



Research Paper

Medical Science

Voluntary Versus Involuntary Admissions to Resident Care. Do Diagnostic Patterns Differ?

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ABSTRACT

A medical doctor must refer patients in need of acute resident psychiatric care in Norway. The wards are mainly of two kinds, open resident wards as part of a district psychiatric centre and closed wards as part of a psychiatric hospital. Treatment under compulsion is only possible at the latter facility. The aim of the study is to compare referrals to facilities with open and closed doors according to frequency and diagnostic patterns. The material consists of resident patients in an acute psychiatric facility with 36 beds serving a catchment area of 165,000 and in an open facility with eight beds in another municipality with a catchment area of 30,000 persons. The former admitted 4.9/1000, the latter 9.3/1000 inhabitants. There were significant differences in referring patterns between the two facilities. More male patients and far less females were referred to the open facility with substance abuse diagnoses. Patients with psychosis were more often referred to the closed ward, with male three times as often to the closed ward, and with a smaller difference for women. A higher percentage of patients had affective disorders at the open facility but only significantly different in females. The difference in referral rates observed has no obvious explanation. The long distance from the open to the closed ward facility may be a factor. Further research is needed. A district psychiatric centre with open doors handles patients with substance abuse and affective disorders to a greater extent than the facility with closed doors, whereas psychotic patients are more often taken care of behind a closed door.

KEYWORDS

Acute psychiatry, diagnoses, coercion and referral patterns.

Introduction

Referral from a medical doctor is the main route to a resident stay in an acute psychiatric facility in Norway. The doctor may choose to refer to an open ward within the realm of a district psychiatric clinic or to an open or closed ward at the psychiatric hospital of the catchment area. A medical doctor may refer patients at any time of the day, 24/7, at all days of the year. The decision of the medical doctor is binding for the resident facility and may not be changed or refused without a personal investigation of the patient by a specialist in psychiatry at the resident facility. The patient may be immediately released after this investigation if the specialist on duty is present at the facility. This usually does not occur before on the day after remitting. There are no differences in referring rules between catchment areas. Decisions to refer patients without their free will are scrutinized twice, firstly by the receiving specialist in psychiatry within 24 hours, and secondly by a special court meeting every second week at the hospital.

Admissions to an acute psychiatric facility have been studied according to which agency refers [1]. The authors did not find substantial differences between referring agents, whether they were casualty clinics, GPs, specialist psychiatric services or other medical specialists. The referrals seemed equally well founded.

A referring physician may thus have a choice between facilities at different quality levels and often at differing distances from the home of the patient. A search of the scientific literature did not reveal any studies of such choices. The following is the result of a comparison between two facilities at different levels and not in the same catchment area. Forensic psychiatric referrals are not covered. Acute treatment facilities for persons with substance abuse do exist, but they seldom admit on an immediate 24-hour basis. Patients with combined substance abuse problems and mental disorders are thus often referred to the psychiatric facilities. Residential treatment for patients referred to somatic and psychiatric health care facilities is free of charge in Norway.

Materials

Two different cohorts of patients were compared:

1. Resident patients at Blakstad Psychiatric Hospital acute psychiatric facility with 36 beds in closed wards serving a catchment area of 165,000. The data are from the full calendar year of 2011 when the author (JEB) worked there. One third were admitted on coercion [2].
2. Resident patients in an open ward with eight beds at a district psychiatric centre from another catchment area of 30,000. Data were gathered for the full calendar year of 2013. No patients were admitted with coercion. Patients clearly in need of a closed door had to be transported by ambulance plane for 30 minutes to the nearest facility with coercion capabilities. This was not the Blakstad facility.

Data for the analysis was taken from the electronic medical records. Number of men and women according to main diagnosis on the final medical report on each patient was registered. Information on age, family situation, education and length of stay was not collected. Thus no person identifiable information was used. The registered information is available as a standardized routine in the electronic medical records. Both facilities had a staff with specially trained nurses, psychologists and psychiatrists. Less than five patients were referred from the open facility to the relevant closed ward in the psychiatric hospital of the catchment area. Blakstad Hospital is situated 15 kilometres from the somatic hospital, whereas Stokmarknes open ward is in an adjacent building of the somatic hospital.

Statistics. Differences between the hospitals were analysed using the chi-square statistic. Significance levels < 0.05 , < 0.01 and < 0.001 are shown in the table.

Results

807 patients were admitted to Blakstad, and 279 to Stokmarknes. That is, respectively 4.9 / 1000 and 9.3 / 1000 inhabitants. Table 1 gives information on gender and the dis-

tribution of main groups of diagnoses according to ICD-10. Results are given as the main diagnosis in the electronic medical records at the end of the resident stay.

Patients with main diagnoses F10 - 19, mainly substance abuse diagnoses did not differ in the total comparison between the two facilities. Looking at men and women separately the open facility had almost the double number of men and less than one fifth of women compared to the closed facility.

Three times as many patients with F 20 - 29 diagnoses, the psychoses, were referred to the closed department. The difference was more pronounced in men than in women.

The group of affective disorders, F30 - 39, however, had the opposite distribution. More patients were referred with these diagnoses to the open facility. The difference was overall significantly different, but this difference relied on the differing referring pattern for women only.

The ICD-10 group of diagnoses F 60 - 69, the personality disorders, represented a small proportion of the total. There were significantly more such patients in the closed facility. The open facility had no such patients among men.

For the other diagnostic groups the numbers were too small to be meaningfully compared.

