Violence prevention and management
Standards for development of training and organisational responses in Victorian health services

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Glossary

Term	Definition	Source*
Acute care setting	Short term public hospital in-patient unit or Emergency department.	[1]
Aggression	A willingness to express harm this may be verbal or behavioural regardless of whether physical harm is sustained.	[1]
Clinical aggression	Aggression within the clinical interaction between clinician or health professional and patient.	[2]
Code Grey	A hospital wide coordinated clinical and security response to actual or potential patient aggression and violence (unarmed threat).	[3]
Code Black	A hospital wide security response to actual or potential aggression or violence involving a weapon (armed threat).	[4]
Credentialing	The processes used to designate that an individual, programme, institution, or product has met established standards set by an agent (governmental or nongovernmental) recognised as qualified to carry out this task.	[5]
De-escalation	A complex range of skills designed to avert the assault cycle during the escalation phase, including verbal and non-verbal communication skills.	[1]
Inquiry	Drugs and Crime Prevention Committee Inquiry into violence and security arrangements in Victorian hospitals and, in particular, Emergency departments.	[6]
Mechanical restraint	A method of physical restraint involving the use of authorised equipment in a skilled manner by designated health care	[1]

	professionals. Its purpose is to safely immobilise or restrict movement of parts of the body of the individual concerned.	
Pedagogy	Methods of instruction used in teaching.	
Physical restraint	A hands-on method of restraining a person where health care professionals, using a coordinated approach, hold a person to prevent them endangering either themselves or others. Its purpose Is to safely immobilise the individual concerned.	[1]
Security officer	People employed in role with a security function. The most commonly identified roles include activities that may be best described as "order maintenance" such as crowd control, property management, guarding and patrolling, the escorting of prisoners and court security.	[7]
Therapeutic sedation	The use of neuroleptics or anxiolytics (typically) to relieve excessive agitation and allow on-going care.	
Violence	The use of physical force that is intended to harm another person	[8]

*[n] refers to reference

Abbreviations

AMT	Aggression Management Team
ANUM	Associate Nurse Unit Manager
ED	Emergency department
EDA	ED attendant
KPI	Key Performance Indicator
ILO	International Labour Office
MAVAS	Management of Aggression and Violence Attitude Scale [9]
MOCA REDI	Management of Clinical Aggression Rapid Emergency Department Intervention
OH&S	Occupational Health and Safety
NHS	National Health Service
NICE	National Institute of Health and Clinical Excellence
PSA	Patient Support Attendant
UK	United Kingdom
USA	United States of America
VIF	Violence Incidence Form [10]

Executive Summary

Context

In December 2011, the Victorian State Government Drugs and Crime Prevention Committee published its report on the Inquiry into Violence and Security Arrangements in Victorian Hospitals and, in particular, Emergency departments [6]. Of the 39 state-wide recommendations made by the committee, all of which were supported or supported in principle by the Government, nine specifically focused on staff communication, education and training.

In addition, recommendations regarding security issues included the standardisation of organisational responses to unarmed threats in all Victorian health services [6]. This project was commissioned to review current and best practice for:

- staff training programs that address prevention and management of aggression and violence in Victoria's hospitals

- organisation wide responses to patient aggression and violence.

The aims of this project were to define minimum standards for staff training on aggression prevention and violence management and to identify core principles underpinning training strategies and standardised organisational responses to patient aggression and violence in Victorian Hospitals.

Hospitals were limited to those in the State of Victoria with an Emergency department. Aggression and violence as a result of bullying and criminal activity were not within the scope of this project.

The term clinical aggression is used throughout this report to describe acute agitation including threats to staff or patients as the result of a health related issue.

Methodology

An extensive review of the literature was undertaken to determine the scope of training content, its duration, methods of instruction and models for assessment and evaluation.

Barriers and enablers to the implementation and sustainability of training in health care settings were also considered.

An email survey of the 40 Victorian Hospitals with an Emergency department was conducted to define the scope of current training and organisational responses to aggression and violence. State-wide consultation with key stakeholders was conducted to obtain in-depth information regarding survey findings. International experts in the area of aggression were consulted to identify alternative approaches to training and management.

A gap analysis was conducted based on the outcomes of the literature review and consultation process. Based on these outcomes principles informing training and organisational responses to clinical aggression were formulated.

