

Prevalence of psychiatric diagnoses among frequent users of rural emergency medical services

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Objective: This study aimed to determine whether there was an increased prevalence of psychiatric disorders among frequent users of rural emergency medical services.
Methods: In a matched comparison design, I compared frequent users of the emergency departments of 2 rural hospitals, both affiliated with an academic centre, with randomly selected users and with randomly selected users who had the same medical diagnoses. The main outcome measures were psychiatric diagnoses on a structured clinical interview, along with medical diagnoses and number of emergency department visits in the past year.
Results: Ninety-three percent of frequent users had at least 1 DSM-IV psychiatric diagnosis, differing from 50% of random users matched for presenting complaint. A random user group, not matched for presenting complaint, showed 28% prevalence of DSM-IV diagnoses. Frequent users were more often state insured (Medicaid) and less often insured privately. The most common diagnoses among frequent users were major depression, generalized anxiety disorder, adjustment disorder, somatoform pain disorder, substance abuse and dependence, and dysthymia. The treating emergency department physician mentioned a psychiatric diagnosis for only 9% of frequent users.
Conclusion: Frequent users have a disproportionately high prevalence of psychiatric disorders (under-documented by their physicians), which may affect their pattern of emergency department use. This suggests the need for better recognition, diversion, and management.

Objectif : Cette étude visait à déterminer s'il y avait une prévalence accrue de troubles psychiatriques chez les utilisateurs fréquents des services médicaux d'urgence en milieu rural.
Méthodes : Suivant un concept de comparaison par jumelage, j'ai comparé les utilisateurs fréquents des services d'urgence de deux hôpitaux ruraux, tous deux affiliés à un centre universitaire, à des utilisateurs choisis au hasard et à des utilisateurs choisis au hasard chez lesquels on avait posé les mêmes diagnostics médicaux. Les diagnostics psychiatriques fondés sur une entrevue clinique structurée, ainsi que les diagnostics médicaux et le nombre de visites à l'urgence au cours de l'année écoulée, ont constitué la principale mesure de résultats.
Résultats : Chez 93 % des utilisateurs fréquents, on avait posé au moins un diagnostic psychiatrique DSM-IV, par rapport à 50 % chez les utilisateurs choisis au hasard et jumelés en fonction du motif de consultation. Dans un groupe d'utilisateurs choisis au hasard et non jumelés en fonction du motif de consultation, la prévalence de diagnostics DSM-IV s'est établie à 28 %. Les utilisateurs fréquents avaient plus souvent une assurance publique (Medicaid) et moins souvent une assurance privée. Les diagnostics les plus courants chez les utilisateurs fréquents étaient les suivants : dépression majeure, trouble d'anxiété généralisée, trouble d'adaptation, trouble somatoforme douloureux, toxicomanie et dépendance, et dysthymie. Le médecin traitant au service d'urgence a signalé un diagnostic psychiatrique chez 9 % seulement des utilisateurs fréquents.
Conclusion : Les utilisateurs fréquents présentent une prévalence excessivement élevée de troubles psychiatriques (sous-documentés par leur médecin), ce qui peut avoir une incidence sur leur tendance à utiliser les services d'urgence. Cela indique qu'il faut mieux reconnaître ces patients, les distinguer des autres et les prendre en charge.

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Introduction

Several studies have suggested that frequent users of primary care include more people with psychiatric disorders than do randomly selected populations. Barsky and colleagues[1] investigated the relationships among psychiatric disorders (i.e., depression and hypochondriasis), somatic symptoms, medical morbidity and the use of ambulatory medical services among 92 general medical outpatients. Medical use correlated with the number of somatic symptoms reported, depressive symptoms and the number of medical diagnoses. It was also related to hypochondriacal attitudes and depression. The number of medical diagnoses accounted for 30% of the variance in medical use. Somatic symptoms were the second most powerful predictor. The next best predictors were to have 2 hypochondriacal attitudes and the presence of a major psychiatric diagnosis in the medical record. These 5 predictors explained 56% of the variance. Depression, disease fear and bodily preoccupations were also important predictors of use. Somatic symptoms were viewed as a final common pathway through which emotional disturbance, psychiatric disorder and organ pathology all express themselves. Somatic symptoms are also what prompted patients to visit doctors.

