Restrictive Interventions in Victorian Emergency Departments: A Review of Current Clinical Practice.

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Glossary

Term	Definition
Acute Care Setting	Short term public hospital in-patient unit or Emergency department
Assessment Order	Involuntary order for which patients are cared for under the Mental Health Act (2014)
Behavioural Emergencies	A behavioural crisis or emergency where an individual's behaviour becomes a danger to themselves and / or to others
Chemical Sedation	The use of medication to relieve acute agitation or contain behaviour
Code Grey	A hospital wide coordinated clinical and security response to actual or potential patient aggression and violence (generally applies to an unarmed threat)
Duty of Care	An ethical and legal obligation to provide reasonable emergency care to a person. The obligation persists even if the person lacks decision-making capacity[1, 2]
Mechanical Restraint	The application of devices (including belts, harnesses, manacles, sheets and straps) to restrict a person's movement[3]
Mental Health Act (2014)[3]	Victorian State Government legislation that provides overarching governance of the use of restrictive interventions, only for patients cared for under this act and are deemed involuntary
Physical Restraint	The skilled hands-on immobilisation or physical restriction of a person[3]
Section 351	Section of the Mental Health Act that permits police to apprehend a person to determine if an assessment order should be made for that person[3, 4]
Seclusion	The sole confinement of a person to a room or any other enclosed space from which it is not within the control of the person to leave[3]

Security officer	Persons employed in a role with a security function. The most commonly identified hospital roles include order maintenance, property management, guarding and patrolling. They have a key role in hospital emergency procedures
Therapeutic Sedation	See Chemical Sedation.

Abbreviations

DOC	Duty of Care
ED	Emergency department
MHA	Mental Health Act, Victorian State Government 2014
PACER	Police, Ambulance, and Clinician Early Response
s351	Section 351 of the Mental Health Act

Key Words

Behavioural Emergencies, Duty of Care, Emergency Department, Restrictive Intervention, Mechanical Restraint, Physical Restraint, Chemical Sedation, Seclusion.

Executive Summary

This report summarises the Emergency department presentations in five hospitals over 2016, the Code Greys that occurred in those departments and the restrictive interventions used on patients. The Alfred, Ballarat, Dandenong, Geelong and Royal Melbourne hospitals were chosen to represent the Emergency department management of highly agitated patients and the interventions required.

In 2016, these five sites had 327 454 presentations. Detailed data regarding the rate of security codes for an unarmed threat (Code Grey) were available from four sites (259 031 presentations). In these sites, there were 3 871 patients who had at least one Code Grey (1.5% of ED presentations). Although the large majority had one Code Grey per presentation, the range was from 1-14.

Most patients who required a Code Grey were given a final discharge category related to mental illness, but a significant proportion had a toxicological presentation (usually alcohol and drug intoxication). One quarter were discharged home and one third to an observation unit, with only one in six requiring a mental health admission.

Nearly one quarter (22.7%) of patients who required a Code Grey had at least one restrictive intervention. Details on 494 randomly selected patients were obtained. One quarter were physically restrained, nearly two thirds were mechanically restrained and nearly 80% were chemically restrained.

Mechanical restraint was for a median of 3 hours, but 5.4% were restrained for more than 10 hours and the longest was nearly 34 hours. Only five patients were secluded but the longest episode was for nearly two days.

Half the patients that required a restrictive intervention arrived under Section 351 (s351) of the Mental Health Act (MHA) with the police. Nearly one third arrived independently i.e. outside of the MHA. At the time of the first restrictive intervention, nearly two thirds were managed under a Duty of Care, only one quarter were being managed under the MHA and approximately 13% were unknown.

The most commonly documented reasons for a restrictive intervention being employed were agitation or aggression (75%), risk of harm to self or others (44%), risk of absconding (28%) or attempting to self-harm (22%).

Approximately half of the patients who had restrictive intervention had a final discharge category related to mental illness and one quarter to a toxicological issue. Only one in six was admitted to a mental health facility. This is similar to the rates for those who had a Code Grey. The majority were discharged home (28%) or admitted to an observation unit (23%) or a general ward (21%).