Outcomes

The evidence for staff training requirements in the prevention and management of clinical aggression is limited. In terms of training content, there is international agreement of the core components to be included in aggression prevention and violence management programs. There is a clear gap regarding specialised training content for different disciplines and work roles within the health care sector. The level of evidence supporting the use of a system wide security response to clinical aggression is limited to only a few published studies. In all cases, the approach has been represented as a practical solution for effectively managing cases of acute agitation and in fewer examples, aggressive visitors.

The consultation process resulted in a 100% response rate from the 40 Victorian Hospitals who were surveyed. In addition, many provided copies of training content, objectives and policies and procedures for the management of clinical aggression. This result reflects the high priority services place on the issue and their willingness to collaborate on the formation of solutions.

All hospitals reported using some form of training package for staff in how to manage clinical aggression. Content areas addressed in these programs were broadly aligned to international recommendations and programs reported in the published literature. Hospitals reported that access to training by staff was a major barrier to implementation

and sustainability of programs. This was mainly due to a lack of backfilled time and the associated costs to allow staff to get to courses. Few health services carried out any form of staff assessment to determine the effectiveness of training on staff knowledge, skills and attitudes to the prevention and management of clinical aggression. Most hospitals surveyed relied on positive staff evaluations of training to measure its impact. Several of the health services who were consulted commented on the lack of a standard evaluation framework to inform the monitoring and evaluation of training on organisational outcomes such as staff injuries, numbers and type of security responses to clinical aggression, and rates of restraint.

In consultation, we found that the concept of "zero tolerance", which has been adopted from the justice system in some hospitals, is unworkable in the health care setting where clinical aggression is conjoined with a duty of care between the clinician and the patient. As a principle, "zero tolerance" fails to recognise that aggression and violence may be manifestations of clinical illness that requires remediation and care. This finding was consistent with international commentary in the published literature on the principle of zero tolerance.

From the review of existing literature and existing policies, as well as the consultation, clear principles can be derived that health care organisations should incorporate into the management of clinical aggression.

Principles for clinical aggression management training

Principle 1:   Training programs should be tailored to staff groups

Principle 2:   Training programs should be tailored to stratified risk levels within the organisation

Principle 3:   Training methods for the prevention of clinical aggression should, where possible, be evidence based, cost-effective and reflective of local need

Principle 4:   Training programs should have clearly defined goals with measurable outcomes

Principle 5:   A culture of continuous quality improvement underlies prevention of clinical aggression training and responses (Code Grey)

Principles for the organisational response to clinical aggressions (Code Grey)

Principle 1:   An organisational response to clinical aggression (Code Grey) should conform to a standard developed at the appropriate jurisdiction.

Principle 2:   Prevention of clinical aggression is a whole of organisation responsibility

Principle 3:   The management of clinical aggression maintains a patient focus whilst ensuring a safe workplace for all staff and visitors

Principle 4:   A response to clinical aggression (Code Grey) should be a dual clinical and security response that is clinically led

Principles and minimum practice standards for prevention of clinical aggression staff training programs

The large body of literature on training for the management of clinical aggression reflects the importance attached to it by healthcare organisations and staff. Despite an inconsistency with respect to target populations, training philosophies, measured outcomes and type of organisation, a number of principles should be applied to the development of training within Victorian healthcare organisations.

Principles for clinical aggression (Code Grey) management training

Principle 1: Training programs should be tailored to staff groups

Principle 2: Training programs should be tailored to stratified risk levels within the organisation

Principle 3: Training methods for the prevention of clinical aggression should, where possible, be evidence based, cost-effective and reflective of local need

Principle 4: Training programs should have clearly defined goals, measurable outcomes

Principle 5: A culture of continuous quality improvement underlies prevention of clinical aggression training and responses (Code Grey)

Principle 1: Training programs should be tailored to staff groups

Whilst all staff should have core training in the management of clinical aggression; within organisations there are staff that require additional training to manage increased exposure, to gain additional skills or to manage complex environments and/or patients.

Minimum Practice Standards

1. Whilst health services may identify additional training requirements specific to local need, core training programs should include a minimum of:
   - orientation to current policies and procedures at induction to the organisation and following transfer to high risk environments
   - medico-legal principles including duty of care, common law the Mental Health Act, the Crimes Act
   - mental health literacy
   - recognition of early signs of agitation

- an introduction to verbal and non-verbal de-escalation techniques

2. High risk areas should consider the specific needs of those areas with particular reference to mental health, drug and alcohol intoxication, forensics and children or the elderly.

