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Emergency Psychiatry in the General Hospital

The emergency room is the interface between community and health care institution. Whether through outreach or in-hospital service, the psychiatrist in the general hospital must have specialized skill and knowledge to attend the increased numbers of mentally ill, substance abusers, homeless individuals, and those with greater acuity and comorbidity than previously known. This Special Section will address those overlapping aspects of psychiatric, medicine, neurology, psychopharmacology, and psychology of essential interest to the psychiatrist who provides emergency consultation and treatment to the general hospital population.

Acute hospital service utilization by inpatients in psychiatric hospitals☆,☆☆,★

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ABSTRACT

Objective: Standardized mortality ratios are twice the population average in the year following a mental health admission, yet there is a relative paucity of research on uptake of general medical care in psychiatric inpatients.
Methods: A retrospective database analysis was performed to ascertain the frequency of acute medical care usage by psychiatric inpatients. Data were gathered through a static linkage between anonymized clinical records in a large UK mental health provider and the national hospital activity database (Hospital Episode Statistics) over 1 year from 2010 to 2011.
Results: Over the year, 10.4% of the 8023 psychiatric admission episodes included at least one night in a general hospital during that psychiatric inpatient stay, while 12.0% of psychiatry admission episodes entailed an emergency department (ED) visit. Over the course of the full year, of the 4674 people admitted to the mental health provider at least once, 16.0% were admitted to a general hospital while registered as a mental health inpatient and 18.0% were seen in the ED. Patients were simultaneously registered as occupying beds in both general and psychiatric hospitals for a total of 5163 bed days at a cost of £2.4 million over the year.
Conclusion: This large population-based linkage study indicates a high rate of general hospital utilization by psychiatric inpatients in an independent mental health provider. The need for combined, flexible and practical approaches to the medical care of psychiatric inpatients is highlighted to reduce unplanned care and provide treatment in the site best suited to the patient's needs.

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★ Author contributions: We affirm that the manuscript is an honest, accurate and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.All authors made substantial contributions to the conception and design of the work.All authors gave final approval of the version to be submitted and published and are in agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.The corresponding author had full access to all the data and had the final decision to submit for publication.

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People with severe mental illness (SMI) have high rates of physical comorbidity [1]. Some of these may be regarded as complications of the psychiatric condition, such as self-injury or self-poisoning, but many derive from the high rates of common medical problems in people with SMI. Life expectancies in people with psychosis are shortened by 15–25 years [2], mainly through natural causes [3]; a substance use diagnosis shortens life expectancy by 14–15 years [2] and personality disorder by 18–19 years [4].

Studies from across the globe highlight that patients with mental health diagnoses receive suboptimal acute medical care [5–7] and that preventative approaches such as screening for cardiovascular risk factors are inconsistently applied [8,9]. Long-term physical conditions may only come to light upon admission to a mental health ward. The trend in the UK toward community management of mental health problems where possible may mean that any coexisting physical health conditions may be more complicated by the time the patient is admitted to a mental health unit.

The presence of medical comorbidities can impact negatively on the severity of psychiatric symptoms [10], psychiatric recovery [11], the length of psychiatric hospital admission [12] and the length of general hospital admission [13]. However, the quality and comprehensiveness of medical care for psychiatric inpatients remains highly variable. Training for general and mental health nursing is separated at a very early stage, while Cartesian dualism leads to a culture where psychiatrists look after illness of the mind and other doctors look after bodily problems. These attitudes are now actively being challenged and attempts to redefine psychiatry as caring for the whole person, body and mind are being promulgated.

Psychiatric hospitalization is the most expensive component of mental health care [14]. Any additional general hospital costs incurred during the course of a psychiatric admission stretch the budget further. Such activity has not been quantified in Europe, although a Californian survey over 30 months found that 0.5% per annum of their psychiatric inpatients was hospitalized for medical treatment [15].

In this study, we sought to investigate acute hospital bed and emergency department (ED) usage by psychiatric inpatients and the associated economic costs.

1. Method

A retrospective database analysis was carried out using a linkage between the Clinical Record Interactive Search (CRIS) database [16] in the South London and Maudsley National Health Service (NHS) Foundation Trust (SLaM) and the UK Hospital Episode Statistics (HES) database over a 1-year period from December 14, 2010 to December 13, 2011 inclusive.

