Goodness of fit is significant (Wald $\chi^2 = 310.10$, ...)
df 9), and the total variance explained is 16.51% (Model SS = 362.64, Total SS = 2196.14).

The strongest predictor of service use is past-year diagnosis ($\chi^2 = 221.50$, df 1). While the remaining terms are statistically significant, their contribution is considerably smaller. Of interest is that, despite using a nonhierarchical modelling approach, there is only one interaction term in the final model. Thus the relationships of gender, age, marital status, and urban versus rural residence to service use are both independent and generally consistent across the Ontario population.

The impact of public assistance is more specific, however, as evidenced by its presence in only the 2-way interaction term (Table IV). Urban recipients of public assistance are 3 to 5 times as likely to use services as rural respondents or those not on public assistance (25.6% versus 5.3% and 7.4%). As the logit model shows, this association is significant even when the effects of other predictors such as diagnosis, gender, or marital status are considered.

The significant interaction between public assistance and urbanicity could reflect different need levels or availability of resources. Urban settings may exacerbate the effects of financial disadvantage or provide a greater number and variety of health services. Alternatively, rural residents may have different help-seeking patterns in that they prefer more informal sources of help.

To explore these possibilities, we examined past-year diagnostic status and service-use patterns by public assistance and urban versus rural residence (Table V). The results show an elevated prevalence of disorder among both urban and rural recipients of public assistance (35.6% and 29.7%), suggesting a larger gap between need and service use among rural respondents.

Examination of use patterns among service seekers shows some variation across sectors. Rural nonrecipients of public assistance have the highest proportion of inpatient service use (10.9%); urban nonrecipients have the lowest proportion of “other” service use (18.2%). The more striking differences are found in the types of outpatient providers consulted. Urban respondents are more likely than rural respondents to see psychologists (12.2% and 12.9% versus 4.3% and 4.4%), and urban recipients of public assistance are more likely to see psychiatrists than nonrecipients or rural respondents (41.7% versus 19.2% and 23.0%).

### Discussion

The Supplement rates for service use are consistently lower (with the exception of the ECA results) than the rates reported in other jurisdictions (see Table I). Some of the differences may be attributable to differences in the utilization questions asked (for example, the Edmonton and New Zealand surveys). However, the utilization rates are also higher in the Montreal and NCS surveys, which used questions nearly identical to the Supplement. Clearly, the differences are due to something other than instrumentation.

Alternative methodological explanations are possible. For example, the NCS used a different weighting strategy than either the Supplement or the Montreal study. All 3 surveys reconciled the sociodemographic profiles of their samples to the population profiles, but the NCS applied a second weight to adjust for the higher rates of psychopathology found in survey nonrespondents (1,14). If weights were the entire explanation, however, we would expect the Supplement and Montreal rates to be similar to each other and distinctly different from the NCS findings. This is not the case.

Differences in sample characteristics, particularly in urban versus rural composition, might also account for the different utilization rates. In reviewing our results, we found that while the overall urban rate for Ontario is 8.1%, the rate for its largest municipality (Toronto) jumps to 14.4%. This is similar to the rates reported for Edmonton and Montreal, which are the primary urban centres for their respective provinces. This finding suggests that general urban–rural distinctions are less important for predicting demand than the distinction between highly urbanized areas (such as inner city Toronto) and less-populated geographic regions.

Higher metropolitan utilization rates may reflect higher rates of disorder or more abundant health care resources. Our data support the former hypothesis, since the one-year diagnostic prevalence rate for the City of Toronto is considerably higher than the overall provincial rate (28.0% versus 18.6%).

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**Table III**

**Logit Model Predicting Use of Services for Mental Health Reasons**

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Wald $\chi^2$</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past-year diagnosis</td>
<td>1</td>
<td>221.50</td>
<td>0.0001</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>16.51</td>
<td>0.0001</td>
</tr>
<tr>
<td>Age</td>
<td>2</td>
<td>13.29</td>
<td>0.001</td>
</tr>
<tr>
<td>Marital status</td>
<td>2</td>
<td>11.31</td>
<td>0.004</td>
</tr>
<tr>
<td>Urban/rural</td>
<td>1</td>
<td>10.30</td>
<td>0.002</td>
</tr>
<tr>
<td>Public assistance by urban/rural</td>
<td>1</td>
<td>21.89</td>
<td>0.0001</td>
</tr>
<tr>
<td>Goodness of fit</td>
<td>9</td>
<td>310.10</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

**Table IV**

**Service Use by Public Assistance and Urban versus Rural Residence**

<table>
<thead>
<tr>
<th>Residence</th>
<th>No Public Assistance</th>
<th>Public Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% 99% CI</td>
<td>% 99% CI</td>
</tr>
<tr>
<td>Urban</td>
<td>7.4 6.1 to 8.7</td>
<td>25.6 16.8 to 34.4</td>
</tr>
<tr>
<td>Rural</td>
<td>5.3 3.5 to 7.1</td>
<td>7.2 2.3 to 12.1</td>
</tr>
</tbody>
</table>

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Exploration of the distribution of resources, which may also play a part, is beyond the scope of this report but is currently underway.

Although several methodological causes for the Supplement’s lower utilization rate have been proposed, the likelihood is that the provincial rate is no higher than those of the American jurisdictions that do not have universal access systems. Our findings suggest that universal access alone does not create dramatically greater demands for service.

Although utilization rates vary across surveys, certain characteristics of the mental health care system are consistent (1,10,11,15). Approximately half (45% to 58%) of those seeking help for mental health reasons have a concurrent diagnosis. The vast majority (94% to 99%) consult outpatient providers, with the largest proportion (32% to 61%) of these going to the general medical sector. In Ontario, this figure represents twice the proportion of those seeking specialty care.