3. Supervisors should have additional training to ensure:
   - conflict resolution, early intervention and supervisory coaching
   - adequate support for staff including de-briefing
   - adequate support for patients and their carers
   - identification of hazards within their environments
   - data collection for incident review

4. Security officers should be licensed and have minimum training to Certificate 2. It must be recognised that the healthcare sector is a small niche within security and that additional training is required. Security officer modules should include:
   - communication
   - health literacy (especially around common mental health disorders)
   - verbal and non-verbal de-escalation
   - medico-legal requirements
   - safer restraint techniques

5. Modular training allows specialised areas such as obstetrics or adolescents to get additional material not required overall.

Principle 2: Training programs should be tailored to stratified risk levels within the organisation

Core programs should be developed that provide the necessary basic skills in the management of clinical aggression for all staff. However, staff in high risk areas will need further training to both deal with complex incidents and to design better response and environments for future care.

Minimum practice standards

1. Organisations should assess areas according to the risk of aggression and violence to staff.
2. Staff in low risk areas should complete the core training program.
3. Staff in medium risk areas should receive training that advances the concepts learned in core training. They should also complete additional training that may

include modules on advanced communication and their application and risks associated with restrictive interventions, in particular prone restraint [11] [12].

4. Staff in high risk areas should receive training that provides the skills for de-escalation in a variety of settings and for a broad spectrum of patients. They should also understand the array of interventions available to them and how to readily form a functional team responding to clinical aggression.

5. Supervisors in high risk areas should receive training that provides debriefing skills, management of complex situations and develops managers who can recognise and modify environmental influences on clinical aggression.

Principle 3: Training methods for the prevention of clinical aggression should, where possible, be evidence based, cost-effective and reflective of local need

There is no consistent advice with regards to the duration and frequency of training programs. As such, this should also be determined by health services.

Minimum practice standards

1. Whilst approaches for training programs should be determined locally, health services could explore the following evidence-supported approaches:

   - Face-to-face programs that include combinations of instructional learning, role play reflection and simulation.

   - Electronic methods or on-line modules to support the quantity of staff engaged. Whilst evidence for e-learning in this area is lacking, material that does no benefit from face to face interaction can be delivered efficiently and effectively with well-made on-line modules.

   - Joint training sessions between managers, clinical and security staff to promote commitment and to better understand roles and responsibilities should be considered, especially for high risk areas.

2. Training can be provided by internal or external providers but credentialing of both programs and trainers for the management of clinical aggression should be established.

Principle 4: Training programs should have clearly defined goals, measurable outcomes and review processes

Currently, there is limited information available in published literature on aggression prevention and violence management to guide the assessment of knowledge, skills or attitudes.

Minimum practice standards

1. Organisations should have key performance indicators for training, including:
   - the proportion of staff trained
   - the proportion of staff who met the goals stated in the training program
   - outcomes from review of incidents involving harm to staff or patients
   - rates of restrictive interventions including restraint and seclusion
2. Goals should be discipline specific and appropriate for the level of pre-existing skills

Principle 5: A culture of continuous quality improvement underlies prevention of clinical aggression training and responses (Code Grey)

Organisations should have a system or review and feedback to ensure the best possible care for patients in the safest possible environment for staff.

Minimum Practice Standards

1. Issues related to training should be reviewed by the relevant hospital committee.
2. Incidents should be reported to Hospital Quality & Safety Committees. These committees should have a broad membership including clinical disciplines, security, OH&S, and where appropriate may include representatives of the hospital executive, police, ambulance, carers and consumers.
3. Data on clinical aggression should be recorded and reviewed at established multi-disciplinary meetings. Serious incidents require an in-depth review.

Principles and minimum practice standards for the management of clinical aggressions (Code Grey)

An organisational framework for responses to clinical aggression (Code Grey) should include a clear governance structure including:

- data collection and monitoring
- evaluation of outcomes
- a defined period for organisational review of policy

The procedure for an organisational response to clinical aggression should:

- include triggers and mechanisms for activation
- define roles of team members
- prescribe mechanisms for escalation
- describe finalisation of reported incidents

Principles for clinical aggression (Code Grey) management

Principle 1:   An organisational response to clinical aggression (Code Grey) should conform to a standard developed at the appropriate jurisdiction

Principle 2:   Prevention of clinical aggression is a whole of organisation responsibility

Principle 3:   The management of clinical aggression maintains a patient focus whilst ensuring a safe workplace for all staff and visitors

Principle 4:   A response to clinical aggression (Code Grey) should be a dual clinical and security response that is clinically led

Principle 1: An organisational response to clinical aggression (Code Grey) should conform to a standard developed at the appropriate jurisdiction.

