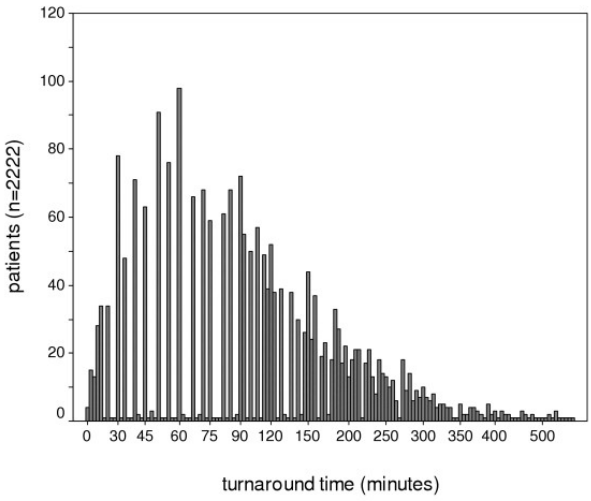

Figure 1
Turnaround times. Turnaround times of the general population of 2222 psychiatric patients within the emergency department in the year 2002.

delivered within reasonable time and taking care of for patients' satisfaction [2-5]. Adhering to a comprehensive philosophy of quality management today is vital for hospitals to compete with other hospitals and healthcare providers. The quality of health care has many different components and is difficult to define. One fundamental principle of quality management is that quality can best be improved if it is measured and compared [6]. Within the emergency department, the measurement of psychiatric service quality with different quality indicators might be useful. As waiting and turnaround times might be crucial to the outcome of a medical disease and the reduction of waiting times will positively influence patients perceptions of a hospital and its services, the purpose of this study is to examine the turnaround times of psychiatric patients according to general and diagnose-related variables as a basis of one possible quality indicator.

Methods

For the period of one year, all psychiatric emergency consultations (n = 2632) within the ED of the Hanover Medical School in Germany were retrospectively monitored, including the time of registration and discharge from ED. We assessed general patients variables and diagnostic procedures in the ED, which might have an impact on the turnaround times. Each procedure such as physical examination, laboratory tests, ECG, X-ray or cranial CT-scan counted as one item. When patients refused physical examination and no other procedures were done, the number of items was zero. All statistical analyses were performed with SPSS™ 12. Besides descriptive statistics, non-parametric methods such as Pearson's Chi Quare test, Mann-Whitney-U-test, Kruskal-Wallis-test and correlation analysis by Spearman were performed. All tests were two-sided. The significance level was set at α 00.05 or less.

Results

2632 patients were assessed, 48.4% were female. The mean age was 43.5 (SD 16.0) years. Female patients were significantly older than male patients (Mann-Whitney-U, Z=-3.4, p = 0.001). 567 patients were secondly referred to a psychiatrist by faculties for consultation (e.g. internal medicine, neurology, surgery). 945 patients were admitted to psychiatric wards and 104 patients to non psychiatric wards. 107 patients refused hospitalization. Substance-related problems (ICD-10 F1X, 672 patients) and psychotic disorders including schizophrenia (ICD-10 F2X, 391 patients) were the most common diagnoses, followed by somatoform, anxiety and neurotic disorders (ICD-10 F4X, 332 patients). 104 patients were involuntary admitted acording to PsychKG (German law concerning psychiatric practice). In 2222 patients, the time from door to release or to hospitalisation was determined. The mean time of stay in ED was 123 (SD 97) minutes, median 95 minutes. 77.9% of all psychiatric patients were released or hospitalized within 3 hours, 88.3% within 4 hours (Fig. 1).

To acknowledge possible influence factors, the first analysis was done taking into account working shifts within the staff of the ED. During the day shift, 26.8% of the patients stayed for more than 3 hours in the ED, during the night shift only 17.9% had to stay that long (Chi-Square = 19.8, df = 2, p < 0.001). By dividing the day into six four hour periods, significant differences between the categorized length of stay could be detected (Chi-Square = 55.6, df = 10, p < 0.001). Between midnight and 4 h, the percentage of patients staying longer than three hours dropped to 7,5%. We found no difference between working days or weekends (Chi-Quare = 0.03, df = 2, p = 0.986). Patients who were hospitalized stayed longer than the discharged patients (Mann-Whitney-U, Z=-3.2, p = 0.002). Patients admitted via the ED to a psychiatric ward stayed shorter in the ED than patients who were admitted to another faculty, for example 14.2% of the later admitted psychiatric patients stayed 3 or more hours in the ED. But 25.9% of the patients admitted to other faculties (Chi-Square = 60.4, df = 2, p = <0.001). Patients who belonged to the urban catchment area were discharged significantly more often within an hour than patients from outside the catchment area (28.0% vs. 21.0%; Chi-Square = 13.3, p = 0.001).

The established diagnosis had a significant impact on turnaround times (Chi-Square = 154.3, df = 14, p < 0.001): patients with dementia or cognitive disorders