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Psychiatric admissions in Malta: demographics and diagnoses

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Background

The decision to hospitalize a patient exhibiting signs of psychiatric distress is made after outpatient management resources have been exhausted or if a patient cannot receive optimal care outside of hospital. The rising number of admissions also has an effect on costs burden within the national health system. This audit is set to determine the main psychiatric reasons for admission to hospital in Malta and analyse demographics, source of referrals and mental health act status whilst comparing such result to those abroad.

Methods

Data from admissions between the 15th October 2018 till the 1st March 2019 was collected, using a recently established electronic database system. Details including; age, sex, nationality, type of admission (new case versus readmission), mental health act status and reason for admission were collected.

Results

300 patients admitted to Mount Carmel hospital during the stated period. Roughly 2 male patients were admitted for every female. 75.3% of the cohort were of Maltese nationality. The majority of foreign patient were European, 14%, followed by African, 8.3%, Asian and American. The most common sources of referrals were casualty at 40%, followed by those from general practitioners at 26.7%.

Conclusion

Reasons for admission were most commonly, substance abuse (15.3%), depression (15%) and acute psychosis (13.3%), following similar trends across Europe. Methods to decrease unnecessary referrals include better training of emergency doctors and general practitioners. Additionally, recent implementation of a 24 hour on call crisis service should provide better acute management of patients and help to prevent saturation of inpatients with cases that can handled in the community.

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Introduction

Admission to hospital for inpatient treatment of psychiatric cases is the most restrictive and clinically disruptive form of management. The need for hospital admission most commonly indicates that presenting symptoms cannot be managed outside an institutional setting. Increasing number of admissions also has an effect on costs burden within the national health system.[1]

In Malta the admission process to the main psychiatric facility occurs provided that the patient presents a ticket of referral with details leading up the admission. In cases where the patient does not want to be admitted voluntarily, admission under the mental health act is undertaken. Patients can be referred by any physician, most commonly from the emergency department or through general practitioners.

This audit is set to determine the main psychiatric reasons for admission to hospital in Malta and to analyse similar factors in these patients including demographics, source of referrals and mental health act status whilst comparing such results to a similar study in Scotland.

Materials and Methods

The study was conducted at Mount Carmel Hospital, Malta and approved by both the local audit committee and by the data protection management. Data from admissions between the 15th October 2018 till the 1st March 2019 was collected. A total of 18 weeks were thus analysed. Data was collected from a recently established electronic database system denoting details about all acute admission to hospital. Each patient case was studied and the following details were noted; age, sex, nationality, type of admission (new case versus readmission), mental health act status (voluntary versus involuntary) and reason for admission/ diagnosis.

In cases were information was absent from the electronic database, online electronic case summaries were opened or physical files were reviewed accordingly. No patient contact was necessary for this audit.

Results

Over a time, span of 18 weeks, 300 patients were referred and admitted to Mount Carmel hospital. The age range of these admission was that between 17 and 90 years of age. Most patients fall between the ages of 20 and 39, these amounting to 140 cases, 46.7% of the total number of admissions. The second most common age group,40-59 years, included 32.3% of 300 admissions studied (table 1).

Table 1 Patient age

Age group	Number of patients	% from total admissions
0-19	15	5
20-39	140	46.7
40-59	97	32.3
60-79	39	13
80+	9	3

Male admissions were more common when compared to the opposite gender. 65.7% of patients,197 case were in fact male (table 2). Roughly 2 male patients were admitted for every female.

75.3% of the cohort were of Maltese nationality. The majority of foreign patient were European, 14%, followed by African, 8.3%, Asian and American (table 3).

Table 2 Admission gender

Gender	Number of patients	% from total admissions
Male	197	65.7
Female	103	34.3

Table 3 Nationality of patients

Nationality	Number of patients	% from total admissions
Maltese	226	75.3
European (excluding Maltese)	42	14
African	25	8.3
Asian	6	2
American	1	0.3

Most referrals came from accident and emergency department in Mater dei Hospital, the main hospital in Malta. A total of 40% of admissions were referred from the aforementioned. Another 23.7% of cases were transferred from wards within this hospital. The second most common source of referral was from general practitioners who referred 26.7% of the 300 subjects. Other referrals came from geriatric hospitals, detox centre and private clinics (table 4).

