Clinical characteristics of people with mental health problems who frequently attend an Australian emergency department

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Abstract

The objective of this study is to determine the clinical characteristics of people with mental health problems who frequently attend an Australian emergency department (ED). A retrospective clinical audit of presenter characteristics was conducted in a 550-bed tertiary referral metropolitan hospital with data reflecting 12 months of consecutive ED presentations between September 2002 and August 2003. A sample of 868 individuals accounted for 1076 presentations. Patients attending more than once accounted for 12.5% of the total sample. Significant variables associated with frequent attendance included: younger age; English speaking background; and mood and anxiety disorders. Lone arrival of a patient to the ED showed marginal significance. The significant associates of frequent attendance found in this study may be used to identify patients earlier to a multidisciplinary case review process and individual management planning involving clinicians, carers and patients.

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What is known about the topic?

The research into attendance patterns of patients with mental health problems is limited, and there is very little of this work completed in a context relevant to Australia. There are few outcome data on successful programs to reduce hospitalisation rates for this patient group; which may be a result of the lack of descriptive studies on frequent presentation.

What does this paper add?

This paper adds an Australian objective description of this patient group. The paper highlights how to describe and think about potential interventions that may help reduce attendance patterns.

What are the implications for practitioners?

Practitioners in emergency departments and mental health services are well placed to think more critically about this group of patients and decide on individualised care plans to help reduce their complicated presentation patterns.

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EMERGENCY DEPARTMENTS (ED) in Australia over the last 10 years have seen an increase in mental health presentations. The reasons behind this have been argued to be multifactorial, including mainstreaming, deinstitutionalisation and poor levels of community-based mental health services.[1-5]

Given the general increase in ED service usage, there is a growing need to identify and understand high utilisers. Patients with mental health problems who frequently attend EDs pose a significant and complex challenge for EDs and mental health services. These patients need intensive treatment planning and service mobilisation.[6] People who frequently attend mental health emergency services have been perceived by health professionals to be hostile, demanding, manipulative and to have a demoralising effect on staff, who become frustrated with their presentations.[7]

Emergency department staff are generally not involved in the development of management plans for people who frequently attend their departments.[5]

Defining frequent attendance patterns

The definition of frequent attendance is not consistently reported. Lucas and Sanford[8] defined frequent attendance as patients who had 4 visits in a 12-month period or two within a month. Kennedy and Ardagh[9] defined frequent attendance as 10 or more visits in a 12-month period. Hansen and Elliot[7] categorised mental health frequent attenders into three groups: non-repeaters; 3 or fewer times in a year (occasional repeaters [OR]); and 4 or more times a year (frequent presenters [FP]). This paper uses Hansen and Elliot's[7] three categories to define the frequent attendance pattern, as the categories best reflect how clinicians might prioritise patient's needs. Patients attending four or more times in a year were anecdotally argued to have more complex needs than those presenting two or three times in a year, or once a year. Using three groups to describe the attendance pattern (rather than multiple or two groups) was argued to be more manageable and targeted.

Literature review

There are few studies describing the characteristics of people who frequently attend EDs with mental health problems and few which compare them with routine presentations. An associative study examining 16 257 patients visiting a North American psychiatric emergency service over 4 years[10] found that patients who showed frequent attendance patterns (more than one visit per year) were more likely to be: male; younger; unmarried; unemployed and non-white; with a diagnosis of schizophrenia, other psychotic disorder or personality disorder. In a study of 12 212 patients at a North American ED, the researchers identified that people with psychiatric disorders and a comorbid substance abuse problem were more likely to frequently attend the service.[11] In a sample of 307 patients attending a private psychiatric emergency service in North America, researchers found that 50 attended more than once in a 12-month period. Patients who frequently attended the service were significantly different to patients who did not, with the characteristics: younger (aged 31–50 years); having ongoing psychotherapy; more occasions of inpatient treatment; no social supports; arrive unaccompanied by friends or family to the ED; referred for hospitalisation; and less likely to be engaged in a "highly positively toned interaction with their therapist".[12] A North American study compared 761 patients who frequently attended a psychiatric emergency service with 1585 non-frequent attenders. Patients who frequently attended were statistically more likely to be: homeless, have developmental delay, be enrolled in a mental health plan, have a history of voluntary and involuntary admissions, have a personality disorder, have unreliable social supports, and have a lifetime history of incarceration and detoxification.[13]

