

Occupational violence in nursing: An analysis of the phenomenon of code grey/black events in four Victorian hospitals

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Executive summary

Background and aims

Nurses, by virtue of the central role they play within the health care team, are particularly vulnerable to abuse from clients and their friends or relatives. Indeed, nurses have been identified by the Australian Institute of Criminology as the occupational group most at risk of violence in the workplace (Graycer 2003). Poor perceptions of health services by patients, altered or disturbed mental states and exposure to prolonged physical or psychological discomforts have been cited as major contributors to client initiated violence in hospitals (Perrone 1999).

This study seeks to explore occupational violence in nursing by examining events in which nurses activate a hospital-wide security response to actual or potential violence (code grey/code black events). To this end, the research aims to:

- describe the prevalence and impact of code grey and code black events in three Melbourne metropolitan health care agencies and one regional centre
- identify situations and specific patient groups more susceptible to being involved in violent incidents within the workplace
- identify best practice in the management of patient violence and aggression directed towards nurses and other health care staff.

Methodology

In addressing the above research aims, this study employed a mixed method design combining key stakeholder and clinician interviews with prospective audit of incidents of actual or potential episodes of aggressive behaviour where an internal hospital-wide security response was activated.

Major findings

Operational issues

- Considerable variability in defining responses to violent or aggressive behaviour was evident across the four participating organisations.
- Clinical responses to violence or aggression are managed at four different levels, according to the nurse's assessment of the severity of the response.
- A comparison of data collected by security and nursing staff reveals that nurses vastly under-report occupational violence.

Prevalence

- Across the four settings, 2,662 potential or actual aggressive events occurred over a six-month period. That is an average of 14.6 events per day.
- In the majority of instances where a hospital-wide security code was activated, the aggressor was a client/patient of the service.

Influences

- Male gender, history of violent or aggressive behaviour and being under the influence of drugs and alcohol were also common characteristics of aggressive clients in this study.
- Significant differences were detected between hospital location and code type. Proportionally higher numbers of code black events were found to occur in the regional location than in the metropolitan area.
- Significant associations were identified between code type and clinical area. Notably, over half of all internal security responses to actual or potential violence occurred in the emergency department.

Considerations

A clear statement of expected behaviour

All persons entering an acute health care facility should receive clear information outlining what is acceptable behaviour.

Standardisation of codes grey/black across the acute care sector

Standard categories and definitions for team responses to violence be developed and implemented across the acute care sector.

Uniform collection of core demographic and clinical data

Uniform collection of hospital-wide security responses be developed that accurately describes the event in terms of both its clinical and security features.

Formation of multidisciplinary code grey/black committees

In each acute care facility, management should establish and maintain workplace committees, comprising members of clinical staff, security, occupational health and safety and management, to oversee policy development, reporting, monitoring and training of staff for code grey/black events.

Aggression management training for clinical and security staff

All clinical and security staff require aggression management training during orientation to a new acute health facility.

Evaluation of training

To contain the growing problem of occupational violence in nursing, evaluation of existing violence management programs that appraise cost, sustainability, skill and knowledge retention and effectiveness is essential.

Definitions of terms and abbreviations

Code grey

A hospital-wide internal security response to actual aggressive behaviour.

Planned code grey

A hospital-wide internal security response to potentially aggressive behaviour.

Code black

A hospital-wide internal security response to actual or potential aggression involving a weapon or serious threat to personal safety.

Occupational violence

Includes situations where employees and other people are threatened, attacked or physically assaulted at work. Non-physical violence, such as verbal abuse, intimidation and threatening behaviour, may also significantly affect a person's health and wellbeing (Mental Health Code of Practice 2002) and is defined as:

any episode in which staff experience either implicit or explicit challenges to their personal safety, health or sense of wellbeing

(International Labour Office, International Council of Nurses, World Health Organization, 2002).

Clinical Aggression

Aggressive behaviour that manifests as the system of an underlying illness. Definition developed for use in this project.

Violence

The intentional use of physical force or power, threatened or actual against one self, another person, or against a group or community, that either results in or has a likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation. (Krug et al 2002 p.5)

Aggression

A forceful behaviour, action or attitude that is expressed physically, verbally or symbolically. (Anderson, K., Keith J & Elliot M (editors) 2002. Mosby's Medical, Nursing and Allied Health Dictionary (6th edition). Mosby; Louise p54).

Distress

Arising from physical or emotional pain or discomfort or grief and agitation as severe anxiety associated with motor restlessness (Kaplan and Sadock 1997 p280).

Section 1: Introduction and scope

Background

Providing a definition of what constitutes workplace violence is a vital first step in measuring, describing and developing methods for preventing occupational violence within the health care sector.

In industrialised and developing societies alike, the diverse range of challenging behaviours we consider under the general rubric of interpersonal violence vary so widely that the boundaries defining what is acceptable behaviour often remain vague (Chappell & Di Martino 1998). The World Health Organization (WHO; Krug, Dahlberg, Mercy, Zwi & Lozano 2002) has defined violence according to both the intent of the behaviour and the outcome it produces for the victim as:

The intentional use of physical force or power, threatened or actual against ones self, another person, or against a group or community, that either results in or has a likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation.

(Krug et al. 2002 p. 5)

Although the Krug et al.2002 definition of violence provides scope for describing violence generally within our society, this definition excludes behaviours that inadvertently result in physical or psychological harm to the person. This point is particularly important within the context of health care delivery as a perpetrator may not intend to do harm but may, nonetheless, cause significant injury.

Doyle (1996) reported findings of an exploratory study that examined how community mental health nurses defined violence and assessed training and educational needs. In this qualitative study, 12 community mental health nurses (six working in forensic community mental health services and six in generic community mental health services) took part in semi-structured interviews to ascertain their perceptions of violence, how they assess risk for violence, and the levels of training and education they have received in respect to the identification and management of violent behaviour. Notably, the researchers found that participants' definitions of violence correspond with those in previously published literature, that is to say, violence is an act of intent to cause serious physical or psychological harm to oneself, property or things, and may be inferred through verbal or physical threats or by acts of omission. In defining violence, Doyle (1996) found that the notion of individual or clinical perception was important to the nurses in making a judgement about what constituted violence. Notably, the researcher identified no overt differences in definition among the two groups of community mental health nurses (Doyle 1996).

Within the health care system, it is not uncommon for aggressive behaviour to manifest as a symptom of an underlying disease process, rather than the outcome of malicious intent on behalf of the perpetrator. For this reason, the definition of occupational violence adopted for this study centres on the outcome of the behaviour for the victim. Thus, occupational violence is defined as:

any episode in which staff experience either implicit or explicit challenges to their personal safety, health or sense of wellbeing

(International Labour Office, International Council of Nurses, World Health Organization, 2002).

This definition is supported by Australian literature on the topic of workplace violence and includes incidents in which an employee is subject to abuse, threats, assault or homicide in circumstances that are related to performing their day-to-day duties at work (Graycar 2003) and any incident in which a person is threatened or physically assaulted in the course of doing their job (Mayhew 2003).

In the context of modern nursing practice, care is understood as a social contract between client and practitioner that is undertaken in an environment of respect and reciprocity. From this perspective, aggressive behaviour can be regarded as a behavioural barrier to the delivery of quality nursing care. Consistent with these perspectives are the conceptualisation of violent behaviour as a symptom that is amenable to specific nursing interventions, rather than an issue of non-compliance requiring control and physical containment. Although in the short term seclusion and chemical restraint may be the only effective means of managing difficult behaviours, such measures are not likely to have ongoing effects in managing subsequent episodes of aggressive behaviour. Importantly, seclusion and restraint do not address the organisational or demographic reasons for patient aggression and offer, at best, a temporary solution to what may be an ongoing behavioural problem (Maude 1998).

To effectively manage actual and potential violence, nurses need to be able to quickly identify emerging situations that are likely to escalate into aggression, implement preventative measures, and feel confident that they can intervene effectively when a violent incident occurs. Ultimately, the way nurses manage violent or aggressive events in the acute care setting will directly impact on their ability to provide quality care in a safe environment.

Study aims

The aims of this study are threefold:

1. To describe the prevalence and impact of code black and code grey events in three Melbourne metropolitan health care agencies and one regional centre.
2. To identify organisational factors, patient characteristics and specific patient groups that are more susceptible to being involved in violent incidents within the workplace.
3. To identify best practice and suggest appropriate organisational and nursing interventions that will improve the management of patient violence directed towards nurses and other health care staff.

In addressing these aims, the study will answer the following research questions:

- What is best practice when training for: the de-escalation of aggression, the management of code black and code grey events, and debriefing of nurses following a code black or code grey event?
- What is the prevalence of occupational violence across three major metropolitan and one regional health care agency?
- How does patient aggression manifest and how is it perceived and managed by nurses?
- Do reported incidents of patient aggression accurately reflect actual levels of patient aggression?
- What demographic, patient and organisational factors influence the frequency of code grey and code black events?

Research methods

In responding to the research aims, the current study utilises a mixed method design combining key stakeholder and clinician interviews with a prospective audit of incidents of actual or potential episodes of aggressive behaviour where an internal hospital-wide security response was activated. This research strategy demonstrated a number of benefits over single method prototypes. First, the sequential arrangement of four phases within the research design allowed the use of findings from earlier work to inform subsequent phases, thus extending the exploration of practice. Second, in describing the phenomenon of occupational violence in nursing, the use of a combination of self-report and actual episodes of violence were selected to delimit the bias of single method research and to include both subjective and objective perspectives of occupational violence in nursing. Third, the use of multiple methods allowed each phase of the study to focus on the exploration of environmental, internal decision-maker and task related effects for the principal outcome variables of interest, the frequency of code grey/black events over a six-month period.

To guide project implementation and provide expertise and local knowledge to support the research team, a multidisciplinary advisory committee was established. The role of the advisory committee was threefold:

1. To assist in the development and validation of data collection tools
2. To review the development and implementation of best practice guidelines
3. To assist in the facilitation of the process of data collection.

The advisory committee comprised members who were employees or contracted to one of the four participating hospitals and who have expertise in the area under investigation.

As part of their role, the advisory committee undertook two key tasks: first, development of the code grey/black data collection tool and, second, the implementation of the tool in the four clinical locations.

Report structure

This report presents the results of three interconnected studies that describe the phenomenon of occupational violence in four Victorian hospitals.

Section 1 defines the scope of the research project.

Section 2 describes the results of a critical review of the literature that examines the phenomenon of occupational violence within the health care system generally and nursing practice in particular. In this section of the report, it is posited that the social context in which practice occurs is a central factor influencing both nurses' perceptions of workplace violence and its impact. Table 1 shows the search strategy that was used for the project.

Section 3 presents the results of a prospective audit of internal security responses to actual and potential aggression in the four participating hospitals. Table 2 summarises the study design used for this quantitative arm of the study.

Section 4 presents the results of a series of interviews with key stakeholders working in the four study sites in respect to the management of patient aggression.

Section 5 presents the results of a series of interviews with nurses working in the four study sites in respect to staff perceptions of patient aggression, their level of perceived support, and the impact of managed and non-managed patient aggression. Table 3 summarises the study design used for the qualitative arm of the study.

Section 6 discusses the findings of the research and presents the conclusions of the study.

Table 1: The search strategy used to locate review and research papers for the project

Research aims			
To describe the prevalence and impact of code black and code grey events in three Melbourne metropolitan health care agencies and one regional centre.			
To identify organisational factors, patient characteristics and specific patient groups that are more susceptible to being involved in violent incidents within the workplace.			
To identify best practice and suggest appropriate organisational and nursing interventions that will improve the management of patient violence directed towards nurses and other health care staff.			
Phase 1 aims	Date	Data Source	Search descriptors
<p>To define the phenomenon of occupational violence in nursing</p> <p>To describe the prevalence and impact of occupational violence in nursing.</p> <p>To identify organisational factors, patient characteristics and specific patient groups that are more susceptible to being involved in violent incidents within the workplace.</p> <p>To identify best practice and suggest appropriate organisational and nursing interventions that will improve the management of patient violence directed towards nurses and other health care staff.</p>	1990–current	<p>Cummulative Index to Nursing and Allied health Literature (CINAHAL)</p> <p>MEDLINE</p> <p>PsychINFO</p> <p>Cochrane Data base</p> <p>Web of Science (Arts, Humanities and Social Sciences Index)</p> <p>AUSThealth (Australian Health, Medicine and Nursing Index)</p> <p>Public Health Topics in Victoria</p> <p>Dare and Joanna Briggs data bases</p>	<p>aggression</p> <p>patient aggression</p> <p>occupational violence</p> <p>training</p> <p>education</p> <p>management</p> <p>debriefing</p>
	1990–Current	<p>Relevant literature and seminal works have been located by hand searching of specialist reports, papers, books and theses cited in publications derived from the data bases identified above.</p>	<p>aggression</p> <p>patient aggression</p> <p>occupational violence</p> <p>training</p> <p>education</p> <p>management</p> <p>debriefing</p>

Table 2: A summary of the study design used for this quantitative arm of the study

Research aims			
To describe the prevalence and impact of code black and code grey events in three Melbourne metropolitan health care agencies and one regional centre.			
To identify organisational factors, patient characteristics and specific patient groups that are more susceptible to being involved in violent incidents within the workplace.			
To identify best practice and suggest appropriate organisational and nursing interventions that will improve the management of patient violence directed towards nurses and other health care staff.			
Phase 2 aims	Outcome	Independent variables	Analysis
To describe the frequency of code black and code grey events over a six month period in a prospective cohort of patients from each of the four study sites	Frequency	Episodes of code grey and black events in four study sites	Descriptive statistics
To provide a detailed description of code grey and black events including details of the aggressor, the incident and the response over a 6 month period in a prospective sample of violent episodes from each of the 4 study sites.			
To explore factors influencing the frequency and duration of code black and code grey events over a six month period in a prospective sample of events from each of the four study sites.	Duration		
To explore factors influencing the frequency and duration of code black and code grey events in each of the 4 study sites	Incident frequency and duration	Demographic variables Location Time Patient variables Gender Acuity Nurse variables Education/training	Chi-square General linear modelling

Table 3: A summary the study design used for this qualitative arm of the study

Phase 3 aims	Summary of questions	Analysis
<p>To explore health staff perceptions of patient aggression, their level of perceived support, and obtain information concerning impact upon the staff member of managed and non-managed patient aggression.</p>	<p>Demographics Perceptions of:</p> <ul style="list-style-type: none"> • training and usefulness of training in practice • frequency patient/relative violence? • causes of patient aggression in your work area • hospital's policy in regard to code grey or black alerts • how policy supports practice • calling code grey/black and how satisfied you are with the response? <p>If a person becomes violent and is seen deliberately to harm staff or cause damage to objects, would you see the police as having a role and the possibility of prosecution as an outcome?</p> <p>Recall a time when you experienced patient or visitor violence in the course of your work as a clinician:</p> <ul style="list-style-type: none"> • What led up to this patient/significant other violence? • Were there any warning signs or did it just blow up? • Where did this occur and what was your involvement? • What happened? • What was the code grey response for this event? • How well was the event handled by staff? • What happened after the event and how satisfied where you with the outcome? • What was the outcome for the patient/significant other? • Can you describe the debriefing that was offered to you and other staff? • How supportive was this? • How did this event impact upon you afterwards, 24 hours afterwards, a week later? • What skills did you implement from training? • How would you have approached this patient/significant other differently? <p>What would you do in the following situations:</p> <ul style="list-style-type: none"> • A young adolescent male is pacing and seems distressed. • An elderly lady is confused and upset, you approach her and she strikes out at you narrowly missing you. • A family member is upset about a patient's diagnosis. She becomes verbally abusive and tells staff they are ignorant pigs. She becomes loud and swears. • A patient refuses to take a treatment and screams at you when you ask for them to comply. • A patient calls you ugly or lazy. How do you deal with this? How does this impact upon you as a person? • An agency nurse comes to the ward for the first time. Taking into account the training you have had what should normally be handed over to this person? • A new graduate comes to your ward. What would you tell them during orientation about patient aggression? 	<p>Thematic Grounded Theory</p>

Section 2: A critical analysis of the literature pertaining to occupational violence in nursing

Introduction

This review provides an overview of what is currently known about the phenomenon of occupational violence in nursing in respect to its prevalence and impact. From this perspective, the review goes on to examine organisational factors and individual characteristics that are known to make people more susceptible to being involved in violent incidents within the workplace. Finally, the review considers the implications of the literature review for this research project and discusses implications for practice in the management of client initiated aggression.

Prevalence

Globally, violence is recognised as a major public health issue and is identified among the leading causes of death for people aged 15–44 years. A growing body of evidence indicates that violence at work affects the lives of millions of people worldwide (Krug et al.2002, WHO 2003).

In the past two decades, researchers have shown a growing interest in what appears to be the escalating problem of occupational violence in nursing (Chappell & Di Martino 1998, Leather, Brady, Lawrence, Beale & Cox 1999, Vanden Bos & Bulatao 1996). While Perrone (1999) speculated that poor public perceptions of hospital services, altered or disturbed mental states and exposure to prolonged physical or psychological discomforts are major factors contributing to patient initiated violence in hospitals, it is also likely that increasing rates of occupational violence in the health care sector are a function of rising levels of violence in the general population, and the increasing use of violence as a means of solving problems (Lipscombe & Love 1992). Statistics from North America, Australia and Europe have indicated that occupations where cash is exchanged for service or that require face-to-face contact between workers and their clients are at a greater risk of experiencing workplace violence than other occupations (Elliot 1997).

In a multinational survey of psychiatric nurses working in the United States, Canada, Britain and South Africa, Poster (1996) used the Attitude to Patient Assault Questionnaire (APAQ). The researchers found that of the 999 participants surveyed, 75% described being assaulted by a patient at some time in their career. Notably, the researchers reported high degrees of variability among participants in respect to issues around staffing and physical assault, the safety of the physical environment, expectations about being victims of assault and taking legal action against the perpetrator of the assault.

Earlier work by Thackery and Bobbitt (1990) compared the incidence of physical violence experienced by non-clinical and clinical staff in one medical centre in Nashville, Tennessee. A total of 122 staff working in various areas of the hospital first took part in a four-hour aggression management workshop. On completion of the training program, participants were asked to fill in a questionnaire which asked whether, at any time during the course of their employment, they were physically attacked by a patient and, if so, if they had reported the event via formal incident report, and whether they had assisted in the physical restraint of a patient. Each of the participants who reported experiencing such an event was then required to complete a checklist to describe the single most serious attack. Of the staff who were surveyed, over half (57%) had assisted in the physical restraint of a patient and 48% reported being physically attacked at least once. Notably, 17% of those staff who reported physical assault did not complete a formal incident report. While the authors of this study were unable to determine the ratios of reported to unreported events, the findings of this study suggest that training in aggression management should involve both clinical and non-clinical personnel, and that the content of training must address both non-physical interventions and ways to manage grabbing and striking attacks and to achieve physical restraint.

In a large multi-site American study, Flannery & Walker (2003) audited violent incidents over a six-year period. Of the 706 incidents of patient assaults, 90.7% involved physical violence and the remaining 8.5% included verbal or non-verbal threats to personal safety.

In a review of research papers on the topic of violence in psychiatric wards, Noble (1997) reported a steady increase in the number of papers published on the topic of client initiated violence listed on the MEDLINE database from 1965–1995. Of this published research, most studies employed simple cross-sectional designs involving a cohort of health care workers from a single institution. In the same paper, Noble went on to describe his 20-year longitudinal study of violent incidents using the Maudsley and Bethlem Violent Incidents Register to describe the prevalence, precipitants and environmental factors contributing to actual violent events. While Noble's (1997) work provides valuable insight into violent behaviour in the psychiatric inpatient population, little published information is available in the Australian literature that describes overall prevalence rates for violence in general hospital settings.

To date, the Australian health care system lacks a substantive database that describes the incidence or severity of occupational violence in nursing or related health care professions. Notwithstanding these limitations, it is clear that patient aggression is of serious concern to the Australian nursing workforce. For example, two years ago, the Australian Nursing Federation (ANF) employed Work Cover data to demonstrate that claims from nurses who had been subject to patient aggression were increasing. At the same time, the Queensland Nurses Union (QNU Queensland) announced a two-year zero-tolerance campaign involving public education and teaching nurses how to recognise early signs of aggression and manage violence in the workplace (Queensland Nurses Union 2001).

Currently, considerable definitional and methodological variance exists in the reporting of violent incidents at work, and it is this limitation that negates estimation of true prevalence rates. For example, while it is known that 38% of work-based homicides between 1988 and 1992 were committed by clients or patients and that nurses were among one of the most at risk groups (Mayhew & Chappell), past research does not clearly indicate if the problem of occupational violence in nursing is getting better or worse or what, if any, factors beyond staff education might ameliorate violent behaviour in hospitals.

Within the context of the Australian health care system, Grainger & Whiteford (1993) retrospectively reviewed all incidents of accidental injury and assaults on staff in psychiatric hospitals over a three-year period (1985–1987). Of the 650 incidents, almost half (48%) involved assault.

In a prospective study of aggressive behaviour in Victoria, Australia, Cheung, Schweitzer, Tuckwell & Crowley (1996) used the Staff Observation Aggression Scale (SOAS) to record 806 incidents of aggression among psychiatric patients in rehabilitation wards. The authors calculated physical assaults to occur at a rate of 97.6 per 100 patients per year. Notably, of these incidents, 55.6% were verbal and 44.4% were physical. Surprisingly, less than one quarter of all incidents ($n = 173$) were reported via formal incident reports. In discussions, the authors noted that while assaults were commonly found to be directed towards staff members, serious physical injuries were rare. Notably, in this study aggressive behaviour was positively correlated with gender, duration of admission for the entire sample, and time of day. Interestingly, staffing levels were not positively associated with aggressive behaviour (Cheung, Schweitzer, Tuckwell & Crowley 1996).