The rate of Code Greys in this study is consistent with the long-term rate of approximately 1.5% of all ED presentations. This is the first Australasian study to look in detail at the restrictive interventions used in the ED. There is a high rate of chemical sedation which is not defined under the MHA. Importantly, most patients that are managed with a restrictive intervention are managed under a Duty of Care. Although there is a clear governance framework and set of policies for patients managed under the MHA, this will not apply to most patients in the ED environment.

Reduction in restrictive interventions in EDs will require interventions specific to that environment. Importantly, measuring success will be challenging as each healthcare organisation has its own set of measures, definitions and reporting mechanisms. Currently the only way to understand restrictive interventions occurring in the ED is to conduct manual data extracts.

Context

In 2014, the Victorian Government legislated the Mental Health Act (2014, MHA) to provide overarching governance over the use of restrictive interventions in managing patients within public and private hospitals, including acute care settings and Emergency departments (EDs).[5] The MHA provides clear definitions for each form of restrictive intervention (physical and mechanical restraint, and the use of seclusion), consumer rights, documentation, and legislative requirements. The MHA does not address the use of chemical restraint or comment on the use of medication for managing behaviour without patient consent. Importantly, there is no state-wide framework to guide the management of patients cared for under a Duty of Care (DOC) within healthcare organisations. A DOC is an ethical and legal obligation to provide reasonable emergency care to a person. The obligation persists even if the person lacks decision-making capacity.[1, 2] Most organisations have operational procedures that relate to issues of containment without patient consent when they are being managed under a DOC.

This project was commissioned by the Department of Health and Human Services and the Office of Chief Mental Health Nurse (OCMHN) to ascertain:

- The known clinical practice of restrictive interventions within Victorian public hospital EDs
- An estimated proportion of patients who received a restrictive intervention in 2016 within Victorian public hospital EDs.
- An estimated proportion of patients cared for under organisational responsibility where a DOC is exercised, or where legislative governance is applied to effect involuntary containment under the MHA and within Victorian public hospital EDs.

Background

EDs can be volatile, busy, working environments in which caring for physically aggressive or agitated patients is common.[6, 7] The challenge for health care professionals is to de-escalate patients who pose a risk of harm to themselves or others.[8] When a patient presenting to the ED with a behavioural emergency threatens to harm themselves, others or property, a Code Grey may be initiated by any member of the health care team. A Code Grey is a hospital-wide, clinically led response to an unarmed threat to self, others or property, and involves both clinical and security staff.[5, 9] In such situations, staff will use verbal de-escalation techniques and may prescribe oral medication where possible and appropriate. If de-escalation fails, and the situation is unsafe, restrictive interventions may be used to ensure patient and staff safety.[10]

Restrictive interventions are used in EDs to mitigate the risk of harm. This is achieved through coercive means and restricts a person's freedom and autonomy. Restrictive interventions involve the use of physical restraint where a team of professionals physically hold the patient down, apply mechanical restraints (such as soft shackles, trays, ties or buckles), employ seclusion (the use of a room in which a patient can not physically leave) or administer chemical sedation (the use of medication to subdue a patient).[5] Concerns have been raised regarding the potential for restrictive interventions to invoke physical and psychological trauma associated with the use of restraints, and loss of patient autonomy.[10, 11] The use of restrictive interventions also raises medico-legal issues pertaining to patient care and organisational responsibilities to effectively manage risk.[10] In particular, there is a tension for healthcare providers between ensuring patients have the right to make their own decision regarding care versus health professionals' responsibility to ensure that patients do not suffer harm whilst in their care. There are additional responsibilities of healthcare organisations to ensure that staff work in a safe environment and that other patients and visitors are safe. ED staff are often confronted with a particularly difficult set of circumstances whereby the patient may not be well known, background information is scant (particularly medical co-morbidities and recent drug or alcohol ingestion), and the decision-making capacity of the person is unclear. The use of restrictive interventions may also disrupt the therapeutic relationship between healthcare providers and their patients and families.[5, 12] This is particularly relevant for those individuals who may need to access ED on multiple future occasions.