In a previous study[2] of frequent users of a rural primary care clinic, I found many more psychiatric diagnoses among these patients than among random users. Psychiatric diagnoses appeared 3 times among their top 10 complaints, compared with none for random users. A variety of psychosocial factors, including marital conflict, problems with children, financial problems, ill relatives, substance abusing family members and family members having problems with the law, were associated with these patients' high use.

In these days of discussion about health care reform, it seems logical that we should know more about frequent users of health care services. Little, if any, data exist on frequent users of emergency departments, what drives their frequent use and how to best meet their needs. Therefore, this study was conducted to determine the prevalence of psychiatric disorders among the most frequent users of rural emergency services.

Methods

Sampling

Lists of the most frequent users of 2 university-affiliated hospitals were generated from billing records containing data about the number of times patients visited the emergency department. When signing their consent for treatment, patients were given the opportunity to consent to be called for participation in quality improvement projects and in future research projects. Subjects who gave this consent were called and asked to join in a research project designed to assess the needs of frequent users and to determine whether or not the emergency department was meeting those needs. Patients were asked if they would be willing to participate in a research project to help determine the characteristics of people who require frequent use of the emergency department and to generate information about how to better serve these people, and, potentially, how to reduce their number of emergency visits, thereby improving quality of care. If patients agreed to participate, they were met at their homes, at their physician's office (at the time of their next office visit) or at the researchers' offices, whichever was most convenient for them. At that time, informed consent to participate in this project was obtained. Any patient not wishing to give consent was not pursued further. The research was approved by the University Human Subjects Protection Committee.

Setting: New York

The project took place in rural Vermont and rural New York in the United States. The New York hospital was in a rural county in northeastern New York with a population of 79 894 people. The city in which it was located had a population of 18 816 in the 2000 census and was the county seat.[3] The hospital was a 341-bed acute care hospital with a 54-bed skilled nursing facility. There were 156 physicians, of which about two-thirds provided primary care and the rest were specialists. The hospital had a psychiatric inpatient unit and psychiatrists were available on call to the emergency department. The surrounding counties using the hospital for services were more rural and of lower socioeconomic status as well as being less populated.[4]

Setting: Vermont

The Vermont hospital was the only hospital in the most populous county in the state, with 146 571 people in the 2000 census. The city where it is located had a population of 38 889 in the 2000 census.[4] As a regional referral centre, the hospital provides advanced-level care to a population of 1 million people throughout the state of Vermont and the northeastern

New York. There were 469 faculty (747 total medical staff), with about 40% primary care and 60% specialists. There were 562 licensed beds (excluding the nursery). Psychiatry was well-represented, with a residency training program and a full complement of child, adolescent, adult and substance abuse services as well as both locked and unlocked psychiatric units. In both states, the counties in which the hospitals were located were surrounded by more rural, less populated and less affluent counties that looked to the hospital for services. In both communities, these hospitals were the only available hospitals of any size.

Frequent users

Frequent users were identified from a list matching patients with the number of emergency department visits. I began by attempting to recruit the most frequent user (more than 50 visits) and continued in descending order of use until 200 frequent users had been interviewed (down to 6 visits per year). When children under the age of 14 years were frequent users, their parents were interviewed and assessed for parental psychiatric disorders.

Interviews

First control group

Subjects were interviewed about their current medical problems, past medical history, social history, habit history and family medical history. The DSM-III-R checklist[5] was administered, along with supplemental questions to diagnose personality and somatoform disorders. Patients' opinions about the emergency department and their satisfaction with the emergency department were solicited.