New cases, meaning first time admission to the psychiatric facility amounted to 64.3% whereas the remaining amount were patients having previous admissions at hospital (table 5).

205 inpatients, 68.3% of the cohort, were inpatients on a voluntary basis whereas 30.7% were sectioned under the mental health act for assessment and observation (schedule 2) The remaining 1% present for involuntary assessment for observation and treatment (schedule 3) (table 6).

Reasons for admission were most commonly, substance abuse (15.3%), depression (15%) and acute psychosis (13.3%) (table 7).

Table 4 Source of admission

Referred from	Number of patients	% from total admissions
A&E	120	40
HC/GP	80	26.7
MDH (wards)	71	23.7
Private clinic	11	3.6
POP	7	2.3
Detox	4	1.3
GGH	2	0.6
KGH	2	0.6
SVPR	2	0.6
CYPS	1	0.3

Table 5 Admission type

Type of admission	Number of patients	% from total admissions
New admission	193	64.3
Readmission	107	35.7

Table 6 MHA status of patient

MHA status	Number of patients	% from total admissions
voluntary	205	68.3
IAO inpatient assessment	92	30.7
IATO inpatient assessment /treatment	3	1

Table 7 Reason for admission

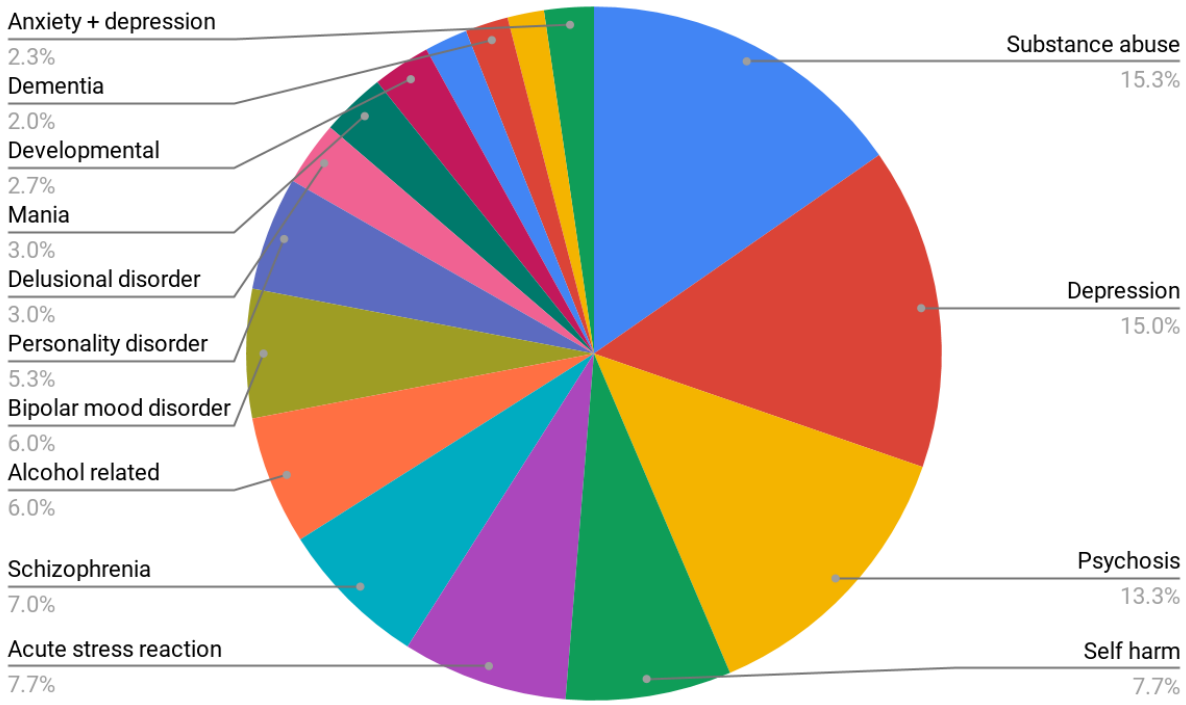
Reason for admission	Number of patients	% from total admissions
Substance abuse	46	15.3
Depression	45	15
Psychosis	40	13.3
Self harm	23	7.7
Acute stress reaction	23	7.7
Schizophrenia	21	7
Alcohol related disorders	18	6
Bipolar mood disorder	18	6
Personality disorder	16	5.3
Delusional disorder	9	3
Mania	9	3
Developmental disorder	8	2.7
Alcohol + substance misuse	6	2
Dementia	6	2
PTSD	5	1.7
Anxiety + depression	4	1.3
Anxiety	3	1