Within Victoria, the use of restrictive interventions for patients cared for involuntarily under the MHA is clearly governed by the MHA itself. However, within acute care settings, including EDs, many patients are managed under a DOC. To date there has been little published on the use of restrictive interventions in this setting.[6, 7]

Objectives

The aim of this study was to produce a summary of current clinical practices surrounding restrictive interventions within Victorian public hospital EDs. This included a description of patients who receive a restrictive intervention, outlined which restrictive interventions were utilised, and the MHA status of patients at the time of presentation and at the time of their restrictive intervention.

Methodology

Research design

This was a multi-centre, retrospective observational study.

Study Setting

Five EDs within Victoria were chosen to provide a cross-section of acute hospital settings. All sites provide occupational violence and aggression management training to staff.

The Alfred Emergency & Trauma Centre is a Level 1, adult-only, tertiary trauma and referral facility located close to Melbourne's central business district. The ED treats approximately 63,000 presentations per year with an admission rate of 60%.

Ballarat Hospital is the largest regional hospital in the Grampians, and is a principle referral hospital, treating approximately 53,000 ED presentations per year with an admission rate of 30%.

Dandenong Hospital is a major Melbourne Health Facility, located 35km southeast of the city centre. It treats approximately 70,000 patients in the ED each year, with a 45% admission rate.

Geelong Hospital is a major regional hospital, 75km southwest of Melbourne and treats 70,000 patients in the ED each year, with an admission rate of 40%.

The Royal Melbourne Hospital is a Level 1, adult only, tertiary trauma and referral centre located adjacent to Melbourne's central business district. The ED treats approximately 72 000 patients per year, with 50% requiring admission.

Participants

All patients who presented to the ED within the period of January 1st 2016 to December 31st 2016 were included.

Outcome measures

The primary outcome was the rate of patient presentations who had at least one restrictive intervention.

Secondary outcome measures included the Code Grey rate, the MHA status at the time of arrival in ED and at the time of the intervention, and the nature and duration of the restrictive interventions.

Data Collection

All ED presentation data for 2016 was obtained from the clinical information systems of the five hospitals. This data contains patient demographics, arrival and disposition data and the length of stay in the ED.

In addition, each hospital provided data related to the Code Grey events in the ED. These datasets were far from homogenous as there is no standardised mechanism for collection of Code Grey data within the jurisdiction. The information was variously obtained from security logs and from hospital incidence systems.[13] The datasets detailed those patients who had had a Code Grey but generally little was recorded about what occurred or the circumstances in which it occurred. Three sites managed their Code Grey database through a system where security officers manually entered data pertaining to Code Grey events. Two sites utilised Riskman™ [13] to document all Code Grey events and document the nature of the restrictive intervention.

The ED presentation data and Code Grey data sets were merged using the patient hospital numbers and date and time of occurrence.

For each site, patients who triggered a Code Grey were randomly sorted using a random number generator. The medical records for each patient were then checked manually to see whether a restrictive intervention had occurred during the Code Grey. This process continued until at least 100 patients who had a restrictive intervention were identified. The exception was at Ballarat Hospital where a total of 106 Code Greys were recorded and so all were included from that site.

For those patients randomly selected, the medical record was reviewed to identify all restrictive interventions, the timing and duration of those interventions and the status of the patient under the MHA at the time of arrival and at the time of the first restrictive intervention. All data needed to be explicitly recorded in the medical, nursing or mental health records to be included in the final dataset. No variable was inferred.

Sample Size

All patients who presented in 2016 were included to avoid seasonal variability. It was anticipated that this would result in approximately 300 000 patient presentations to the five

EDs. Given that the expected Code Grey rate of is 1.5%,[14, 15] this would result in 4 500 patients who would have at least one Code Grey. If the rate of restrictive interventions during a Code Grey is assumed to be 30%, a sample of 419 patients was required to demonstrate a 10% variance (alpha = 0.05, power =0.9). The random sampling of 100 patients from each site who had at least one restrictive intervention was expected to provide details on approximately 500 patients.