I conducted the majority of the interviews. I trained with Dr. John Helzer, a developer of the DSM-III-R checklist in its administration to 80 psychiatric inpatients at the University of Vermont–affiliated Medical Center Hospital. The results of my administration of the DSM-III-R agreed with Dr. Helzer's clinical diagnoses, with 93% concordance for the primary diagnosis and 81% concordance for secondary diagnoses. I trained medical students and 1 graduate research assistant to administer the DSM-III-R checklist on these same inpatients until 80% agreement overall was reached between us. Once agreement was reached, I administered the DSM-III-R checklist and interviewed 10% of the same patients as these assistants, finding 91% overall agreement in diagnoses. Therefore, the administration of the DSM-III-R was judged reliable. The DSM-IV checklist was still under development at the time this study began and it had not yet been validated.

I was both a member of the psychiatry department at one of the hospitals and the emergency medicine department at the other, which facilitated inter-departmental cooperation and collaboration. When possible, the emergency physician was interviewed briefly about the patient. They were asked about their impression of the diagnosis, their impression of the appropriateness of the current emergency room visit and their thoughts about any psychiatric or psychosocial factors that might be influencing the presentation.

Two comparison groups were developed. The first (called random users) was developed by randomly selecting (using a random number generator) the time of day to visit the emergency department. Upon arrival at the emergency department at that time, the author randomly selected a room (again using a random number generator to select which room number to choose) for interview. The patient in the selected room was approached and told that he or she had been randomly selected for participation in a study to learn more about the emotional needs of emergency department users. The patients were offered no compensation for participation, except relief from boredom due to their potentially long wait in the emergency department. The acceptance rate for participation was 54%. If the selected patient was sufficiently well and was expected to remain for at least another hour in the emergency department, he or she was invited to participate in this research project. Informed consent was obtained before proceeding any further. If sufficient time remained in the visit, the patient was interviewed in the room at that time. If not, the patient was asked if he or she would be willing to be interviewed at home and told that an appointment would be made for a later interview. If the patient was critically ill, a family member was asked if it would be acceptable to call later when their relative was less distressed and had recovered enough to provide consent for participation. When subjects were called later, a meeting was arranged and informed consent was obtained before proceeding.

Second control group

The second control group (same presenting com-

plaint), was chosen by similar random selection of the time to begin recruiting patients from the emergency department. For this group, however, patients who had the same presenting complaints as the frequent user group were selected. A list of eligible presenting complaints was updated weekly. These patients were told that they had been selected for inclusion in a study on patients' use of the emergency department because they shared the same diagnosis with frequent users and because they happened to be at the emergency department when we randomly chose to conduct the study. They were told that we were interested in how emergency departments meet emotional needs and in what led to people's frequent use of emergency departments. Informed consent for participation was obtained. The interview was conducted similarly to the randomly selected group. The agreement rate for participants in this comparison group was 41%.

The study was conceived as largely descriptive. The Student's *t* test or chi-squared procedure was used to make comparisons between groups. Bonferroni corrections were made in the standard manner given the number of comparisons to be made.

Results

A total of 440 people were called to obtain 200 frequent users. The response rate was 45%. The 200 frequent users had an average of 12 visits per year. The 200 random users had an average of 5 visits per year. The same complaint users had an average of 8 emergency department visits per year. These differences were significant at $p < 0.001$. The range for number of visits of frequent users was from 6 to 60. The number of visits of random users ranged from 1 to 58. The range for same presenting complaint users was from 1 to 40. There were minimal age differences among the groups (Table 1), but there was a significantly greater incidence of Medicaid funded patients among the frequent users. There were no differences in sex distribution.

The most common mental health diagnoses encountered among frequent users were major depression, followed by alcohol abuse and dependence, other substance abuse and dependence, adjustment disorder, general anxiety disorder, somatoform pain disorder, dysthymia, borderline personality disorder and somatization disorder (Table 2). Frequent users had an average