An organisational response to unarmed clinical aggression (Code Grey) should be incorporated into the Victorian and National Standards for hospital accreditation. In the first instance, a standardised response for Victorian Hospitals should be created that can be the model for development as a National standard. It is recommended that the term Code Grey be considered as the emergency code response for an unarmed threat as it is widely used across State and National jurisdictions.

Principle 2: Prevention of clinical aggression is a whole of organisation responsibility

All Victorian Hospitals should commit to an organisational approach to staff training to prevent and manage clinical aggression. This means that all staff, CEOs through to frontline staff, have a role in ensuring staff competency in the management of violence and aggression. This includes implementing environmental and individually focussed strategies (such as surveillance, design, risk assessment and security response procedures), as well as establishing governance structures and processes (monitoring and evaluation of staff and patient safety)[13][14].

Minimum Practice Standards

1. Health services must have an agreed strategy, with executive sign-off and support, for the implementation of clinical aggression management across the organisation
2. Health services must ensure the necessary funding for a sustainable clinical aggression program
3. All healthcare organisations should have policies for:
   - management of clinical aggression
   - weapons searches
   - restraint and seclusion

   Policies should account for particularly vulnerable groups such as children, the elderly, patients with disabilities and patients from culturally and linguistically diverse backgrounds. Input to policy development by carers and consumers should be obtained.

4. Healthcare organisations should have acceptable behaviour policies and make these clearly visible to all patients and visitors.

Principle 3: The management of clinical aggression maintains a patient focus whilst ensuring a safe workplace for all staff and visitors

Precipitants of clinical aggression are often multi-factorial and require an individualised response. Responses to clinical aggression should maintain patient safety and dignity in using the least restrictive intervention.

Minimum Practice Standards

1. Procedures for the prevention and management of clinical aggression should be:
   - established for all clinical areas within a health service
   - modified for levels of staff training and risk profile
   - inclusive of post incident support mechanisms for all staff.
2. Supervisors must also be competent in the conduct of hazard assessment and make changes to identified hazards in the environment to reduce risk of harm.
3. A tiered framework for responding to clinical aggression (Code Grey) should be considered.
4. Clinical aggression management strategies must take into account the clinical condition of the patient.
5. Clinical aggression management strategies should be sufficiently flexible to allow for differences in gender, ethnicity and cultural identity.

Principle 4: A response to clinical aggression (Code Grey) should be a dual clinical and security response that is clinically led

The response to clinical aggression recognises the need for different management skills but that in the setting of on-going clinical care for a patient (or their carer), the team is led by a clinician prioritising patient care at the highest level together with staff safety.

Minimum Practice Standards

1. The response is led by senior staff from the local area in which the clinical aggression is occurring.
2. The team requires a minimum of three persons to manage the limbs if required, one to manage the head and a team leader.

3. The composition of the team should be trained security staff, trained staff from the local clinical area and trained staff responding hospital wide.
4. In high risk areas such as Mental Health and Emergency, the teams are typically ward based and supplemented by security.
5. Staff expected to participate in teams responding to clinical aggression should have a clear understanding of how the team comes together and the roles and responsibilities of all team members.

1. Project Scope

The scope of this project was to evaluate the training of hospital staff involved in the prevention and management of clinical aggression. Clinical aggression includes agitation and threats to staff or patients as the result of a health care issue. Mental illness, intoxication and organic illness may all manifest as a threat. A patient may be influenced by a combination of these factors and it may be unclear to staff what the underlying cause of the agitation is. Physical or verbal threats to staff that result from bullying or criminal activity were not included. Hospitals were limited to those in the State of Victoria with an Emergency Department (ED).

All staff were considered but particular attention was paid to those whose primary duties involve direct patient contact and who are likely to encounter clinical aggression. Volunteers and students were excluded from this project. However, it is recognised that groups such as these may also be exposed to clinical aggression

2. Methodology

2.1 Literature Review
A comprehensive review of the literature was undertaken to identify research evidence supporting training curricula and clinical responses to the problem of patient aggression and violence in acute hospitals.

