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The Demand for Extramural Psychiatric Intervention in a Community-Based Service

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Summary. Using a psychiatric case register, patients who had extramural contacts with the South-Verona Community Psychiatric Service in 1983 ($N = 549$) were selected for this study and followed-up for 3 years, from the date of their first 1983 contact. Out of the total number of extramural contacts made in 3 years ($N = 12429$) 16% were unplanned (drop-in) contacts. A linear-logistic model was used to investigate the joint effects of sociodemographic and clinical variables on the frequency of unplanned extramural contacts. The model to fit the data was complex, confirming that many interactions among the variables considered in the study significantly affect the probability of using the community services on an urgent or unplanned basis.

Key words: Community psychiatry – Extramural care – Urgent interventions – Psychiatric case register

Introduction

According to the reform passed by the Italian Parliament in May 1978, treatment was, as a rule, to be made available to mental patients in their own environment. Community-based services would provide the full range of psychiatric interventions for specified geographical areas and hospitalization would be regarded as an extraordinary intervention, to take place in small units in general hospitals. First admissions to mental hospitals were forbidden after May 1978 and all admissions to these institutions forbidden after January 1982 (Tansella and Williams 1987; Tansella et al. 1987).

A major shift of the focus of care from hospital to the community therefore occurred in Italy. Two aspects of the Italian model of community psychiatry need to be emphasized (Tansella and Zimmermann-Tansella, 1988):

1. The phasing out of the mental hospital is being achieved gradually through the closing down of its admissions department and without abrupt deinstitutionalization of the patients.
2. Hospital psychiatry is considered to be complementary to community care and not vice versa.

In a community-based system of care it is important to study the *demand* for psychiatric care and to try to differentiate service activities due mainly to this demand from that mainly influenced by *availability or supply* of care (Balestrieri et al. 1987). This is on the assumption that the former unplanned activities, which reflect patients' need not routinely met by the services, may be important for the prevention of crises as well as for avoiding unnecessary hospitalization. One way to approach this problem is to analyse separately community contacts made on a "drop-in" basis (i.e. emergency and other contacts made without an appointment), which are influenced mainly by demand, and those contacts which were previously booked and may be considered subject to considerations of both supply and demand. The aim of this paper is to present the results of such a study, conducted using the South-Verona Psychiatric Case Register.

Patients and Methods

The area and the psychiatric services. South-Verona is an area with 75000 inhabitants. All psychiatric services located in the province of Verona which may provide care to the residents in this area report to the South-Verona Psychiatric Case Register, which started on 31 December 1978. The main service for South-

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Table 1. South-Verona Community Psychiatric Service (CPS)

General hospital inpatient unit (15 beds)
Mental Health Centre (day care and rehabilitation)
Outpatient department (individual and family therapy)
Crisis intervention service (home visits) twelve hours a day
Twenty-four hours a day emergency service at the casualty department of the University General Hospital
Consultation-Liaison Service at the University General Hospital
Apartments and supervised hostel for long-term patients (8 beds)

Verona inhabitants is the Community Psychiatric Service (CPS) run by the Institute of Psychiatry, University of Verona, and established in May 1978 according to the provisions of Italian psychiatric reform. The CPS comprises both inpatient and extramural facilities (see Table 1). It is well integrated and allows easy access of patients to any of its components and easy transfer from one component to another according to needs. Continuity of care is also ensured, since the same staff members follow-up the patient through the different phases of treatment and the different components of the service (Jablensky and Henderson 1983; Burti et al. 1986).

The psychiatric referral system. The Italian psychiatric reform in December 1978 (approved in May of that year) became part of the National Health Reform that introduced the National Health Service (NHS) in Italy. In this NHS general practice services are given a central role. However, rules for referrals from general practice to specialist services were not very strictly defined. In particular, psychiatric services were the only services for adults regarded as services at the primary care level *as well as* at the specialist level and no procedures for referral from general practitioners were established. The main characteristics of the Italian primary care system have been described elsewhere (Tansella and Bellantuono 1986).

Studies conducted in Verona showed that the "pathways to psychiatric care" were similar to those described by Goldberg and Huxley (1980) and that the bulk of psychiatric morbidity was therefore faced and managed at a general practice level (Tansella and Williams 1989: Marino et al. 1989). Moreover, it has been shown that in the last few years an increasing proportion (24% in 1987) of first-ever patients were referred to South-Verona psychiatric services by general practitioners (Bellantuono et al. 1989).

Booked and drop-in extramural contacts. Each attendance at an outpatient clinic and each home visit is counted as a contact. The same applies to day care at the day hospital or the Mental Health Centre, where each daily attendance is counted as one contact.

