Psychiatric Emergency Services – Inpatient Admissions During the Night

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Abstract

In the year 2004 a total of 3,262 inpatients were admitted to a psychiatric hospital in Berlin, Germany. Of these patients, 357 presented during the night. In order to ensure competent management of night admissions, we conducted a study to determine the characteristics of this specific subgroup of patients. Our analysis was based on data obtained from the hospital’s electronic health records system, which is slightly modified version of the Regensburg Basic Documentation System widely used in Germany. The results of our analysis show that patients who arrived during the night suffered from psychiatric disorders of greater severity than patients arriving at other times of day. Night admissions showed a significantly lower level of functionality (p<0.001) and were more likely to be admitted on a compulsory basis (p<0.001) and to exhibit behavior that was dangerous to themselves or to others (p<0.001). Our findings show that psychiatric care for patients admitted during the night requires the presence of especially well-trained staff with sufficient time and resources to ensure quality diagnosis and treatment (German J Psychiatry 2006,9: 128-132).

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Introduction

The competent management of patients admitted at night is one of the primary duties of a psychiatric hospital that offers emergency care services. A number of studies have shown that a large proportion of emergency room presentations are due to psychiatric illnesses. In the Western industrialized countries, the three most common diagnoses in this regard are alcohol intoxication, alcohol withdrawal syndromes, and suicide attempts (Kardels et al., 2003, Pajonk et al., 2001). Factors such as living alone, being unemployed, and/or having a history of previous hospitalization or prior psychotic disorders have been shown to be significantly correlated with emergency inpatient treatment (Schnyder et al., 1995).

However, to our knowledge, no studies to date have examined the characteristics of patients who present at the emergency department with psychiatric illnesses specifically during the night. Is it not the case that most individuals in the abovementioned patient groups wait until the next day to seek medical assistance? Are certain psychiatric illnesses more common in individuals who present at the emergency department during the night, despite the fact that almost all psychiatric disorders are associated with sleep disturbances? Do the majority of depressive patients seek help during the day because they are ashamed to do so during the night? Are most of the manic patients who are admitted at night brought to the emergency department by the police?

One possible reason for night admissions may be the fact that the great majority of psychiatric illnesses are associated with profound sleep disturbances. Depressive patients often have difficulty initiating or maintaining sleep, or experience early morning awakening accompanied by worrying thoughts. The latter phenomenon – often referred to as terminal, or sleep-offset insomnia – is a classic sign of depression and is regarded by many patients as particularly distressing (Hübner-Liebermann et al., 2001). In turn, patients experiencing a manic episode may exhibit seemingly
unlimited energy during the night, thus coming into conflict with the living habits of those around them (Dislaver et al., 1999). Sleep disturbances are also typical early warning signs of schizophrenia. Indeed, during periods of exacerbation, sleep disturbances can become so severe that they lead to a complete fragmentation of sleep patterns. Demented patients often experience a sleep-wake reversal accompanied by an increase in the frequency of disruptive nocturnal behaviors (Ancoli-Israel et al., 1997).

Based on their everyday experience, most caregivers in the field of psychiatry would undoubtedly assert that patients admitted to the emergency department during the night are precisely those who need the most help and are at the greatest risk of harming themselves or others. If this is truly the case, then psychiatric hospitals offering emergency services must ensure that especially well-trained professionals are available to provide out-of-hours medical services, and that they have the necessary time and resources to respond to the specific needs of each individual patient. This is especially important when one considers that a patients' first impressions of what they undoubtedly perceive as a strange and threatening environment have been shown to set the tone for their further stay in the psychiatric ward and, thus, influence the success of treatment.

**Methods**

All persons admitted as inpatients during the year 2004 to a psychiatric hospital in Berlin, Germany and discharged before January 30, 2005 were included in the study. With regard to basic inpatient services in the area of adult psychiatry, Berlin is divided into twelve regions, which correspond to the city’s twelve boroughs. Each region is legally obliged to provide a certain number of inpatient beds and basic services for emergency psychiatric care. The psychiatric hospital in this study provides such services to one of these boroughs. The hospital itself has a total of 237 beds (172 for inpatients, 65 for day cases), representing a ratio of 0.7 beds per 1000 population. Patients who present during the night are admitted to one of eight different hospital wards. These include 4 mixed-gender general psychiatric wards, 2 wards for patients with addictive disorders (including 1 ward for double diagnoses), 1 special gerontopsychiatric ward, and 1 ward with a focus on psychotherapy. The number of beds in each ward ranges from 18 to 25. Intoxicated patients are treated in neighboring internal medicine clinics.

Within 14 days of hospital admission, data on each patient’s pre-admission medical history were recorded by means of a computerized basic documentation system (BADO) (Cording, 1998). Following discharge, data on the course of treatment were extracted from the patient record database. The templates used in the study BADO were based on items contained in the Regensburg BADO. All data were recorded by assistant physicians. The computer-based design of the system ensures that all data entered is accurate, timely, and complete.

In our analysis, we compared patients who presented during the night (weekdays: 10 pm – 6 am; weekends: between 10 pm – 8 am) to those who presented at other times of day. In order to compare day and night admissions, we extracted data on disease severity (e.g. GAF, scales for measuring psychosocial burden and physical limitations) as well as indicators for characterizing complications that occurred prior to admission and during treatment (suicide attempts, violent acts, obsessive behavior, escapes, compulsory admissions) from the BADO. In particular we wanted to test the hypothesis that patients presenting at the clinic during the night were more severely ill than those who presented during the day.

Statistical analysis was performed using SPSS for Windows, version 13.0.1. Data are presented as mean values and standard deviations. Mean value comparisons were performed using the t test for independent samples and chi-square for ordinal variables.