Data Analysis

All data were analysed descriptively. Confidence intervals were set at 95%. Proportions were statistically assessed using the Chi-squared tests and continuous variables with ANOVA for normally distributed values and Kruskal-Wallis for non-parametric variables.

Ethical Considerations

This project had ethics approval from all five hospitals' ethics and research committees. This project was assessed as being of low ethical risk study of retrospective data obtained from existing electronic data sets available at each of the five sites. The requirement to obtain informed consent from patients was waived. All data were pooled and converted into a non-identifiable format.

Results

In 2016, the five sites had 327 454 ED presentations.

Table 1 shows details regarding patient demographics, ED arrival and disposition.

Table 1: Patient details, by site

	Alfred	Ballarat	Dandenong	Geelong	Royal Melbourne	Total
Presentations	63 724	53 831	69 910	68 423	71 566	327 454
Age (years) - median (IQR)*	44 (29-64)	33 (17-56)	39 (23-61)	37 (18-61)	44 (28-65)	40 (24-62)
Sex – n (%)						
Male	34 915 (54.8)	na	35 933 (51.4)	34 459 (50.4)	37 813 (52.8)	143 120 (52.3)
Female	28 807 (45.2)	na	33 977 (48.6)	33 961 (49.6)	33 744 (47.2)	130 489 (47.7)
Other~	2 (0.0)	na	0 (0.0)	3 (0.0)	9 (0.0)	14 (0.0)
Triage category – n (%)^						
1	616 (1.0)	274 (0.5)	271 (0.4)	488 (0.7)	917 (1.3)	2 566 (0.8)
2	8 809 (13.8)	6 358 (11.8)	9 198 (13.2)	10 040 (14.7)	7 532 (10.5)	41 937 (12.8)
3	25 551 (40.1)	18 911 (35.1)	29 205 (41.8)	25 434 (37.2)	32 707 (45.7)	131 808 (40.3)
4	24 365 (38.2)	24 389 (45.3)	25 920 (37.1)	26 557 (38.8)	26 612 (37.2)	127 843 (39.0)
5	4 381 (6.9)	3 899 (7.2)	5 314 (7.6)	5 899 (8.6)	3 797 (5.3)	23 290 (7.1)
Other#	2 (0.0)	0 (0.0)	2 (0.0)	5 (0.0)	1 (0.0)	10 (0.0)
Mode of arrival – n (%)						
Self	41 396 (65.0)	42 586 (79.1)	na	47 183 (69.0)	45 981 (64.3)	177 146 (68.8)
Ambulance	21 779 (34.2)	10 929 (20.3)	na	20 751 (30.3)	24 623 (34.4)	78 082 (30.3)

Police	549	(0.9)	306	(0.6)	na		470	(0.7)	580	(0.8)	1 905	(0.7)
Other[#]	0	(0.0)	10	(0.0)	na		19	(0.0)	382	(0.5)	411	(0.2)
Disposition – n (%)[∞]												
Home	23 097	(36.3)	35 343	(65.7)	32 991	(47.2)	36 672	(53.6)	31 188	(43.6)	159 291	(48.7)
Observation medicine	20 073	(31.5)	4 192	(7.8)	19 306	(27.6)	6 222	(9.1)	15 009	(21.0)	58 580	(17.9)
General ward	15 033	(23.6)	9 244	(17.2)	11 274	(16.1)	23 371	(34.2)	17 839	(24.9)	76 381	(23.3)
Critical Care	2 282	(3.6)	664	(1.2)	1 443	(2.1)	884	(1.3)	2 477	(3.5)	7 204	(2.2)
Inter-hospital transfer	222	(0.4)	406	(0.8)	526	(0.8)	726	(1.1)	1 270	(1.8)	3 150	(1.0)
Mental Health ward	401	(0.6)	197	(0.4)	739	(1.1)	538	(0.8)	575	(0.8)	1 948	(0.6)
Left at own risk	2 757	(4.3)	4 109	(7.6)	3 985	(5.7)	4 907	(7.2)	4343	(6.1)	20 101	(6.1)
DIED	63	(0.1)	22	(0.0)	60	(0.1)	57	(0.1)	69	(0.1)	271	(0.1)
LOS[≠] – median (IQR)	181	(111-238)	184	(107-300)	177	(113-236)	202	(123-312)	206	(127-324)	190	116-281