Within the CPS only, each extramural contact is recorded either as "booked" or "drop-in", according to whether or not an appointment was previously arranged. Unfortunately this dichotic recording system does not allow better differentiation of "drop-in" contacts: the latter include both crisis interventions (made at the University General Hospital casualty department as well as at the Mental Health Centre, at the patients home etc.) and all other unplanned extramural contacts. The referral source and the professionals involved (psychiatrist, psychologist, social worker, nurse, team of two or more professionals, etc.) are also routinely recorded for each extramural contact. For a few contacts, recorded as "NK", this information is not available. It is also not available for extramural contacts made with other agencies, outside the South-Verona CPS. However, data from the South-Verona Psychiatric Case Register show that in each year more than 95% of the extramural contacts (excluding contacts with the service for drug dependence) are made with our CPS.

Patients and statistical analysis. Patients who had extramural contacts with the South-Verona CPS in the year 1983 were selected for this study. Each patient in this cohort was followed up for 3 years from the date of his/her first 1983 contact and all extramural contacts with the South-Verona CPS were considered.

For each patient, information was drawn from the psychiatric case register concerning sociodemographic and clinical data. To investigate the joint effects of sociodemographic and clinical variables on the frequency of unplanned (drop-in) contacts a linear-logistic model was used (Cox 1970). The relative frequency of drop-in contacts was the *response variable*. Five variables were used as *concomitant variables*. They were sex (male, female), age (<55 years; ≥ 55 years); occupational status (employed; unemployed; other status, including housewives, students, retired); diagnosis (psychosis; neurosis; alcoholism, drug dependence and personality disorders; other diagnosis) and previous contact with psychiatric services (yes, no). The GLIM Package was used to perform the analysis (Payne 1986).

A second cohort was therefore extracted from the case register. All patients who had a first-ever psychiatric contact in the years 1983–1985, through one of the extramural facilities of our CPS, were selected and followed up for 1 year after their first contact.

Results

In the period 1983–1985 more than 70% of the South-Verona residents who had contacts with a psychiatric service (mean 1-year prevalence rate = 1201/100000) received extramural care only. The mean 1-year prevalence rate of patients treated only outside hospital was 846/100000, while the mean rate of those who received both inpatient and extramural care or inpatient care only was 355/100000. These results confirm that in South-Verona, in accordance with the principle of the Italian reform, most patients were actually treated in their own environment and that only 30% were hospitalized. Moreover, more than 73% of the patients seen in 1 year over the period 1983–1985 were treated by the South-Verona CPS, which confirms that our service is the main agency for those living in the area.

Table 2. 1983 Cohort (549 patients): extramural contacts with the South-Verona CPS over 3 years

	n	%
Booked	10454	84.0
Drop-in	1975	15.9
NK	21	0.1
Total	12450	100

Table 3. 1983 Cohort (549 patients): extramural contacts with the South-Verona CPS over 3 years

	Booked ($n = 10454$) (%)	Drop-in ($n = 1975$) (%)
Outpatient care	26.1	17.2
Day-patient care	54.9	26.0
Home visits	12.1	13.5
Emergency service at the University General Hospital casuality department	0.2	24.7
Telephone calls	6.7	18.6
Total	100	100

Table 4. 1983 Cohort: drop-in contacts ($n = 1975$), sociodemographic and clinical variables

	% Drop-in contacts	χ^2	P
All	15.9	–	–
Male	15.7		
Female	16.1	0.46	NS
< 55 years	18.2		
≥ 55 years	10.1	133.23	< 0.001
Employed	18.2		
Unemployed	21.3	64.34	< 0.001
Other	14.0		
Psychosis	12.6		
Neurosis	20.2		
Alcoholism and pers. dis.	17.0	88.66	< 0.001
Other	16.4		
First-ever	19.6		
Not first-ever	15.7	8.19	< 0.005

Table 2 shows that the drop-in contacts over the 3-year period under study were 16% of the total number of extramural contacts. The distribution of booked and drop-in contacts over the various facilities within the South-Verona CPS is shown in Table 3. Drop-in contacts were day contacts at the Mental Health Centre (26%), contacts at the casualty department (25%), telephone calls at the Mental Health Centre (19%), outpatients contacts (17%) and home visits (13%). The principal referral source for drop-in contacts was the patient (48%); other important sources were the family or the neighbours (29%) and our CPS (15%).

Table 4 shows the relationship between frequency of drop-in contacts and five sociodemographic and clinical variables. It can be seen that all variables but sex were significantly related to the frequency of extramural contacts made on a drop-in basis.

The joint effects of all five variables on the probability of having drop-in contacts were then examined. To simplify the interpretation, it was decided to ignore higher order (4-way) interactions; $P = 0.001$ was used as the criterion for statistical significance. Nevertheless the model found to fit the data was complex. In addition to the main effect of all five concomitant variables, three second-order interactions were highly significant. The effect of diagnosis on percentage of drop-in contacts depends on sex and age jointly but also on sex and occupation jointly. Moreover, the effect of previous psychiatric contacts was influenced by sex and occupation jointly. Only data concerning ≥ 450 contacts over 3 years are shown in Table 5. The characteristics are reported in decreasing order of expected percentage of drop-in contacts.