A British study comparing 77 patients who presented seven or more times in 12 months with 182 routine attenders noted that 45% had a psychiatric disorder and 49% had an alcohol-related disorder. Compared with routine attenders, those who frequently attended had lower health status, more psychiatric disorders, more psychiatric admissions and more general practitioner visits.[14] In a Finnish study of 537 presentations in a 12-month period, the researchers found 8% of the sample had 4 or more visits. In this study, the following variables were found to predict frequent attendance: male; previous multiple hospital admissions; planned outpatient contacts; and repeated outpatient contacts.[15]

The Australian scenario is scarcely described. An analysis of 500 frequent attenders over a 6-year period at an Australian inner-city ED found that 26.5% had primary psychiatric or altered conscious states due to drugs and alcohol.[16] In another Australian study of frequent attendance at a general hospital ED, it was suggested that patients who frequently attended were a small

group with high support needs and a lack of integrated care planning.[17]

It is difficult to draw a conclusive description of these patients' clinical characteristics from the small number of available studies, in different countries and with different clinical settings. The dominant characteristics that present more than once in this literature pool are: young age range; male gender; psychotic or personality disorder; and comorbid substance abuse. History of multiple hospital admissions and evidence of poor psychosocial supports have also been repeatedly identified.

There is scant discussion of options and approaches regarding how best to manage frequent attendance. While some work has been published around the modelling of treatment services for multiple presenters to the ED, this does not focus on the mentally ill.[5]

Study aims

This study attempted to understand the phenomena of frequent attendance to the ED by patients with mental health problems, by identifying clinical characteristics associated with their presentations.

Methods

This retrospective clinical audit of presenter characteristics was conducted in a 550-bed teaching hospital in metropolitan Sydney. Data reflecting 12 months of consecutive ED presentations was obtained from the emergency department information system (EDIS). A total of 45 671 patients presented between September 2002 and August 2003; 1076 of these presentations were given a psychiatric diagnosis. The authors collected data reflecting patient demographics, triage codes, time and mode of arrival, length of stay (LOS), diagnosis, admission and discharge status.

Mental health staff and ED medical staff assessed patients with primary mental health diagnosis. The International Classification of Diseases (ICD) 9 (ninth revision) diagnosis recorded in EDIS was furthered categorised into six larger diagnostic descriptions and considered as presenting problems for the purpose of analysis: deliberate self-harm (suicide attempt or actual self harm); suicide risk (suicidal ideation with no act of self-harm or attempt); psychotic episode (drug psychosis, delusional disorders, affective psychosis, alcoholic psychosis); schizophrenia (schizophrenia disorders); mood and anxiety disorder (major depressive episodes, bipolar affective disorder not mania, reactive depressions, anxiety disorders, panic attacks, adjustment disorder, acute stress reactions); and other (alcohol intoxication, agitation and delirium). For this study, comorbid diagnoses were not considered. The EDIS discharge diagnosis was used and data were analysed using SPSS for Windows, version 11.0 (SPSS Inc, Chicago, Ill, USA).

Results

Of the total sample, 12.5% attended at least twice in the study period. The entire frequent presenters group had their second presentation within the first month and 10 (77%) had all their presentations within the first 6 months. The occasional repeaters had their second visit to the ED within the first month 65% of the time, and all visits within 6 months. There were 1076 presentations to the ED, which were made by 868 individual patients. Their mean age was 43.8 years, 49% were male, and 71% were from an

1 Attendance profile

	Non-repeaters (1 visit only)	Occasional repeaters (2–3 visits)	Frequent presenter (>4 visits)	Total sample
Total (%)	759 (87.3)	97 (11.2)	13 (1.5)	869 (100)
Emergency department attendances	759	221	96	1076
Mean attendances (SD)	1 (0.0)	2.3 (0.4)	6.5 (4.3)	1.2 (0.9)