Discussion

Several specific patient characteristics, especially early onset of disease, hospital admission in the past year, comorbid substance use disorder, global illness severity, and poor social function, were previously found to contribute to risk of hospital admission.[1]

Reasons for inpatient stay at the main psychiatric hospital on the island revealed that substance abuse (15.3%) and depressive mood disorder (15%) are the most common causes for admission figure 1). This is also seen in Scotland however the rates are 35% for depressive mood disorder and 25.2% for substance abuse. The difference in rates could be due to presence of categories such as bipolar disorder (6%) and self-harm (7.7%) which could be caused by depressive disorder. These subgroups were not listed in the Scottish study used for comparison. The same can be said about the alcohol abuse category (6%) and mixed substance use (2%) that can be included with substance abuse disorder. Other reasons for admission abroad accumulate up to 18.3% for schizophrenia and related psychoses, 17.2% for anxiety and stress related disorders with the remainder associated with eating and personality disorders.[2] In the United Kingdom schizophrenia and related psychoses accounted for 26.0% of admissions and substance misuse 19.1%.[3] Similar trends can be seen across the European Union likewise.[4] In Malta psychotic episodes lead to 13.3% of the total admission. Such episodes are mostly substance induced thus also adding to the total amount of patients needing admission due to a substance related disorder.

Figure 1 Reason for admission



In general, depressive disorders are more common in females whilst men were more likely to present with psychotic disorders, alcohol use, and substance use disorders and to be assessed as aggressive toward others.[5-6]

Males admissions represent 65.7% of the total when compared to 34.3% of females (figure 2). Other studies show that females have a higher number of hospitalisations although men have a higher risk of a first hospitalisation and their stays prove to be longer.[6] Female gender is thought to be one of the risk factor for hospitalisation, others include suicidality, drug treatment administered at casualty, restraining measures applied, dementia, number of consultations, referral to hospital by a physician, or the patient presenting at the emergency department unaccompanied.[7]

With regards to most common age group requiring admission in Malta, patient were found to be between the ages of 20 and 39 (figure 3). This can be related to the fact that age of onset for the most common diagnosis are as follows; substance use disorders (age 20 years) and mood disorders (age 30 years)[5]. In the United Kingdom the most common age category for admission is between the ages of 25 and 44, thus a great overlap of age can be seen with that found locally.

31.7% of patients were brought to hospital involuntarily using the mental health act (figure 4). Compared to foreign tendencies, the total frequencies of admission and compulsory admission rates vary remarkably across the European Union, from 30% in Sweden to 3.2% in Portugal. Variation hints at the influence of differences in legal frameworks or procedures despite the tendency for harmonisation of strategies for mental health care delivery, rules and regulations for involuntary placement or treatment of mentally ill persons.[8]