*IQR=Inter-quartile range. ~other=intersex or indeterminate. ^Australasian triage scale. #Other=not specified in medical notes. ∞Disposition notes – Home includes usual residential care, Observation medicine includes short-stay and behavioural admission units, Critical Care includes coronary care, intensive care, catheter lab and direct to theatre, DIED=Died within the ED and dead on arrival. [≠]Minutes. na=not available

Patients who had a Code Grey

The Code Grey data was incomplete for one site. For the remaining four sites there were 259 031 presentations and 3 871 patients who had at least one Code Grey recorded (1.5%). There were 682 patients who had more than one Code Grey during a presentation (range 1-14) resulting in a total 4 841 Code Greys.

Patients who had a Code Grey were significantly more likely to be male (59.1% versus 52.2%), and younger (median age 36, IQR: 27-44), than the rest of the ED population.

The majority of patients who had a Code Grey event were given a final discharge diagnosis related to a mental health issue. Those with a toxicological issue including drug and alcohol intoxication made up a significant minority.

Compared to the general ED population, a significantly higher proportion of patients with Code Grey were admitted to an observation or mental health ward.

Table 2: Patients who had a Code Grey called

	n=3 871	
Age (years) - median (IQR)*	36	(27-44)
Sex - n (%)[~]		
Male	2 219	(58.8)
Female	1 556	(41.2)
Other[^]	0	(0.0)
Discharge Category - n (%)		
Mental Health	2 274	(58.8)
Toxicology	777	(20.1)
Trauma	307	(7.9)
Other[#]	436	(11.2)
Unknown	77	(2.0)
Disposition - n (%)[∞]		
Home	1 074	(27.7)
Observation Medicine	1 235	(31.9)
Mental Health ward	649	(16.8)
General ward	443	(11.5)
Left at own risk	297	(7.7)
Critical Care	75	(1.9)
Correctional facility	59	(1.5)
Inter-hospital transfer	39	(1.0)
DIED	0	(0.0)

*IQR=Inter-quartile range. ~Sex=only three sites with available data ^Other=intersex or indeterminate. #Other=not specified in medical notes. ∞Disposition notes – Home includes usual residential care, Observation medicine includes short-stay and behavioural admission units, Critical Care includes coronary care, intensive care, catheter lab and direct to theatre, DIED=Died within the ED and dead on arrival.

Patients who had a restrictive intervention

For those patients who had a Code Grey, 942 (22.7%) had at least one restrictive intervention.

Table 3 shows the details of the 494 patients who had at least one restrictive intervention and were randomly selected for manual review of their medical records.

The age and gender distribution were similar to those who had a Code Grey (see Table 2).

The proportion of patients physically restrained was less than the proportion that was mechanically restrained. As mechanical restraint is almost invariably preceded by physical restraint, this most likely represents a documentation bias and the true rate of physical restraint would be expected to be higher (but not the overall number of patients restrained).

Most patients restrained were either not under the MHA when they arrived or were brought in by the police under s351. At the time of restraint, nearly two thirds were managed under a DOC and not under the MHA. The number of patients arriving on an involuntary treatment order was slightly lower by the time restraint occurred. This again is likely to be a documentation issue. A significant proportion had an unknown status at the time of arrival and at restraint.

A discharge diagnosis of mental illness was recorded for half the patients and approximately half of the remainder had a toxicological discharge diagnosis. This was most commonly alcohol and/or drug intoxication.

Although a restrictive intervention was used in all these patients, only one in six were subsequently admitted to a mental health ward. Most went home, to an observation ward or to a general medical ward.