2 Demographics and diagnosis by frequency of attendance

	Total	Non-repeater	Occasional repeater	Frequent presenter	Univariate test	*P*
Totals per group	*n* = 869	*n* = 759	*n* = 97	*n* = 13		
Age (mean, years)	46	47	38	33	F = 8.1	< 0.0001
Male	50%	50%	47%	69%	$\chi^2 = 2.2$	0.34
English speaking background	75%	74%	77%	100%	$\chi^2 = 4.9$	0.09
Diagnosis*					$\chi^2 = 19.4$	0.04
Deliberate self harm	14%	15%	10%	15%		
Mood and anxiety	21%	20%	25%	39%		
Suicide risk	8%	7%	14%	0		
Psychotic episode	14%	14%	16%	15%		
Schizophrenia	8%	7%	12%	8%		
Other	35%	37%	23%	23%		

* For occasional and frequent repeaters, the most frequently occurring diagnosis codes are employed

3 Presentation descriptors by frequency of attendance

	Total	Non-repeaters	Occasional repeater	Frequent presenter	Univariate test	*P*
Totals per group	*n* = 869	*n* = 759	*n* = 97	*n* = 13		
Arrived* via:						
self	43%	43%	42%	69%	$\chi^2 = 9.1$	0.06
ambulance	42%	43%	35%	23%		
police	15%	14%	23%	8%		
Triage category*						
1	1%	1%	–	–	$\chi^2 = 7.0$	0.49
2	9%	9%	9%	–		
3	56%	56%	60%	85%		
4	33%	34%	31%	15%		
5	1%	1%	–	–		
Emergency Department LOS (Mean hours†)	6.4	6.5	6.3	5.1	F = 0.38	0.68
Triage to MO‡ (Mean hours†)	0.8	0.8	0.6	0.6	F = 1.2	0.31
Admitted	40%	39%	46%	46%	$\chi^2 = 2.4$	0.30

LOS = length of stay. * For occasional and frequent repeaters, the most frequently occurring arrival and triage codes are employed. † For occasional and frequent presenters, an overall mean (all presentations) was employed. ‡ Triage to MO = time triaged to time seen by medical officer.

English speaking background. Box 1 reports the attendance profile. Box 2 describes the demographics and diagnostic group by attendance frequency.

The results indicate significant differences for age and diagnosis. Younger people appeared more prominently in the frequent presenters group, and this group also contained more

mood/anxiety diagnoses than the other groups. A marginally significant relationship was also noted for ethnicity, where people of English speaking background appeared more prominently in the frequent presenters group. Box 3 describes presentation descriptors by frequency of attendance. Mode of arrival was shown to differ by presentation group at a marginally significant level. Frequent presenters were more likely to be self-prompted arrivals and less likely to arrive via ambulance or police. On presentation to the ED, patients are given a priority coding system, with triage code 1 being high priority (to be seen immediately) to a triage code 5 with lowest priority. The analysis by triage code indicated a proportionally greater likelihood of frequent presenters being allocated triage code 3, compared with the other groups. Box 4 profiles each frequent presenter presentation in detail.