Four key questions informed the review.
1. What evidence is there for staff training requirements in the prevention of aggression and management of violence in acute health care?
2. What are the key features of successful training programs in the prevention of aggression and management of violence in healthcare?
3. What is the evidence base for informing successful interventions in prevention of aggression and management of violence?
4. What evidence is there for supporting a system wide security and clinical response to aggression and violence (Code Grey) in acute care hospitals?

The literature review was conducted in two stages. First an in-depth search for peer reviewed publications was conducted using pre-determined terms and exclusion criteria to identify papers relevant to the research questions. Second a review of publically available training documents policies and procedures was performed of the grey literature. To optimise our search two independent members of the project team (MFG and VD) scanned the literature to check accuracy of search methods and interpretation of key findings. Literature published in the English language was identified for the preceding decade (2003 – 2013). The following data bases were searched: EBSCO CINHAL, MEDLINE, psychINFO, SCOPUS, MD Consult, Google Scholar and Trove databases. Inclusion criteria were defined using the following the search teams: aggression, violence, training, healthcare, nursing, doctors, and workplace. These were then applied using an advanced search strategy which involved the use of the following string: aggression OR violence AND training AND hospital OR health OR healthcare OR nursing OR nurse* OR physician* OR doctor OR doctors AND workplace* OR hospital* OR occupation*.

Exclusion criteria were applied using a number of key terms identified from the original search. These terms were: interpersonal violence, specifically family violence, domestic violence, and partner abuse. A related records search was then performed based on common citations.

This process identified 155 manuscripts that were potentially relevant to the questions developed for the review. Articles were then retrieved and abstracts scanned. Grey literature was identified by searching Department of Health websites across Australian jurisdictions and searching linked citations.

The following stepwise strategy was then used to appraise and integrate the evidence and grey literature for each of the pre-determined search questions.

1. Conduct the searches applying inclusion and exclusion criterion
2. Download selected references and read abstracts
3. Classify papers according to research questions
4. Download full text documents and compile Endnote library
5. Read all papers meeting inclusion and exclusion criteria in totality and summarised according to study aims, methods, interventions and findings.

6. Collate and analyse all relevant studies based on the following sub-categories: syllabus and program delivery; pedagogical approaches; assessment and evaluation and governance and administration.
7. Identify gaps in the literature using criterion listed in Step 6.
8. Draft the report in consultation with the research team.

2.2 Health service current state

A survey of Victorian Hospitals with an ED was conducted to define the scope of current training and organisational responses to aggression and violence. Primary consultation occurred through the key contacts provided by every Health Service CEO to the Department of Health as the liaison for improving hospital safety and security. These contacts were asked to provide details on the training provided to staff and the procedures used to manage clinical aggression. They were also asked to provide details of barriers to optimal training and key successes in establishing their own processes.

2.3 Stakeholder engagement

The Department of Health and the Emergency Care Network held a forum on April 16 2013 "Prevention and management of violence and aggression in hospitals forum" [15]. There were nearly 200 attendees. Presentations included:

- Information on best practice responses to violence at organisations and available training
- Information on the legislative environment including duty of care and mental health
- Perspectives on barriers to addressing violence and aggression and how to overcome them
- An expert panel discussing the clinical aspects of preventing and managing violence and aggression

This project was presented to the forum and attendees were provided with opportunities to liaise with the project team both at the forum and subsequently.

Meetings run by the Department of Health were contacted and the team presented to most or met with the Chairs:

- Metro Security Managers Network
- Metropolitan Education Managers' network
- Aggression Management forum

- Metro and Regional Health OHS Executive forum

Targeted consultation occurred with International experts in this field, security staff and with external providers of training to hospitals.

3. Results - Staff training for management of clinical aggression

3.1 Literature review

Staff training programs have long been considered a critical intervention for preventing and managing workplace aggression and violence. In the past decade publications have been produced by professional bodies and provide a basic structure for informing training content for use in acute hospitals [1] [3] [13] [16-19]. Notwithstanding any recommendations for what might be considered "a core training syllabus", legislation and regulatory policy in many jurisdictions require organisations to develop local response procedures to manage episodes of patient violence [19-22]. This includes implementing environmental and individually focussed strategies (such as surveillance, design, risk assessment and security response procedures), as well as establishing governance structures and processes (monitoring and evaluation of staff and patient safety) [13-15].