SLaM is one of Europe's largest providers of secondary mental health care and provides comprehensive secondary mental health care to approximately 1.2 million residents of four London boroughs, as well as a number of national specialist services. It has 68 psychiatric inpatient wards at four different hospital sites. One site is at a general hospital, but general medical care is not integrated with the psychiatric inpatient service. There are no embedded medical services to the general psychiatric inpatient wards.

From 2006 onwards, electronic psychiatric clinical records (EPCRs) have been used across all SLaM services. In 2008, the CRIS system, supported by the National Institute for Health Research (NIHR) Specialist Biomedical Research Centre for Mental Health, was developed to enable researchers to efficiently search EPCRs and retrieve anonymized clinical information. The protocol for this case register has been described in detail in an open-access publication [16,17].

Psychiatric diagnoses were based on the 10th edition of the World Health Organization International Classification of Diseases (ICD-10) and reflected the clinical diagnoses recorded in the electronic notes. Multiple diagnoses may be recorded, but for the purposes of this study, only primary diagnoses are displayed here.

HES is a data warehouse containing details of all admissions and ED attendances to NHS hospitals in England (http://www.hscic.gov.uk/hes). The HES database is populated with clinical data recorded by specially trained clinical coders from patients' medical records at the time of hospital discharge. Primary ICD-10 medical diagnoses, relating to the general hospital admission, were retrieved from HES. The primary diagnosis is defined by the Department of Health as the main condition treated or investigated during the relevant episode of health care [18].

An extract of the HES database for the relevant time period was linked with CRIS, through a secure and approved linkage carried out by the Health and Social Care Information Service data linkage and extracts team. The fully anonymized linkage identified all admissions and ED care episodes at all UK NHS general hospitals and EDs of people simultaneously registered as a psychiatric inpatient in SLaM. CRIS was approved as a dataset for secondary analysis in this study by the Oxfordshire Research Ethics Committee C, reference 08/H0606/71.

The cohort consisted of individuals occupying SLaM psychiatric inpatient beds during the specified 1-year observation period. We did not separately identify patients from Child and Adolescent services, and we excluded patients from the UK National Psychosis Service as that unit has a special interest in people with medical comorbidities and thus would potentially bias the sample.

This cohort was then cross-referenced with HES to identify patients admitted to a general hospital or ED setting anywhere in England. As it is not uncommon for patients to be transferred between general hospitals and psychiatric inpatient settings on the day of mental health admission, the period of interest was defined from day 2 of a psychiatric admission until the day of discharge from the psychiatric inpatient setting.

The patient variables available were as follows: gender, age range, ethnicity, primary mental disorder ICD-10 diagnosis, date of psychiatric admission and discharge, a psychiatric admission under mental health act legislation (involuntary or compulsory commitment), primary HES ICD-10 diagnosis, dates of general hospital admission and discharge, dates of ED visit and admission type (general hospital or ED).

2. Main outcome measures

We sought to establish the number and primary diagnoses of general hospital admissions and ED presentations of psychiatric inpatients and the economic costs of the contacts over the 1-year study period

Costs of general hospital admissions and ED visits were estimated by multiplying total bed days and ED visits by their respective unit costs: £458 per bed day (average across all specialties) and £108 per ED attendance without hospital admission [19].

The frequencies of ICD-10 diagnostic categories for general hospital admissions are presented by psychiatric service category where the patient was admitted [acute and general adult psychiatry (e.g., psychiatric intensive care units, psychiatric general and triage wards, old age psychiatry services, forensic psychiatry settings)].

We also recorded whether the patient was compulsory detained under mental health act legislation (involuntary commitment) at the time of the general hospital transfer or admission, as this has economic implications in terms of nursing escorts (sitters).

3. Results

3.1. Admissions to general hospitals

During the study period, 4674 patients (53.1% males) were admitted to psychiatric inpatient beds, during 8023 psychiatric inpatient admission episodes, giving a total of 358,666 bed days (201,317 days used by males). Fifty five percent of psychiatric admission episodes ($n=4417$ admission episodes) were for patients admitted involuntarily under the jurisdiction of the Mental Health Act (1983, amended 2007) (involuntary commitment).

Eight hundred and thirty one (10.4%) of the 8023 psychiatric admission episodes incorporated at least one night in a general hospital as part of that psychiatric inpatient stay and 983 (12.0%) incorporated at least one trip to an ED. Of these general hospital admission episodes, 41.0% involved those hospitalized under mental health act legislation. Fifty percent of these general hospital admission episodes were of people admitted with diagnoses of psychotic or affective illnesses [26.0%