4 Frequent presenter (*n* = 13): variation in attendance descriptors

Sex and age	No. of ED visits	Diagnoses for all visits (no.)	Arrived via: (no.)	ED LOS (range in hours)	No. of admissions to psychiatry
Female 45 years	4	Psychotic episode (2), mood/anxiety (2)	Self (2), ambulance (2)	3.4–21.0	0
Male 42 years	8	Deliberate self harm (4), other (3), mood anxiety (1)	Self (8)	0.4–9.0	8
Female 23 years	4	Psychotic episode (1), schizophrenia (1), mood/anxiety (1), other (1)	Self (4)	1.4–15	4
Female 32 years	20	Other (8), deliberate self harm (2), suicide risk (4), psychotic episode (3), mood/anxiety (3)	Ambulance (19), police (1)	0–18	20
Male 34 years	9	Other (1), deliberate self harm (3), suicide risk (1), psychotic episode (2), schizophrenia (1), mood/anxiety (1)	Police (4), ambulance (5)	0.5–4.5	9
Female 47 years	5	Other (4), deliberate self harm (1)	Police (1), ambulance (2)	1.3–12	5
Male 32 years	4	Schizophrenia (4)	Police (1), self (3)	0.12–4	4
Male 26 years	19	Other (2), deliberate self harm (1), suicide risk (4), psychotic episode (4), schizophrenia (3), mood/anxiety (5)	Self (20)	0.15–10.15	3
Female 18 years	7	Other (2), schizophrenia (1), mood/anxiety (4)	Police (2), ambulance (2), self (3)	2.16–9	0
Male 47 years	5	Other (1), schizophrenia (2), mood/anxiety (2)	Self (3), police (2)	1–5	0
Male 33 years	4	Other (1), mood/anxiety (3)	Ambulance (2), self (3)	1–3	0
Male 24 years	4	Other (1), deliberate self harm (1), suicide risk (1), mood/anxiety (1)	Self (1), ambulance (2)	2–18	0
Male 27 years	4	Other (1), schizophrenia (2), mood/anxiety (1)	Self (3), police (1)	0.14–18	0

ED = emergency department. LOS = length of stay.

Discussion

The significant descriptors identified are: younger age, English speaking background and mood and anxiety disorders. Younger age has been demonstrated as a descriptor in two other studies of frequent attendance.[10,12] Significant mental health services for younger people with mental illness have been developed in recent years.[18] To impact on the significance of younger people being over-represented in this and other studies of frequent attendance, closer links between these services and EDs need to develop.

The demographics of the study area showed that 33% of the population were from a non-English speaking background.[19] Mental health disorders generally have higher prevalence among immigrant groups, and it would be expected that people from immigrant populations be over-represented in the frequent presenters group.[20] This study found the opposite. It is unclear why there were so many patients from an English speaking background represented in the findings, although patients from a non-English speaking background may have lower ability to access hospital services.[21]

Previous studies have shown schizophrenia as more likely in the frequent presenter groups.[10] While this study demonstrated significance for mood and anxiety disorders, it is likely that there was a strong comorbidity of illness as shown in other studies, with comorbid substance abuse a major dual diagnosis.[22]

Bassuk and Gerson[12] found that patients were more likely to attend unaccompanied, and our data are also suggestive of this. The predominance of people willingly attending the ED, then re-attending, is difficult to interpret. This phenomenon may suggest greater levels of insight into illness, poor diagnostic ability on attendance, poor management planning by mental health staff or inability of local mental health services to provide appropriate services. Raphling and Lion[23] discussed the motivations for emergency visits, describing the needs for seeking treatment as to reduce anxiety and guilt or seeking treatment when acting upon impulses. These patients felt lonely, isolated, depressed, and overwhelmed by their life situation. The notion of engagement with staff members was noted, with the authors suggesting that patients did not complain of clinicians in emergency settings rotating regularly — rather, they preferred it.[23] They argued that the borderline patient may prefer the "impersonality" of the emergency setting.[23] The notion of engagement or lack of rapport building is also cited by other authors who perceive it as a potential causal factor for frequent attendance.[12,14]

All the frequent attendance in this study occurred within 6 months of the first presentation. It was beyond the scope of this study to determine, but several factors could account for this: patients moved to another geographical area; attended another hospital ED; patient needs were met by other health services; or patients may have needed a series of presentations before there was some resolution to their problems.

Though there was a tendency for frequent presenters to not spend as long in the ED as the other groups, we found no statistically significant difference. Time spent from triage to being seen by a medical officer and the triage distribution patterns were not different among the three groups. This is suggestive that the patient groups studied were not treated differently in accessing services, as may have been thought, given the challenging and complex nature of these patients. There were fewer overall frequent attenders (12.5%) than reported in the other studies, which range from 13%–18%.[7]

Frequent presenters in this study were more likely to have their second presentation within a month of their first and to present after normal business hours, both of which were reported by Hansen and Elliot.[7] Explanations for this occurrence are not readily available in the literature and require further study. The phenomenon of attendance after normal hours of operation is a strong argument for intensive after-hours mental health services.