Table 1. Demographic comparisons between emergency department user groups

	Group, % of patients			Statistical significance, *p* value	
Patient characteristics	Frequent users	Random users	Same complaint users	Frequent v. random users	Frequent v. same complaint users
Age, yr					
< 10	10	18	10	NS	NS
10–19	8	8	8	< 0.05	< 0.05
20–29	16	16	20	NS	NS
30–39	18	23	14	NS	NS
40–49	14	9	14	NS	NS
50–59	7	6	9	< 0.05	NS
60–69	14	7	11	< 0.01	< 0.05
70–79	8	9	8	NS	< 0.05
80–89	5	2	6	NS	NS
Insurance					
Private	12	14	15	NS	NS
Medicaid*	58	37	47	< 0.001	< 0.05
Medicare†	9	12	12	NS	NS
None	11	15	12	NS	NS
HMO	7	6	8	NS	NS
Student Health	0	2	1	NS	NS
Workers' Compensation	3	14	5	< 0.01	NS
Sex					
Male	41	58	48	< 0.01	NS
Female	59	42	52		

NS = not statistically significant; HMO = health maintenance organization.
*Medicaid is state-provided (with federal supplementation) insurance for low-income people who are receiving social assistance.
†Medicare is government-sponsored insurance for older people and those with disabilities.

of 2.45 diagnoses, compared with 0.6 among random users and 1.32 among same complaint users.

Frequent users were more often diagnosed with upper respiratory infection, backache, upper gastrointestinal disorders, migraine headache, acute lumbosacral strain, viral syndromes, other headaches, alcohol intoxication, diabetes related problems, anxiety, abdominal pain, otitis media and inner ear disorders (Table 3 and Table 4). Random users had more acute injuries and infections.

Some general clinical impressions emerged from our interviews. The frequent users seemed to be a source of puzzlement and frustration to the emergency physicians (Table 5). It was sometimes hard to assign their complaints to a standard diagnosis. Many of these patients were known on sight to the emergency physicians, who bemoaned their appearance in the emergency department. These doctors did not seem to know how to help many of these patients and felt that their complaints were inappropriate for management in the emergency department.

From our discussions and interviews, it appeared that the emergency physicians tended to avoid the patients known to be chronically mentally ill. The emergency nurses would call the Crisis Team (a mobile group of mental health clinicians who came from the Community Mental Health Center to known psychiatric clients wherever they were in crisis) immediately on their arrival and their physical assessment was usually cursory. The frequent users described in this study were largely not identified by the emergency physicians as mentally ill (only 9% received a psychiatric diagnosis, and psychosocial factors were suspected to be influencing the presentation in only 30% of patients).

In accordance with previously signed consents authorizing chart review and with approval of the Human Subjects Protection Committee, a chart audit was conducted for those patients who declined interview but allowed chart audit. Bias was found in our study in that chronic users of the mental health system fell into this group. These patients primarily presented to the emergency department with psychiatric

Table 2. Comparison of psychiatric diagnoses present among users of emergency medical services

	Group, no. of diagnoses			Statistical significance	
Diagnosis	Frequent users	Random users	Same complaint users	Frequent v. random users	Frequent v. same complaint users
Major depression	88	39	56	27.70; $p < 0.001$	11.11; $p < 0.01$
Alcohol abuse or dependence (current or past)	61	32	35	11.78; $p < 0.01$	9.27; $p < 0.01$
Generalized anxiety disorder	39	24	30	4.24; $p < 0.05$	1.42; NS
Adjustment reactions	34	7	11	19.8	13.2
Other substance abuse or dependence (current or past)	33	6	20	20.7	3.07
Somatoform pain disorder	33	16	22	6.70	2.55
Dysthymia	30	11	21	9.87	3.08
Personality disorder, cluster B	24	14	16	4.73	1.77
Somatization disorder	22	12	16	7.00	3.22
Personality disorder, cluster C	19	14	6	0.83	7.21
Panic disorder	15	11	14	0.66	0.04
Simple phobias	15	0	7	15.6	3.08
Dementia and developmental disorders	15	8	12	2.30	0.36
Social phobias	11	0	3	11.3	4.74
Psychotoform disorders	10	0	2	10.3	5.50
Posttraumatic stress disorder	9	4	5	1.99	1.18
Acute stress reaction	9	3	8	2.23	0.06
Impulse control	8	4	9	1.37	0.06
Eating disorders	6	4	6	0.41	0.0
Acute grief reaction	4	3	5	0.15	0.11
Dissociative disorders	4	0	4	4.04	0.0
Bipolar disorder	3	4	0	0.15	3.02
Conversion or hypochondriasis	3	0	0	3.02	3.02
Total diagnoses	495	216	308		