In another Australian study, Owen, Tarantello, Jones and Tennant (1998) described the prevalence of violence and aggression in psychiatric units. In this prospective study, three assessment tools – the Violence and Aggression Checklist, the Ward Activity Index and the Staff Level Index – were employed to record data in five psychiatric units. The study data showed 1,289 incidents of violence occurred over a seven-month period. Notably, 58% of these were documented as serious (Owen, Tarantello, Jones and Tennant 1998).

In a Western Australian study that documented the prevalence of client initiated violence in general wards and high dependency settings, O'Connell, Young, Brooks, Hutchings and Lofthouse (2000) showed high levels of client initiated aggression. In this study, the researchers examined nurses' perceptions of the nature and frequency of aggression. This study involved a random sample of 400 nurses working in one metropolitan teaching hospital. In particular, the data showed that 95% of nurses who took part in the study had encountered at least several episodes of violence in the last year, many of which were experienced in medical and surgical wards of the hospital (O'Connell et al. 2000).

In summary, the literature is notable for the variability in definitions of violence and aggression and differing methodological approaches used to study the phenomena. Few large scale longitudinal studies have adequately described the scope of occupational violence in the context of nursing practice beyond the speciality of psychiatry. This knowledge gap limits the development of an effective means of reducing and managing workplace violence within the context of Australian nursing practice (Bowers, Nijman, Palmstierna & Crowhurst 2002).

Measures of violence

The phenomenon of occupational violence in nursing is limited by lack of consensus among health professionals as to what constitutes violent behaviour. In addition, available instrumentation for the recording of violent incidents is, by in large, in its infancy (Bowers 1999). Official reports of violent incidents produced for managerial purposes are well known to be unreliable indicators of frequency or severity of aggressive behaviour. Such reports are influenced by organisational policy, the nature of the forms, nurse workload and individual perceptions of violence (Bowers 1999).

Despite the rudimentary nature of tools available to measure client aggression, a range of instruments has been developed and tested on psychiatric inpatients. These tools and their relative strengths and limitations are considered below.

1. Overt aggression scale (OAS), Modified Overt Aggression Scale (MOAS), Retrospective Overt Aggression Scale (ROAS), Aggressive Incident Record Form (AIRF)

Developed and validated by American researchers Yudofsky, Silver, Jackson, Endicott & Williams (1986, 1991), the OAS was designed to measure the occurrence of patient initiated violence in both adults and children. The OAS provides an objective rating of verbal and physical aggression. Using this instrument, nurses are required to immediately complete the OAS following each violent episode experienced. The variables incorporated in the tool include patient name, date, time, shift and interventions used to contain the incident. Four-point rating scales are used to measure the dimensions of verbal abuse, physical aggression, property damage and self-harm.

Three inter-rater reliability trials report good intra-class correlation co-efficients for aggression and restrictive interventions: 0.70; 0.87 respectively (Silver & Yudofsky 1987). However, the authors note that verbal aggression and associated interventions for children had lower levels of reliability (Yudofsky 1986).

A further adaptation of the OAS is the AIRF devised by Paxton Anslow. The AIRF uses the OAS but, in addition, collects antecedents to the event. Building on the AIRF, Milne and Grant (1997) produced an instrument that requires nurses to complete a lengthy scale immediately following the violent event.

Kay, Wolkenfeld, Murrill modified the OAS (MOAS) using slightly different definitions and added a zero point to the end of each of the four dimensions. The scale is compiled on a weekly basis by a visiting psychologist who also consults written records and conducts interviews with ward staff. A scale is then completed for each patient that provides details of the most serious act of aggression over the past week. Inter-rater reliability using this instrument yielded Pearson r scores of between 0.85–0.94 (Kay, Wolkenfeld Murrill). An important limitation of the MOAS is the use of a single score to quantify one week of aggressive behaviour. In particular, the MOAS yields no data to describe the interventions used by nurses in managing aggressive behaviour, the duration of the incident or the frequency of the observed violent behaviour over the week.

The ROAS devised by Sorgi, Ratey, Knoedler, Markert and Reichman (1991) is an adaptation of the OAS where nurses are required to score patients retrospective of one week. Inter-rater reliability testing of the ROAS produced Pearson r values of 0.96 and Chronbach alpha co-efficient of 0.75 for two independent raters completing 28 ROAS.

2. Staff Observation Aggression Scale (SOAS) and Revised Staff Aggression Scale (SOAS-R)

Developed by Dutch researchers Palmstierna and Wistedt (1987), the SOAS is an incident-based method of recording client aggression by nurses. Like the OAS, nurses are required to complete the forms immediately following the violent event. Verbal and physical aggression are measured using this scale, however self-harm is not included. Dimensions of aggression are measured according to means, aims and results. Researchers Palmstierna and Wistedt (1987) reported excellent intra-class correlation scores (0.96) using this instrument. In a cohort of elderly clients, Shah and De (1997) cross-validated SOAS severity scores with those of the rating scale for aggressive behaviour. Correlation co-efficient between the Rating Scale for Aggressive Behaviour was found to be high ($r=0.81$).

Nijman, Muris, Merckelbach, Palmstierna, Wistedt, Vos, Rixtel and Allertz (1999) went on to develop the revised Staff Observation Aggression Scale (SOAS-R). The rationale for the SOAS-R was that the severity of aggression behaviour relies on an array of features, with some, such as consequences for victim, more important than others. The SOAS-R is an empirically validated severity scoring system in which separate features are weighted using regression techniques in a way that makes a determination of the differential contribution to the overall aggression severity score.

To further evaluate the validity of the SOAS-R, Nijman, Evers, Merckelbach and Palmstierna (2002), cross-validated the original SOAS and SOAS-R scores with the judgments of staff members in four locked psychiatric inpatient wards. In this study, aggression behaviour was systematically monitored over a 16-week period, in four wards (two of which were located in The Netherlands and two in Belgium). In addition to SOAS-R items, staff were required to provide estimates of the severity of the incident using a 100 mm Visual Analogue Scale (VAS) with end points 'not severe at all' and 'extremely severe'. Pearson's correlations were calculated after adjusting for the effects of working experience and gender of the completing staff member because it is likely that these variables modulate the perception of aggression severity. The authors concluded that SOAS-R approximates clinicians judgments using a 100 mm VAS significantly more closely than original SOAS scores $r=0.62$ for the SOAS-R and $r=0.38$ ($p < 0.01$).

3. Violence Scale (VS)

Developed by Morrison (1993a, 1993b), the VS measures frequency of aggression but not severity. The VS requires clinicians to use a Likert Scale to rate each patient on the frequency of violent incidents since admission at discharge. Inter-rater reliability of the VS subscales (violence to self, others and property damage) using vignette method were found to be moderate to good and internal consistency reported as high.

Possible limitations of this scale include inaccuracy in counting the number of violent incidents; because the VS is only completed once by nurses it seems likely that inaccuracies will occur due to the time lapse between violent incidents and discharge (Bowers 1999).

Bowers (1999), in a critical review of literature regarding the recording of violent behaviour in a psychiatric ward, compared seven measures of violence including the Overt Aggression Scale (OAS), the Modified Overt Aggression Scale (MOAS), the Staff Observation Aggression Scale (SOAS), the Violence Scale (VS), the Retrospective Overt Aggression Scale (ROAS), the Aggressive Incident Record Form (AIRF) and the use of video camera surveillance. Bower's major criticisms of these were two-fold:

1. The reviewed instrumentation defined aggression too widely. That is to say, behaviours that may have different causes and be associated with different psychological and social mechanisms are grouped together and treated as a single entity. While most scales include verbal abuse, physical violence towards other people, damage to property and self-harm, it is fair to say that each of these behaviours vary in severity. For example, verbal abuse may be seen as trivial, while in some situations it may be used as a positive way of avoiding more serious aggressive behaviour. Verbal abuse can also be a manifestation of a sustained campaign that may not appear objectively abusive but is overly critical, argumentative or picks on individual weaknesses. Such behaviour, while difficult to measure, nonetheless has the potential to cause psychological harm (Bowers, Nijman, Palmstiema & Crowhurst 2002).
2. The conflation effect of severity of the aggression with its consequences (with the exception of the SOAS-R) is likely to result in the reporting of violent events based on a subjectively defined phenomenon that has resulted in deleterious effects for an individual. While Bowers argues that verbal aggression is a ubiquitous feature of the health service environment and relatively harmless, his suggestion of documenting only attempted or actual physical abuse using objective behavioural criteria will fail to capture the more subtle forms of psychological abuse. In particular, persistent verbal abuse is likely to influence individual job satisfaction and nursing recruitment and retention.

Predicting risk

Leather (2002) notes that embedded in much of the published literature that investigates workplace violence is the fundamental assumption that risk prevention is best achieved via the explication of the phenomena and the articulation of an explanatory model. Yet, much of the research literature into risk prediction for occupational violence refers to the use of actuarial screening tools used to aid in the assessment of violent patients.

The actuarial approach to risk assessment uses empirical research to identify variables associated with aggression within populations, groups and subgroups. Predictors including youth, male gender and previous history of violence, abuse of alcohol and drugs and acute psychiatric symptoms are statistically associated with violent behaviour and, therefore, people who have these characteristics are seen to have an increased risk when compared to the general population (Trenoworth 2003).

In many of these studies the researchers are primarily focused on assessing the validity of a particular screening tool (Mulvey and Lidz 1993, Harris and Rice 1997, Nijman and co-workers 2002, and Whittington and Patterson 1996) and do not investigate the impact of situational variables on aggressive behaviour.

In a case comparison of 99 emergency psychiatric patients, Apperson and co-workers (1993) performed a four-month audit of text from unit meetings and a chart review to determine risk factors for occurrence of violent behaviour. In this study the researchers determined that effectiveness of risk prediction depends on the methods chosen for prediction and the selection of a non-violent comparison group on which to test the predictive model. This finding highlights the need to consider more broadly the role of situational factors in contributing to a violent incident; including the characteristics of the individuals involved, the nature and motive for the interaction and the environmental and social context in which an interaction takes place.

Haim, Rabinowitz, Lereya and Fennig (2002) compared predictions of 14 psychiatrists and nine psychiatric nurses' evaluations of risk of violence. The participants in the study completed a survey regarding the clinical criteria they used for risk prediction. The researchers found no significant difference between the professional groups or the criteria that was used to predict violence.

Hoptman, Yates, Patalinjug, Wack and Convit (1990) compared predictive patient characteristics with actual assault behaviour characteristics in a forensic psychiatric hospital in New York. They evaluated the behavioural predictions of psychiatrists for 183 male inpatients in respect to assaultive behaviour with incident reports of real occasions of assault. The researcher found that predictors of patient violence included transfer from a civil hospital due to violence or dangerousness, age, education, arrests for violent offences, childhood physical abuse, hostility, nurses' assessment of irritability and inability to follow ward routine. Interestingly, the researchers found that the clinicians' rate of prediction was substantially greater than chance at 71%, with a diagnostic sensitivity of 54% and a diagnostic specificity of 79%.

In the United Kingdom, Doyle, Dolan and McGovern (2002) compared three actuarial research tools for risk prediction. In their study, they assessed the validity of the psychopathy checklist screening version (PCL:SV), Violence Risk Appraisal Guide (VRAG) and the historical part (H-10) of the Historical/Risk/Clinical (HCR-20) scheme in predicting inpatient violence in 87 mentally disordered inpatients in a medium security unit. Actuarial scores were obtained retrospectively from pre-admission and admission case notes. The presence or absence, severity and frequency of inpatient violence were recorded by an independent researcher. The predictive accuracy and association between predictors and outcome measures were evaluated using correlation analyses, regression procedures and receiver operator characteristics (ROC) analysis. Notably, the researchers found the scores of all three risk assessment tools were significantly higher in the violent cohort. The PCL:SV was found to be the most robust predictor of inpatient violence and contributes significantly to the predictive validity of the VRAG and H-10 scale of the HCR-20. Researchers concluded that the PCL:SV is a valid predictor of inpatient violence and that predictive validity is similar to that reported in North American studies.

In a study conducted in The Netherlands, Nijman and colleagues (2002) evaluated the accuracy of clinical and archival predictors of patients' aggressive behaviour on a 20-bed locked psychiatric ward. Over a nine-month period, staff estimated the likelihood of patient aggression during their stay. Unaided clinical assessments were obtained using a VAS within 24 hours of admission. Archival predictions were based on demographic variables derived from patient admission forms. Aggressive behaviour was recorded using the SOAS-R. Clinical VAS ratings, diagnostic status, age, sex, readmission rate and involuntary admissions were associated with aggressive behaviour. The researchers found that clinical predictions of aggression were moderately accurate. On the basis of clinical estimates, 75% of patients were correctly classified. From these results, the authors concluded that unaided clinical prediction may be quite accurate in predicting short term violent recidivism during acute psychiatric admission.

In an extensive review, Harris and Rice (1997) examined studies on risk prediction and management of violent patients for a 10-year period from 1987-1997. In interpreting the literature, the authors made a number of conclusions, which are summarised below:

1. Violence is highly predictable in certain populations with strong predictors listed as age, sex, history of anti-social conduct, psychopathy, aggressive childhood behaviour and substance abuse.
2. Major mental disorders and psychiatric disturbance are poor predictors of violence.
3. Actuarial methods of predicting violence are more accurate than unaided clinical judgement, which was noted to be a poor predictor of violence.
4. The Violence Risk Appraisal Guide (VRAG) has been shown to be a reliable and accurate actuarial instrument.
5. Studies have shown effectiveness of behaviour therapy and behavioural staff training programs to reduce the incidence of violence in a range of settings and populations.

Influences

An alternative method to actuarial risk assessment is the clinical approach to evaluation of aggressive behaviour. This approach includes the judgements of experts and considers the influence of a wide range of variables that are uniquely related to the individual and their situation (Trenoworth 2003). Notably, this approach does not exclude the idea that antecedents can be identified from a set of common patient characteristics, but acknowledges more broadly the influence of situational variables on the phenomenon.

Leather (2002) argues convincingly that while understanding how individual patient factors play a role in violent behaviour is a worthwhile goal of research, it is the explication of the social context that is central to understanding the phenomenon. For example, a study of 301 violent incidents conducted by Nijman and co-workers (2002) found triggers for violent behaviour included denial of patient request, provocation by a fellow patient, and staff request for patient to take medication. The types of aggression documented included physical violence 183 (61%) and, in most cases, staff became the victims of the violent behaviour. From a social integrationist view, it is argued that while certain biological factors may predispose a person to aggressive behaviour, it is the social environment that determines whether a person actually becomes violent (Fisher 1998).

Client variables

Beck, White and Gage (1991) used a case comparison of 99 psychiatric emergency patients to ascertain if clinical and demographic characteristics distinguish dangerous from non-dangerous patients in a psychiatric emergency unit and to identify variables to distinguish between hospitalised patients who are dangerous and those who are not.

In this study, staff members were interviewed and patient records reviewed. Using log linear analysis, the researchers found that historical variables regarding violent behaviour in the community related minimally or not at all to violent behaviour in hospital. Yet, patients requiring restraint for violent behaviour who had committed assault and battery immediately prior to admission, or were brought to the hospital by police, were found to be more dangerous than other patients. The researchers concluded that the enduring personal characteristics of violent patients relate to current patient state and immediate past behaviour (Beck et al.1991).

To explore patient violence and aggression and examine the relationship between patient, environmental and staff factors related to workplace assault, Chou, Lu and Mao (2002) used a mixed method that included incident audits, chart reviews and staff interview at four Taiwanese hospitals. Data from the study included 855 assaults from 287 patients. Significantly, patient variables linked with aggressive behaviour included diagnosis, history of assaultive behaviour, duration of admission, and smoking history. Environmental variables linked to aggressive behaviour included nurse patient ratio and space density. Staff variables linked to aggressive behaviour included age, length of work experience, and training program received in assault prevention and management. These results highlight the complexity of models in predicting violent behaviour.

In assessing for risk, Doyle (1996) reported that the nurses considered past history of violence, family dynamics, the client's ability to build relationships, general social circumstance and the use of alcohol or drugs to be important factors contributing to violent behaviour. The nurses also reported behavioural risk factors including present levels of agitation, physical signs of anger, sweating, pacing, anxiety, dilated pupils, tremors, interpersonal skills and ability to express feelings. Mental illness was not considered a risk factor. When asked about the methods used to assess aggression, nurses reported using patient interviews, observational techniques, liaison with friends and family members and other health care providers. Notably, the use of rating scales and inventories to quantify or grade risk were not used in risk assessment and no reference to psychometric tests was made by the nurses during the interviews. In respect to training, Doyle (1996) noted that the majority of nurses had received very little, if any, training in risk assessment. Moreover, the nurses viewed training as ineffectual, focusing on risk assessments which rate patient behaviour. While control and restraint courses discussed by the nurses seemed popular, participants generally considered these courses to focus too much on physical methods. Doyle (1996) concluded that experience of dealing with aggression is vital to assess likelihood of violent behaviour and that there appears to be a lack of formal methods and clinical tools available to assess risk for violence.

In an extensive review of risk factors associated with violent behaviour in psychiatric inpatients, Flannery, Hanson and Penk (1994) examined the impact of patient and staff characteristics and a range of contextual variables on frequency of violent events. Notably, the authors discussed the difficulties associated with identifying the patient characteristic due to the varying definitions and underreporting. Flannery and co-workers (1994) went on to report the findings of a prospective

two-year study of a peer help crisis intervention program. Significant patient characteristics identified from the study data included diagnosis of psychosis with active impaired thinking or other neurological abnormality, a past history of violence and a diagnosis of substance abuse. Increased incidents of violence also occurred in patients who were younger, male and psychotic. Significant staff characteristics included sex (male employees were more often recipients of violent behaviour from clients) and appointment level (less senior workers with lower levels of education were more likely to experience violence at work). In respect to situational variables, Flannery and co-workers (1994) reported significant triggers for violent behaviour as denial of services or benefits, and sensory overload induced by high levels of work activity. Environmental variables also played an important role, in particular location and time of day were associated with violent behaviour.

Later, Flannery (2002) reviewed 28 empirical studies of repeatedly assaultive psychiatric patients in federal, state, municipal and private vendor inpatient forensic, geriatric and community facilities. In his review, Flannery found violent patients to be younger, equally male or female and most frequently had a diagnosis of schizophrenia or personality disorder. In this study, two groups of assailants were identified: first, the older male with a diagnosis of schizophrenia and a history of violence and substance abuse; and second, a group of clients equally male or female, with a diagnosis of personality disorder with history of violence towards others, personal victimisation and/or substance abuse disorder.

In the same year, North America researchers Flannery, Schuler, Farley and Walker (2002), reported a 10-year longitudinal analysis of client aggression in Boston, USA. In this study, the researchers audited a crisis intervention program for staff (the Assaulted Staff Action Program). A total of 929 cases of patient assault were reviewed. Of these, 412 were male and 365 female inpatients and 84 were male and 152 were female community psychiatric patients. Results revealed three significant findings:

1. Assaultive inpatients were primarily older males with a diagnosis of schizophrenia, had histories of violence toward others and substance use disorder.
2. A second group of violent patients were younger females with a diagnosis of personality disorder.
3. The study additionally reported high frequency of personal victimisation in both male and female groups.

Canadian researchers Lancee and Gallop (1995) explored factors contributing to nurses' difficulty in treating patients in short-stay psychiatric settings. In this 10-month study, 249 psychiatric patients being cared for in four sites by 40 nurses were studied. The Hospital Treatment Rating Scale (HTRS) was employed to measure staff, patient and system variables and rate treatment difficulty. The results of this study show that patient factors and, to lesser extent, treatment resources, contribute to nurses' perception of difficulty in treating patients. Notably, violence and interpersonal issues were considered as important factors contributing to treatment difficulty.

In examining associations between patient characteristics and assaultive behaviour, Miller, Zadolinyj and Hafner (1993) reviewed 1,025 hospital records and incident reports for a six-month period in one psychiatric hospital. Data on 260 assaultive patients and 136 non-assaultive patients was analysed using multiple regression to predict violence. In this study the authors found that age and sex was not related to violence, but that diagnosis was a powerful predictor. In particular, the researchers noted that time hospitalised since first admission was a strong predictor of assault as were diagnostic distinctions derived from data on coexistent diagnosis. Indeed, most of the assaults in the study were by acute patients whose diagnosis excluded organic mental disorder but included either bipolar or personality disorder.

Australian researchers Owen, Tarantello, Jones and Tennant (1998) conducted a multi-site prospective audit of violent incidents over a seven-month period and compared repeatedly violent patients to non-recidivist violent patients. Of the 174 patients studied, 20 met criteria for recidivism (defined as greater than 20 incidents). The 20 recidivist patients were responsible for 520 (69%) of 752 violent incidents. Recidivist male patients were significantly more likely to have an organic brain disorder while female recidivists were more likely to have a personality disorder. A notable finding of this study was that of staff responses to the behaviour of recidivists. Staff were less likely to complete incident forms and, consequently, the victims were less likely to receive debriefing.

In a 15-month retrospective audit of violent incidents in a five-bed psychiatric intensive care unit, Saverimuttu (2000) studied a total of 167 aggressive incidents. The researchers found that female patients were significantly more likely to be involved in violent incidents, but that most of these incidents involved self-harm. In addition, patients with a diagnosis of schizophrenia were more likely to display violent behaviour than those from other diagnostic categories, while patients with a diagnosis of personality disorder were more likely to inflict violence against themselves.

Steinert, Wiebe and Gebhardt (1999) examined aggressive behaviour to self and to others in a sample of patients with schizophrenia during their first episode of hospitalisation. The researchers reviewed charts of 138 patients to obtain information regarding four types of aggressive behaviour: verbal aggression, damage to property, violence toward self and violence toward others. In addition, chart reviews were conducted for 83 patients who were re-hospitalised during the subsequent two years. The severity of behaviour was rated using the MOAS. Stepwise multiple regressions were used to identify predictors of the number and the duration of re-hospitalisations. Study findings showed that the majority (75% of men and 53% of women) showed some type of aggressive behaviour during their first and subsequent admissions. Of the patients included in the study, 17% of men and 26% of women attempted suicide. Among predictors of rehospitalisation, aggressive behaviour against self and others were significant predictors. Predictors of aggressive behaviour against others included sex, with males more likely to be physically violent, number of hospitalisations, and alcohol abuse.