Discussion

The referral rate was 4.9 / 1000 and 9.3 / 1000 inhabitants to Blakstad and Stokmarknes, respectively, i.e. almost twice as high to the District centre open ward. A psychiatric hospital with both open and closed wards in Oslo had a referral rate of 2.9/1000 [3]. It is likely that a constructive liaison between psychiatrists and general practitioners could enhance the referral rate to the district centre [4]. On the other hand, urban catchment areas may have other possibilities for treating mental disorders, and thus reducing the rate of referral to the resident facilities. The number of private psychiatrists and psychologists is higher in urban areas. Little is known about the "optimal" referral rate and comparative studies on referral rates to psychiatric treatment are hard to come by. The crude rates that were calculated for the present study are valid measures of caseload to the facilities, whereas global referral rates from general practitioner are difficult to interpret [5].

There was a significant difference between men and women for the diagnostic group F10 - 19, mainly substance abuse disorders. Overall there was no difference. However, more men and far less women were referred for substance abuse disorder to the open facility. This may reflect a difference in substance abuse behaviour between men and women. A rural living may restrict women more than men in drinking and in taking illegal drugs. But the finding is puzzling as one might expect that men with troublesome substance abuse behaviour would be in need of a closed door. Even more so as there is no acute substance abuse detoxification clinic in the catchment area of the open facility, whereas the closed one has a detoxification clinic within the catchment area. The number of patients given these diagnoses was below 13% at both facilities, probably less than the imputed rate of substance abuse among patients with psychiatric diagnoses[2].

On the other hand, the distribution of patients with F20-29 diagnoses, mainly the psychoses, where as expected. Patients with severe psychotic illness would more often be in need of a closed door to the ward. Accordingly, more men and women were referred to the closed ward. In a study of immigrants referred to a closed unit, more men than women were referred for psychosis compared to non immigrants, indicating that psychotic and aggressive behaviour had to be taken care of within a closed ward[6].

Patients with affective disorders, F30-39, dominated the open facility. Broken down by gender, the difference was only significant in women, where more women were referred to the open facility. The reason behind no difference observed in men, might hinge on the number of severely manic patients, who would be

handled under coercion in the closed unit.

Psychological lability and crisis reaction, F40-49, were more prominent in the open facility. Patients with personality disorders as main diagnosis were significantly more often referred to the closed unit, but the numbers are small.

For the other diagnostic groups the numbers were too small to merit statistical inference.

Amaral et al. found that 28% of all patients in medical emergency units had substance use disorders, but less than half of the patients with alcohol-related problems were identified [7]. An underestimation of substance abuse relevant for the functional ability of the patients could be of importance for our groups of patients, but we have no way of post hoc substantiating this. Hiding your substance abuse in the rural setting could be harder as patients and staff often are acquainted. It has earlier been shown that the use of psychometric tests in acute psychiatric settings is very low, letting this route to a more comprehensive diagnosis being missed[8][2].

The electronic medical records do not reliably give second and third level diagnoses. Within a psychiatric facility a psychiatric symptom diagnosis will often be preferred[9].

Awareness of the different approaches needed is a salient task for nurses and doctors alike.

The authors have not found, searching PubMed and relevant lists of references, any studies comparing acute psychiatric facilities according to whether they accept coerced patients according to diagnostic pattern.

Weaknesses of the study approach.

The authors did not collect the legally required GAF scores (General Assessment of Function). Thus a difference in severity of diagnostic entities could not be explored, for instance between voluntary and non-voluntary patients. On the other hand GAF scores are not collected in a standardized way between facilities and not even within a facility and the reliability of the scores may be low. The author did not gather information on the open and closed wards separately for Blakstad Hospital.

The two facilities are situated in different parts of the country and there would be no interaction between them, whereas within one catchment area the district psychiatric centre and the main psychiatric hospital would be in close cooperation. This is not the case in the present study.

Table 1

Medical record derived ICD - 10 main diagnoses in a one-year cohort of patients (N and % in parentheses) in an acute psychiatric facility with coercion possibilities, facility 1, Blakstad Hospital(B) and facility 2 without, Vesterålen District Psychiatric Centre (V). Chi-square statistics were performed between patients in the two facilities as total, and for males and females separately. #) indicates non significant differences.

ICD-10 group	Total	Male		Male	
	Blakstad	Vesterålen	Blakstad	Vesterålen	
F0 Organic psychosis and dementia	13 (1.6)	0 (0.0)#	5 (1.3)	0 (0.0)#	
F10 Substance abuse related disorders	104 (12.9)	28 (10.0)#	59 (15.8)	26 (25.5)***	
F20 Schizophrenia, schizotypal and delusional disorders	247 (30.6)	30 (10.8)*	138 (36.9)	7 (6.9)*	
F30 Mood (affective) disorders	221 (27.4)	114 (40.9)*	102 (27.3)	35 (34.3)#	
F40 Neurotic, stress-related and somatoform disorders	88 (10.9)	54 (19.4)*	35 (9.4)	22 (21.6)#	
F50 Behavioural syndromes associated with physiological disturbances and physical factors	3 (0.4)	3 (1.1)#	1 (0.3)	0#	
F60 Disorders of adult personality and behaviour	65 (8.1)	7 (2.5)*	6 (1.6)	0#	
F70 Mental retardation	4 (0.5)	1 (0.4)#	1 (0.3)	0#	
F80 Disorders of psychological development	5 (0.6)	2 (0.7)	3 (0.8)	0	
F90 Behavioural and emotional disorders with onset usually occurring in childhood and adolescence	15 (1.9)	5 (1.8)	9 (2.4)	1 (1.0)	
Other diagnoses	42 (5.2)	35 (12.5)	15 (4.0)	11 (10.8)	

Sum	807	279	
374	102	433	177

*) Significantly different at < 0.001 level

**) Significantly different at < 0.01 level

***) Significantly different at < 0.05 level

#) Not significantly different

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