NS = not statistically significant.

symptoms and the local mental health centre's Crisis Team was often called to interview and manage these patients. Among those patients who were frequent users and declined interview, 24% were frequent users of the mental health system and 50% had a known psychiatric diagnosis. Of those frequent users who accepted participation, only 2% were known to the Crisis Team and only 9% had a psychiatric diagnosis. Thus our sample of patients interviewed under-represents people with chronic mental illness.

Table 3. Most frequently encountered diagnoses among emergency department users

		Group, no. of diagnoses			χ^2 analyses	
Diagnosis	ICD-9 code	Frequent users	Random users	Same complaint users	Frequent v. random users	Frequent v. same complaint users
Other diagnoses*	NA	58	44	28	2.58	13.33
URI or viral syndrome*	NA	34	16	23	11.77	2.48
Gastritis, PUD, hernia, esophagitis or GERD‡	784.0	45	30	39	3.69	0.54
Abdominal pain-producing disorders*	382.9	39	23	24	4.89	4.24
Headache or migraine*†	477.9	26	12	21	5.70	10.60
Back and neck related diagnoses‡	309.9	22	8	25	7.06	0.22
Soft tissue injuries*	309.28	22	48	15	11.71	1.46
Ear problems†	300.4	20	12	8	2.17	5.53
Neurologic diagnoses	465.9	19	20	11	0.03	2.31
Headache, other‡	NA	18	6	9	6.38	3.22
Alcohol intoxication‡	NA	18	8	9	4.11	3.22
Bronchitis	401.9	18	15	15	0.30	0.30
Diabetes and related complications	250.8	18	12	14	1.30	1.36
Anxiety†	490	17	3	4	10.32	8.49
Viral gastroenteritis†	300.0	15	11	9	6.99	1.58
Asthma exacerbation	NA	15	12	14	0.36	0.04
Skin disorders and infections	NA	14	21	16	1.53	0.14
COPD exacerbation	789.0	13	12	7	0.04	1.89
Depression/suicidal ideation	311	13	12	18	0.04	0.87
Chest wall pain‡	492.8	11	3	5	4.74	2.34
Pharyngitis	462	10	8	10	0.23	0.00
Drug reactions/ingestions	NA	9	12	5	0.45	4.29
Epistaxis	NA	8	7	4	0.07	1.37
Congestive heart failure	NA	8	7	3	0.07	2.34
Hypertension	NA	7	12	9	1.38	0.26
Dementia or delirium	NA	6	8	4	0.30	0.41
Urinary tract infection or pyelonephritis†	599	6	23	8	10.74	0.30
Liver disease	NA	6	8	5	0.30	0.09
Pelvic inflammatory disease	250	4	1	5	1.82	0.11
Sinusitis	NA	4	3	3	0.15	0.15
Prostate problems	NA	4	2	2	0.68	0.68
Fractures†	V20.2	3	12	2	5.61	0.20
Head injury	NA	3	1	2	0.51	0.15
Angina or myocardial infarction	429.2	3	4	4	0.15	0.15
Eye problems†	NA	3	16	7	9.34	1.64
Pregnancy related*	V22.1	2	20	2	15.58	0.00
CVAs or TIAs	NA	2	0	3	3.02	0.20
Total	NA	553	472	392		

ICD-9 = International Classification of Diseases, 9th Revision[22]; NA = not applicable; URI = upper respiratory infection; PUD = peptic ulcer disease; GERD = gastroesophageal reflux disease; COPD = chronic obstructive pulmonary disease; CVA = cerebral vascular accident; TIA = transient ischemic attack.

Note: The higher χ^2 value is the one of significance. Frequent users presented more often with complaints of back pain, shortness of breath, abdominal pain, dizziness, headache, numbness and "sugar problems" (see Table 4). Random users presented more often with acute injuries and infections.