Figure 2 Admission gender

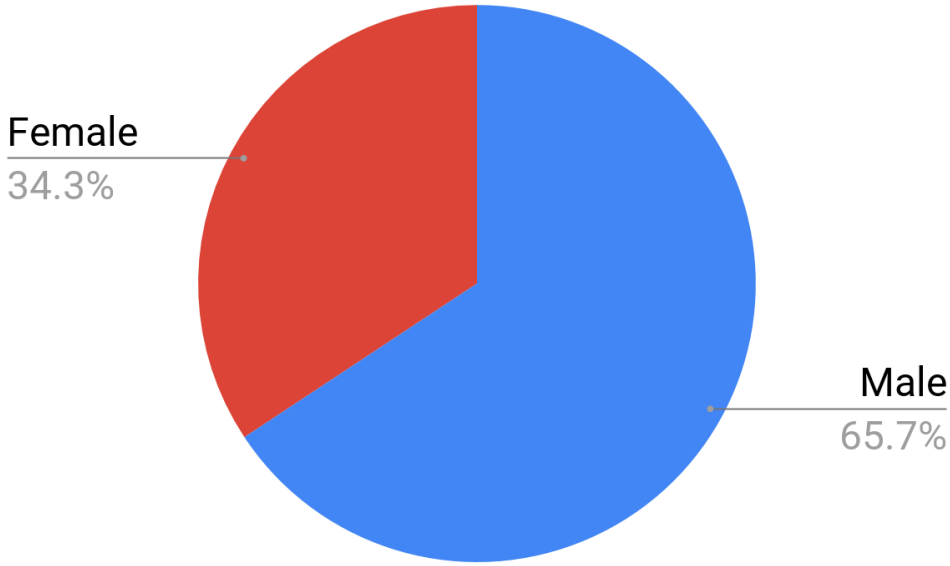


Figure 3 Patient age

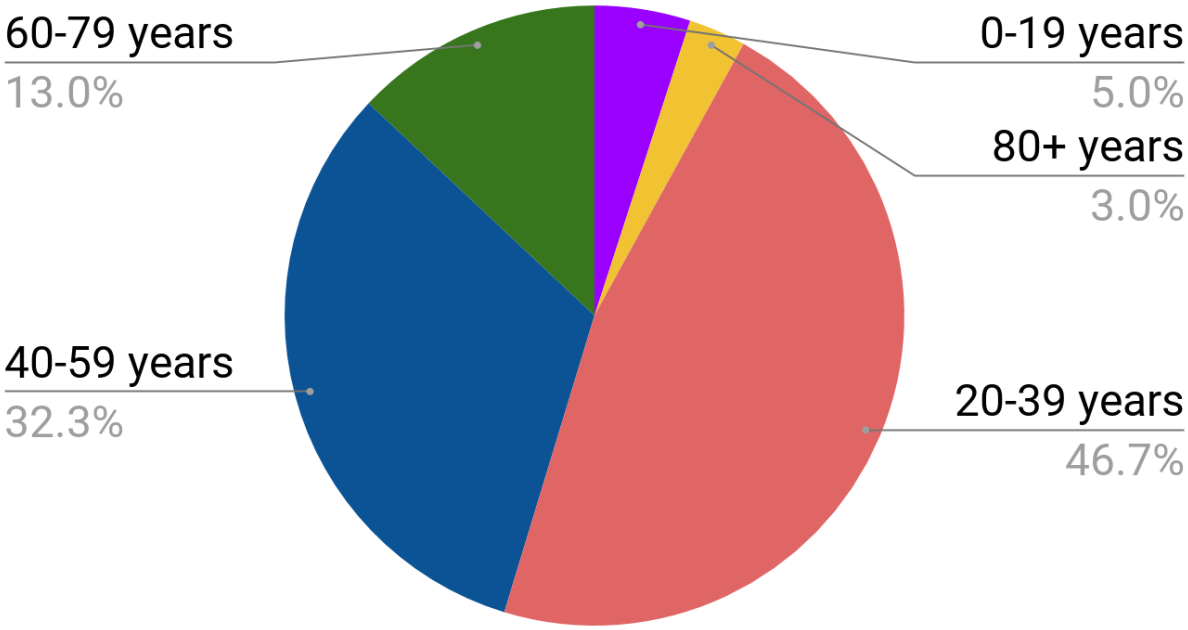