Whittington & Patterson (1996) researched verbal and non-verbal behaviour in a cohort of 31 psychiatric patients immediately prior to assaulting a staff member and in 31 non-aggressive controls. Data was collected from nine wards of one rural psychiatric hospital over a 14-month period. Verbal abuse, hyperactivity and standing uncomfortably close to the intended victim were behaviours observed most frequently prior to assault. Assaultive patients were also found to differ from non-assaultive patients regarding threatening gestures and threatening stance. Notably, only one patient in the study was aggressive in the absence of any of the predictive behaviours identified.

In summary, comparing data from studies that have described assaultive patients is limited by a range of methodological issues including operational differences in defining and measuring the phenomenon and difficulties related to the under-reporting of assault (Flannery et al. 1994). Despite this limitation, researchers have consistently identified a number of patient variables that influence both the frequency and the type of violence that is demonstrated. These factors include:

- age
- sex
- psychiatric diagnosis; and
- substance abuse.

What also emerges from studies into patient factors are the triggers for a violent event. These triggers include:

- limit setting
- involving denial of services or benefits; and
- sensory overload induced by high levels of ward activity.

Staff factors

Similar definitional and methodological difficulties have been encountered by researchers studying the patient factors common to workplace violence (Flannery et al. 1994).

In a large Swedish study of 684 violent incidents, Arnetz (1998) found that the most frequent victims of patient violence were clinical nurses with specialist qualifications in mental health or psychiatry (40%). A North American study by Levin (1998) that explored the opinions of emergency nurses about factors leading to assault, documented attitudes and behaviours as important factors related to the risk of violence. Notably, while physical attributes of individuals, such as age, size and sex, were discussed, these characteristics were viewed as less of an influence than attitude and body language.

A Victorian study performed by Cheung, Schweitzer, Tuckwell and Crowley (1996) used the SOAS to audit 806 episodes of aggression. Of these incidents, the probability and severity of this violence varies markedly between occupations and is known to be influenced by a wide range of environmental factors including time of day or night, security presence, waiting times, the number, age and gender of people congregating in one area and the availability and use of mood altering substances including alcohol. Individuals working in isolated work environments are also known to be at a higher risk of assault than other workers (Mayhew and Chappell 2001).

Little (1999) examined risk factors for nurse assaults and the prevalence of staff assaults on patients from a questionnaire to a random sample of 200 nurses drawn from the membership base of the New Hampshire Nursing Association. In this study, the author identifies major staff variables to include qualifications, years of experience, and training in violence and de-escalation techniques. Notably, being physically assaulted was correlated positively with a history of childhood abuse of staff. Logistic regressions were performed to determine most important unique predictors of workplace violence. Surprisingly, training in violence de-escalation was not correlated with decreased risk for assault. A major limitation of this study was the small sample ($n = 64$) of nurses who took part.

Whittington and Wykes (1996), in a study of aversive stimulation by staff on psychiatric patients, reported that recently employed staff were more likely to be assaulted when compared with more experienced staff. In addition, the researcher found an inverse relationship between assault frequency and staffing levels. This finding is noteworthy since staff experience and staffing levels are a direct function of quality of care (Leather 2002).

Spokes, Bond, Lowe, Jones, Illingworth, Brimblecombe and Wellman (2002) combined interviews with survey data in a study of 108 multidisciplinary mental health staff to elicit nurses' views in respect to staff-related factors and antecedents to violence at work. Data from this study indicated that participants identified a variety of behaviours, clinical skills and personal characteristics that were regarded as impacting on the frequency of violent events that occurred over the course of the admission. The results from this study identified three staff-related themes relevant to incidence of violent behaviour, including clinical skills, interpersonal characteristics and personal selection. While the participants in the study noted that clinical skills were important in protecting oneself from assault, personal characteristics and interpersonal skills were perceived to have a much stronger influence. A noteworthy conclusion drawn from this study showed that interpersonal skills and training combined with skilled supervision may be effective strategies that could assist staff when dealing with potentially assaultive patients.

In a British study performed by Shepherd & Lavender (1999), 130 violent incidents were subject to a functional analysis. Staff interviews were used to identify antecedents and management strategies employed to contain psychiatric patients demonstrating violent behaviour. In this study the researchers noted that staff victims were significantly ($p < 0.01$) more likely to be male than female. The findings of this study suggest that environmental and interpersonal variables may have influenced the rate of aggressive incidents.

In summary, the literature shows that significant worker characteristics influencing the frequency of violence include:

- age
- sex
- appointment level
- personality type; and
- training in violence prevention.

Client and organisational culture

Notwithstanding the role individual factors may play in the frequency and type of violent behaviour that occurs in hospitals, socio-political factors are also likely to be related to violence and aggression (Leather 2002). Indeed, within the health care sector one of the most obvious examples of the relationship between social and physical safety environments is the management of violent behaviour in hospitals. For example, rules may provide a source of grievance and when setting such boundaries staff are likely to become particularly vulnerable to violent attacks. Importantly, the ways in which an organisation structures services will directly influence the nature and quality of staff-patient interactions (Leather 2002).

Embedded in historical, social, economic and political contexts, culture represents the dynamic inter-relationships between race, gender and class and includes, but is not limited to, the beliefs, practices and values of particular ethnic groups (Anderson et al. 2003). In this way, culture can be conceptualised as a characteristic of all societies and interpreted as a process through which meanings are produced and exchanged (Burns 1998, Anderson & Henderson 2003).

Within the health care context, important functions of culture include the following:

1. Perception, the way a person understands and interprets events and the environment in which they occur.
2. Motives, behavioural intentions, be they conscious or subconscious, are conditioned by the values assumed by culture.
3. Identity, individual and group identity are manifest by the oral, written and social constructs that define culture.
4. Values, the concepts of ethics and morality are conditioned by a person's cultural background.
5. Communication, language, music and dance are the external and observable expressions of culture.
6. Emotions are entrenched and formed by cultural ideas, practices and institutions (Stuart & Laraia 1998).

In times of stress and illness, culture is recognised as a key factor influencing the amount and type of coping resources available to a person. For this reason, a core principle driving the study of culture in health care is the discovery of ways in which to provide care that maximises a person's individual coping mechanisms and preserves their cultural identity (Stuart & Laraia 1998).

Organisational culture influences how we interpret organisational life and the meaning employers and employees place on the activities of the organisation (Brown 1998).

More specifically, organisational culture is defined as the vision, values, norms, leadership styles, interpersonal behaviours and behavioural expectations of an organisation. The ways in which authority, responsibility, rewards and incentives and information systems are planned and implemented within an organisation will all affect organisational culture in a diverse range of ways.

Organisational culture contributes to the performance of an organisation by socialising workers in conduct that maximises commitment to the organisational goal. Within the context of the Australian health care system, a universal goal of its organisations includes the maintenance of safety standards in both a physical and a moral sense.

Examination of the interrelationship between culture and safety in organisations shows that organisational relationships are key influences on culture and safety and that successful two-way communication is pivotal to achieving a corporate 'safety culture' (Clark 2002).

Culture is recognised as a powerful factor influencing the psychic, somatic and behavioural expression of emotion (Kaplan & Sadock 1997 p. 279).

Distress and agitation are unpleasant emotional and physical states that are recognised as antecedents to violent and aggressive behaviour. More specifically, distress has been defined as an emotional or physical state of pain, sorrow, misery, suffering or discomfort (Mosby's 2002). For the purpose of this study, distress will be defined as arising from physical or emotional pain/discomfort or grief and agitation as severe anxiety associated with motor restlessness (Kaplan & Sadock 1997 p. 280).

In many societies there are culturally sanctioned ways for accounting for misfortune or expressing distress that, within the context of western culture, may be interpreted as inappropriate, histrionic or even as evidence of mental illness, for example, witchcraft and possession states (Simon 1997). The ways in which organisations respond to individuals demonstrating the commonly encountered signs of distress and agitation are bound to organisational culture by policies around a range of practices and procedures.

In short, culture is a key variable influencing behaviour. More specifically, client culture affects the ways in which a person expresses emotions linked with violent behaviour, including frustration and anger. Organisational culture, in particular:

- waiting times for service
- the level of bureaucratic demands placed on staff; and
- the presence of security features in the clinical environment will all influence the level of aggression experienced by staff.

A further powerful cultural influence affecting behaviour is the ways in which workers impose rules and respond to consumer complaints.

Environmental variables

In addition to client, staff and organisational characteristics, the incidence of violence has also been linked to a range of environmental factors.

Cuffel (1994), in a stratified random sample of 641 subjects admitted to three hospitals, conducted an audit of medical records categorising variables according to demographics, diagnosis and level of violence one week prior to admission. In this study, the researchers found that patients admitted from rural areas were more likely to be aggressive than urban patients. The prevalence of violent and aggressive behaviour in rural patients was 49.2% and 39.4% in urban patients. The authors surmise this may be a consequence of reduced or delayed entry into mental health services.

Palmstierna and Wistedt (1995) investigated aggressive behaviour by psychiatric inpatients over a 12-month period. The researchers used a quasi-experimental study design comprising two groups of patients: the first group admitted in the first six months of the study and the second group in the second six months of the study when staff had undergone an educational program and there was a 50.0% reduction in ward beds. The researchers found no significant difference in the frequency of aggressive behaviour, however, the number of more severe incidents towards staff decreased.

Later, Ng, Kumar, Ranclaud and Robinson (2001), studied environmental factors in a New Zealand hospital over a 12-month period by conducting an audit of 58 ward records of incidents. The aim of the study was to examine the relationship

between ward occupancy level, staff-patient ratio and incidents of violence. Logistic regression procedure identified a positive association between occupancy level but did not find a link between number of violent incidents and patient-staff ratios.

Management

In the context of the review so far, it is clear that patient violence and aggression is a substantive problem for nurses, who are the largest group of professionals providing around the clock health care. Moreover, the very nature of nursing care deals with, and may confront, the patient at both physical and emotional levels (Maude 1999). In explicating existing approaches to the management of occupational violence in nursing, this review has discussed the impact a range of variables on the frequency and type of violence nurses experience in clinical practice. Notably, Duxbury (2002) outlined three causal models that emphasise the varied origins of workplace aggression and violence in nursing. These models are listed below:

1. The internal model emphasises the role of patient factors, in particular, age, gender, mental illness and substance abuse, in occupational violence.
2. The external models stress the role factors external to the patient play in the violent event, in particular, space, time of day, temperature, staff ratios and overcrowding.
3. The situational model examines violence by studying the interactions between internal and external variables. Central to the situational model is the conviction that a combination of factors may result in a milieu that negatively impacts on staff patient relationships.

In view of these three perspectives, much of the literature that describes the management of patient aggression includes a combination of prevention strategies and the use of traditional methods such as restraint and seclusion. Despite developments in the integration of de-escalation techniques into practice, it is fair to say that many violent incidents continue to be managed in a way that is reactive rather than proactive (Duxbury 2002).

A cornerstone in violence prevention is the formation of a multidisciplinary anti-violence committee, that ensures that all violent incidents are audited in a way that quantifies occurrence, identifies management problems, informs local policy and provides advice in respect to education and training. In addition to violence prevention, multidisciplinary violence management teams (VMTs) composed of a group of suitably trained staff (specifically medical, nursing and security personnel) are needed to respond to patient aggression and violence 24 hours a day.

Three core principles underpin the structure and operations of VMTs.

1. The development and implementation of a written policy for job safety and security that is clearly communicated to all staff working with patients. Organisations should provide a clear definition of violence and aggression and clearly state policy response for workplace violence.
2. That all members of the VMT are educated in respect to organisational policy and trained in techniques used to contain violent incidents.
3. That the management of patient violence both in policy development and in staff training be informed by a framework that conceptualises patient violence as a clinical problem requiring a clinically driven response.

In a South Australian study that aimed to describe the establishment of a VMT, Brayley, Lange, Baggoley, Bond and Harvey (1994) performed a prospective survey over the first two years of its operation. The VMT comprised one medical doctor, one senior nurse and four orderlies. In this study, records and audits of each violent incident involving the VMT were collected. Calls to the team were recorded and audited. A total of 282 calls to the VMT occurred in the study period. Demographic data from the study showed that age of patients represented in the data occurred in two peaks; the first between 15–35 years and the second between the ages of 70–85. Over half (52%) of all violent incidents occurred in the emergency department and analysis of the frequency of incidents revealed high incidence of violent and aggressive events between 6.00 pm and midnight. Notably, most VMT calls were for patients with organic mental disorders (45%), substance abuse disorders (18%), and personality disorders (15%). In 30% of calls, verbal placation was sufficient for management, but 62% of patients had required physical restraint and 53% were also administered sedation.

In light of the high percentage of organic disease represented in the study population, the authors concluded that responses to patient violence be clinically led rather than security guard or police driven. In addition, the authors noted that violence

management training provides a mechanism for dealing with aggressive patients that ensures focused patient management and protects staff. It is also a measure for quality assurance and provides data to determine causes of patient violence to implement prevention programs. Description of patient management strategies showed that 30% of patients required verbal placation; 62.0% required physical restraint and 53.0% were given medication. The authors raised an important resource issue in respect to patient restraint, noting that a minimum of four people is needed to safely restrain a violent person.

One difficulty in the formation of VMT relates to staff perceptions of responsibility for containing violent patient behaviour. Duxbury (1999) conducted studies into critical incidences from nurses working in psychiatric and general ward areas to ascertain differences and similarities in type and frequency of violent incidents and how violent incidents are managed. The researcher found that nurses mostly attribute patient violence to internal factors. In addition, while the participants from the two areas reported similar problems in terms of the types of patient aggression they are required to deal with, differences between the groups related to the extent to which nurses were prepared to take control over the management of violent patients. Mental health nurses were noted to consistently report taking charge of violent behaviour, whereas general nurses reported reliance on greater input from others, in particular, doctors, the mental health team and police. General nurses were also noted by the researcher to hold negative perceptions of psychiatric patients. This observation emphasises the need for general nurses to become more skilled in 'therapeutic communication' and the prevention of occupational violence.

Physical and chemical restraint and seclusion are traditional techniques used to manage violent patient behaviour in both general and psychiatric settings (Fisher 1992, Maude 1998). Recently, a number of writers have argued that the use of restraints and seclusion to manage verbal and physical threats has a negative impact on patient behaviour by reinforcing victimisation and eroding caregiver trust. Other writers view restraint as a failure of preventative or therapeutic measures. Notwithstanding these assertions, much of the literature that addresses the issue of restraint stresses the need for its reduction, due to its high connection with harm and its short-lived effects as an intervention (Johnson and Hauser 2001).

Fisher (1994) argues that while seclusion and restraint are used with the aim of preventing injury and limiting agitation, these techniques pose deleterious physical and psychological effects for both patients and staff.

In a systematic review to estimate the effects of seclusion and restraint and strategies to prevent the use of seclusion and restraint in those with serious mental illness, Fenton, Bowers, Jones, Lakeman & Morrison (2004) concluded that, in the absence of control trials, no recommendations in respect to the effectiveness, benefit or harmfulness of seclusion or restraint could be made. Notwithstanding these findings, the author noted that while undoubtedly unpleasant as strategies for preventing harm, such containment techniques may be the most practical and safe. Yet the author noted that the use of seclusion and restraint could lead to greater morbidity and mortality than alternative drug or non-drug approaches and that their use should be minimised for ethical reasons.

Canatsey and Roper (1997) analysed the use of a less restrictive measure of behavioural management, termed the 'Restrictive Removal From Stimuli' (RFS), where success of the intervention was measured by de-escalation of the event, that is, not requiring additional restraint to manage behaviour. The researchers collected one year of data tabulating RFS, seclusion and restraint utilisation rates. Notably, the researchers reported that the use of RFS had resulted in two favourable results - decreased use of seclusion and restraint and a reduction in the frequency and severity of aggressive behaviours. While the authors of this study noted that many factors impact on the frequency and severity of aggressive behaviours, this study confirmed that patient care can be improved through the adoption of less restrictive models of intervention.

Kalogjera, Bedi, Watson & Meyer (1989) examined the use of seclusion and restraint on three inpatient adolescent psychiatric units before and after implementation of a 'therapeutic management' protocol. Notably, the number of episodes of seclusion and restraint fell by 64% after the protocol was adopted, as did the number of clients who required those interventions. Mean duration of episodes of seclusion and restraint were also reduced by more than half (59%). The authors concluded that in this client population therapeutic management provided a positive (corrective) experience by addressing the developmental needs, deficient cognitive skills and poor internalised controls of disruptive adolescents.

It is clear that the use of restraint and seclusion has a limited, though important, role in the management of violent behaviour when less restrictive methods of containment have failed. In such situations, attention needs to be clearly focused on the safety of the patient and the staff involved. In the longer term, nurses must review the ways in which the patient may be encouraged to learn more socially acceptable ways of adapting to the stress of illness and hospitalisation and to taking responsibility for their actions (Maude 1998).

Duxbury (2002) used in a mixed study from audits of incident forms, questionnaires and interviews with staff and patients in respect to the causes management and training of staff to manage aggressive patients. Data was obtained using incident form, questionnaire and interviews. Views of patients ($n = 80$), nurses ($n = 72$) and medical staff ($n = 10$) were explored through semi-structured interviews. The findings of the study showed a clear distinction between the way staff and patients view both the problem and response to a violent or aggressive episode.

Notably, patients viewed staff as 'controlling' and noted that environmental and poor communication factors underpin aggressive behaviour. This finding has implications for education and training of staff in the management of aggression. As Duxbury (2002) reported, many training courses perpetuate the principles of reactivity focusing on traditional approaches to aggression management including seclusion, principles of restraint, breakaway techniques and the use of rapid sedation. In this study, the author argues for the use of training that is proactive and preventative in focus, rather than reactive and controlling.

Violence management training is the mechanism through which the values and principles bounded by policy can be applied to practice. The literature surrounding aggression management and training indicates that staff trained in aggression management techniques not only possess increased theoretical knowledge in respect to triggers and early warning signs, but report improved confidence when placed in violent situations.

In a British study conducted by Noak, Wrigt, Sayer, Parr, Gray, Southern and Gournay (2002), researchers examined the content of hospital trust policy documents to establish their usefulness as guidance for staff in the clinical setting. In this study, policies were found to vary widely in their content and were noted to have serious shortcomings in terms of their status and review, advice on the prevention of violence, the management of violent incidents and post incident action. Notably, while most of the policies analysed in the study expressed a clear commitment to training, few indicated how frequently training should take place (30%) and less than half (45%) stated the need for refresher training at all (Noak 2002).

Implications of the literature review for research

In summary, occupational violence is a substantive problem for nursing. While it is reasonable to hypothesise that reports of increasing violence against nurses is a function of a progressively more violent society, nurses, by virtue of the type of work they perform and the compromised circumstances of the people they care for, are particularly vulnerable to client initiated aggression.

However, lack of standardisation in both the definitions and the instruments of measurement used to quantify the scope of occupational violence, limit the development of policies that truly reflect what occurs in actual practice.

Indeed, the review of literature provided in this report indicates that many studies into patient aggression are derived from psychiatric settings and may not be transferable to the general hospital environment. In order to gain a complete picture of the prevalence of occupational violence in nursing, more information is required into how patient aggression manifests in a range of environments, particularly within the general hospital setting.

Within the diverse range of specialties in which nurses deliver care, the impact of situational variables on the incidence of violent behaviour is also noteworthy. In addition to already identified client and nurse factors known to influence the prevalence of aggression, these situational factors, which include a myriad of variables, may be broadly classified as relating to characteristics of culture, the organisation and the physical environment in which care is delivered.

With these situational factors in mind, the social interactionist approach has been posited as a useful lens through which to analyse the phenomenon of occupational violence in health care.

A further dimension of interest that emerges from the literature is the philosophical tension between the occupational safety 'zero tolerance approach' to the management of workplace violence in nursing and client or consumer focused models of aggression management where violence is conceptualised as a barrier to achieving a therapeutic interaction.

While the literature is replete with information in respect to actuarial screening tools for aggression, there is a general lack of clinically useful tools for assessment of aggressive behaviour and evaluation of interventions used to contain violent behaviour.

In order to contain the growing problem of occupational violence in nursing, evaluation of existing violence management programs that appraise cost, sustainability, skill and knowledge retention and effectiveness are essential.

Section 3: A prospective audit of internal security responses to violent patient behaviour in four Victorian hospitals

Introduction

This second phase of the research project describes the prevalence of patient violence by measuring the incidence of code black and code grey events, and explores the impact of patient and environmental variables on prevalence in three Melbourne metropolitan health care agencies and one regional centre.

Setting

The research locations chosen for this study were selected for three reasons, to:

- account for a diverse range of clinical settings that offer access to a variety of clinical specialities across metropolitan and regional locations
- permit comparison between sites and exploration of the phenomenon of patient aggression, taking into account differing approaches toward its identification and management
- involve expert clinicians from the field and from expressions of interest in the area of code black/grey, aggression training and management.

Section 2 of this report identified a number of issues that support the exploration of occupational violence in a range of settings. First, lack of standardisation in respect to definitions of violence and aggression require a clear description of policy and training in each of the hospitals involved in the study as definitional variations are likely to impact on the measurement of the phenomena. Second, due to increasing recognition of the importance of situational variables on the ways in which violence and aggression are expressed in clinical settings, detailed descriptions of organisational culture, policy and training are required. To this end, the following description of each of the study sites includes discussion of demographics, policy and training.

The setting descriptions provided in this report were developed by obtaining data from a range of sources including annual reports, policy and training curricula.

Hospital A

Demographics

Hospital A is a large regional hospital servicing a population of 80,000, which is increasing at a rate of 1% in 2000.

Hospital A is the principal referral hospital for a region covering an area of 48,000 square kilometres with a population of 200,800 people. In the financial year 2002–2003, the 2,822 staff working at Hospital A provided care for 25,480 inpatients and emergency department presentations reached 36,250.

Hospital A houses 246 acute hospital beds and 38 secure beds for psychiatric services.