Table 3: Randomised sample of patients who had a restrictive intervention

	n=494	
Age (years) - median (IQR)*	36	(27-45)
Sex - n (%)[~]		
Male	256	(64.0)
Female	144	(36.0)
Other[^]	0	(0.0)
Physical restraint - n (%)	165	(33.4)
Mechanical restraint - n (%)	296	(59.9)
Duration - median (IQR)[#]	180	(75-360)
Chemical restraint - n (%)	388	(78.5)
Seclusion - n (%)	5	(1.0)
Duration - median (IQR)[#]	406	(375-2460)
MHA status on arrival - n (%)		
No Status[∞]	147	(29.7)
Section 351	254	(51.3)
Assessment order	11	(2.2)
Involuntary treatment order	20	(4.0)
Unknown	62	(12.7)
MHA status at 1st restrictive intervention - n (%)		
Duty of Care	311	(62.8)
Assessment order	108	(21.8)
Involuntary treatment order	10	(2.0)
Unknown	65	(13.4)
Reason for restraint - n (%)[≠]		
Aggression / Agitation	371	(75.0)
Risk of harm to self or others	218	(44.0)
Risk of absconding	140	(28.3)
Attempting to self-harm	110	(22.2)
Refusal of medication	101	(20.4)
Damaging property	36	(7.3)
Trauma care	8	(1.6)
Unknown	19	(3.9)
Discharge Diagnosis Category - n (%)		
Mental Health	265	(53.4)
Toxicology	125	(25.3)
Trauma	42	(8.5)
Other	60	(12.1)
Unknown	4	(0.8)
Disposition - n (%)[£]		
Home	139	(28.1)
Observation medicine	112	(22.6)
General ward	103	(20.8)
Mental Health ward	81	(16.4)
Critical Care	13	(2.6)
Correctional facility	10	(2.0)

Inter-hospital transfer	5	(1.0)
Left at own risk	31	(6.3)

*IQR=interquartile range. ˜only three sites with available data. ^Other=intersex or indeterminate. [#]Duration in minutes of restrictive intervention. [∝]No status under the MHA indicates that the Act was not being applied. Patients had presented voluntarily. [≠]More than 1 reason per restrictive intervention might be recorded. [£]Disposition notes – Home includes usual residential care, Observation medicine includes short-stay and behavioural admission units, Critical Care includes coronary care, intensive care, catheter lab and direct to theatre.

Figure 1 shows the duration of mechanical restraint stratified by whether the patient was under a DOC or the MHA at the time of the first restrictive intervention. Overall, 16 patients (5.4%) were mechanically restrained for at least 10 hours and the longest was 34 hours. Mechanical restraint was longer for those restrained under a DOC.

Figure 1: Duration of mechanical restraint in minutes (n=296)

Box shows median and inter-quartile range. Whiskers are an additional 1.5 x the IQR.

Discussion

This is the first Australasian study to provide a detailed review of restrictive interventions in an acute setting generally and an ED population specifically. In the published literature there is limited knowledge regarding the overarching governance of restrictive intervention practices within these settings. Current international and national trends highlight the impetus to reduce the restrictive practices wherever this is possible, as it invokes medicolegal risk regarding occupational and patient safety.[16] Studies suggest that restrictive interventions influence future health seeking behaviour and may lead to ED avoidance by patients with ongoing health issues.[17, 18]

For the majority of patients who required a restrictive intervention in the ED, this was carried out under DOC. Unlike the legislative requirements pertaining to the MHA, there is no standardised state-wide process or documentation of restraint use. Although programs have been introduced to reduce the rate of restrictive interventions, in the State of Victoria this has been limited to those patients under the MHA.[19] It is clear from this study that reduction in the rate of restrictive interventions in the ED will require focusing on the majority of patients, i.e. those who are managed under DOC.