From an evaluation perspective, the multi-faceted nature of aggression prevention and violence management programs, of which staff training is but one aspect, make it difficult to isolate the effect of training in practice [14] [21]. In addition, definitions of aggression and violence in health care vary and there has been little work undertaken to date to establish the validity and reliability of organisation outcome measures [14] [21]. These factors have collectively impacted on the quality of the evidence supporting the use of specific training interventions. Indeed, in this extensive review of the published literature we uncovered only four randomised control trials that directly measured the effect of training on learning or organisational outcomes [23-26].

This review begins with a description of the current state of the evidence supporting training requirements for prevention of aggression and violence management for different levels of hospital staff. Specifically training content, duration, methods of instruction (pedagogy) and models for assessment and evaluation are described. Core components of successful training programs are identified. Barriers and enablers to the

uptake and sustainability of training in healthcare settings are considered. Based on the review, recommendations are made for staff training that includes administrative staff, security personnel, nurses, allied health professionals and medical staff.

3.1.1 Evidence for staff training requirements

The published literature provides extensive descriptions of the content and duration of training programs [2 13 14 17 19 24-46]. To date the majority of work has involved nurses, with few other health care professions represented (physicians and allied health) and very little has been published on the training of security personnel who work in hospitals or other healthcare settings. The lack of evidence regarding the training requirements of security personnel is particularly concerning not only because of the key role these staff often play in assisting with the administration of physical interventions, but in the absence of any specific licensing requirements for the management of aggression and violence in health settings.

Internationally, most of the early work informing the content for staff training emerged from the United Kingdom (UK) National Health Service (NHS). For example Beech [29] sought to evaluate the content and impact of a three day pre-registration training program on nurses attitudes toward aggression management using a before and after design. While the training intervention is only briefly outlined, a core syllabus and pedagogical approach is described. An evaluation of this training program among a cohort of under graduate nursing students found significant short-term attitude changes among participants, however the sustainability of the change and its translation into practice were not assessed.

Seminal work published by the International Labour Office (ILO), International Council of Nurses, World Health Organisation and Public Services International provided guidelines for addressing workplace violence in the health sector [13]. The framework provides a basic structure from which organisations can develop a systematic program for aggression prevention and violence management in acute care and other healthcare settings. In terms of training content, the guidelines address five key areas for action, to: prevent, respond, manage the impact of, and support staff to sustain initiatives across organisations.

The ILO et al framework [13] lists nine key core content areas.
1.   Orientation to the workplace environment policies and procedures.

2.   Information on the different types of aggression and violence and "best practice" for its reduction.

3.   Information on influencing factors such as gender and multi-cultural diversity.

4.   Improving the ability to identify potentially dangerous situations.

5.   Interpersonal skills, communication.

6.   Competence on functions to be performed in response to episodes of aggression and violence.

7.   Preparation of a core group of staff up-skilled to respond to more challenging situations.

8.   Training in assertiveness or empowerment

9.   Self-defence skills.

Around the same time as the release of this framework, details were emerging about the death of David Bennett within an NHS Trust psychiatric in-patient unit [47]. David Bennett, a 38-year-old African Caribbean suffering from schizophrenia died following an episode of acute agitation. An independent public inquiry published in 2003 reported that a major contributing factor to his death was being positioned prone on the floor for 25 minutes by a team of nurses. Prone positioning has been clearly linked to other restraint related deaths [11]. The inquiry identified significant problems with the management of acute behavioural disturbances within the NHS specifically highlighting, the unacceptable use of coercive interventions, and lack of staff knowledge about strategies to manage violence generally. In particular, an inquiry noted the absence of any sensitivity in respect to issues of race, ethnicity and culture by clinical staff who managed the patient in the months prior to his death. A key recommendation arising from the inquiry was the establishment of a national system of training in restraint and control. The National Institute of Mental Health in England subsequently mapped the various training packages on offer in the UK, and, in collaboration with the NHS Security and Management Service, developed a core training curriculum and accreditation scheme for trainers [40].

In 2005 NHS Protect developed the Promoting Safer and Therapeutic Services (PSTS) syllabus [48] in conjunction with key stakeholders and specialists in this area. These included both the National Institute of Mental Health in England and the National Institute for Health and Clinical Excellence (NICE). The PSTS program acknowledges the

specific and complex needs of staff working in mental health and learning disability environments and is designed to help them to deal with potentially violent situations, to ensure that they can be prevented and managed in a safe and therapeutic manner. It constitutes the foundation training that has to be provided ahead of any training in physical interventions.