Models of care

Few interventions to reduce frequent attendance have been evaluated in the literature. Westwood

and Westwood[5] highlighted various programs for frequent attendance at EDs, and the need for liaison mental health services, use of mental health triage guidelines, suicide prevention programs and increased social work services focusing on social admissions. A comparison of hospitalisation rates of community-based emergency services and hospital-based emergency services was conducted showing hospital-based emergency mental health services were three times more likely to admit patients than the mobile emergency mental health teams.[24] The use of compulsory community treatment orders, primarily on patients with schizophrenia, have been shown to have a significant reduction in people being readmitted to hospital.[25] A working model for deliberate self-harm attendees at an inner-city ED based on a cognitive behavioural formulation reported success in reducing re-presentation and suggested that the model could also be used outside of the ED in community mental health settings.[26] A literature review on suicide attempts at accident and emergency departments argued the case for a "suicide prevention nurse".[27] In a study of 24 patients, the authors described a "difficult case management program" at an ED for people with a range of chronic medical conditions, including deliberate self-harm. The authors reported a significant reduction in repeat visits to the ED after the introduction of individualised care plans.[28] In an Australian study it was found that patients who repeatedly deliberately self-poisoned were significantly more likely to repeat if they had not received a "psychosocial assessment".[29] In a trial of a "hospital in the home" service to relieve pressure on EDs, the authors reported positive outcomes on redirecting patients to intensive community-based mental health services, freeing up beds in the ED.[30]

Due to limitations of the available database, comorbid substance abuse by patients with mental health issues in the ED was not studied. The association between comorbid substance abuse and psychiatric disorders presenting to a general hospital ED has been associated with substantially increased ED service usage. It has been argued that improved detection, referral and treatment of substance abuse disorders in this population may decrease ED service usage.[11]

A recent model of care in the ED is the Psychiatric Emergency Centre (PEC).[31] The PEC is a 4-bed ward attached to or closely associated with the ED, with the purpose of ensuring quick access to mental health assessment and care, with a short-term admission focus (48 hours). This model of care is not designed specifically for frequent attendance, but the model is argued to improve quality of care due to the high acuity of patients presenting to EDs.

Study limitations

The retrospective nature of the study and the use of the diagnosis system (ICD 9) available through EDIS limited the study. Diagnosis is entered into the EDIS system by a range of staff in the ED, limiting its reliability.[32] Diagnosis in the emergency setting is a challenge, given: there is limited time; it is an environment where the availability of corroborative history from relatives may be impaired; the clinician may not have sufficient experience; there is to demand to expedite presentations through the ED (because of pressure on beds); the location and conditions of the interview room and the need for immediate treatment.[33] There were numerous variables that were unavailable to the researchers which may affect the outcomes, such as employment status, financial status, GP availability, ability to travel to the ED, levels of social support and mental health specialist support.

The longer term follow up of this patient group by interview and/or survey could further answer questions as to the reason for numbers of presentations and all presentations occurring within 6 months.

Future research

From these results and the literature review, a proposed intervention to reduce frequent attendance would include a multidisciplinary case review process, and management planning involving clinicians, carers and patients. Markers

for prioritising patients to the review process would include a second presentation within the first month, younger age and presenting with suicide risk or mood and anxiety disorder. Ongoing case reviews of the patient could be undertaken on a regular basis by the multidisciplinary review team. Outcomes that could be measured are presentation rate, readmission rate, symptoms and patient satisfaction. The interventions proposed should be attempted within a controlled and randomised model.

Conclusion

This study contributes further to our understanding of frequent attendance in a general hospital emergency department. The study has highlighted the needs of this patient group at the study site and also gives baseline data. Future studies need to evaluate interventions that may reduce levels of frequent attendance.

Competing interests

The authors declare that they have no competing interests.

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