*$p < 0.005$.

†$p < 0.01$.

‡$p < 0.05$.

Discussion

Psychiatric diagnoses were much more prevalent among the emergency department frequent users. This study did not set out to determine whether psychiatric disorders caused greater emergency department use. It is important, however, to note that most of the frequent users did not present with psychiatric complaints. The great majority were not known to the psychiatric department as chronic users of the mental health system. They were not identified as psychiatric patients and were not being followed by psychiatrists, for the most part. The high prevalence of psychiatric disorders, largely undiagnosed by the emergency physicians but apparent on diagnostic interviewing, calls attention to a psychiatrically underserved population and to the potential interaction of psychiatric disorders to make physical problems seem more severe to those afflicted.

Table 4. Presenting complaints among randomly selected users, compared with frequent users of the emergency department

	Group, no. of complaints		
Presenting complaint	Random users	Frequent users	χ^2 analysis
Back pain*	19	48	15.08
Injuries, r/o fracture†	48	29	5.81
Shortness of breath†	13	29	6.81
Abdominal pain‡	14	26	4.00
Cold	22	24	0.10
Cough	21	24	0.23
Sick to stomach	15	24	2.30
Lightheadedness	16	23	1.39
Dizziness†	7	21	7.53
Chest pain	16	19	0.28
Headache*	12	32	10.21
Sinus infection or nasal discharge	11	15	0.66
Sore throat	10	15	1.07
Numbness	7	14	2.46
Vomiting	12	14	0.16
Passed out, fainted or woozy	12	13	0.21
Weakness	14	13	0.04
Problems with urination	7	12	1.38
Vaginal discharge or bleeding	14	12	0.16
Diarrhea	10	11	0.05
Fever	11	11	0.00
Nervous or anxious	6	11	1.54
Rapid heart rate	5	9	1.18
Sugar problems†	1	9	6.56
Neck pain	9	6	0.62
Rash	9	6	0.62
Seizure	6	6	0.00
Ear pain	8	3	2.34
Eye irritation	6	3	1.02
Stroke	3	3	0.00
Thoughts of suicide	0	1	1.00
MVC	1	0	1.00
Total	330	457	

r/o = rule out; MVC = motor vehicle crash.
*$p < 0.005$.
†$p < 0.01$.
‡$p < 0.05$.

No previous studies of frequent users of rural emergency services could be found. Urban studies exist, however, and present a picture that is different from the results that this study would suggest. For example, Sun and colleagues[6] concluded that frequent emergency department visits in Boston, Massachusetts, were associated with socioeconomic distress, chronic illness and high use of other health resources, but mental health concerns and psychiatric issues were not assessed. In San Francisco, California, Mandelburg and coauthors[7] found that frequent users constituted 3.9% of emergency department patients but accounted for 20.5% of emergency department visits. The relative risk (RR) of frequent use was high among patients who were homeless (RR 4.5), black (RR 1.8) and Medi-Cal sponsored (RR 2.1). Frequent users were more likely to be seen for alcohol withdrawal (RR 4.4), alcohol dependence (RR 3.4) and alcohol intoxication (RR 2.4). Frequent users were also more likely to visit for exacerbations of chronic conditions, including sickle cell anemia (RR 8.0), renal failure (RR 3.6) and chronic obstructive pulmonary disease (RR 3.3). They were less likely to visit for all forms of trauma (RR 0.43). Survival analysis showed that only 38% of frequent users for 1 year remained frequent users the next year. However, 56% of frequent users for 2 consecutive years remained frequent users in the third year. Again, psychiatric and psychosocial factors were not assessed. Thus rural frequent users may be substantially different from urban frequent users.