Figure 4 Admission type

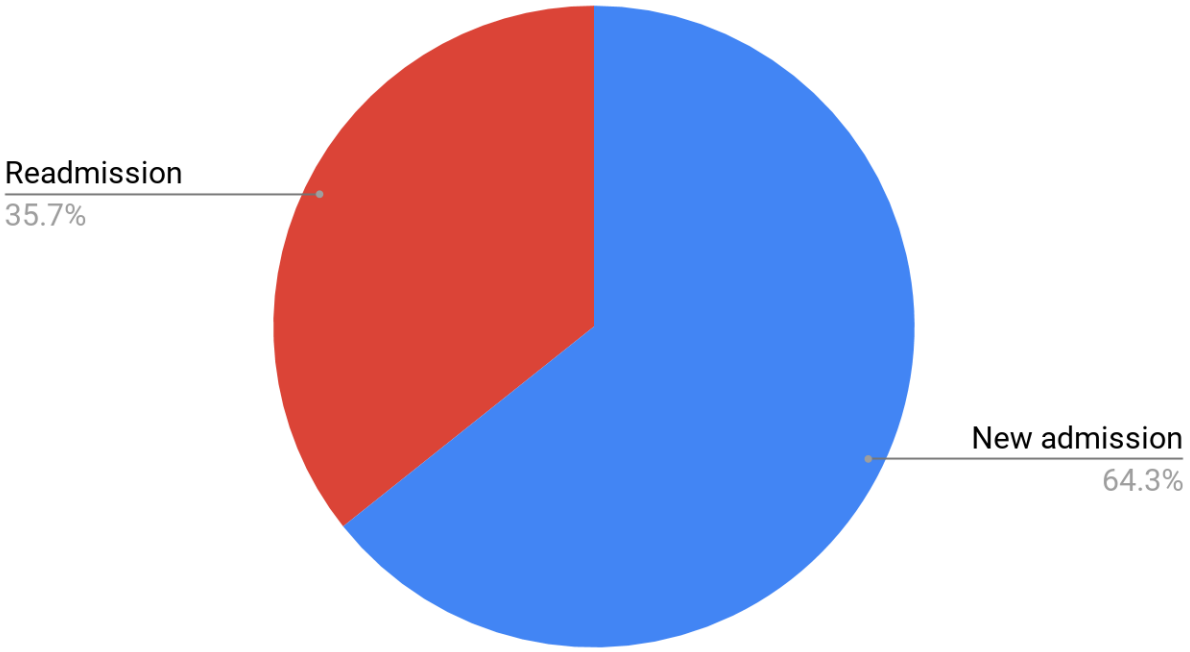
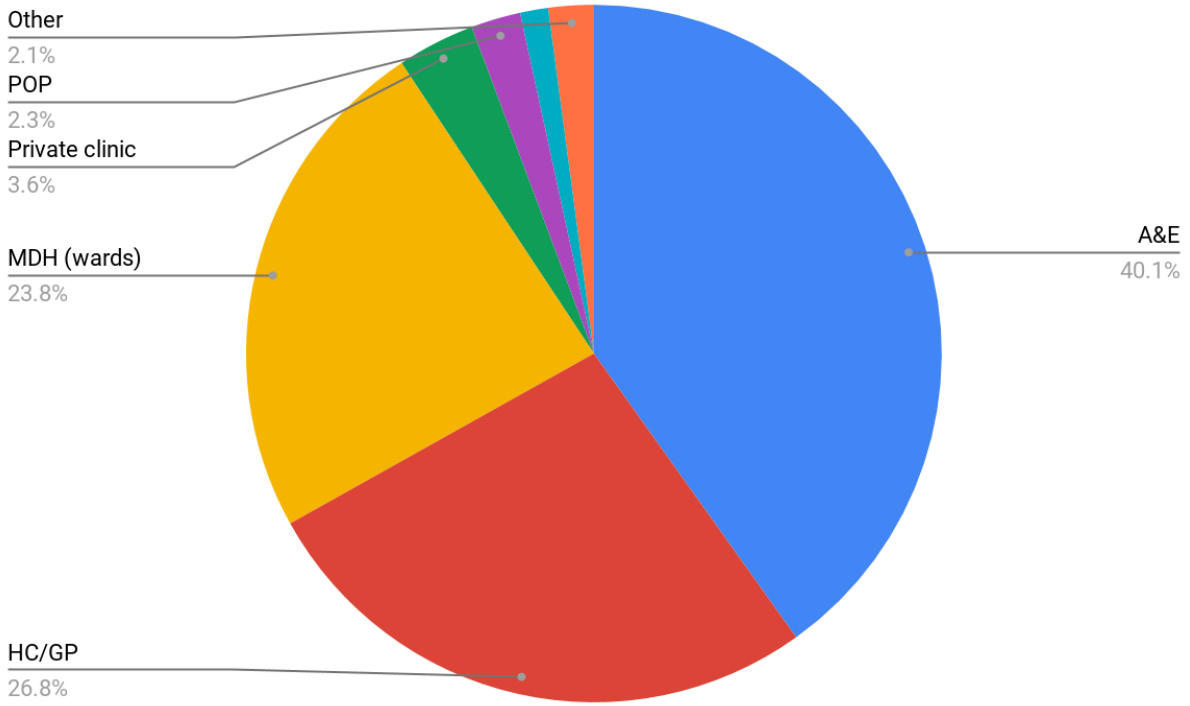