More than half the patients who received a restrictive intervention were subsequently admitted to an observation ward or sent home from the ED. Less than one in six were admitted to a mental health ward. This implies that a substantial proportion of those brought to the ED and subsequently restrained had an acute healthcare issue that did not require prolonged hospitalisation. Interventions to reduce restrictive interventions may include diversion programs as the ED is a high acuity area unsuited to settling some of the behaviours that bring patients forcibly to hospital under s351 of the MHA. The Police, Ambulance, and Community Early Response program (PACER), introduced throughout Victoria, is an example of a targeted program to divert patients with behavioural issues who do not require ED care. Assessment occurs in tandem in the community by a mental health clinician and police, with patient issues managed on the spot or referred for community follow up.[4] The intention of PACER is also to facilitate direct admission of patients to an inpatient mental health bed. However, EDs are still used to contain patients waiting for mental health beds and the extent of this is not known. In addition to decreasing ED workload and reducing the involuntary management of patients, PACER has decreased the time police spend in transit to the ED and handing over these patients. Unfortunately, data related to presentations with

police, either voluntarily with PACER or under s351, is recorded poorly or not at all. Hospital datasets do not record that arrival was under s351 and it is unknown how patients arriving by s351 were managed if they did not have a restrictive intervention.

Aggression and agitation were the main reasons recorded for restrictive interventions. Staff in the ED are exposed to this high level of occupational violence. Current programs to reduce this risk include a WorkSafe campaign to raise public awareness,[20] funding to improve ED and hospital security,[21] and reviews of security arrangements and staff training (for publication in June 2018). The ED environment may be adapted to decrease the risk to staff and patients by decreasing Code Greys, and the rate of restrictive interventions. For those patients who will be sent home or to an observation unit, modification of the typical short-stay model to better manage patients with behavioural concerns would allow transfer to a less acute environment than the ED, ideally with resources better suited to managing this population. A six bed Behavioural Assessment Unit was developed at Royal Melbourne hospital. The evaluation showed improved care by staff with a decrease in restrictive interventions and Code Greys.[22] This study also showed a reduction in the time patients spent in mechanical restraints.

The number of patients who were secluded was reported to be very low. The use of seclusion in ED is controversial as it is more difficult to monitor and observe these patients. It is unclear whether the very low rate is due to under-reporting or is representative of the true low prevalence of this intervention

The rate of physical restraint was also low, yet in clinical practice mechanical restraint is unlikely to occur in the absence of physical restraint. There is a process for authorising and recording the duration of physical restraint for patients under the MHA; there is no equivalent for patients cared for under DOC. Furthermore, the compliance with physical and mechanical restraint documentation including authorisation, and duration, has not been established in the ED setting. This will require a prospective study of what occurs during the period of containment and a comparison with documentation.

Less than half the patients brought to hospital under s351 required an assessment order. Additionally, some were not assessed by a mental health clinician. This group of patients may need a degree of containment, but the mental health assessment is often delayed due to intoxication or an acute medical condition. Although this group is transported under s351,

many patients are cared for under DOC. Once the person can be reviewed, ED medical staff determine if a referral to a mental health clinician is required.

Limitations

Accurate reporting of Code Grey rates depends on adequate, standardised data collection. A Code Grey is not an Australian Standard[23] and many jurisdictions do not require an emergency response for an unarmed threat. The State of Victoria has developed "Code Grey" as a State-wide standard[9] but this was only introduced in 2015. It may not have been formally introduced in all healthcare organisations by the time data were obtained for this study.

All five sites had differing systems for recording Code Grey data and the use of restrictive interventions. No organisation had a dedicated system for recording restrictive interventions or the MHA status at the time of the intervention. Obtaining these data still requires manual extraction from medical records.

The five sites may not be representative of other jurisdictions. However, the breadth of coverage across Victoria is likely to be indicative of such activity at least within the State for those healthcare organisations that have an ED.

Documentation at the sites varied with four of five using paper–based forms for recording restrictive interventions that occurred under a DOC. Only two sites required documentation of monitoring. One site did not require a clear rationale for the restrictive interventions.

The data needed to answer the relatively straightforward questions concerning Code Grey rates, restrictive intervention rates and details surrounding those interventions, required intensive resources to extract manually. Issues arose surrounding transferability and replication of the data. Manual extraction may result in subjective interpretation of the records, especially where procedures are poorly defined or recorded.

If management was not specifically recorded in the medical, nursing or mental health clinician notes then it was deemed to have not occurred. This may have resulted in under-reporting of restrictive interventions. As noted in the results, the rate of physical restraint is markedly less than that of mechanical restraint. This is almost certainly a documentation

issue. Although in these circumstances the rates at which individuals are restrained is not affected.