Katon and colleagues[8] concluded that 25%–75% of visits to primary care physicians were primarily owing to psychosocial stress manifested by somatic complaints. About 70% of patients with primary or secondary diagnoses of emotional disorders gave a somatic complaint as the reason for their visits to physicians. Similar to our study, Katon and coauthors found the most common complaints were constitutional symptoms, headache, dizziness, and abdominal or extremity pain. Our clinical impression from the 600 interviews was that somatization of affect played an important role in the high use of

the emergency department by this population. We tended to observe alexithymia. A general lack of psychological sophistication coupled with many social stressors was common.

Somatization may underlie frequent visits to primary care physicians and is most frequently associated with depression, anxiety and somatoform disorders in primary care populations. Depression is not recognized or treated in roughly 18%–50% of affected primary care patients.[9,10] Depression is the most common mental disorder in the general population, after substance abuse and anxiety,[11] and is one of the most common disorders underlying somatization in primary care.[12–18] Depressed patients may selectively focus on the somatic manifestations of their disease and ignore or not experience affective or mood disturbance.[19] These patients often present to primary care physicians with the classic depressive somatic complaints or nonspecific cardiopulmonary and gastrointestinal complaints or localized pain lacking the symptoms of depressed affect. Patients with this "masked depression" may lack the ability to label and report emotions ("alexithymia," or the inability to reveal feelings using usual words or language).

From the results of this study, it would appear that helping patients address their life situations, their misery and suffering, and to communicate with providers and with each other about their difficulties rather than merely providing short-term symptom relief could be desirable. Teaching patients to ask for and receive support and help from each other might reduce their reliance on medical care and the cost of their care. These interventions could take the form of group therapies, behaviour therapy or social skills training and they could be organized around rural emergency departments or rural family practices. It was my impression that it would be easier to provide such services in rural environments than large urban environments since people did appear to know and care about each other, even when they found each other frustrating (as in doctors' and nurses' responses to many frequent visitors).

Spillane and colleagues[20] tried to use individualized care plans and case management to decrease emergency department use by frequent users without success. Patients with greater than 10 emergency department visits to a university hospital in 1993 were identified. Patients were matched for age, sex and number of visits and then randomized into 2 groups. The control group received standard emergency care. The treatment group was managed by a multidisciplinary team and treated in the ED according to individualized care plans. Emergency department use was tracked at the university hospital and at the other 5 community hospitals in the city. No change in emergency department use resulted. On the other hand, a multi-disciplinary team in Vancouver, British Columbia, was able to reduce the frequency of emergency department visits of 24 frequent users by almost one-third over 1 year.[21]

Conventional psychiatric services may not be able to respond to the needs of this population. In both our study's hospitals, psychiatric consultation and services were widely available, yet not used by this population. Patients may steer clear of psychiatry for fear of stigmatization. Psychiatrists may wish to avoid this population as much as emergency physicians do. While greater awareness of the potential for psychiatric diagnoses among frequent users of emergency services is important, conventional mental health workers may not be able to address this problem. More creative solutions may be needed.

From the results of this study, we can say that there is a population in rural areas that is consum-

Table 5. Results of physician interviews with patients

Physician assessment	Group, % of patients*		
	Frequent users	Random users	Same complaint users
No. of patients interviewed	115	89	91
Visit was inappropriate for ED	70	29	30
Physician suspected psychiatric or psychosocial factors	30	11	20
Physician uncertain about diagnosis	46	19	22
Physician puzzled, frustrated or both	78	23	57
Physician recognized patient	68	18	47

ED = emergency department.
*Unless otherwise indicated.

ing large volumes of medical care and that also has multiple psychiatric diagnoses. Such a group presents an opportunity for innovation. Conventional psychiatric consultation services in these areas are not addressing these needs. Most are not even identified as psychiatric patients (and would probably object to such labelling if it was offered). Perhaps it is possible to be psychologically sophisticated and to engage patients in psychological work in the course of primary care without ever labelling it as such. Perhaps patients can learn to better optimize their medical care choices if they feel adequately heard. Clearly further work needs to be done and multidisciplinary teams or other interventions may be useful along with the incorporation of listening and counselling by family physicians into the medical encounter in a seamless way that does not use the word "psychiatric." The issues are as important in rural centres as they are in urban areas.

Competing interests: None declared.

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