Figure 5 Source of admission



There are many paths that lead to inpatient psychiatric treatment: referral by a specialist including general practitioners, walk ins directly attending emergency department, referral by community psychiatric services, patients brought in by the police, as well as transfers from other hospital departments. For many patients with psychiatric problems, the first port of call is casualty, in fact the majority, 40% of referrals, are sent from accident and emergency. Following casualty, the most common source is that *via* general practitioners at health centres, 26.7%, followed by transfer from wards within the general hospital,23.7% (figure 5).

These above factors should help guide clinical and programmatic efforts to focus outpatient care on psychiatric patients at high risk for hospital admission. Furthermore, evaluation of sources of referral can result in more effective management by providing more resources and better training to attending physicians. Seeing how the number of prescriptions of antidepressant drugs issued to patients with a diagnosis of depression in primary care in the United Kingdom has increased[9] by 33% goes to show how general practitioners are dealing with more psychiatric consultations. Providing adequate and updated training to family doctors could lead to better community management and divert admission to hospital whenever possible. Once a patient is referred or walks into casualty, it is the assessment done by emergency physicians that determines a dischargeable case versus an admission, also bearing in mind that some patients will request the admission themselves.

As of March 2019, crisis psychiatric services at casualty have extended their on-call hours from 8am till 5pm to a 24 hour service. Having a psychiatric specialist on site leads to review by a trained psychiatric physician allowing for better assessment of each case and cutting down on unnecessary admissions. Overall, there is also a need to assess the role of relevant community services, together with evaluation of the quality and continuity of outpatient care, family and social support to possibly reduce the risk of hospital admission.[1] As with every developing specialty, patient education and especially in the case of psychiatry, family education is essential in promoting better timing for admissions based on warning signs together with public knowledge of the available resources such as non-governmental organisations and support helplines.

Suggestions for re-audit include analysing admissions occurring after the introduction of extended 24 hour crisis service recently introduced and to see how this affected the number and type of admissions to the hospital.

The limitations of this audit include the limited number of patients analysed and the fact that some patients were not yet discharged with a formal diagnosis thus an impression of the diagnosis was used. In other cases, updates of the working diagnosis may have not been uploaded accordingly.

Conclusion

The decision to hospitalise a patient is taken to be the last resort after outpatient management has failed, if risk is too high or if community support is not sufficient to mitigate this risk. Evaluation of services has shown that admission to hospital is more common in males locally. The most common reasons for admission are substance abuse and depressive disorder with local rates comparable to those in the UK and Scotland. 68.3% of all patients are admitted voluntarily with the remaining 31.7% needing sectioning

by applying the mental health act. The vast majority of referrals are done through the emergency department. The goal of an acute psychiatry specialist is to optimally assess the clinical presentation and use all available community resources. Implementation of a 24 hour on call crisis service should provide better acute management of patients and help to prevent saturation of inpatients with cases that can handled in the community. This may also help prevent patients from future institutionalisation, cuts down on costs yet ensuring that inpatient hospitalisation is reserved for situations with high imminence of danger to the patient or others.

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