The mission of Hospital A is to deliver fully integrated regional health services which maximise care, compassion, individual choice and quality outcomes.

Policy for dealing with violent patients

Described in the hospital's Health Services Safety Program OHS Section 2.22 Prevention and Management of Occupational Violence and Aggression are the policy and procedures for the management of violence and aggression in Hospital A. Importantly, during the study period Hospital A revised its approach to the management of aggression defining the following terms and behaviours:

Occupational Violence and Aggression covers a wide range of offences. Examples include:

- Verbal abuse
- Intimidating behaviour/bullying
- Physical threatening behaviour (with or without a weapon)
- Physical assault (with or without a weapon)
- Sexual harassment

Hospital A policy states that:

Violence and Aggression within the health services will not be tolerated.

Potential for violent and aggressive episodes must be prevented wherever possible.

All people identified as being potentially violent must be assessed and controlled in consultation with the employee(s) who provide the care, and be documented in both patient medical records and nursing care plans.

Any visitors or intruders exhibiting violent or aggressive behaviour are also not to be accepted. Internal emergency procedures are to be initiated and the Police notified.

Control measures must be implemented in accordance with the preventative flowchart outlined within this policy.

Employees who are engaged in patient/resident/client care will be provided with appropriate supervision, information and training to enable them to understand and implement agreed safe practices.

Staff must receive the appropriate level of training in the safe management of violent and aggressive patients/residents/clients or others (potential or real) in the workplace, according to the training guidelines within this policy.

All staff must comply fully with occupational violence and aggression programs and procedures developed in accordance with the hospital's Prevention and Management of Occupational Violence and Aggression Policy.

Operationally in Hospital A, a delegated authority in each workplace ensures that potential for violent and aggressive episodes are identified, assessed and controlled in a way that is systematic. Outlined in the policy document are implementation steps that include:

- identification of potential for violence
- assessment for potential for violence
- consultation in respect to the management of violent behaviour
- control, which involves the formulation of action plans based on the outcomes of risk assessment.

Hospital A has one internal code for managing aggression—code black, which is activated for armed confrontation or hold-up. For persons acting suspiciously, staff members are to notify the area warden. General aggression of any type is managed as described above. A code is activated via switchboard or by pressing the 'duress' button. The hospital switchboard is directed to notify relevant staff.

Training

All employees of Hospital A who are engaged in direct patient, resident, client or visitor contact are expected to undertake the standard competency-based training program. All employees are assessed for competency immediately following the training and then at regular intervals, not exceeding 12 months. Training is tailored to the needs of each department. Training duration varies depending on the needs of the individual department.

Due to the early stage of program implementation, no formal evaluation data is available into the effectiveness of aggression training offered at Hospital A, however, the program was internally developed and will be subject to a review including an appraisal of its effectiveness and long term sustainability.

Hospital B

Demographics

Hospital B is a large metropolitan teaching hospital that has a reputation as a leader in patient care, teaching and clinical research. Hospital B provides a range of general medical and surgical services to people living in the city's northern and western communities. Through its statewide and specialist programs, including cardiac, neurosciences, oncology, trauma services and an infectious diseases service, Hospital B also serves rural and interstate regions.

Hospital B houses 348 acute overnight hospital beds and four high dependency secure beds for psychiatric services.

The hospital's mission is to provide services of compassion and excellence to all who seek care through a dedicated workforce skilled in patient care, teaching, research, community health education and resource management.

The total number of patients treated as inpatients in 2003 was 148,935 (including satellite dialysis services) and the total number of emergency presentations for that same year was 46,682.

Policy for dealing with violent patients

Within the hospital policy and procedure manual, the policy for the management of occupational violence at study site B is titled *Aggression Management* and dated March 2003. This document defines aggressive behaviour, overall managerial and employee responsibilities, and refers specifically to response codes grey and black.

Planned code grey is activated when staff anticipate an unarmed threat, including aggressive behaviour from any person, could potentially threaten injury to others or themselves.

Code grey is activated when there is an unarmed threat or aggressive behaviour from any person that threatens injury to self or other people.

Code black is activated when a person makes an armed threat using a weapon.

A code is called by notifying switchboard of the type of emergency and location. Switchboard is provided with a list of persons and others (police) to contact and what to say. The incident is recorded in the switchboard emergency procedures log book.

Specific details, including the make up of emergency response teams for the aforementioned codes and the training of the response team, are not described in the policy document, however, there are 'action cards' for switchboard, security staff, the 'emergency controller' and for a 'clinical assistant'. The role of security staff 'planned respond grey' code grey and code black are stated. Security staff members are required to complete an internal audit tool, 'Emergency Codes - Review/Evaluation' form after every code.

Training

A skills acquisition approach to management of aggression training has been in existence for a considerable time within the confines of the psychiatric services provided in Hospital B, and a revised model was implemented in 1999. Using this model, staff members were inducted into a train the trainer program and were responsible for disseminating training to clinical staff. In January 2003, the mental health network, of which Hospital B is part, developed a multifaceted approach to the management of client aggression that incorporates best available evidence along with clinician and consumer perspectives. Within this framework, prevention is viewed as the core strategy with emphasis on early identification and engagement. The unique nature of this training strategy is underpinned by the philosophy that understanding consumer perspectives is central to the management of client aggression.

Beyond the confines of mental health, there is no mandated competency in respect to aggression management training at Hospital B, however, training is available to staff working in the general wards and specialist departments at regular intervals. Training is delivered over eight hours as two half-day sessions.

Due to recent changes in training, no evaluation data is yet available in respect to the program and its sustainability.

Hospital C

Demographics

Hospital C is a large metropolitan teaching hospital and tertiary referral centre that has been recognised as a pacesetter in the national medical arena and has consistently been linked to progressive developments in acute care, medical research and health care teaching.

Hospital C has a staff of 3,500 and treats more than one quarter of a million patients annually. It provides a comprehensive range of specialist medical and surgical services and accommodates six directorates comprising 42 clinical units, offering every form of medical treatment with the exception of obstetrics and paediatrics.

Hospital C has a mission of providing high quality care, cost effective care founded on excellent practice, teaching and research 'which improves the quality of life of Australians'. This is consistent with its vision – to be the driving force in Australia's health care system.

Hospital C has 340 acute hospital beds as well as 54 for acute psychiatric beds on the campus. In 2003, Hospital C had a total 38,735 emergency department attendances and 9,614 emergency admissions. In addition, Hospital C recorded 699 admissions to its psychiatric unit.

Policy for dealing with violent patients

Included in the hospital's internal security procedures dated August 2002 statement, is a definition of occupational violence:

any incident in which staff are abused, threatened or assaulted in circumstances arising out of, or in the course of, their employment.

The document outlines procedures and the defined codes for dealing with aggressive persons, including patients.

The code responses are listed as:

- code grey
- code black.

Operationally, a code grey/black is activated by telephoning switchboard stating type of emergency and location.

The hospital switchboard is provided with a roster of staff to contact and detailed instructions as to how the incident is to be announced.

There is an emergency response team – the Aggression Management Team (AMT), that is made up of clinicians and security staff that respond to code grey calls. The AMT, which is clinically led, works in conjunction with security staff once local staff assess that additional resources are required. Security officers are required to liaise with AMT, and will assume responsibility of an incident if a code black is called. Clinician numbers and the total numbers of staff who makeup the AMT is not stated. Members of this team are trained in aggression management.

At Hospital C, a code grey is only called when the local staff member believes they are unable to contain the aggressive incident and require assistance.

Where there is escalation of violence to dangerous assault or threat, a code black is activated.

Training

A training program specifically designed for staff working at Hospital C is delivered by the Australian Institute of Public Safety and has been in operation for several years. The course focuses on defusing situations by implementing strategies proven to de-escalate incidents. All of the strategies adopted in the program focus on non-violent intervention as the first choice. Within the training framework delivered at Hospital C is a 'system' designed to deal with actual or potential incidents that may involve staff or, alternatively, occur in the presence of staff.

The training, while not a mandated competency at Hospital C, is available to all staff.

Hospital D

Demographics

Hospital D is a major teaching, research and tertiary referral centre situated on the fringe of the central business district.

Hospital D provides adult medical, surgical and mental health services and a range of community and outreach services. Inpatient and ambulatory care is provided in a variety of medical and surgical specialties and is supported by allied health services.

The hospital operates a number of services from other sites around Melbourne, including mental health, community care and correctional health services.

In 2003, Hospital D housed 375 acute hospital beds and 44 beds in the inpatient psychiatric unit. A total of 46,580 inpatients were treated at Hospital D that year and its emergency department presentations totalled 32,194.

Hospital D works under the values of compassion, justice, human dignity, excellence and unity.

Policy for dealing with violent patients

Included in the hospital's internal security procedures are two documents relevant to the management of patient aggression. The first document dated January 2003 is titled code grey patient aggression and patient restraint. The policy provides an identical definition of occupational violence as that used in Hospital C. A code grey is called when an unarmed patient becomes verbally or physically aggressive, or requires restraint, or destroys property.

Operationally, a code is called via switchboard (stating the type of emergency and location of the incident). The hospital switchboard is provided with a list of persons to page who make up the code grey response team.

The code grey response team is made up of:

- the code grey coordinator and/or hospital emergency coordinator (a division 1 registered nurse)
- the code grey response medical officer
- two code grey support service associates
- two security officers.

All of the team members have been trained in the management of aggression.

Security staff, as members of the code grey response team, work under the direction of the code grey coordinator

Should escalation of violence occur during a code grey, in situations where the aggressor is someone other than a patient, or for episodes of armed violence requiring a police response, a code black will be activated.

The second internal security response document is for code black events for non-patient violence, armed/unarmed intrusion, armed patient violence and is dated September 2000.

This policy has been written specifically for situations where visitors or members of the public exhibit aggressive or violent behaviour towards patients, staff or hospital property. It also covers armed patient violence.

A code black is called via switchboard in the same manner as the code grey.

Again, switchboard is provided with a list of persons to contact, including the code black response team at any time, and the police.

The code black emergency response team consists of the following people:

- the hospital emergency coordinator
- the deputy emergency coordinator
- a security officer
- the risk manager.

Security staff work under direction of the hospital emergency coordinator, prior to arrival of police, and only intervene if a staff member is in danger or if requested to by a staff member.

Training

Hospital D offers a comprehensive program of aggression prevention training to all staff including security staff, nurses, allied health workers, medical staff, patient care attendants and clerical staff. Program content comprises an outline of hospital policy in respect to the management of code grey and code black events. In addition, training offers participants practical strategies in the early identification and management of violent behaviour, including de-escalation techniques. The views of consumers were taken into account in program development and were aligned with the organisational philosophy of compassion, justice, human dignity, excellence and unity.

Eleven recruited staff members from Hospital D completed a three-week aggression and violence management facilitators course in June 2002. Since this time, most of the facilitators have been involved in conducting workshops and contributed as active resources across the hospital.

In April 2003, a formal evaluation of the program was funded under the Department of Human Services Quality Improvement and Best Practice Funding Round 00/01. More than 1,200 staff members working in Hospital D have been trained in the use of de-escalation techniques. These skills are used by staff to prevent aggressive incidents and are drawn upon until the code grey team assembles within the designated area to manage the incident. The top three outcomes of the training included increased awareness of aggression in the workplace and identification of the need for an ongoing approach to education. A noteworthy outcome of this evaluation is that while training heightened awareness of aggressive behaviour and provided useful strategies to manage violent events, there was no reduction in the number of code grey events that occurred at Hospital D.

A positive outcome of the evaluation related to the cross-disciplinary nature of the training and the promotion of the view that aggression management is the responsibility of all staff working within the confines of the hospital.

Security audit

Planning and development of aggression management policy and training requires an understanding of the number and type of incidents in which an internal security response is activated for episodes of potential and actual violence and aggression. This component of the study sought to describe the extent and scope of code grey/black events in four separate locations in metropolitan and regional Victoria.

Aims

To describe the frequency of code black and code grey events over a six-month period in four study sites.

Method

A prospective audit of all episodes of violence that resulted in a hospital-wide security response was obtained from data routinely collected by each of the organisations involved in the study.

Sample

Sampling of all code grey and code black events occurred in the four study sites over a six-month period from November 2003 to April 2004 inclusive.

Analysis

The key variable of interest in this section of the analysis was the frequency of code grey and code black events in each of the study sites. Statistical analysis of quantitative data was performed by using Statistical Package for the Social Sciences (SPSS) version 11. Descriptive statistics included frequencies, cross-tabulations, measures of central tendency and dispersion.

For the purpose of analysis, continuous data collected in respect to time of day were collapsed into three nominal categories according to shift times (day shift 0700–1530 hours, evening shift 1530–2130 hours and night shift 2130–0700 hours).

Due to substantially different methods used by security services to collect information concerning violent incidents at Hospital C, comparisons between code type by location (regional or metropolitan), shift and clinical area (emergency, ward, psychiatry and other) were not possible.

Due to variability in policy between the three settings included in the exploratory analysis (Hospitals A, B and D), data cells were collapsed to produce two independent variables. Planned and grey categories were collapsed to yield a single grey category while the code black category remained discrete.

Results

A total of 2,662 potential or actual aggressive episodes requiring an internal hospital-wide security response occurred in the four participating hospitals over the six-month period commencing 1 November 2003 and ending 31 April 2004. Table 4 shows the total frequency of events by hospital location for each of the four hospitals involved in the study.

There was considerable variability among the four hospitals in respect to code types. For example, while Hospitals A, C and D had two response categories (grey and black) to deal with violent behaviour, Hospital B had three (planned grey/grey and black). In addition, while hospital C had fewer code grey events than the other hospitals, security responses were activated for a large number of episodes ($n = 955$). Table 5 shows the frequency of code type by location.

Of those internal security events activated in response to actual or potential violence at Hospital C and classified in the 'other' category, the following frequencies were recorded:

- response to duress alarms ($f=33$; 3.2%), incident attendance ($f=43$; 4.2%), observation of a patient or visitor ($f=12$; 1.1%)
- eviction of a patient or visitor ($f=41$; 3.9%), escort of possible troubled patient ($f=162$; 15.7%)
- standby troubled patient ($f=459$; 44.7%)
- restraint ($f=205$; 19.9%).

When data cells were collapsed to produce two nominal categories – grey and black – the distribution of events over the six-month period showed little seasonal variance. Table 6 shows a breakdown of code events per month for Hospitals A, B and D.

Significant differences were found between the frequency of the two main code types (grey and black) at Hospitals A, B and D ($\chi^2=99.73$; $p<0.01$). Table 7 shows code type by hospital.

Significant differences were also found between hospital location and code type ($\chi^2=47.38$; $p<0.01$) with proportionally higher numbers of code black events occurring in the regional location than in the metropolitan area. Table 8 shows code type by location.

Significant associations between code type and clinical area were revealed ($\chi^2=24.97$; $p<0.01$). Notably, over half of all internal security responses to actual or potential violence in the three hospitals occurred in the emergency department (53.6%). Table 9 shows code type by clinical area.

Analysis revealed no significant associations between code type and shift ($\chi^2=1.37$; $p=0.50$). Table 10 shows code type by shift.

Table 4: Total frequency of events by hospital location for each of the four hospitals involved in the study (n=2,662)

Hospital	<i>f</i>	%
A	115	4.3
B	1,055	39.6
C	1,026	38.5
D	466	17.5
Total	2,662	100.0

Table 5: Frequency of code type by hospital location (n=2,662)

	Hospital			
	A	B	C	D
Code type	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Planned grey	0 (0.0)	588 (55.7)	0 (0.0)	0 (0.0)
Grey	100 (86.9)	467 (44.3)	70 (6.8)	435 (93.3)
Black	15 (13.0)	0 (0.0)	1 (0.1)	31 (6.6)
Other	0 (0.0)	0 (0.0)	955 (93.1)	0 (0.0)
Total	115	1,055	1,026	466

Planned code grey is activated when staff anticipate an unarmed threat, including aggressive behaviour from any person that could potentially threaten injury to others or themselves. Code grey is activated when there is an unarmed threat or aggressive behaviour from any person that threatens injury to self or other people. Code black is activated when a person makes an armed threat using a weapon or poses a serious threat to personal safety of self or others.

Table 6: Code events per month for Hospitals A, B and D (n=1,605)

	Month					
	November	December	January	February	March	April
Code type	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>
Grey (including planned)	260	242	241	319	302	226
Black	5	1	3	3	3	0
Total	265	243	244	322	305	226

Note: In 31 cases security records did not stipulate in which month the event occurred.

Note: Hospital C had insufficient data for comparative analysis.

Grey = planned and unplanned code grey

Planned code grey is activated when staff anticipate an unarmed threat, including aggressive behaviour from any person that could potentially threaten injury to others or themselves. Code grey is activated when there is an unarmed threat or aggressive behaviour from any person that threatens injury to self or other people. Code black is activated when a person makes an armed threat using a weapon or poses a serious threat to personal safety of self or others.

Table 7: Code type by hospital ($n=1,636$)

Code type	Hospital		
	A	B	D
	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Grey*	100 (86.9)	1,055 (100.0)	435 (93.3)
Black	15 (13.0)	0 (0.0)	31 (6.6)
Total	115 (7.0)	1,055 (64.4)	466 (28.4)

Note: Hospital C had insufficient data for comparative analysis.

*Grey = planned and unplanned code grey

Planned code grey is activated when staff anticipate an unarmed threat, including aggressive behaviour from any person that could potentially threaten injury to others or themselves. Code grey is activated when there is an unarmed threat or aggressive behaviour from any person that threatens injury to self or other people. Code black is activated when a person makes an armed threat using a weapon or poses a serious threat to personal safety of self or others.

Table 8: Code type by location ($n=1,636$)

Code type	Location	
	Regional	Metropolitan
	<i>f</i> (%)	<i>f</i> (%)
Grey*	100 (86.9)	1,490 (97.9)
Black	15 (13.0)	31 (2.0)
Total	115 (7.0)	1,521 (92.9)

Note: Hospital C had insufficient data for comparative analysis.

*Grey = planned and unplanned code grey

Planned code grey is activated when staff anticipate an unarmed threat, including aggressive behaviour from any person that could potentially threaten injury to others or themselves. Code grey is activated when there is an unarmed threat or aggressive behaviour from any person that threatens injury to self or other people. Code black is activated when a person makes an armed threat using a weapon or poses a serious threat to personal safety of self or others.

Table 9: Code type by clinical area ($n=1,636$)

Code type	Clinical area			
	Emergency	Psychiatry	Ward	Other
	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)	<i>f</i> (%)
Grey*	852 (97.5)	197 (100.0)	485 (96.6)	52 (88.1)
Black	21 (2.4)	0 (0.0)	17 (3.3)	7 (11.8)
Total	873 (53.5)	197 (12.0)	502 (30.7)	59 (3.6)

Note: In 5 cases security records did not stipulate in which clinical area the event occurred.

Note: Hospital C had insufficient data for comparative analysis.

*Grey = planned and unplanned code grey

Planned code grey is activated when staff anticipate an unarmed threat, including aggressive behaviour from any person that could potentially threaten injury to others or themselves. Code grey is activated when there is an unarmed threat or aggressive behaviour from any person that threatens injury to self or other people. Code black is activated when a person makes an armed threat using a weapon or poses a serious threat to personal safety of self or others. Planned code grey is activated when staff anticipates an unarmed threat including aggressive behaviour from any person could potentially threaten injury to others or themselves. Code grey is activated when there is an unarmed threat or aggressive behaviour from any person that threatens injury to self or other people. A code black is activated when a person makes an armed threat using a weapon or poses a serious threat to personal safety of self or others.

Table 10: Code type by shift (n=1,636)

	Shift		
	AM	PM	ND
Code type	f (%)	f (%)	f (%)
Grey*	534 (99.4)	564 (98.7)	489 (98.9)
Black	3 (0.5)	7 (1.2)	5 (1.0)
Total	537 (33.5)	494 (30.8)	571 (35.6)

Note: Hospital C had insufficient data for comparative analysis.

Note: In 34 cases security records did not stipulate at what time the event occurred.

*Grey = planned and unplanned code grey.

Planned code grey is activated when staff anticipate an unarmed threat, including aggressive behaviour from any person that could potentially threaten injury to others or themselves. Code grey is activated when there is an unarmed threat or aggressive behaviour from any person that threatens injury to self or other people. Code black is activated when a person makes an armed threat using a weapon or poses a serious threat to personal safety of self or others. Planned code grey is activated when staff anticipates an unarmed threat including aggressive behaviour from any person could potentially threaten injury to others or themselves. Code grey is activated when there is an unarmed threat or aggressive behaviour from any person that threatens injury to self or other people. A code black is activated when a person makes an armed threat using a weapon or poses a serious threat to personal safety of self or others.

AM = 0700–1530 hours

PM = 1530–2130 hours

ND = 2130–0700 hours

Closer analysis of Hospital B data was made possible by the two distinct categories of code grey (planned and unplanned). These data reveal that in Hospital B the highest number of unplanned code grey events occurred in non-inpatient areas (such as radiology and the hospital foyer) while the highest proportion of planned code grey events occurred in the emergency department (f=310; 56.3%). Table 11 shows code type by clinical area for Hospital B.

Table 11: Code type by clinical area for Hospital B

	Clinical area			
	Emergency	Psychiatry	Ward	Other
Code type	f (%)	f (%)	f (%)	f (%)
Planned Grey	310 (56.3)	134 (88.1)	142 (42.3)	2 (11.1)
Grey	240 (43.4)	18 (11.8)	193 (57.6)	16 (88.8)
Total	550 (52.1)	152 (14.4)	335 (31.7)	18 (1.7)

Planned code grey is activated when staff anticipate an unarmed threat including aggressive behaviour from any person could potentially threaten injury to others or themselves. Code grey is activated when there is an unarmed threat or aggressive behaviour from any person that threatens injury to self or other people. Code black is activated when a person makes an armed threat using a weapon or poses a serious threat to personal safety of self or others.