If “need” is defined as having a diagnosis and “care” defined using the Supplement utilization questions, then the fit between “need” and “care” in Ontario warrants further scrutiny. Over 75% of those with a past-year disorder did not seek help, and 27.1% of those who sought help did not qualify for a UM-CIDI/DSM-III-R diagnosis in their lifetime. The factors that contribute to or are associated with this apparent mismatch will obviously be an important area for future research.

Like others, we found that seeking services for mental health reasons is not evenly distributed across the population. The strongest predictor for help seeking is diagnosis. As other studies have also found, however, diagnosis is not the sole determinant of use (1,15). A variety of other factors, as demonstrated by the logit model, determines who will seek services.

We found that utilization is also significantly associated with disrupted marital status, limited financial resources, gender, and age. This is consistent with numerous previous findings (10,16–21). These results have implications both for who will demand services and for the context in which therapeutic interventions occur. Our results suggest that providers must frequently deal with the psychological sequelae of marital disruption and financial disadvantage, sometimes in the presence of disorder and sometimes not. The important implication for policy makers, planners, and service providers alike is that prevention and intervention must extend beyond the medical and psychological realms into the social and economic ones as well.

Our findings also indicate that the setting in which care occurs makes an important difference. The high rate of disorder in the municipality of Toronto, combined with the significant interaction between urbanicity and receipt of public assistance, suggests urban–rural differences in the factors leading to demand for services and provision of care. In particular, our data show a particularly large discrepancy between need and service use among financially disadvantaged rural respondents.

In summary, the Supplement’s lower utilization rate suggests that universal access alone does not create greater service demands. The strongest motivator for help seeking is diagnosis; the fit between “need” and “care” in Ontario, however, is far from perfect. The dynamics of help seeking differ within specific groups. In particular, the relationship between “need” and “care” differs for those living in core urban areas compared with those living elsewhere.

Table V

<table>
<thead>
<tr>
<th>Category</th>
<th>No Public Assistance</th>
<th>Public Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban (%)</td>
<td>Rural (%)</td>
</tr>
<tr>
<td>All respondents Past-year diagnosis</td>
<td>17.7</td>
<td>18.0</td>
</tr>
<tr>
<td>Service users</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Past-year diagnosis</td>
<td>56.7</td>
<td>60.4</td>
</tr>
<tr>
<td>Inpatient</td>
<td>3.5</td>
<td>10.9</td>
</tr>
<tr>
<td>Outpatient</td>
<td>93.8</td>
<td>95.9</td>
</tr>
<tr>
<td>Other services</td>
<td>18.2</td>
<td>23.6</td>
</tr>
<tr>
<td>Service users seeing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General practitioner</td>
<td>49.5</td>
<td>45.7</td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>22.2</td>
<td>19.2</td>
</tr>
<tr>
<td>Social worker</td>
<td>20.4</td>
<td>34.9</td>
</tr>
<tr>
<td>Psychologist</td>
<td>12.2</td>
<td>4.3</td>
</tr>
<tr>
<td>Clergy</td>
<td>9.8</td>
<td>20.3</td>
</tr>
</tbody>
</table>

*Because the number of rural recipients of public assistance who also used services is quite small, percentages in this column should be interpreted cautiously.

*bIncludes hot lines, self-help groups, and vocational programs.

Table V: Past-Year Diagnostic Status and Use of Services by Public Assistance and Urban versus Rural Residence.
Furthermore, the association of marital disruption and economic disadvantage with service use indicates that prevention and intervention should address a broader range of needs than just the medical or the psychological.

Clinical Implications

- The fit between mental health “need” and “care” in Ontario is far from perfect.
- Help seeking differs across sociodemographic and geographic groups and is associated with marital disruption and economic disadvantage.
- Prevention and intervention in mental health should address needs beyond the medical or psychological.

Limitations

- Cross-sectional surveys cannot directly address questions of causality, course of illness, or treatment outcome.
- Household resident surveys provide part of the total picture of how services are used.
- “Service use” is respondent-defined and based on self-report.

Acknowledgements

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References


Résumé

Objectif : Décrire la répartition et les prédicteurs de l’utilisation des services de santé mentale à des fins d’enquête auprès de résidents de l’Ontario âgés de 15 à 64 ans.

Méthode : L’utilisation des services était définie comme tout contact au cours de l’année précédente avec un prestataire de services officiel ou informel pour des motifs de santé mentale. Les données du supplément sur la santé mentale ont servi à comparer les caractéristiques sociodémographiques et géographiques ainsi que le diagnostic des utilisateurs de services par rapport aux non-utilisateurs.

Résultats : Au cours de l’année précédente, 7,8 % des résidents ont eu recours à des services de santé mentale. Chez la majorité d’entre eux (57,8 %), on a posé un diagnostic en vertu de la UM-CIDI bien que 27,1 % des résidents n’aient jamais répondu aux critères diagnostiques. L’état civil, la fourniture d’une aide sociale aux ménages, le sexe, l’âge et le fait d’habiter en milieu urbain ou rural constituaient d’autres prédicteurs significatifs.

Conclusion : Bien que le diagnostic soit le plus important prédicteur de l’utilisation, l’adéquation n’est pas parfaite entre le « besoin » et les « soins » en Ontario. La recherche d’aide présente des caractéristiques différentes à l’intérieur de groupes sociodémographiques et géographiques donnés. De plus, le lien établi entre l’utilisation des services et les perturbations matrimoniales et le dénuement économique révèle que la prévention et l’intervention devraient viser des besoins qui dépassent la portée de la médecine ou de la psychologie.