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Paediatric Psychiatry Admissions to Critical Care

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Abstract

Aims

Children and adolescents may require admission to PICU to manage significant episodes of psychiatric or behavioural disorders. The primary aim was to determine the number of paediatric psychiatry patients requiring PICU admission and the indications for admission.

Methods

Our patient information system was used to identify patients admitted with a psychiatric presentation.

Results

Fifteen patients were admitted during the study period. Ten (66%) patients were admitted at a weekend and 12 (80%) were admitted after 5pm. The admitting diagnosis was self-harm in 7 (46%), psychosis in five (33%) and an eating disorder in three (20%) patients.

Conclusion

The number of patients requiring PICU admission was small but represents a significant challenge to staff and resources. There is a need to establish a governance structure and pathway of care for these patients.

Keywords: paediatric; psychiatry; intensive care; admission

Introduction

Ireland has a deficit of paediatric inpatient psychiatry beds. There are currently four paediatric HSE inpatient units with a total of 76 beds and two private units with 26 beds. In 2019 there were 497 admissions to these 6 units, an increase of 89 from 408 in 2018.[1]

These figures do not take into account the large number of psychiatric admissions to paediatric medical wards. Indeed, these figures are not officially recorded by the Mental Health Commission, however published studies[2,3,4] have reported data from 3 Dublin Paediatric Hospitals.

Fitzgerald et al[2] reports that in 2016 there were 432 psychiatric presentations to a Paediatric Emergency Department (PED) in Dublin. Another study reported 318 acute psychiatric presentations to an Irish PED over a 10 year period[3]. A previous study[4] in our institution reported 151 psychiatric admissions over a 12 month period.

The primary aim of this study was to determine the number of paediatric psychiatry patients requiring PICU admission, over a five year period, and the indications for admission. Secondary aims include analysing patient demographics, outcomes, and resource implications.

This is the first study to investigate paediatric psychiatry admissions to PICU in an Irish setting.

Methods

This study was performed in the 23 bed PICU in CHI at Crumlin Hospital. The hospital has a Liaison Psychiatry Department who review admitted patients. A five year review from 2015 to 2020 was performed.

Results

15 patients were admitted over the five year period, accounting for 0.3% of total PICU admissions. There was no significant variation in the number of annual admissions over the study period. Patient data is summarised in Figure 1.

Age	9-16 years (Mean 12.6)
Sex	8 Male, 7 Female
Admitted Friday-Sunday	10 (66%)
Admitted after 5pm	12 (80%)
Length of stay	1-5 days (Mean 2.7 days)
Admitting diagnosis *-Self harm* *-Psychosis* *-Anorexia Nervosa*	 7 (46%) 5 (33%) 3 (20%)
Intoxicated with alcohol or drugs	5 (33%)
Co-Morbidity *-T21* *-Previous PICU admission with self harm* *-Asthma* *-Acute Myeloid Leukaemia*	 2 (13%) 1 (7%) 1 (7%) 1 (7%)
Delayed discharge (>4 hrs for transfer to ward)	7 (46%)

Figure 1: Patient Characteristics.

The five patients with psychosis required intravenous sedation while antipsychotic medication was titrated to therapeutic effect. The 7 patients with self-harm were admitted for management of drug overdoses, significant alcohol and/or drug ingestion or management of self-inflicted injuries. Five required sedation and ventilation as part of their critical care. The three patients with anorexia nervosa were admitted due to ECG changes from severe electrolyte derangement.

Fourteen patients were discharged to a Paediatric Medical Ward for further care and there was one death in PICU, which occurred due to severe hypoxic brain injury secondary to attempted hanging. Seven patients had delayed discharge, with a mean waiting time of 33 hours (range 5-73 hours).

Discussion

PICU provides enhanced monitoring and 1:1 nursing care. It is, however, a limited resource. Rapid access to MDT support and appropriate infrastructure to ensure physical safety is important. Seven of fifteen patients in our study had their discharge delayed due to delays in accessing these essential MDT supports or delays in sourcing a ward bed with appropriately trained staff.

Ten of fifteen patients were admitted at the weekend with 12/15 patients being admitted after 5pm. These trends are in keeping with those of Lynch et al[5] who noted that 62% of referrals had attended "out-of-hours". Weekends and after hours provide limited Child and Adolescent Mental Health Service supports, with the PED and/or PICU becoming the default environment for acute psychiatric emergencies.

Most PICU nurses have not received training in the judicious use of controlled restraint. Thomas et al[6] report that paediatric nurses often do not feel confident providing care to young people presenting with self harm or attempted suicide, citing inadequate training and lack of expertise. Ramritu et al[7] report that 67% of respondents felt they were not adequately trained to look after children with mental health issues. There are relevant courses currently available, such as MAPA Training (Management of actual and potential aggression) and TMV Training (Therapeutic Management of Violence). These courses are generally not undertaken by paediatric staff but perhaps this needs to be considered given the increase in psychiatric presentations in recent years.

There is a need to establish a pathway of care for young patients with psychiatric illness who need PICU admission. The Mental Health Act[8] specifies that patients admitted for psychiatric care without consent must be admitted to an approved unit. The Act does not make any reference to children who require critical care admission and paediatric hospitals are not designated as approved units. The new National Children's Hospital will provide 28 beds for child and adolescent psychiatric services. There is no specific reference to psychiatric admissions in the Model of Care for Paediatric Critical Care in Ireland.[9] This is something that needs to be addressed to ensure a safe and efficient pathway for these children.

Declaration of Conflicts of Interest:
Neither author has a conflict of interest relating in this paper.

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