Nurse audit

Aims

- To provide a detailed description of code grey and black events including information about the aggressor, the incident and the response over a six-month period in a prospective sample of violent episodes from each of the four study sites.
- To explore factors influencing the frequency and duration of code black and code grey events over a six-month period in a prospective sample of events from each of the four study sites.

Method

To elicit more specific detail in respect to episodes of patient violence, this stage of the study involved performing a prospective audit of episodes of violence that resulted in a hospital-wide security response. In this phase, data was collected by nurses working in each of the organisations involved in the study.

Sample

A convenience sample of violent episodes occurring in the four study sites was conducted over the period from 1 November 2003 to 31 April 2004.

Convenience sampling is a type of non-probability sampling and involves the use of the most easily available events as subjects in a study. This approach to sampling was judged to be the most practical and economical way of obtaining information from nurses about patient violence. While the events selected for analysis in this study are subject to the limitations of sampling bias, the researchers had no reason to believe that the nurses completing the audit would influence which events were reported and which were not.

Instruments

In the absence of a tool specifically designed to measure violent behaviour in the context of a hospital-wide security response to actual or potential patient aggression, an instrument was developed, piloted and tested using variables identified in the MOAS (Kay, Wolkenfeld, Murril 1988). These variables included the date and time of the event and the interventions used to contain the incident. In addition, demographic, patient and organisational variables incorporated into the data collection tool included:

- hospital type (metropolitan/regional)
- clinical location
- patient age
- patient gender
- ability to communicate in English
- level of urgency (emergency department only using Australasian Triage Scale)
- waiting times (emergency only)
- staff perception of workload at the time of the incident.

The content validity of the instrument was supported by a comprehensive review of the literature, the engagement of an advisory group comprising of clinicians and security personnel working at the four hospitals involved in the research, and a pilot study. The pilot instrument was tested in three of the four study sites ($n = 20$). Feedback was obtained regarding the scope of responses offered and the clarity of questions asked. A number of minor revisions were made prior to the instrument being distributed. The final instrument was divided into five sections:

1. Description of the event

This section collected information in respect to the date, time and duration of the event. In the presence of considerable variability in hospital policy in respect to code grey events, the type of response that was activated to manage violent behaviour was constructed as a four-point classification based on the policies and procedures of the four participating organisations and included the following categories:

- staff called security for assistance, however, no code was activated
- staff activated a hospital-wide security response to potentially aggressive behaviour
- staff activated a hospital-wide security response to actual aggressive behaviour
- staff activated a hospital-wide security response to actual or potential aggressive behaviour involving a weapon.

2. Location

This section was designed to collect information in respect to the clinical location of the event, and for the emergency department information in regard to patient acuity using The Australasian Triage Scale.

3. Aggressor details

Variables measured in this section of the instrument included age, gender, ability to communicate in English, history of previous aggressive behaviour and observed warning signs.

4. Incident details

In this section, information was gathered in respect to type of aggression observed, if physical injuries were sustained, if persons were exposed to blood or body fluids during the incident, and interventions used to contain the violent incident.

5. Response team details

Variables measured in this section of the audit included a description of the work environment at the time of the incident, including levels of staffing and the staff groups that responded to the incident. In addition, information was collected about staff training.

Analysis

Statistical analysis of quantitative data was performed by using SPSS version 11. Descriptive statistics included frequencies, cross-tabulations, measures of central tendency and dispersion.

A quantitative approach to qualitative data was employed to analyse the free text comments made by the nurses on the audit tool. Individual comments were subject to a content analysis where statements were systematically analysed according to common themes, including reasons for code activation, warning signs and other behaviour observed, possible precipitating factors and incident descriptions. These themes were subsequently broken into categories and counted using SPSS version 11 software.

Results

A total of 264 episodes of violence were recoded using the nursing audit in the four study sites, which represents 9.9% of all violent events that occurred in the four hospitals included in the study over the six-month period, as shown in section 3 of this report.

Table 12 shows a comparison between descriptive characteristics of the sample (nurse audit) and the total number of recorded violent events for the six-month period (security audit).

Description and location of violent event

With the exception of February, during which slightly more violent incidents were recorded (61; 23.1%), a relatively even distribution of events occurred over the six-month study period. The most commonly reported response was the activation of a hospital-wide security code to potentially aggressive behaviour (112; 42.2%). Little variability in the frequency of codes according to shift times were noted with approximately one third of events (89; 33.0%) occurring on the morning shift, one third (88; 33.3%) occurring on the afternoon shift and one third (87; 33.0%) occurring on the night shift.

Table 13 shows the distribution of events over the six-month period by the type of response activated.

Of all episodes of violence and aggression included for analysis, the mean duration of events was calculated at 23.31 minutes (+2.58; range 159). Figure 1 shows code duration in minutes by hospital type.

Univariate Analysis of Variance (ANOVA) between the three hospitals with sufficient data in respect to code duration (Hospitals B, C and D) indicated a significant difference between duration of response and hospital ($n=176$, $f=7.5$; $p=0.001$), however, this result must be interpreted with caution due to the relatively wide confidence intervals produced for code duration in participating hospitals. Table 14 sets out a description of the frequency and the duration of aggressive events in each of the participating hospitals.

Of the 264 violent episodes included in this part of the study, the majority (180; 68.2%) occurred in the emergency department while fewer occurred in the ward (5; 20.8%) and psychiatric units (16; 6.1%). Table 15 shows a breakdown of type of response by clinical location.

Table 12: Descriptive characteristics of the sample (nurse audit) with the total number of recoded violent events for the six-month period (security audit)

	Security audit ($n=2,662$) <i>f</i> (%)	Nurse audit ($n=264$) <i>f</i> (%)
*Location		
Regional	115 (7.0)	52 (19.7)
Metropolitan	1,521 (92.9)	212 (80.3)
Hospital		
A	115 (4.3)	52 (19.7)
B	1,055 (39.3)	136 (51.5)
C	1,026 (38.5)	36 (13.6)
D	466 (17.5)	40 (15.2)
*Clinical area		
Emergency	873 (53.5)	180 (68.2)
Psychiatry	197 (12.0)	16 (6.1)
Ward	502 (30.7)	55 (20.8)
Other	59 (3.6)	12 (4.5)
Code type		
Security only	955 (35.8)	52 (19.7)
Planned grey	588 (22.0)	112 (42.4)
Grey	1,072 (40.2)	76 (28.8)
Black	47 (1.7)	9 (3.4)
Incomplete		15 (5.7)

Note: In 1 case nurse data did not stipulate in which clinical area the event occurred.

Key

* $n = 1,636$ Hospitals A, B and D only.

Security only = staff called security for assistance, however, no code was activated

Planned grey = staff activated a hospital-wide security response to potentially aggressive behaviour

Grey = staff activated a hospital-wide security response to actual aggressive behaviour

Black = staff activated a hospital-wide security response to actual or potential aggressive behaviour involving a weapon

Table 13: Distribution of events over the six month period by the type of response activated (n=264)

Response type	Month					
	Nov <i>f</i> (%)	Dec <i>f</i> (%)	Jan <i>f</i> (%)	Feb <i>f</i> (%)	March <i>f</i> (%)	April <i>f</i> (%)
Security assistance	3 (1.1)	11 (4.2)	2 (0.8)	5 (1.9)	8 (3.0)	23 (8.7)
Potentially aggressive	16 (6.1)	15 (5.7)	17 (6.4)	38 (14.4)	18 (6.8)	5 (1.9)
Actually aggressive	14 (5.3)	21 (8.0)	11 (4.2)	15 (5.7)	8 (3.0)	5 (1.9)
Involving weapon	1 (0.4)	1 (0.4)	3 (1.1)	2 (0.8)	0 (0.0)	2 (0.8)
Unknown	7 2.7	3 1.1	2 0.8	1 0.4	1 0.4	1 0.4
Total	41 (15.5)	51 (19.3)	35 (13.3)	61 (23.4)	35 (13.3)	36 (13.6)

Note: In 5 cases nurse data did not stipulate in which month the event occurred and in 15 cases the nurse data did not stipulate the response type that was activated.

Key

NB: 5 (1.9%) cases incomplete

Security assistance = staff called security for assistance, however, no code was activated

Potentially aggressive = staff activated a hospital-wide security response to potentially aggressive behaviour

Actually aggressive = staff activated a hospital-wide security response to actual aggressive behaviour

Involving weapon = staff activated a hospital-wide security response to actual or potential aggressive behaviour involving a weapon

Figure 1: Duration of response in minutes in each hospital.

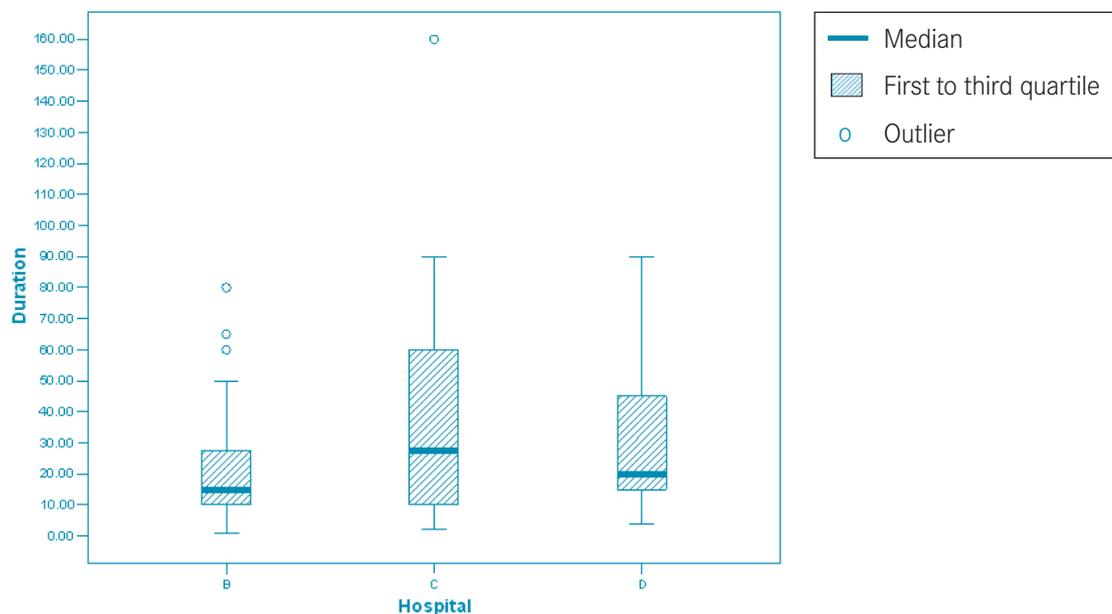


Table 14: Frequency and duration of aggressive events by hospital (n=176)

Hospital	f	%	M	95% Confidence interval	
				Lower	Upper
B	127	70.9	20.23	17.57	22.88
C	18	10.0	37.88	17.84	57.93
D	31	17.3	28.90	21.49	36.31

Note: Please see p.32 for further detail. ANOVA was only coordinated on complete data set.

Table 15: Type of response by clinical location (n=249)

Response type	Clinical location			
	Psychiatry	Ward	Emergency	Other
	f (%)	f (%)	f (%)	f (%)
Security assistance	8 (3.2)	6 (2.4)	38 (15.3)	0 (0.0)
Potentially aggressive	0 (0.0)	20 (8.0)	85 (34.1)	7 (2.8)
Actually aggressive	2 (0.8)	19 (7.6)	51 (20.5)	4 (1.5)
Involving weapon	2 (0.8)	4 (1.6)	3 (1.2)	0 (0.0)
Total	12 (4.8)	49 (19.7)	177 (71.1)	11 (4.4)

Key

NB: n = 264-15 incomplete cases excluded from table

Security assistance = staff called security for assistance, however, no code was activated

Potentially aggressive = staff activated a hospital-wide security response to potentially aggressive behaviour

Actually aggressive = staff activated a hospital-wide security response to actual aggressive behaviour

Aggressor details

Of the 261 episodes of violence that accurately recorded the gender of the aggressor, most were patients (239; 90.5%), while the remaining 25 cases (9.5%) involved relatives or friend of patients and, in a few cases, the identity of the aggressor was unknown or not recorded (3; 1.1%). Of all violent or aggressive episodes recorded, most were male (188; 72.0%), while fewer than one third were female (73; 27.9%). The mean age of aggressors overall was 39.67 years (+ 17.22; range 82) with no significant difference detected between the age of male (39.69; CI 37.08-42.29) and female (39.64; CI 35.29-43.99) aggressors.

Most aggressors were able to communicate adequately in English (233; 88.3%) and had a known history of aggressive behaviour (151; 57.2%). Warning signs for aggressive behaviour were noted by the nurses in 123 (46.6%) of incidents. These warning signs included a range of clinical signs which are summarised in Table 16.

Of the 152 episodes of aggression in which nurses responded to the question:

'did the aggressor appear to be under the influence of alcohol or drugs?',

66 (43.4%) responded in the affirmative.

Table 16: Observed warning signs for aggressive behaviour (n=264)

Type of behaviour	<i>f</i>	%
Agitated, restless, irritable	82	31.1
Disordered thought, paranoid ideation, homicidal or suicidal thoughts	25	9.5
Psychotic behaviour	18	6.8
Confusion	14	5.3
Altered conscious state	8	3.0
Hallucinations	7	2.7
Elevated mood/manic	7	2.7
Delusional	3	1.1
Delirium	2	0.8
Depressed	2	0.8
Mood disorder	2	0.8
Unsteady gait	2	0.8

Note: 172 signs were noted in 123 incidents. In some incidents more than one warning sign was entered.

Incident details

Precipitants to the violent event were noted by nurses. These included alcohol (29; 11.0%) and drug (30; 11.4%) usage or as a response to a delay in treatment (5; 1.9%).

A number of reasons were identified as triggers for clinicians to activate a code. These reasons can be broadly grouped according to the following classification:

- potential for self-harm
- potential for violence toward others
- actual violence toward self
- actual violence toward others.

Actual violence toward others (264 incidents) was the largest group of behaviours contributing to the activation of a security response (174; 65.9%); such behaviours included verbal aggression and threats (144; 54.5%) and physical assault (30; 11.4%).

Overall potential for self-harm was noted to be a reason given for code activation in over half of all violent episodes 142 (53.8%). Of these episodes, 47 (17.8%) included being uncooperative with treatment, while 67 (25.4%) involved threatened or attempted absconding from the hospital.

Potential for violence toward others comprised the third largest group of triggers for activation of a security or code response (90; 34.0%). Of these episodes, 82 (31.1%) included agitation or motor restlessness, and eight (3.0%) involved aggressive persons refusing to leave the department or hospital.

A much smaller group of behaviours that triggered a security response comprised actual violence toward self and involved suicide attempts while in the hospital (2; 0.75%).

Of the 264 violent incidents recorded by the nurses, most involved verbal abuse (137; 51.9%), while almost half of all episodes involved threats to staff or another person (124; 47.0%). Table 17 shows the frequency of violent behaviour for the 264 events reported in this study.

Of those 33 people who were physically abused as a result of the violent episode, most were nurses (19; 57.6%) while fewer were patients and relatives (5; 15%), security staff (5; 15.1%), medical staff (2; 6.0%), domestic staff (1; 3.0%) or police (1; 3.0%).

Action taken to contain violent incidents included a range of security and clinical interventions comprising de-escalation strategies 'talking down' (126; 47.7%), physical restraint (86; 32.0%), seclusion (33; 12.5%), eviction from the hospital (17; 6.4%) and the use of medication (101; 38.3%).

Table 17: Frequency of violent behaviour for the 264 events reported in this study

Type of behaviour	<i>f</i>	%
Physical abuse to any person	33	12.5
Threats to property	27	10.2
Throwing and object	16	6.1
Use of a weapon	16	6.1
Damage to property	13	4.9
Exposure to body fluids	12	4.5

Environmental variables measured by the audit tool also included subjective categorisation of workload at the time of the incident. Only 16 (6.1%) of the episodes occurred when the nurses stated that the ward or department was 'quiet', 68 (25.7%) when activity level was 'normal' and 88 (33.3%) when the nurses stated that the departmental or ward activity level was 'busy'. While a high level of incomplete data (95; 36.0%) limited analysis of responses to staffing at the time of the incident, it should be noted that there was a full complement of staff in 152 cases of violence (57.6%).

Response team details

In addition to medical, nursing and security staff, a range of other professionals were present at the 'codes' described in this study. Table 18 describes the professional groups present at the 264 events studied.

Table 18: Professional groups present at the violent events studied (n=264)

Professional group	<i>f</i>	%
Security staff	257	97.3
Nurses	174	65.9
Medical staff	135	51.1
Police	30	11.4
Crisis Assessment Team	6	2.3
Psychiatric special	6	2.3
Child protection workers	1	0.4

Note: We do not know if the same nurse was responsible for activating a code during the study because our instrument did not identify the nurse name or code. Our study was focused on the management of events rather than the individual nurse.

On only one occasion was a staff member unable to complete their shift as a result of the violent behaviour.

Of the staff who were responsible for activation of the security response to the behavioural emergencies 99 (37.5%) had completed aggression management training; of these people, 58 (58.5%) had received training within the last year.

Section 4: Staff perceptions of patient aggression

Introduction

The purpose of this phase of the study was to explore health staff perceptions of patient aggression, their level of perceived support, and obtain information concerning the impact on the staff member of managed and non-managed patient aggression.

Method

Structured interviews were conducted with staff using a tool adapted from three studies (Fry et al. 2002, Rose 1997, Yudofsky, Silver, Jackson, Endicott & Williams 1986). The opportunity for each participant to inform the study with a story of how patient aggression was managed was captured during this phase. Post phase 1 and 2 of the study, the interview schedule, was adapted to take into account typical case scenarios requiring decision making.

Participants and setting

Phase 3 of the study was advertised throughout the settings on flyers posted on staff noticeboards. Criteria for participation in the interviews included the need for participants to have experienced some incident of patient aggression. Such a strategy ensured that interested parties identified themselves and the interviews were drawn from a population interested or experienced in patient aggression.

Instrument

The structured interviews took each participant through examples of clinical incidents and sought how they would address and report these. Participants were also asked to relate a story of their own to identify how staff respond to typical situations and to develop case examples for use in future training.

Ethics

An ethics protocol was developed and successfully submitted, gaining approval from The University of Melbourne Human Research Ethics Committee, The Royal Melbourne Human Ethics Committee, The Alfred Human Ethics Committee, Ballarat Human Ethics Committee, and support and approval to proceed with the project from St. Vincent's Hospital.

Analysis

Qualitative data analysis was guided by the literature concerning Grounded Theory (Strauss & Corbin 1997). Data was stored using a software program, QRS NUDIST, which assisted with thematic categorisation. The preliminary analysis started during the interviews. The audiotapes were transcribed verbatim and names and other identifying information were coded to create the textual database for the analysis. The code used identifies the participant by an individual number, the clinical location and the clinical specialty. During the transcription, emerging concepts and categories were recorded as notes. After transcription, the interviews were analysed and insights concerning the material, its analysis and theoretical memos (Glaser 1992) written down during the analysis process. Concept mapping (Artinian 1986) and drawings were also used to understand the totality of the data. Data analysis was carried out using the descriptions of grounded theory by Glaser (1992) and Hutchinson (1986). The data was analysed using the constant comparative method, wherein an incident is compared with another incident, an incident to a category and a category to a category, to find the similarities and differences between them. A grid process was used to compare common themes and identify disparities. At the first level of coding, incidents are coded using words that describe what is happening in the data. At the second level of coding, categories are formulated on the basis of a constant comparison between the first-level codes and then by conceptually grouping similar codes together. At the third level of coding, emergent theoretical codes are used to conceptualise how the codes and categories relate to each other. The data is then written up as a narrative description.

Results

Demographics of the participants

Section C of the schedule of interview questions for the individual interviews made request for demographic data. Up to 30 participants were sought for interview across the four hospital locations. Twenty-four interviews were conducted; 20 with registered division 1 nurses, two with registered division 2 nurses and two with security staff. The study did not seek out division 2 nurses so this transcript was not included in overall data analysis. Thus a population of 22 participants were interviewed to inform the study. Table 19 provides an overview of the demographics of the participants.

Table 19: Demographics of the nurses/security staff who were interviewed

Demographics	Nurses (n=20)		Security staff (n=2)	
Hospital location:				
- Hospital A	10			
- Hospital B	5		1	
- Hospital C	0		1	
- Hospital D	5			
Gender	Female 14 Male 6		Male 2	
Length of time working in the hospital				
- 4 to 5 years			3	
- 6 to 10 years			2	
- 11 to 15 years			2	
- 16 to 20 years			7	
- 21 to 25 years			4	
- 26 to 30 years			4	
Age at last birthday				
- 20 to 29			2	
- 30 to 39			7	
- 40 to 49			12	
- 50 to 59			1	
English as a 1 st language			21	
English as a 2 nd language			1	
Highest qualification completed				
- Postgraduate Diploma	4			
- Postgraduate Certificate	3			
- Bachelors Degree	8			
- Diploma in Nursing	5			
- Security Certificate				2
Continuous work since qualifying as a nurse / security officer	Yes 20		Yes 2	
Current area of work				
- Psychiatry	6			0
- Emergency	5			0
- Acute Care	5			0
- Midwifery	3			0
- Security	0			2
- Other	1			0
Length of time working in their current hospital (All participants n=22)	A	B	C	D
- 4 to 5 years	1	2	0	0
- 6 to 10 years	0	0	1	1
- 11 to 15 years	0	1	0	1
- 16 to 20 years	5	1	0	1
- 21 to 25 years	3	0	0	1
- 26 to 30 years	1	2	0	1
Total	10	6	1	5

Note: Security data has not been aggregated due to small numbers.

Experience and credibility to inform the study

The participants were asked as an introductory question to describe a little about themselves and provide the length of time they had been working in the clinical area to identify credibility of the sample. The years of continuous experience ranged from four years up to 31 years with 15 of the participants having more than 10 years experience.

Training

The participants were asked five questions relating to their experiences with training to identify the recency and length of training provided and any ways that training had assisted the participants. Ten of the participants advised that they had no training at all in management of occupational patient violence (4 at Hospital A, 5 at Hospital B and 1 at Hospital D) one participant could describe the training they had but could not recall how long ago it had occurred (Hospital A); five participants had completed training in the previous six months; two participants had completed training in the previous year; one participant in the previous two years; and one in the previous three years.