**Results**

In the year 2004 a total of 3,262 inpatients were admitted to the participating psychiatric hospital. Of these, 357 presented during the night (143 men and 214 women). The four largest diagnostic groups among nighttime patients comprised persons with depressive episodes (43 patients), schizophrenic and hallucinatory disorders (73 patients), adjustment disorders (76 patients), alcohol-related disorders (77 patients), and borderline personality disorders (13 patients). The contribution of patients’ diagnoses is presented in Table 1. The distribution of diagnoses among patients admitted during the night differed from that seen in patients admitted during the day. For certain diagnoses, the differences were significant. During the night, for example, significantly fewer depressive patients were admitted. In contrast, a significantly greater number of individuals with adjustment disorders were admitted at night. Patients with depressive disorders (14.5%) and borderline personality disorders (24%) showed a significant higher level of and more severe suicide attempts upon admission (p<0.001), borderline personality disorders were also a risk group for self-harm (p<0.001). The highest level of compulsory admissions we found in patients with delirium (16%) or psychosis (19%), which was significant higher than in the other patient groups (p<0.001).
A total of 58 nighttime patients (16%) had either been hospitalized at some point in the past because they posed a risk to themselves or others, or had to be admitted to our emergency department at the time of presentation for the same reason. Almost 50% of patients admitted during the night had a history of at least one suicide attempt. Immediately prior to presentation, 58 nighttime patients (16%) had attempted to commit suicide or inflict self-harm, and 73 (22%) had been exhibiting threatening behavior or committed violent acts against themselves or others. In summary, patients admitted to the emergency department during the night were more likely than patients admitted during the day to pose a risk to themselves or others by committing suicidal acts and/or demonstrating threatening behavior (p<0.001).

A comparison of day and night admissions reveals that patients admitted during the night were significantly more severely impaired than patients who had been admitted during the day, although the differences in this regard were not significant (p>0.05). However, our data show that persons with severe physical impairments were more likely to present to the emergency department during the day (p<0.001).

A total of 85% of all inpatient admissions to our hospital in the year 2004 were compulsory (Table 3). Patients who presented during the night were significantly more likely to be admitted on a compulsory basis according to the German Law on Assistance and Protective Measures in Cases of Psychiatric Illnesses or the German Guardianship Law in order to prevent them from harming themselves or others. A total of 323 patients received detention orders either before or during their stay in the hospital.
A total of 104 day and night admissions presented with minor or serious injuries, thus comprising only a small group of patients (Table 4). If aggression against others is taken into account, the number of patients who exhibited aggressive behavior prior to admission is substantially higher. Indeed, this could be observed in 1 in 5 nighttime patients if all forms of physical and verbal aggression are included. Importantly, patients admitted during the night were significantly more likely to demonstrate some form of aggression against others.

On average, patients admitted at night had a history of stronger suicidal tendencies (p<0.001) and were also more significantly more likely to exhibit suicidal or self-injurious behavior immediately prior to admission (p<0.001; Table 5). Furthermore, patients admitted at night were more likely to develop obsessions (p<0.001) or exhibit violent behavior (p<0.001) during their inpatient stay. There were no differences between day and night admissions with regard to suicidal or self-injurious behavior during inpatient treatment. During the observation period there were 27 suicide attempts and 7 successful suicides. The suicide rate during our study (i.e. approximately 100 suicides per 100,000 admissions) was somewhat higher than that seen in the investigation by Hübner-Liebermann et al (2001).

Discussion

The results of our analysis clearly show that patients presenting at our emergency psychiatric ward during the night suffered from psychiatric disorders that were more severe than those among patients who arrived at other times of the day. Both general and more specific measures of disease severity showed that patients admitted at night were in less stable condition. Indeed, they were more likely to have attempted suicide prior to hospital admission, as well as to engage in threatening or violent behavior against themselves or others before and during their hospital stay. The frequency of violent behavior seen in our cohort is roughly equal to that seen in data compiled by Spiesl et al (1998) for the Regensburg region of Germany. In our study, it appears that the only psychiatric patients who tended to wait until the daytime to present at our emergency department were those with physical impairments. These characteristics correspond to those seen in patients in other studies who were referred to psychiatric emergency services by the police, regardless of the time of day (Spurrell et al., 2003, Dhossche and Ghani, 1998, Redondo et al., 2003).

Based on these findings, the quality of services currently offered to psychiatric patients during the night needs to be called into question. In particular, our data make clear that night admissions require an especially well-trained psychiatric staff that is able to perform proper diagnostic procedures and provide acute treatment. This is not the case in all German clinics. Indeed, emergency care is often covered by specialists in other medical disciplines who lack experience in acute psychiatric care. The data presented here point to great challenges in personnel and resource management, for it is precisely during the night that most emergency departments in Germany have the lowest number of staff.

In light of our data, it would seem advisable that duty doctors responsible for acute admissions always have one further specialist in psychiatry at hand who can attend to patients’ needs. Furthermore, it would also be advantageous if night staff could be provided with an emergency call system, allowing them to request additional assistance should it be necessary to deescalate volatile situations. Grube (2001) was able to show that proper staff training is clearly an important prerequisite for dealing effectively with highly aggressive situations in patient admissions.

It is also conceivable that our data reflect the fact that a citywide crisis service has been operating in Berlin since the year 2002. As part of this service, the crisis team visits patients during the night and offers expert on-location assistance. It may be that these teams are able to provide sufficient support to patients with lesser disease severity, thus obviating the need for hospital admission. Conversely, it may be that the availability of such a crisis service actually paves the way for inpatient hospital admission during the night.

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