At the same time, Clinical Practice Guidelines for the short term management of disturbed and violent behaviour in psychiatric settings and hospital EDs were also commissioned by NICE [1]. Among other interventions the NICE guideline provides a summary of core elements of training courses provided in the UK based on the findings of four cross sectional studies that examined arrangements in the UK for physical training techniques in in-patient psychiatric settings [49-52]. In combination these components include the following psychomotor skills.

1. Taking the patient to the floor
2. Three-person restraint
3. Sitting and standing the patient
4. Negotiating stairways and doors
5. Restraining hold,
6. Roles within the team
7. Turning the patient over
8. Breakaways
9. Entry into and exit out of seclusion
10. Blocking punches and kicks
11. Separating fighting patients

While primarily focussing on the problem of patient violence in mental health care settings, ED management approaches, including training, were considered within the guideline. Recommendations specific for ED specific interventions, while brief, do provide guidance on development of staff skills in the area. Specifically the NICE guideline [1] recommends that all ED staff in contact with patients and the general public undergo competency based training in the management of disturbed and violent behaviour; training in the recognition of mental illness, and; awareness of service user involvement in care [1].

In respect to specific knowledge on physical techniques, a comprehensive report of 38 restraint-related deaths in the UK makes recommendations for staff training [11]. The report specifically highlights the need for dissemination of the medical theories regarding restraining practices for both clinical and non-clinical staff (security and police). In 2013, the Office of the Chief Psychiatrist in Victoria issued a clinical advisory note cautioning the use of prone restraint [12]

In terms of descriptions of training content for the prevention and management of aggression and violence in other European countries research has emerged from Switzerland and The Netherlands [24 37 42 53], Sweden [10 23 54] Finland [25] and Germany. This content is broadly consistent with both the ILO framework [13] and NICE guidelines [1].

In a Swiss study Needham et al [24] used a cluster randomised trial to test the effect of a five day aggression management training course on participant's perception of and attitudes on aggression management. The intervention, described as an aggression management training program which was developed in Netherlands by Nico Oud [55]. The program is described as comprising five days, with a 20 x 50 minute lesson program. Two outcome measures were examined: participant's perception and tolerance toward aggression and resultant adverse feelings. A total of 114 psychiatric nurses participated in the training and evaluation of its outcomes. Unfortunately a relatively high attrition rate and poor response rate was reported (51%) limiting the use of the research findings. No effect was found between measures taken one week prior, and 90 days following training. The authors questioned the sensitivity of the instruments used to measure the effect of training and suggested future work focus on relationship between staff attitudes on behavioural change.

In a later Swiss study, Hahn et al [37] evaluated the outcomes of a more recent version of the same five day aggression program using a before and after study on staff attitudes to causes and management of patient aggression in three acute psychiatric hospitals (six wards). Outcomes were measured using the German version of the Management of Aggression and Violence Attitude Scale (MAVAS). The MAVAS has been used extensively in studies of staff and consumer attitudes toward the causes and management of aggression in mental health settings [9 56]. The pedagogical approach was described as using problem based learning, theoretical elements, exchange of experience and hands on training. The authors found no significant attitude changes in the intervention group three months following training and recommended that future

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work consider level of organisational support and pedagogical approach on learning outcomes in practice.

Another study conducted in the Netherlands by Oostrom and van Mierlo [42] evaluated the effectiveness of an aggression management training program in a Dutch homecare organisation. A before and after method was used to evaluate the outcomes of the 12 hour program on coping and team functioning. Participants were domestic aids, homecare workers, registered nurses, new born and infant care workers. Training content included assertiveness, coping and team functioning. The researcher reported significant improvement on assertiveness variables and participant's ability to cope however found no significant improvement in team functioning.

Nau et al [57] aimed to evaluate the outcomes of a training course in the management of patient aggression on student nurses levels of confidence in Germany. Using a before and after study they measured the outcomes of a three day program on 68 student nurses levels of confidence at three time points using a confidence in coping aggression scale. The intervention involved lessons regarding the assessment of occurrence, dealing with the patient, coping and after care. These were delivered as a combination of lectures, small group work, skills training. The three day training course was found to enhance participant's capacity to manage patient aggression.