Of those participants who had completed training, there was a common theme that the training assisted them to be more confident when approaching violence as long as the code grey team was available.

'I just remember thinking I am not going to be able to use this most of the time. It's very different when you have support but really messy with someone who is not cooperative.'

Reflection of training and implementation of training to practice

Four questions were asked of each participant to seek their reflection on the adequacy of the training they had received and whether they were able to implement any of the de-escalation practices or other strategies learnt.

Impression of usefulness of training

The participants who had completed some training could all identify benefits from the training and the transferability of skills across the hospital.

'The training's ...transferable ... anyone in the organisation can be trained. It's a range of competencies and depending on where we work and the level of exposure to workplace aggression.'

'Relevant and useful. Use it every day.'

In particular, there was an appreciation for the level of team building that training can provide staff. There was also evidence that hospitals were providing extra training for people who are involved in coordinating the codes.

'It's good ... all the members of the team need to be aware of the techniques ... It's compulsory that everybody undergoes the training here now.'

'Quite useful. It was a three hour session the ... team approach ... it was how to run the code... to give instructions to ... the team and when to give those instructions... it probably helped to coordinate it better...it ... reinforced, that one person should talk and the only person should be coordinating is the nurse in charge.'

There was concern that medical staff were not involved in training despite the fact they are very much part of the team that responds.

'Doctors don't get the training yet they are there to consult with the team... the doctor in charge really runs it and can ask for restraint to be taken off, when you don't think it is safe to do so. The coordinator, which would be the nurse, is in charge of the whole team but the doctor is the collaborating person. They've got to make the medical call, whether it's a chemical or physical restraint, they're the ones giving the order and it's a written order that we have to sign. They can override but, if we felt very strongly, well, it's not a forum to be having debate.'

A participant from ICU shed some insight into experiences of aggression in this clinical area. He seems to indicate that ICU is overlooked as a place where patient violence occurs.

'In ICU patients do take swings at nurses ... nine times out of ten they miss or they don't hit hard because they're so out of it we ... can manage that.'

Sedation seemed to be the way that ICU nurses managed confusional states where there existed patient outbursts.

'In ICU we use sedation...if a patient is getting very aggressive we just use drugs.'

This participant went on to say that grief is a very real issue in ICU and caring for grieving relatives can place nurses in the firing line for aggressive outbursts.

'Grieving relatives. You know everyone grieves differently. We've had instances where grief turns to anger with some relatives; anger towards the hospital, towards the nurses, towards the medical staff, that we haven't saved their relative.'

Despite the common need to break bad news to relatives or support a person who is grieving, training for de-escalation of aggression does not cover this well.

'I think on the whole...we manage it very well. Again not with any sort of formal training but just by trying to be there for them, comfort them.'

A few of the interview participants who had training felt that it had not assisted them to manage the aggression. The following participant had been hit post the training and she felt that she was unable to put the theory into practice.

'I thought it was worthwhile at the time...but having the event happen following that, I didn't feel it was any use, no...It was all theory based...I thought that it was worthwhile but then having had an opportunity to put it into practice and not being able to, whether that was my situation or not, I don't know.'

This participant's story highlights the need to incorporate some practical training and teamwork when the staff return to their working environment. The following participant was not so negative about the training as she tended to believe that some situations you can not de-escalate. This is possibly an issue that needs to be raised in discussion during training programs.

'The situation was far too quick it did help when the people restrained him...we had training in how to do that but as far as me being able to talk him down and get out of the situation before it became violent - too quick.'

The participants who had no training were largely silent on this issue but one explained her attitude as follows:

'Not really interested in [training]...over the years you learn how to deal with aggression as part of maturing...I've gained my knowledge over the years just working.'

It is clear that training needs to be promoted to all staff and that there are most likely barriers of staff perceptions of the usefulness of this training and many local customs to be challenged.

Security staff were divided on their impressions of the training.

'Yes, when we started here...all of the security officers and nurses and clinical assistants all get put through a patient aggression or patient aggression minimization training...we get our own outside training.'

'Not really [useful], it took about 12 months before we were actually put through an aggression management training course.'

However, security staff had previous training to gain their security certificate.

'A lot [of the content] was a refresher from the security course which you have to undergo to obtain your license, the same course that the nurses have to go through.'

The components of the training could be listed, however, there was a sense that the training did not address the need for security staff to be recognised by clinical staff for the role that they play in the management of violence.

'How to escort a patient safely, how to...move them down to the seclusion room safely with minimal injury to both parties. With the nursing staff, they tend to get in our way...they'll call us...for the code...expecting us...to do our job when we get here, but we can't do it safely...because the nursing staff are in the way...they'll say...put him down on the trolley, we'll shackle him...and as we go into grab him there's about three or four nurses just standing around hindering us to get to the patient...That happens...in the emergency department, up on the wards and in the psych ward.'

Training's ability to change the participant's perception about client aggression

Confidence was the most evident theme from this section of the transcripts.

'It did make me more confident.'

'Our staff feel more confident, the feedback that we've had from graduates and people on rotations feel a lot more at ease once they've done the training previously they were concerned about aggression.'

A sense of support was also evident:

'I feel supported and know somebody's there and I feel safe.'

Training provided simple strategies for participants as take away messages.

'The ability to remain calm. Don't raise voice...adopt safe but non threatening demeanour, keep talking, find an avenue for diffusing.'

Training had the ability to make people aware that they could do something about patient/family aggression and provided strategies that raised staff confidence to practice.

'You become very de-sensitised to things and as you get a little bit older I see things differently now and I am learning what's acceptable behaviour and what's not.'

However, the training was seen to be more focused on physical take-downs than talking down. Possibly emphasis is placed on de-escalation in the theory component and the practicum does not reinforce this but looks at holds and restraints only.

'It...helped reinforce...give me...extra pointers on the physical...side...more than talking down.'

From the security participants' experience, the training was useful to some extent to gain an understanding of the clinical picture of the patient.

'An understanding into the psyche of their unbalanced mind.'

Application of skills learnt from training to the clinical area

The researchers were interested to know if the principles learnt during training were followed through into clinical practice. Several of the participants advised that they had not used the training upon returning to the clinical area.

'We don't use the training, instincts really.'

'Haven't utilised that since the training session.'

However, these comments were few compared to the positive experiences of having completed the training and the teamwork that was developed from working together to manage the situation.

'There's been several instances where that course has been very good at diffusing situations before they have got out of hand.'

'Any...aggression in this area is treated...like a team.'

'Workers realise that they're trained in the same methods. That gives you the confidence.'

Certainly a coordinated approach and having all staff do the same training was seen as a positive.

'We need a coordinated approach where everyone does the same training... that's more important than what the actual methods are.'

'The best thing is that everybody's doing the same thing...everybody's coordinated and...knows what how...when to respond.'

And the ability to de-escalate clients and to do this well was a good reinforcer for staff.

'The...positive...was talking about the de-escalation, the less hands-on and dealing with situations. Sometimes you forget that a code situation often has been brought on by some verbal abuse.'

However, one down side to training was when policy was imposed that required training before staff could be involved. Although this could be seen as a positive to have only trained staff attending to patient aggression, the fact that many staff elect to not take training imposes a burden on those who have completed the training.

'They're not allowed to get involved until they have [done the training]. That's a good policy. As they're not allowed to work in our high dependency area. But, then it makes it more stressful sometimes for the people who are on ward because there might only be two or three people on...who are experienced, who actually have had the training and who get in and do things.'

The security staff participants took a much more pragmatic view to management of violence. Negotiation and presence seemed to be the two main contributions they made to de-escalate violence, but once this had been seen to be non-effective, the situation was to be contained as quickly as possible.

'Nine times out of ten, they're willing to cooperate. But then there are times when they just don't want to listen and you grab them...enough of negotiations.'

There was limited belief that things would get any better, largely due to poor communication between management and staff leading to a breakdown in policy being implemented clinically.

'Communication between management, the hospital and security here, does seem to be a little bit lax at times...the main thing is that security...is reactionary. They react to a problem rather than being proactive...you can see problems before they arise but...they wait for it to happen and then sort it out then. We log everything. There's no possible way that the hospital is not aware of what's going on. And basically there's a lot of things that are put into those reports which should be acted upon which aren't. We'll report...a possible risk and it's exactly the way it was the day before.'

Suggested frequency of training and content

The literature does not inform practice as to the need to revisit training. One could suggest that training needs to be reinforced, but the timeframe between the initial training and subsequent follow up is uncertain. Repetition in the content of follow up training was evident from the transcripts.

'It has always ever been one day. I'm still happy for it to be once a year but there must be more to management of patients than just the same things each time. If you're a graduate nurse maybe you need the very basic...perhaps we could have a discussion group or something like that for people who are trained and perhaps ideas of what people have done in other services and how people have dealt with things.'

For one emergency area, the psychiatric liaison nurse was conducting regular sessions of 40 minutes duration and the nurse unit manager was directing staff who were identified to have a need. There was a sense that this training in the unit was much more practical than the official hospital course.

'We've got a psych liaison nurse, who runs in-services on aggression...it's 40 minutes once a fortnight...I ask her to speak to particular people...who I think are more nervous than others. Probably the most important thing...is... the (de)escalation techniques for staff...what to do and how to talk to people who have a potential threat of violence...unfortunately the training sessions don't address those issues, they address the actual code grey when it's already escalated and technically out of hand...It doesn't talk about talking people down, interpreting behaviour...Where to stand and make sure you've got a route out of the place and out of the room and just identifying behaviour that is potentially escalating.'

Training needed to be conducted early during the orientation program for a new staff member.

'It probably needs to be part of an introductory package...whether for a day, a study day, half a day session...mandatory, part of orientation. Every staff member is told to attend orientation as soon as or close to when they start employment...every 12 months as a refresher.'

And one participant could not see if competencies could be developed as with code blue or other codes.

'I don't know...how you would go about making it...a competency. Everybody deals with things differently. It's not black and white I suppose you can ask someone to deal with a situation in a certain way but whether they can, you know, after hours when they're alone or when they don't have support, everybody copes differently.'

One security staff member volunteered that

'We're going to be doing in-house training every six months.'

Another suggested that all staff should be trained and this should be mandatory:

'...so that the nurses could work with security and medical staff as a team. I don't know whether it's compulsory for all nurses to go through the aggression management but I believe it should be because there seems to be a fundamental misunderstanding...between nurses and security...it seems to be hospital-wide too...there seems to be like a minority that accepts security for what they do but...most of the time nurses are just blasé about it...it's not just nurses, it's doctors...sometimes we feel undermined because we'll set something in place that makes a situation safe and a doctor or a nurse will come in and say: "I don't want it done like that", which totally undermines what we've just done.'

Experiences with aggressive incidents

Four questions were asked to assist the participants to describe their overall perceptions of violence within their work environments. One participant suggested that it was very infrequent in the community where she worked but she was often caught up in violence when she had to go to the acute inpatient unit.

'I get far more exposed to violence when I have to support the adult acute care unit when we get called for code blacks to help subdue people.'

The other participants all had frequent experiences of violence that seemed to occur either daily or even hourly and one participant suggested that they were now desensitised to it.

'Yesterday I worked and I got what I would count some sort of violence eight times, so that's once an hour, initiated by a patient. I work four days a week, so that's 48 times a week.'

'I would say at least once or twice a day.'

'Every second day.'

'Someone once per day.'

'Every day.'

'One a day to four times a day...on average. {Do you think you're desensitised to it?} 'Yes.'

Security staff experience was far greater.

'We might have one or two code greys or planned code greys during the course of the shift...but there has been times when we've had...upwards of 14 code greys on patients, visitors, relatives.' {every day there would be a code?} 'Yes...in emergency department or the psych Ward or up on the wards...the majority of them happen here (emergency) and the psych ward.'

Patient and family aggression directed towards health staff was not always because of difficult client presentations. It could be because the system was letting people down or they were not getting what they expected in a timely fashion. One of the nurse participants commented concerning this phenomenon.

'At the moment we're having more cancellations of procedures and this is where we find that people do get fairly upset, aggressive, verbalise things. I know we had an incident last week. A patient had been cancelled for the...fourth time. The patient was very agitated, the son was very agitated and we had to deal with that situation. You could have it once a day for a week and then nothing for a month...it's probably once a fortnight.'

The participants were asked if many of the patients who presented with violence were frequent presenters or if they were known to them.

'With that...patient...it's ongoing, it's three times a week... whenever he turns up.'

However, one psychiatric nurse participant suggested that short stay patients who were not known to the service were the most difficult.

'People who are admitted for a 24 hour, 48 hour period, tend to be more hostile than someone who's been back a number of times.'

The researchers were interested to know if the nurses in the country area would be later confronted by these individuals when going about their normal life. One of the participants had this very experience.

'I've been threatened by one of those people outside. I made it quite clear that if he continued to threaten me in front of my family I'd take action.'

What stands out from the text of the transcripts is that there are a number of individuals who frequently present to emergency services and are violent or aggressive on each presentation. However, there seems little handover of these individuals and each new presentation seems to be addressed as a one-off. One nurse participant calls this knowledge of patients who are violent when they present 'corporate knowledge' but expresses frustration that this can not be handed on to others.

'This is a skill...I...have been saying lately, it's corporate knowledge; I will know how this person will present...And this is where the problem is; when you're not actually the patient's nurse and can't override... that staff member's decision and you know there's going to be an incident ... you get to know certain patients and...maybe their face changes or they start yelling at you and you know... from your previous experience has meant that the next step is going to be that they are going to hit out at someone.'

It must be acknowledged that it is not just the nursing staff who suffer abuse from patients; and when other members of staff become the target of abuse nurses will tend to intervene on the other person's behalf or in support of ward protocols and procedures such as reducing the impact of visitors during ward rounds.

'The ward clerks...cop a lot of abuse from relatives...it's a daily occurrence and if that happens and I'll go out there and... have a chat to them and say, Look, we'll get you in as soon as possible ... the medical staff want the door to be locked at all times... The medical rounds are quite sort of strict at their times.'

When asked about the frequency of presentations of verbal abuse, abuse directed towards self and violence directed towards objects or others, the participants tended to agree that verbal abuse was the most frequent event. And of this verbal abuse the major contributing factors seemed to be non-compliance.

'A third would be non-compliance...physical not much...lot of just verbal assault.'

However, this verbal abuse could be very personal and distressing.

'It's hard because some of the things are just a look...but a look from someone and then they say "Geez, you've put on a whole lot of weight".'

Perceived causes of patient aggression

All participants were asked for their opinion as to the major causes of patient aggression in their work area. A variety of causes were identified including pain, drug use, personality disorder presentations and waiting.

'Substance abuse...people...angry at society...personality disorder issues...People that feel that they've been waiting too long or...overlooked.'

Patients being required to wait seemed a major issue for many of the participants.

'At triage...people who are quite irritated because they're waiting for long periods of time...not...understanding...the way the triage system works or how busy you are...or how many staff are on and patient load.'

One nurse suggested that many junior nurses were too busy fitting in with demanding workloads to pacify the patients and this resulted in misunderstanding and more verbal abuse.

'One underlying pattern would be...The protracted waits, just makes everything seem a whole lot worse' {told why they're waiting?}'...some of the junior staff...don't seem to do that very well...they're just so caught up in...their workload, that (communication) becomes a secondary thing and they forget to do it. They...do the most important thing and they may not get to the bottom of the list...feeding back to the patients, giving information to the relatives.'

And the cancelling of appointments over and over again was a contributing factor that left nurses feeling that they had to compensate for the system.

'Often these people have been cancelled three and four times so they're very angry they are unwell, they have symptoms and they are not being able to get the resolution that they want. They generally say we know it's not your fault but you still feel the anger, try and pacify them anything you can do to assist them.'

Security participants also identified waiting and time contributing factors to patient and family violence.

'The thing that seems to escalate the situation the most, is time.'

And if the police had been involved the security staff could be seen as agents of the police and the patient may continue to take frustrations out on security.

'They're seeking help, they're mentally unstable...It's a mixture of everything; it's frustration...if the police have brought somebody in, when they get here...they're focused on the police...they see us and our uniforms and they think, "Oh no, more coppers"...so they get a bit more aggro towards us, but then when they realise that we work here, they sort of tend to calm down a bit.'

The environment that nurses worked in and the constraints the environment placed on visitors and patients were also identified as contributing factors.

'ICU it's a big area. Not much space between each bed. It's a very noisy environment, very impersonal...we do tend to keep the relatives out of the area quite a bit for ward rounds and for...procedures, so...relatives can't actually be in the ICU area to be with their loved one because we're keeping them outside. Half of the anger I deal with is relatives who can't actually physically be inside the unit to be with their loved one.'

One nurse participant considered cultural needs of the patient.

'We have a varied group of patients of different cultures and many of the cultures they don't want women looking after them.'

This participant could also recall an issue of racial conflict that impacted upon two of her Asian nurses working on night shift. When a patient required a nurse with a specific gender or was reluctant to be nursed by some races conflict could arise.

'I've had two Asian nurses...on the night duty and...the patient's been quite nasty towards them...They were kind of ethnic people...they weren't attacked but it was...verbal abuse; it's been really difficult.'

There is a paucity of debate in the literature concerning this phenomenon of cultural misunderstanding leading to conflict, possibly because this is a controversial area for discussion.

Another issue that arose from the thematic analysis of the transcripts was frequent presentation of people with untreated mental illness and substance use. In the case of mental illness, the legal requirements of the Mental Health Act and how these requirements often restricted patients' choice was seen to lead to conflict. One participant went as far as to say that the changes to mental health legislation and the move to treat more people in the community had created a new need in emergency care to treat the mentally ill on presentation. Although the comment is not in keeping with current deinstitutionalisation policy, it must be acknowledged that emergency has now become the front door to psychiatry and that emergency nurses are ill prepared for this.

'I think the Mental Health Act has led...to increasing aggression in hospitals, in EDs...because there are a lot of crazy people out in society now...when I started nursing they were all locked away...and they're...in the community, being forced to cope...I've seen people come in who've...tried to murder their mother and ransacked the house and had a knife, and they go home. And I just can't believe...how they can go home.'

Perceptions of local policy concerning calling codes and intervening

The participants were asked to describe their current code grey and code black hospital policies, the procedures to call these codes and resultant intervention that they would expect. One theme that comes out of the transcripts is that nurses want to be able to manage the code themselves whenever possible. There was a real sense that nurses did want to de-escalate the person and true commitment to talk people through what was perceived a crisis or reaction to waiting.

'Hopefully...we manage our codes ... we don't get to a code'

'It's up to the nurse looking after the patients...and the doctor...it's...a team, but it seems to fall upon the nurse more times...to feed back that information, provide education for the staff. To realise what can lead to aggression...and realising if they do simple things like spending a few minutes with the patient and telling them what's happening...it just helps incredibly.'

All the participants could describe the procedures and differentiate between the codes. One participant differentiated between the differing codes as follows:

'There's two code greys...a planned...and...there's a code grey. The planned code grey is...where the situation is under control...and we need extra assistance...the code grey is when...someone is aggressive towards someone else...or the situation actually has gotten out of control...the code black is...an armed threat.'

There were some definite discrepancies between agencies identifying planned code greys as opposed to actual code greys and Hospital A was using only one code system – code black.

'There is a need to differentiate between a code grey patient violence and code black violence.'

This non-conformity of code definition could pose some difficulties when staff move between locations and would also impact upon any training curricula that intended to be universal.

Although there was general acceptance of code grey as being supportive, there was some definite concern about calling a code black. This seemed to be because staff feared that the response would be delayed or that calling a code black could inflame the situation.

'We've had some aggressive situations where we've quietly phoned security; a code black would have antagonised the situation.'

Hospital A was developing their response and this was evident in this reflection of calling a code 12 months prior to the day of interview.

'You call a code black here and...get a reasonable turn up, but 12 months ago you might get two. There might be no security guard...a couple of other people...nurses have to, if skilled, actually attempt de-escalation...if you call a code black when people from psych services or from security arrive, people step back.'

The final statement from this participant about people stepping back once they had called a code grey/black was evident in the reading of the participant transcripts of nurses who had limited training in de-escalation of aggression. As with the code blue (medical emergency) response, once a nurse initiated the code they felt they had little need to intervene once the code grey 'crash team' had arrived. Nurses who had limited training were not orientated to their roles and responsibilities. Thus training could be seen as a way of skilling health care workers but also involving them in the very important role they can play in talking to patients/relatives and keeping them calm.

Security was praised for the work they did and there was a sense of teamwork, with security being seen very much as part of the team.

'I believe that security are...very good and they have a very good rapport and relationship with the staff in this department.'

'The security staff do tend to...try and diffuse the situation first...they've been great for us. If we've had any relatives in ICU who have...been a little bit verbally aggressive...they'll come in and say, "Look, you know, you've got to move away from the area"' and they will comply.'

The psychiatric nursing team was also mentioned as a resource that could be called upon for Hospital A.

'As an after hours coordinator...I stand back...I...know the security are...responsive...they get there before me...we can rely on acute psych if they're not busy.'

However, security staff felt that their roles were sometimes made more difficult when staff were unable to support them because of a lack of understanding of their contribution to patient care.

'Communication needs to be improved. Nursing staff sometimes call the code too late...be in our way...argue with us that we're doing it the wrong way...(we are) trained in what we do and they're trained in what they do, they should leave us to do our work. As soon as they call us and we arrive on the scene...one of them should...meet us, brief us quickly on the way going in, and then we can work out a plan of action...and deal with it.'

Security participants provided some background into the development of code grey teams and suggested that delays in calling a code actually escalate the situation 'code grey was actually implemented to try and reduce the numbers of security guards needed.'

'During a code grey it was proposed that only two security guards...plus the doctor on call plus the psych registrar on call plus the clinical coordinator and...any other...staff...happened to be around the area of the code...we found that there was an extremely long time between the code grey being called and the psych registrar and the doctor on call arriving to the situation...it seemed to be consistent...they were consistently late so we made it a directive of...ourselves, that all four guards would just turn up...the response that we got from other nursing staff was fantastic. When they see four guards turn up to a situation...they feel safe.'