Finally, Table 6 shows that the patients who had a drop-in first-ever contact with the extramural facilities of the South-Verona CPS had more psychiatric care in

Table 5. Results of the logistic regression analysis[a]; model of best fit: sex · age · DIA + sex · OCC · (DIA + PPC)

Drop-in contacts		Sex	Age	Occupation	Diagnosis	Previous psychiatric contacts
Expected %	Observed %					
22.4	23.2	M	< 55	Other	Psychosis	Yes
20.7	20.0	M	< 55	Employed	Neurosis	Yes
20.5	20.4	F	< 55	Other	Neurosis	Yes
18.1	16.6	M	< 55	Other	Alcoholism and pers. dis.	Yes
17.1	17.1	M	< 55	Unemployed	Psychosis	Yes
12.9	12.6	M	≥ 55	Other	Neurosis	Yes
12.8	12.5	F	< 55	Other	Alcoholism and pers. dis.	Yes
12.0	12.0	F	< 55	Other	Psychosis	Yes
9.3	7.9	M	< 55	Employed	Psychosis	Yes
5.4	4.6	M	≥ 55	Other	Psychosis	Yes

[a] Only data concerning ≥ 450 contacts (over 3 years) are reported
DIA = Diagnosis, OCC = occupation; PPC = previous psychiatric contacts

Table 6. First-ever patients (1983–1985) who had their first-ever contact with the extramural facilities of the South-Verona CPS: a 1-year follow-up

Pattern of care in the following year	Booked ($n = 253$)	Drop-in ($n = 151$)	P
Mean no. of days in hospital	0.64	7.95	< 0.001
Mean no. of extramural			
booked contacts	2.21	4.36	< 0.001
drop-in contacts	0.21	0.84	< 0.001

the following year, as compared with patients who had a booked first-ever contact.

Discussion

South-Verona is one of the few places in which a case-register longitudinal study may be conducted to analyse separately drop-in extramural contacts (which are mainly influenced by demand) and previously booked contacts (which are influenced by both supply and demand). This is because in the South-Verona Psychiatric Case Register information on various features of *each* contact, including whether or not an appointment was previously arranged as well as referral source, are *routinely* recorded. To our knowledge only the Portogruaro Register (De Salvia 1987) has a similar recording system. Studies on unplanned psychiatric care, provided on request made by patients, relatives and others, are important for a better understanding of this type of urgent need that community services are expected to meet.

The results of the present study may be summarized as follows. In South-Verona most patients are treated in their own environment and only 30% of those contacting psychiatric services are hospitalized. It is worth noting that in an epidemiological study in Upper Bavaria it was found that a similar proportion (29%) of patients were treated on an inpatient basis (Dilling and Weyerer 1978). In our area drop-in extramural contacts are 16% of all extramural contacts. These drop-in contacts include both crisis intervention contacts and other unplanned extramural contacts, mostly at the Mental Health Centre but also at home, which may reflect the patients' need for social support and contact, and often have the function of crisis prevention.

The drop-in contacts are made more frequently by patients under 55 years, by unemployed patients and by first-ever patients; patients with diagnosis of psychosis make unplanned contacts less frequently than other patients, which is probably related to the fact that in our community service a great effort is made to ensure continuity of care and regular follow-up of psychotic patients (Burti et al. 1986). A complex model was found necessary to describe the joint effects of the four above-mentioned variables and of the frequency of drop-in contacts. Therefore, many interactions among the sociodemographic and clinical variables considered in the study significantly affect the probability of using the community services on an urgent or unplanned basis.

Those patients who have their first-ever psychiatric contact on a drop-in basis will have a greater amount of both inpatient and extramural care in the following year than those patients who have a booked first-ever contact. This result needs to be confirmed by further analyses conducted in a larger sample of first-ever patients. Such a study is currently in progress.

A good practice community service should be able to provide two types of care: (1) psychiatric care, on a regular basis, to all patients whose needs are known to the service (booked contacts or activities organized in advance), but also (2) psychiatric care in response to demand made by patients on a drop-in or urgent basis.

A flexible balance between these two types of service provision is necessary, and this balance should change according to the changing needs of patients living in the catchment area and according to the changing availability of other clinical and social services in the area, especially those at the primary care level. Unplanned extramural contacts with psychiatric services are a considerable burden for the personnel. Services should be organized in order to satisfy these requests, and staff must always be available to provide crisis interventions and home visits, outpatient consultations and counselling even without previous arrangements. However, the advantages for our patients who receive prompt, bureaucracy-free response to their requests are often evident and we believe that every community service should be able to offer a service on a drop-in or urgent basis at least for 12 h a day. The identification of those patients who make more frequent urgent or unplanned contacts than others may be important for the organization of community services and, in particular, for deciding which proportion of the available resources should be dedicated to this type of activity.

A prompt reply to an urgent demand for care, i.e. early diagnosis and treatment, is considered as secondary prevention. Further studies are necessary to evaluate the clinical and social outcome of this type of secondary prevention.

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