Recommendations

Governance

A framework for the governance of restrictive interventions in acute settings needs to be developed. This should consider the perspectives of consumers, organisation and staff. Such a framework would include continuous quality improvement and focus on minimising the rates of restrictive practices in EDs whilst maintaining a safe environment for patients, staff, and visitors.

The use of restrictive interventions in the ED should be clearly documented using a standardised tool. This should record the type of restraint used, the reason it was required and the duration (where appropriate). A senior member of staff should authorise these interventions. Consideration should be given to producing a tool that is similar (or identical) to those used to document interventions undertaken on patients restrained under the MHA. Patients management should not vary because of their status under the MHA. Both populations are receiving restrictive interventions as their decision-making capacity has been assessed as diminished because of mental illness, organic illness or intoxication.

A policy framework based upon an overt aggression scale model should be considered to prompt staff into a proactive approach to use de-escalation techniques and appropriate early interventions. This framework would be beneficial to staff who have not completed appropriate aggression management training or are unfamiliar with dealing with behavioural emergencies.

The rate of Code Greys and restrictive interventions should be reported to organisational occupational violence and aggression committees. These rates should be clearly defined so that changes in practice and local variation can be used to improve overall practice. The current situation of localised definitions and reporting mechanisms limits both comparison and the opportunity for services to learn from each other.

The rate of Code Greys and restrictive interventions should be reported using a template that allows ready data extraction and consolidation. The lack of previous publications on this topic and the ongoing need for manual extraction and interpretation of data from medical records demonstrate the intensity of resources required to answer relatively straightforward questions. This is not sustainable. If the rate of restrictive interventions is regarded as an area of interest, then a standardised and robust system of data collection is required.

All healthcare organisations are moving towards electronic systems that should make consolidation of data and comparisons, relatively straightforward. However, in the devolved governance that exists in Victoria, there is a substantial risk that individual sites will develop their own, mutually incompatible, data collection tools. The Department of Health and Human Services should consider developing a minimum data set and reporting criteria to ensure that these are embedded in all electronic systems as they are introduced.

Interventions

Interventions should be a component of a program of recovery-orientated, trauma-informed care.[24] Difficult and challenging behaviour should be managed in ways that shows decency, humanity and respect for individual rights, while effectively managing risk. Restrictive interventions should be used as a last resort and for the briefest duration, after all other less restrictive options reasonably available have been tried or considered and found to be unsuitable in the circumstances.[19]

Training for staff in ED should consider a cross-cultural approach involving ED clinical staff and mental health clinicians familiar with the ED working environment. Training should emphasise the causes leading to agitated behaviour, early recognition of signs of distress, de-escalation techniques and the need to consider restrictive interventions in a framework of recovery-orientated, trauma-informed care.

Models of care should be developed that emphasise low stimulus, high resource environments that combine acute and mental health care. Models based on short-stay units but with additional high acuity nursing such as is available in the ED and inclusion of mental health and drug and alcohol staff have been developed and evaluated.[22] These models should consider the care required for patients with acute or chronic mental health issues compounded by drug and/or alcohol intoxication.

As models of care evolve, opportunities for ED nurses to gain mental health nursing qualifications should be considered. There is also potential for mental health nurse practitioners to work collaboratively with ED medical and nursing staff to guide the care for patients who are at risk of experiencing a coercive intervention in ED.

Programs for appropriate diversion should be developed and evaluated. Direct access to mental health care and early access to community-based care should be available for patients

who do not require ED medical care. Enhanced community-based diversion (e.g. PACER[4]) should be considered.

The use of seclusion rooms in EDs is not supported by evidence. These are known to be problematic. There is an increased risk of adverse patient outcomes given the lack of governance policies that are required for mental health inpatient seclusion units. Seclusion in EDs should not occur.

The use of chemical (or therapeutic) sedation is a commonly used mechanism to contain patients but is not defined in the MHA or considered a restrictive intervention in the policies derived from the MHA. All governance frameworks, including the current MHA should incorporate chemical sedation.

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