Only one participant spoke about debriefing and there was a sense from the transcripts that debriefing was conducted on an ad hoc basis.

'Sometimes people have a chat how it could have been managed better...Sometimes it won't happen...it will happen later in that shift or...it won't happen at all...it depends on who's on, the situation, how it actually went...sometimes it will just be - "That went very well, guys" and that's it... it sometimes will be like, "Oh do you think next time we could focus on this and that" but it's not all the time that we do that. Sometimes it's "Oh that was an ugly code" and that's it.' {Any reference to the principals from training?} 'No, the training's just something we do on the day.'

This final statement from this participant could be important. If training occurs but little is done to reinforce the principles learnt when the trainee goes back to the ward, then it could be suggested that only limited change to practice will occur. As with any new clinical skill, a person can learn the theory and even have some limited practice under supervision but if they do not have the opportunity to debate the theory or practice then they will not become confident. So too, a person who learns the theory of de-escalation but comes back to the ward environment and little is done in practice/policy to address management and de-escalation, then these skills will be quickly lost. Debriefing could be changed to incorporate some assessment of the principles of de-escalation and management and changes to practice could evolve out of what is learnt from this process.

From a security perspective, debriefing was limited and could be conducted in a much more thorough way.

'I think there should be a...debrief involving...all people involved in the incident...I...find it...frustrating...working here...lack of communication between nursing staff and security staff, a lack of respect...they don't understand...really why we're here and what we do...we feel from our management and the hospital management...we feel they're a bit negligent in that they are reactionary instead of proactive.'

Calling codes and interventions

The participants were asked to consider the process of calling a code and under what circumstances they would initiate the code. One reason offered by nurses as to why they would not call a code was that they had limited understanding of what security could do for them. This is a good example of how training could bring people together, build teams and break down barriers to understanding each others' roles.

'I was hesitant to do it because my understanding then was that the security guards would... basically drop the person to the floor and I didn't want that to happen and what I actually learnt from that situation was that the security people involved were extremely good at dealing with the person and they dealt with the situation much better than we, the nurses, did.'

Once nursing staff got to know security and the roles they could perform, they tended to feel more comfortable to use this service.

'I actually have quite a bit to do with security here because we have lots of patient valuables that need to be locked up. As you get to know the security staff... they're actually not the big burly blokes... they're actually very nice, pleasant, extremely helpful people who I would have no hesitation in calling [to help in] a code grey because I believe that they are probably better trained to deal with those difficult situations than I am... I think it's important that employees... feel supported in the environment and I certainly do in... this hospital if I call security, they're up here like a flash, they're very, very helpful.'

Some codes are planned [known at Hospital C as stand by] to assist in the safe transfer of patients.

'Sometimes you just want a couple of tall guys and you have to call the whole team because there's no way of just getting a couple of guys.'

Planned codes are used when there is a potential for violence and the staff need to move or work with a patient or family member.

At times it is difficult to get staff to the area where the aggression is taking place due to the distance between locations within the hospitals.

'That's awkward because physically the ward is mid way from the rest of the hospital and the staff have to come down elevators and go across, so it does take a couple of minutes but in fact 90% of the time... they come promptly and will deal with the situation that's at hand in a clear and efficient way.'

Conflict can arise because different people are taught different techniques to restrain a patient.

'The problem is that they get taught different take down techniques to what we do... generally we just let them do the take down but tell them who we want where.'

The impact of staff not all being aware of management techniques and the resultant behaviour of staff being left to manage the situation while other staff prepared or obtained medication was evident in the following security officer's story of how he was injured during an incident of patient aggression.

'A young male, early 20s... he had a brain disorder... his brother and friends were visiting him... they wanted to keep him in hospital for observation... and we happened to be a man short that night. And a code grey got called... under Occupational Health and Safety, if we're a man short we don't have to attend to anything... for our own safety... so we only had three people for the restraint... we tried to talk to him... that wasn't working... he started getting agitated and he descended into getting worse... It was quite difficult to hold him, so we made the decision to put him down on the ground... This is... about five to ten minutes from the time that the code grey was called... then nursing staff, after we put him down on the ground, told us that they wanted him in his bed... we're... 12 feet away from his bed. It still took another five minutes for them to write up the medication needed... to calm him down. Now from the start of the incident it's now 20 minutes. I've felt something snap or break... but because the bed was only at half height... we were... bending over the bed... to hold this patient down, that was like five or ten minutes... that's how... I sustained an injury to my left shoulder and my lower back... I just feel it's way too long, the nurses knew that he was a risk. This wasn't the first code grey that was called for this patient.'

Surprisingly, nurse participants would not call a code black if they were threatened with a weapon. This was in an effort to contain the situation and avoid potentially harming other staff.

'No. You don't call a code black if there's a suspicion, suspected guns... Because if you're calling a code, you put more people at risk.'

A nursing participant provided an example of a situation where a code would not be called.

'It was damage control... it was a night shift. There were just two people around; we wanted to keep it within the two of us so that if both of us got shot we didn't want the whole ward shot. We managed to talk him into leaving... in the meantime he had gone downstairs and threatened to break one of the other nurse's legs and other things... that was only because we didn't open the door quick enough. Calling code grey is based on whether you can manage it clinically or not.'

In a situation where others may be injured, if called to assist, nurses tended to be reluctant to involve others.

'If I was drawing other people into the danger... if someone was holding me with a gun or something, I don't know that I'd do it.'

One participant indicated that the response to code black was not appropriate.

{you're not happy with the response to code black?} 'No, I don't think it's adequate.'

Thus it is important that code black policy is reviewed and parameters for calling such a code are conveyed to all staff.

Nurses felt that calling a code when there was a patient threatening them with a weapon was not appropriate. This finding indicates that code black policy needs greater articulation and that the appropriateness of calling a code black, when being threatened, needs to be reinforced during training.

'I wouldn't feel comfortable calling a code black for some of these things that have happened. I am happy to call security that's equivalent to a code grey.'

The calling of the code grey alerts staff that some areas are more violent. This could possibly have a detrimental effect on recruitment to specialty areas where there are greater numbers of called codes, such as in emergency and mental health.

'People will call a code grey if they feel that's there any sense of... themselves being threatened. In Emergency... some days you just think... what's happening down there, they seem to be called every ten minutes.'

Security advised that they would not want to attend if there was a weapon involved as they were not trained.

'We're not going to go up there if he is armed, because we're unarmed, we don't have the training'

Circumstances that a code grey would not be called

The old ways persist and staff had previously been discouraged from calling a code. To call a code would have been seen as weak.

'Well codes weren't even around when I first started nursing you were indoctrinated into thinking that it really had to be a terrible situation to call a code grey.'

The participants indicated that they would prefer to manage the situation themselves and try to deescalate the patient.

'If I felt that I was able to see that the situation was de-escalating, then I wouldn't call a code... very small percentage, maybe five percent.'

'If the situation was contained and people were safe.'

'If I thought I had the situation under control... if I could verbally stand down the issue with the person.'

Verbal abuse seems to be ignored.

'Verbal ones I ignore.'

'There's some verbal aggression that I tolerate (sometimes anger). It might be a short burst. I don't think the code grey team could help... That may escalate the whole situation further.'

Staff felt that the more junior the staff member the less likely it was that a code would be called.

'Junior staff feel that they'd get into trouble for calling a code.'

One participant felt that nurses get use to coping with difficult situations such as patient violence and are not encouraged to make a fuss.

'If I believed that I could deal with the situation myself as a nurse, if I felt that would not inflame the situation and my personal safety wasn't at risk. You become very desensitized over the years you probably look at things that you put up with now and I think you just become a little bit immune. Nurses tend to not want to make a fuss about things and sort things out to make sure you do the right thing by the patient, you don't want to create a fuss, you know that security's busy, if it was a very simple, straightforward situation and I felt that I, with my clinical background, could deal with it, it was better to do it without security than I certainly would.'

There is fear that calling a code can alert the patient that security are on the way and that this can escalate the situation.

'We actually gathered around the corner because we didn't want the patient to see all the staff and know what was going to happen because they all know that code grey first floor psychiatric services, means they have to come, that it's for them and so that's also a bit of a problem.'

Cultural safety and the overall needs of the patient seem to be higher on the nurses' clinical agenda than personal safety.

'We had a girl recently who was Muslim and I just knew it would be so distressing to her that I thought well no I'm not going to do this and actually managed to give her the injection by myself and put myself at risk and that was just...my way of thinking that would be just too stressful for her to have all these guys jump on her because of her religious cultural beliefs, practising Muslim.' {You're prepared to take the risk because you think there's a particular benefit to the client?} 'Certainly.'

Possibility of Police involvement or legal action

The nurses indicated that they needed to feel supported by the hospital in their decision making concerning potential prosecution.

'I would hope that if I was physically punched in the face by a relative and I wanted to prosecute I would hope the hospital would back me.'

'I would love the police to be involved. The hospital is not different to anywhere else...There is an Occ Health and Safety Officer but these issues are not talked about.'

'I think they should be prosecuted because even if it doesn't get anywhere I still think that person has (to be)...told or the process will tell them that the behaviour is unacceptable.'

The nurses felt that police could be involved in events of patient violence but they were not 100% certain how to instigate such a call or what the police role would be.

'If they're damaging property because...it's public property...the police do have jurisdiction in hospital. I'm probably not well versed in the technical rules.'

'I think they [police] probably do but where they sort of stand in the loop with security, I'm not really sure.'

'If people are behaving in a way that's outside the scope of security, dealing with situations, perhaps the police do'

'If it was to do with my staff, in consultation if they wanted to, I'd be happy to support them... unless you do something about things, things don't get changed...probably 10 or 15 years ago I probably wouldn't have'

If a patient was deemed to be psychotic, the nurses tended to see the patient as being not responsible for their own actions and the violence was more accepted.

'They're psychotic so they can't be responsible for their actions things can be said, "Oh well, they were just psychotic, we can't prove that they were premeditated."

'I wouldn't hold them responsible if they were having a psychiatric crisis'

There was evidence in the transcripts that nurses had witnessed psychotic patients being appropriate and then upon return to the hospital area becoming violent. No explanation for this was given.

'But when someone actually says hello to a staff member, shakes a person's hand and says, "I remember you from last admission", and whacks them on the face, to me that's fairly premeditated...that they knew what they were doing, they knew where they were and they knew that that wasn't acceptable.'

There was not much faith evident in any reporting of violence, even being hit, by a mentally unwell patient or that the police would attend in such a situation.

'A lot of staff say "Well, the psychiatrist is going to say they weren't competent to make a decision and this isn't necessarily psychotic people, it's just people under Section 12 or whatever"...the police say "Oh yes, report everything". However, when you actually ring them up, "Oh we can't do anything right now, what about tomorrow". By that stage it's gone out of your mind and you've moved on and you don't want to go re-visit it.'

For some reason a patient can be fine in one environment and then hostile within the hospital unit.

'I have observed some of my patients going to the shop and looking through magazines, buying something, handing the appropriate money to the shopkeepers coming back to the ward and being nasty and irritable. I think that's because they know they will be thrown out from the shop but they won't be thrown out of hospital. They know that behaviour is just a good way of getting what you want. It's just life in here. I think they see us working as helpful people in a helpful field but I also think we put up with too much.'

If the patient is seen to be too out of control they may be asked to leave the hospital.

'If it's a risk to my own safety or one of the other colleagues or staff on the ward, I won't hold people. I'll just ask them to leave.'

Nurses' unwillingness to prosecute patients who had been violent towards them was simply explained by one nurse participant who suggested that prosecution does not occur because after the event of violence you don't want any more to do with the patient.

'I don't think we've got the support for prosecution with any patients. I asked a patient [visitor] to leave, he was verbally abusive. I coaxed him to the door and he started to punch me. We restrained him and police stopped along then I was asked to press charges but because of the individual, I wouldn't want him knowing my surname, he's the sort of person that I believe would take it out on your family. I would have pressed charges. I've reported to the police several times, I haven't particularly wanted to press charges; I've just wanted it on record. Yes police are good.'

The time that it would take to prosecute seemed an added burden.

'The prosecution and the time delays and perhaps the mental anxiety may deter me.'

'One of my workmates was assaulted, his leg broken by a patient and the reports filled out, police charges were laid. The guy was psychotic but by his own hand, i.e. drugs. I don't agree with giving them absolution, they're in control of taking these drugs and they know they get violent. There has to be some repercussion. No I wouldn't have any optimism it was going to get anywhere.'

Nurses also felt a greater responsibility to the patient and thus felt in some way responsible for managing the patient's aggression and, if not managed, accepting it.

'It's just out of fear and that person has just been at the wrong place at the wrong time. You wouldn't accept it outside work. You wouldn't put up with it. I would have difficulty [prosecuting]. Management would support [me] but it would be my Catholic guilt that would get to me.'

Experiences with phases of patient aggression and debriefing

Each participant was asked to focus on one event of violence perpetrated by a patient or visitor in the course of their work as a clinician. Eleven prompt questions were developed to assist the person to tell their story. However, these were rarely required as each participant could easily recall an event that had impacted upon them while working in the clinical area. These prompt questions were to assist the person to consider precipitating factors (triggers), warning signs, the environment, the actual event, the response, debriefing, support and personal impact of the event.

The following participant suggested that family members are often difficult and that the dynamics of the family are often pre-existing and impact upon the patient's admission.

'A family member, he was getting very verbally abusive. He was just being totally irrational. When a patient comes in that's critically ill we don't know the family dynamics. I find that a lot of the stress and anger is that there's already been some conflict within the family before the relative's even sick, so when they've got an ill relative, those emotions between each other just again, boil over. So I spend a lot of the time talking to relatives who basically are angry at each other.'

'I go home and just collapse and my wife at times has said, "Well, you've got to change your job". Because I just get home and I just can hardly talk to her because I've been talking all day; it's very mentally draining. We're encountering people at their absolute worst. And I'll get home and she [wife] gets angry because she wants to talk and I'll just collapse, after tea I'll collapse on the couch and sleep...physically and mentally just exhausted.'

Here is a further example of the impact of family violence upon health care workers:

'Working on night duty in Mid...this woman...was admitted...she developed an acute abdomen...she...had to...have an emergency caesar...her baby died...there was three of us left...we were...busy...I...met this aggressive family. Before they arrived a woman rang and...said, "You've killed my grandson"...I...let her say what she had to say and...I...said, "Look, why don't you come up to the hospital". They all came up...she was with...eight adults...I did alert...the emergency department...after hours everyone's got to come through the emergency department. They presented and she was very aggressive...she was the matriarch perhaps of the whole clan. She was...yelling and letting steam off...in the end I...had to raise my voice, and...say, "Your daughter could have been dead too if she had gone home". Just to...shock them. I don't think she spoke to me again later. It was horrid.'

And this very disturbing story of a nurse who was attacked by a family member.

*'A patient's relative...I was doing agency nursing and I was working in the Palliative Care ward...this chap's father only had a couple of days to live...asked to...turn him so the wardman was...with me and...a trainee nurse. We went into the room and explained to the relatives...this was a double room and one of the relatives was lying all over the other bed...I made a joke out of it...and this son turns...and...says, "Get the **** * of here" I said "Oh look, excuse me sir, we're just wanting to make your father a little more comfortable and it's very important, you know, that we turn him and just check that all is well...before I knew it I had been picked up and thrown literally across the room, straight into the wall. It was so quick...I don't even remember him approaching me. I discovered this chap...had a history and that they'd been booted out...other private hospital...because of the behaviour of the relatives. The guy...threatened... "If you call in the police I will come back here with...bikie gang and shoot everybody in this hospital dead".'*

One visitor was stopped from taking money from a patient and became violent because the nurse intervened.

'He got...angry...because we'd said no to him taking money from the patient...buying drugs. He started becoming verbally abusive...and couldn't understand why he couldn't have her money.' {always write an incident report if anyone's aggressive?}
'Verbal abuse, we tend not to.'

Culture was also seen as a contributing factor to family aggression towards staff.

'Some relatives...behave hysterically and...some cultures are more verbose in their grief than some other cultures.'

'We had one incidence that this relative was going to kill one of the staff members...It was a Middle Eastern family that took angst towards one nurse...the son would come in every night, threatening this nurse that he was going to kill them, that he was going to get a hit team. My experience with Middle Eastern, is the female problem; female to male. It's normal culture for them...to hit somebody.'

Here is a story of a patient who becomes violent from a security perspective.

'A substance abuser, he was quite violent and...he nearly stabbed a nurse with a pair of scissors, punched another nurse who was pregnant in the stomach and punched another nurse...CAs (clinical assistants) crash tackled the patient down to the ground and pinned him down until security arrived...then...he was just shackled and sedated for 24 hours...from his general appearance, his behaviour, his mannerisms...I...said, "We're going to have trouble with that guy", like there's just something about him that just stood out...the number one priority is the safety of the staff and the visitors and other patients...we'll assess the situation and then we'll act on our instincts... And they've been times when the nursing staff has refused to shackle the patient even though he's swung things at them or thrown things at them or whatever. They'd...call the code too late, they'd...be in our way or...they'll argue with us that we're doing it the wrong way...we are trained in what we do and they're trained in what they do, they should leave us to do our work...then we can go and they can continue on with their work. And some nurses who arrive after we've been called and all they see is us piling on top of the bloke or the female, and lift them up, put them into the bed and shackle them. They just see thugs...they don't see the whole story of when we got there, we tried negotiating, he got agitated!'

The impact of the violence takes a personal toll on security staff.

'There have been some incidents here that haven't affected me so much, but I know it has affected other security staff...They have either been punched or bitten or scratched or stuck with a...I've seen their stress and...their behaviour afterwards...and then for the next three to six months... became a real aggressive person and just take out his aggression on everybody and anybody.'

Security did not consider peer support or formal debriefing as important.

'Peer support, we don't use it...we have our own way of dealing with it. We'll laugh about it, we'll joke about it or we'll go to the pub and have a drink after work, you know, just wind down and reflect...security departments are severely under-staffed...three on for day shift, three on for afternoon shift and four on for night shift...we need an extra set of hands...we've got the statistics to back it all...needs to be reviewed throughout the health care system.'

The impact of having multiple codes to attend over a period of time was well described by one of the security participants.

'If we've had a hard night...we were having like 14, 15 codes a night...there was one on day shift that actually had 16...After that, like, you got the adrenalin going because it was like code after code, after code and another code would be called while you're on a code and then you might have five minutes to sit down and...you're off again...at the end of the night you're physically knackered, you know and you drive home, and you get home and all you want to do is just crash out on the couch or whatever and have a good night's sleep. And then come back the next night and do it all again. And having two or three days like that in a row, it does get tiring and by the end of the week when you have your day off or whatever, that's it, you just sleep the whole day...it takes you a long, long time to recover.'

Responses to case scenarios

Adolescent male

The first case scenario question asked the participants to consider what they would do if a young adolescent male was pacing and seemed distressed? This question was posed as the typical profile of a patient who would tend to become aggressive is a young adolescent male. Some of the participants would attempt to find out what was occurring.

'Try and talk to him, try and find out if there is something that we can do to help him. You'd not want that situation to escalate at all.'

Participants also suggested that they would intervene by trying to de-escalate the situation.

'I'd say, "Look, I'll try and help, I'll try and get the doctor to come and talk to you, I'll find out how long the wait is". And I will try and intervene in whatever is making him agitated. {Would you call a code?} 'No'

'Approach him and ask him if he needed to talk...because I think to call security will aggravate the situation...I would suggest...it's an inappropriate place for that sort of language and...would he please go back into the room or leave.'

But most of the participants were more likely to call code grey in such a situation.

'I definitely would call security... Don't know if I'd call a black... unless it went a bit further.'

'Younger people usually, far more disinhibited... I would be more inclined to make sure I had two to four people around for the adolescent.'

'I'd isolate him, he has the potential to cause damage to people and property... I'd call a code... He's young, he's male, he's grown up in an era of instant gratification... he doesn't have very high tolerance for... having to wait or... his needs not being met quickly.'

Security participants would:

'Find out if he's been triaged, what's he in for. I'd go up and ask him what he was doing here, if he had a relevant explanation... I'd say, "Fine, look no worries, just take it easy", otherwise you will get called and we won't be so nice. "Listen, just sit down, you're making the nursing staff worried. I'm going to sit here and keep an eye on you for 15 minutes".'

'If there was only one or so in the area, we'd call for back-ups... gauge the situation and... have somebody talking to him and someone standing behind that person as a back-up.'

Elderly lady

The second case scenario question asked the participants to consider what they would do if an elderly lady is confused and upset when approached and she strikes out and nearly misses the staff member. Participants tended to see this scenario as less urgent than addressing the issues with the adolescent male, despite the fact that the elderly lady had attempted to hit out at staff.

'I've had a few elderly ladies who have taken a swing at me... I probably wouldn't call a code grey in that situation.'

'Deal with the elderly lady differently because (1) she's female, (2) she's elderly, (3) there may be an element of confusion and dementia, a confused elderly lady that strikes you is striking you for a different reason than probably the agitated adolescent. If she was too difficult for me to handle I'd call security then but most elderly frail ladies you can generally deal with, make sure that she was safe.'

Two participants suggested that a physical cause could be the real presenting problem.

'I would make sure that she and other patients, other staff, were safe. Warn of the potential for aggression and say that two staff must be with her at all times. I'd also look at her medication, review to see if there was anything there.'

'I'd be looking for a physical cause first... rectify it... get family members... then the next step... sedation.'

Security saw this situation as having more direction required.

'I wouldn't put myself in the position to be struck... find out where she's from... page the ward through to our two-way radio and I'll say... can you come and pick her up... I'll stay with her until they get there. If she refuses... then we call a planned code.'

However, they were reluctant to hurt a frail elderly person as they saw this as creating more problems for the medical team to manage.

'An elderly lady... not really going to be able to do a great deal of damage. She's going to be pretty controllable she's probably got some ageing problems. If you restrain her too hard... you could be creating a problem.'

Family members

The third case scenario question asked the participants to consider what they would do if a family member is upset about a patient's diagnosis. This family member becomes verbally abusive and tells staff they are ignorant pigs. She becomes loud and swears.

Nurses related experiences of assaults from family members.

'There's a lot of assaults or verbal abuses from families.'

'I get concerned sometimes when there's a lot of family members...together they are quite threatening. Depending on where they come from...their culture and...age and...current mental state of the family...it's...the...potential to get out of control, we don't document...we could be verbally abused but just go about our work.'

Blame for a relative's illness was seen to cause an escalation of aggression in family members.

'We've had situations where relatives who are unhappy with the diagnosis...blame the hospital and...the doctors, not necessarily in ICU but their parent unit...why wasn't this picked up, why wasn't this done.'

Participants would also try to diffuse the situation and one suggested that a letter of warning should be sent out after such an incident with a visitor.

'I'd try to diffuse the situation. If I couldn't diffuse the situation, remove her from the bedside perhaps, take her to the office, sit her down and have a bit of time out then I would probably call security.'

'I'd say I'm happy to discuss issues however if you continue to be rude to me, I can't continue this conversation. I'm not going to ban someone forever but we need to work out some sort of strategies and rules. You should get a warning letter if you've been rude towards staff. And the second time round they're banned but the first time it's a warning.'

However, some participants would use stronger measures if needed to diffuse the situation.

'I'd say, "We can't have you speaking like that. I understand you're very upset. You've had some bad news. We are here to try and help you and your relative... but if you're going to continue speaking like that, you'll have to leave".'

'I would tell them that I'm ringing security to escort her off the premises.'

'Take a team approach and it doesn't take long for them to realise that we're...on their side and their loved one's.'

Verbal refusal to comply with treatment

The fourth case scenario question asked the participants to consider what they would do if a patient refuses to take a treatment and screams at you when you ask for them to comply. This was seen to be the patient's own choice and unless there was some compelling reason, the nurse would accept their refusal.

'We just let them refuse it basically. If it's something that they do need...we have ways around patients refusing treatment and/or medications or things.'

'Explain the reasons, the ramifications of them not doing what we asked and their right to. I would ask them if they wanted to speak to anyone else about it, document it. They have a right to refuse treatment so long as I feel they've been adequately informed. And you very often find that a bit of time out actually does a lot of good.'

'It's quite frustrating because all you're trying to do is help this person. Sometimes it feels like a bit of a reflection on your practice. You question yourself and it's not that you've done anything wrong.'

Sarcasm

The fifth case scenario question asked the participants to consider what they would do if a patient is sarcastic or calls them ugly or lazy. Trying to get another person to take over was one strategy that allowed the nurse to remove themselves from a difficult situation.

'It's very personal and it's always you're very conscious of, the patient will pick up on. I try and get another nurse to deal with that patient. That generally works quite well.'

A sense of inevitability and developing some resilience to verbal aggression was seen to be needed.

'In the last few years I've actually developed a tougher skin...you realise that you're never going to please anybody (everybody). It's still not nice, you'd rather it didn't happen. Depends who's said it to you as well. Is it someone you respect? That would be very hard...I do tend to think...when things are...made personal...you have to just switch off...you'd go insane otherwise.'

And two of the participants took a realist view of the situation and their self esteem was good enough to overcome such abuse.

'I'd completely ignore it because it was not true. My self esteem's high enough to know that that's not true.'

'I don't take...offence. I've got a thick skin...in this role...things don't bother me...I have my own ways of...diffusing my own frustrations and anger...I go to the football every week and I can verbalise there.'

Orientating new staff, agency shift workers and students

The sixth case scenario question asked the participants to consider what they would do if an agency nurse comes to the ward for the first time and what should be handed over to them, taking into account the training provided. Some participants could see the need to orientate new staff to the code system and this was important considering the disparities in systems that currently exist.

'Need to ensure that they're orientated to the codes...my role in running a shift is actually helping my staff...if an agency person comes you're responsible for them...I would be less likely to give them difficult patients...if people come to help you, you try to make it a nice experience so they'll come back.'

The following participant also considered identifying some of the early warning signs and triggers as useful.

'Any violence that this person has shown, any triggers...anything...you've observed...any risk factors for suicide or anything...(do something) they actually enjoyed or actually distract from...these triggers. And what medications seem to help.'

Some staff would try to avoid giving a non-regular staff member a difficult patient to care for.

'I really wouldn't expose that agency person to an aggressive patient.'

However, for the most part, the nurse participants were not confident that an agency nurse would be given much of a handover.

'We probably wouldn't show where the button is; we should if you've got agency coming in, you're busy.'

'They'd probably get told nothing, you can't get inducted into every hospital policy. It would just take too much time.'

'We don't tell our agency staff much in terms of aggression, management of aggression...They need to know how to, how to call a code...there's an information sheet.'

'It would be good for them to be informed. But I don't go out of my way.'

'I don't think that agency staff are informed enough about anything.'

The seventh case scenario question asked the participants to consider what they would do concerning orientation to management of potential patient aggression for a new graduate nurse. There was certainly a commitment and sense of duty to support new staff members and in particular more junior staff.

'You have a duty as a senior nurse to look after the junior nurses and that's something they learn over time... a lot of dealing with difficult people... is what you learn just through... being a human being and just living... nursing is common sense; you should try and protect them... they need to learn how to do that at some stage, but you don't want to scare them.'

'We have students... as supernumerary... anybody that's slightly aggressive they're not to be involved with... They can watch. It's not their role to experience it.'

There was advice to ensure that upset relatives were treated differently because of the situation of their sick relative.

'They've got to cut relatives a bit of slack in that we're meeting people at their worst, at their lowest ebb basically... if... the relatives are or the patient is getting verbally aggressive or violent... talk to your team leader.'

And some nurse participants saw violence as being something that was an inevitable encounter for any nurse.

'New graduates are seen to be at higher risk of patient aggression being directed towards them. I tell them to develop pretty thick skin; they get singled out.'

'Listen to what other people... say about a patient... they are going to be hurt at some stage because you can't help that in a psychiatric ward.'

Section 5: Discussion

In revisiting the aims of this study, the current project proposed a comprehensive exploration of the prevalence and impact of code black and code grey events in three Melbourne metropolitan health care agencies and one Victorian regional centre. For the purpose of this discussion, the outcomes of the research will be presented in respect to the critical elements of the literature review and discussed according to the core research aims.

Prevalence of occupational violence across three major metropolitan and one regional health care agency

This is the first multi-centre study identified in the literature to describe the incidence of code grey/black events in Australian hospitals.

The most noteworthy findings of this research relates to the prevalence within the acute hospital setting. Over a six-month period, 2,662 potential or aggressive events occurred across the four settings. That is an average of 14.6 events per day. Mean code duration was 23.3 minutes. Based on these figures and using a calculation of two nurses per code, this equates to 680 minutes (11.3 hours) of nursing time per day across the four sites. While estimation of expenditure used to combat violence and aggression is beyond the scope of this study, it is clear from the prevalence data that the magnitude of human resource required per violent event is substantive.

The security audit indicated that the distribution of events over the six-month period showed little seasonal variance, thus it seems likely that prevalence rates for code grey/black events are relatively consistent over time. It should, however, be noted that this data was collected over the late spring, summer and early autumn and it is therefore not possible to be sure that prevalence is not impacted by seasonal variation.

A notable point of comparison between data collected by security staff (who are mandated to collect prevalence statistics as part of their role) and nursing staff (who are not expected to routinely report episodes of client aggression unless injury or damage to property is sustained) shows that nurses vastly under-report occupational violence.

Despite extensive engagement of clinicians to complete the nurse audit tool, less than one tenth (264:9.9%) of all episodes of violence and aggression were reported by the nurses in this study. This finding accords with previous work commissioned in the United Kingdom by the Trade Union Congress (TUC) that found significant under-reporting of workplace violence and aggression among nurses (Trade Union Congress 1999). It is clear that cultural attitudes in nursing that promote under-reporting and maintain passive acceptance of violence as part of the job need to change in order to adequately address the issue (Australian Nursing Federation 2002).

The results of the current study confirm findings of previous work in the area of violence and aggression that show a lack of clarity in defining violence and aggression in a consistent way. An obvious consequence of the lack of uniformity in defining violence is evident in the policy documents of the four participating agencies, where a high degree of variability was found among hospitals in the way policy directed staff to respond to violent incidents. For example, while Hospitals A, C and D had two response categories (grey and black) to deal with violent behaviour, Hospital B had three (planned grey/grey and black).

A further example of variability in policy is noted in the security data obtained from Hospital C. At this hospital, data showed activation of significantly fewer code grey events than the other hospitals, however, security responses were still requested for a large number of aggressive/violent episodes (n = 955) Those 'non-code grey' security events that occurred at Hospital C were defined in the data as responses to duress alarms, incident attendance, observation of a patient or visitor, eviction of a patient or visitor, escort of possible troubled patient, standby troubled patient and assisting with restraint. In this study, all of these events were conceptualised as security responses to potential violence and as such have been included for analysis.

Notwithstanding lack of conformity in defining code grey/black events among the participating hospitals, examination of organisational policy documents, the results of the nurse audit and the qualitative analysis of nurse interviews confirm the assertion that the clinical response to patient violence is managed at four different levels according to the nurses' assessment of the severity of the response. These discrete response categories are defined as follows:

1. Security assistance, but no code activated
2. Staff activated a hospital-wide security response to potentially aggressive behaviour
3. Staff activated a hospital-wide security response to actual aggressive behaviour
4. Staff activated a hospital-wide security response to actual or potentially aggressive behaviour involving a weapon or representing a serious threat to personal safety.

This hierarchy of action is new to our understanding of the way in which clinicians conceptualise and manage violent behaviour in practice and, as such, provides useful information to policy makers when revising response protocols.

Not surprising were the significant differences found in the security data between the frequency of the two main response types (grey and black). This finding shows that code grey events occur significantly more often than events involving a weapon or serious threat to personal safety (code black events).

An interesting outcome of the study was the significant differences found between hospital location and code type. Proportionally higher numbers of code black events were found to occur in the regional location than in the metropolitan area.

While this finding may have been the result of a growing awareness of patient violence in Hospital A, which had instigated a new zero tolerance policy during the data collection phase of the study, it also accords with the findings of a study conducted by Cuffel (1994) that discovered patients admitted from rural areas were more likely to be aggressive than their urban counterparts. The researchers went on to suggest that this may be the product of reduced or delayed entry into mental health services for patients in rural locations (Cuffel 1994).

A further noteworthy finding of the security data was the significant associations identified between code type and clinical area. Notably, over half of all internal security responses to actual or potential violence occurred in the emergency department (53.6%). This result is not only consistent with the work of South Australian researchers Brayley and co-workers (1994) who reported similar prevalence rates (52%) in the emergency department, but supports the premise that environmental factors are likely to contribute considerably to the development of aggressive behaviour.

Emergency departments, by virtue of the service they provide, are busy, potentially chaotic environments that are likely to produce high levels of sensory stimulus. Certainly, research indicates that environmental factors such as high nurse patient ratios and increased space density (Chou, Lu & Mao 2002) are associated with escalating rates of patient violence and aggression, and that low stimulus environments such as the use of RFS produce a reduction in the frequency and severity of aggressive behaviours (Canatsey & Roper 1997).

An additional finding arising from both the nursing and security audits was the distribution of events across the three shifts worked by nurses in the participating hospitals. No significant associations were identified between code type and time of day according to shift.

Aggressor characteristics and specific client groups that are more susceptible to being involved in violent incidents within the workplace

Not unexpectedly, the results of the current study indicate that in the majority of instances where a hospital-wide security code was activated, the aggressor was a client or patient of the service.

Indeed, of the 261 episodes of violence that accurately recorded aggressor details in the nurse audit, most aggressors were identified as patients (90.5%), while a small number of cases involved relatives or friends of patients (9.5%).

Not surprisingly, nurses were the largest group to be physically assaulted as a result of violent behaviour, while in fewer cases patients and relatives, security staff, medical staff, domestic staff, and police, fell victim to violent behaviour. These results accord with previous work that has identified nurses as a professional group at high risk of occupational assault (Graycar 2003) and are consistent with previous work that has identified patients and their relatives and friends as the prime perpetrators of violence directed toward nurses (TUC 1999).

In respect to the demographic characteristics of the aggressor, the findings of the current research accord with previous work that shows gender as a key predictor of aggressive behaviour in hospitals (Eastley & Mian 1993; Harris & Rice 1997). Also consistent with previous research, is the finding that many violent and aggressive episodes involve an aggressor who has a previous history of violent behaviour (Chou Lu & Mao 2002; Harris & Rice 1997).

The results of the current research indicate that nurses are able to, at least in retrospect, identify, warning signs for aggressive behaviour. This result is noteworthy because it highlights the volatile nature of patient aggression. Despite behavioural warnings, patient aggression appears to rapidly escalate to a level that requires organised and definitive action. Yet given this information, it is reasonable to assume that at least a proportion of violent events may be amenable to preventative intervention. Further research is required to more closely explore the situational factors contributing to the escalation and the de-escalation of such behaviours within the clinical environment.

Being under the influence of drugs and alcohol were also common to aggressive clients in this study. Again this result accords with previous work that has demonstrated that the use of alcohol and drugs are important factors contributing to aggressive behaviour (Doyle 1996).

An interesting result of the study related to the issue of verbal communication. Notably in this study, the majority of aggressors possessed sufficient levels of English to communicate adequately to staff.

Despite this finding, patient culture emerged as a core issue for nurses managing risk; the following exemplars illustrate this relationship well. In this first example, a nurse was prepared to place herself at risk in order to prevent a violent situation from escalating.

'We had a girl recently who was Muslim...and I just knew...It would be so distressing to her that I thought well no I'm not going to do this and actually managed to give her the injection by myself and put myself at risk and that was just...my way of thinking that would be just too stressful for her to have all these guys jump on her because of her religious cultural beliefs, practising Muslim.'

Another illustration of the prevailing influence of culture on behaviour was manifest in ethnic differences between the nurse and the patient.

'He was a Tongan fellow who wanted to be seen for asthma... he wouldn't answer the questions and then he just repeated, 'Are you a copper?' or something...slammed the peak flow on the desk, broke the switch on the desk...put two heavy punches into the window which shattered both panes of glass...between me and him.'

Both of these brief descriptions suggest inequalities in the power relationships underpinning the interactions and are pivotal to understanding the interaction between client and organisational culture. This is manifest in potential or actual violent or aggressive behaviour.

A useful classification developed for the purpose of this study dealt with the type of violent behaviour observed by the nurses who took part. In essence, a number of reasons were cited by nurses that identified the triggers for clinicians to activate a hospital-wide security response to aggression. These reasons included potential for self-harm, potential for violence toward others, actual violence toward self and actual violence toward others.

The utility of such a classification lies in its ability to clearly articulate the nature of the behaviour observed and quantify its prevalence. In this study, actual violence toward others was the largest group of behaviours contributing to the activation of a security response. Such behaviours included verbal aggression, threats and physical assault.

Potential for self-harm was also noted to be a common trigger for code activation. Behaviours described under this category incorporated being uncooperative with treatment, and threatening or attempting to abscond from the hospital.

Potential for violence toward others comprised the third largest group of triggers for activation of a security or code response. Of these episodes most involved agitation or motor restlessness, while a smaller number involved aggressive persons refusing to leave the department or hospital. In the minority of client behaviours that prompted nurses to initiate a security response were those that involved actual violence toward self, that is, suicide attempts while in the hospital.

In addition to the description of prevalence and exploration of factors likely to impact on its occurrence, this study provides information in respect to the nature of the violent behaviour in hospitals. In most cases, verbal abuse occurred and in almost half of all episodes, threats were made to staff or to another person.

Action taken to contain violent incidents was found to involve a range of security and clinical interventions comprising de-escalation strategies, 'talking down', physical restraint, seclusion, eviction from the hospital and the use of medication.

Implications for best practice to improve the management of patient violence directed towards nurses and other health care staff

The final aim of this project was to consider the implications of the research findings for best practice for consideration in respect to guideline development. To this end, the research team worked closely with a core group of key stakeholders drawn from the four hospitals that took part in the study.

A set of key considerations arising from the literature, the current study data and discussions with the advisory committee are outlined below:

A clear statement of expected behaviour

All persons entering an acute health care facility should receive clear information outlining what is acceptable behaviour.

Specifically, this information should contain a statement that violence, including verbal abuse and threats made toward others will not be tolerated.

A notable dimension that emerged from the literature and in discussions with key stakeholders relates to the philosophical tension between the occupational safety 'zero tolerance approach' to the management of workplace violence in nursing and client or consumer focused models of aggression management, where violence is conceptualised as a barrier to achieving a therapeutic interaction. This tension requires further debate. However a statement of expected behaviour is necessary, and is rudimentary in communicating to staff, visitors and clients of the service that violent behaviour is not acceptable.

Standardisation of codes grey/black across the acute care sector

Standard categories and definitions for team responses to violence be developed and implemented across the acute care sector. As part of this process, consideration should be given to the ways in which clinicians conceptualise and manage violent behaviour in practice.

The rationale for this consideration arises from the lack of uniformity in both the definitions and the instruments of measurement used to quantify the scope of the phenomenon. This severely limits the development of the true extent of occupational violence in nursing. This information is required if policy is to reflect how violence and aggression actually manifest in practice.

Uniform collection of core demographic and clinical data

Uniform collection of hospital-wide security responses be developed that accurately describes the event in terms of both its clinical and security features.

Minimum information collected in respect to code responses should include the following:

- response type
- date
- time called
- time called down
- location
- age of aggressor
- gender of aggressor
- type of aggressor (client of the service or other)
- number and appointment level of response team members
- a description of the type of behaviour demonstrated by aggressor that resulted in the activation of the team.
- a description of interventions undertaken to contain the incident
- a description of any injuries sustained as a result of the incident
- a description of property damage that occurred as a result of the incident.

The rationale supporting this is underscored by the lack of studies investigating client initiated violence in the acute care setting. Studies into patient aggression have to a large extent been conducted in psychiatric settings. The assumption that these findings are transferable to the general hospital environment has not been well tested.

In order to gain a complete overview of the scope of occupational violence in nursing, more information is required into how patient aggression manifests in a range of environments, particularly within the general hospital setting. Collecting standardised demographic and clinical data for each code grey/black event will assist in providing relevant information to policy makers and committees responsible for monitoring code grey/black events.

In addition, while the literature abounds with studies describing the use of actuarial screening tools for predicting client aggression, there is a clear lack of valid, reliable and clinically useful tools for assessing aggressive behaviour and evaluating interventions used to contain violent behaviour. Collecting data that reflects both the clinical and security dimensions of the event has the potential to provide invaluable information in respect to predicting risk and identifying situational factors likely to contribute to the development of violent behaviour.

Each acute care agency establish a multidisciplinary code grey/black committee

In each acute care facility, management should establish and maintain workplace committees, comprising members of clinical staff (nursing and medical), security, occupational health and safety and management, to oversee policy development, reporting, monitoring and training of staff in relation to code grey/black events.

Policy, procedure and all aspects of code grey/black management should clearly articulate the multidisciplinary relationship between clinical and security staff in the management of code grey/black events, with emphasis that responses are clinically driven.

Aggression management training for clinical and security staff

All clinical and security staff (including nurses, medical staff and security staff) require aggression management training during orientation to a new acute health facility.

Students and casual staff require training in violence management and code grey/black events.

All acute care agencies must maintain a centralised record of staff who have completed code grey/black training.

Evaluation of training

To contain the growing problem of occupational violence in nursing, evaluation of existing violence management programs that appraise cost, sustainability, skill and knowledge retention and effectiveness are essential.

Conclusions

Limitations

The limitations of this study include:

- The lack of a full 12 months of data for the four hospitals. As mentioned previously, it is not possible to definitively state the annual incidence of code grey/black events as there may be seasonal variation in the incidence rate.
- The four clinical agencies selected for this study can be considered to be representative of major metropolitan teaching hospitals and a regional hospital. However, it is not possible to generalise the findings to all Victorian clinical agencies.
- Similarly, the sample size and volume of data collected represents a relatively small sample of all actual code grey/black events in Victorian clinical agencies. While the nature of incidents captured and the responses of staff to those events is reliable for the four clinical agencies, the results should only be extrapolated to all agencies with caution.

Implications for further research

This study has highlighted the need for future research into the phenomenon of patient violence. The results raise a multitude of questions for which there is currently little evidence on which to base rational decision-making at either the policy or clinical level.

The majority of previous research into the area has been conducted in the psychiatric setting. There is scant evidence of the similarities and/or differences between patient violence in the acute care general hospital sector.

There is a clear need to develop specific, valid and reliable instruments to measure and quantify factors surrounding code grey/black events in the general hospital environment.

Future research needs to employ appropriate methodological approaches that are sensitive and robust enough to adequately investigate the multiple factors involved in code grey/black events.

Studies should explore predictive factors, patient screening and risk assessment methods, as well as staff factors that contribute to effective preventative action.

Future research that is sufficiently broad in terms of sample size and duration is required to enable adequate generalisation of findings.

The variation in specific hospital level policy and responses to code grey/black events should be investigated from the perspective of clinical effectiveness and outcome. There is currently little evidence regarding the effectiveness of differing approaches.

Perhaps one of the most critical factors to the future of research in this area is the need for a statewide code grey/black database that collects the same data in the same manner regarding the events. The data should also include comparable outcome data.

Conclusion

The findings of this study are a valuable first step in gaining an understanding of the phenomenon of occupational violence in nursing. Code grey/black events are complex in nature, unpredictable in their course and potentially damaging to patients, staff and their families. Their multifactorial causation and multidisciplinary response place clinicians, clinical agencies and government in a position that requires immediate responses to complex and poorly understood situations. The Victorian Department of Human Services should be commended for its vision in commencing a process of developing the necessary evidence on which to build effective and safe responses to this difficult yet important aspect of clinical practice. We believe that the findings of this study will provide an important impetus to this process.

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