In a Tertiary Level 1 Trauma Centre located in San Diego California United States, Cahill [30] evaluated the outcomes before and after the implementation of the ACT-SMART training program on participants (ED nurse) self-report of aggression and violence. Similar to that used in previously mentioned studies the training program addressed four core areas: mission and professionalism; generational and cultural biases; communication strategies among patients family members and healthcare providers, key concepts in understanding the cycle of aggressive and violent behaviours, interventions; specific scenarios, dealing with difficult personalities, self-protection and evasion; techniques. The pedagogical model was described as didactic instruction, group activities discussion, role play and the program was eight hours in duration. Evaluation measures for the program were defined in terms of the incidence of, and attitudes towards aggression in the workplace questionnaire (perceived confidence and attitudes). From a convenience sample of 65 ED nurses (56 intervention and nine controls) and overall response rate of 97% was achieved. Results revealed significantly improved

scores on confidence managing aggressive situations (p=0.001) but no change in incidence of aggression was observed.

Early work in the USA undertaken by Lipscomb [58] reviewed strategies for prevention of aggression and violence. This included the provision of training for health professionals working in both psychiatric centres and EDs. Although staff training was identified as the most common preventative strategy used by organisations to prevent and manage aggression little information was available on training content and pedagogy. Despite these shortcomings training for the management of assaultive behaviour was found to be far more common in psychiatric services and usually included of up to 14 hours with two hour annual refresher courses. Training for ED nurses was comparatively low with participation rates estimated at less than 50%.

In 2004 the USA Department of Labor, Occupational Safety and Health Administration (OSHA) published a guide for preventing workplace violence for healthcare and social service workers [19]. This multi-faceted organisational strategy includes five elements: management commitment and employee involvement; worksite hazard analysis; hazard prevention and control; safety and health training; and record keeping and program evaluation. In terms of safety and health training this guideline stipulates every employee understand the concept of "universal precautions for violence". This concept is based on the premise that violence can be expected but its effects mitigated through preparation. Effective training may reduce the likelihood of being assaulted at work.

The OSHA guideline [19] specifies that new and reassigned staff receive the same level of basic orientation before the commencement of work with respect to local occupational hazards. In addition visiting staff such as physicians and allied health workers must receive the same basic training as permanent staff. The guideline also stipulates that training be delivered by qualified trainers to outline core program content so that all staff can comprehend specific workplace hazards and methods used to prevent and respond to violence.

In terms of pedagogy, the OSHA recommends the incorporation of role playing, simulation and drills. At a basic level training topics for all staff are listed as including the Management of assaultive behaviour and professional-assault response training. It is recommended that employees attend annual training and that organisations provide

refresher as well as basic training. In addition to this the OSHA guideline [19] recognises the need for additional training for supervisors so that they can manage high risk situations, ensure staff are not placed at additional or unnecessary risk, and encourage incident reporting.

Supervisors must also be competent in the conduct of hazard assessment and make changes to identified hazards in the environment to reduce risk of harm [19].

In terms of security personnel working within healthcare settings OSHA [19] recommend that security staff receive additional training in psychological aspects of handling aggressive and abusive clients and types of disorders and the ways to handle aggression and diffuse violent situations.

In an earlier USA study, Calabro et al [31] sought to measure effect of a training session in violence management on mental health workers knowledge, attitudes, self-efficacy and perceptions of behavioural intention using a before and after study design. The setting for the study was described as one acute psychiatric in-patient service in south west USA. Program participants were selected from a non-random convenience sample of 180 staff. The training intervention was comprised of two commercially available programs. The evaluation outcome measures were participant's levels of knowledge, attitudes, self-efficacy and perceptions of behavioural intention. The pedagogy of the training program was described as using a combination of lecture and self-defence skills and as well as physical restraining methods role plays, and reading and reviewing a policy manual. In total the program was of 12 hours duration. Notably, the authors of this study reported significant short-term improvements in participant's knowledge, attitudes, self-efficacy and perceptions of behavioural intention.

In another USA study Morton [59] sought to describe the experience of one health care organisation responses to the prevention and management of violence using a before and after design. Study participants were nurses and psychiatric clinicians. Training content was described as focussing on prevention with early structural interpersonal interventions, self-defence, physical control, escort and transportation techniques included. The pedagogy was competency based and comprised of didactic small group sessions, roll play case reviews competency demonstration in simulations and drill scenarios to maintain competence. A key focus for this paper was a detailed account of

the process for the development of interdisciplinary competencies for the prevention and management of patient violence. In conclusion the authors highlighted the vital role strong governance and supportive organisational structures had on the success of the approach that was described.

In an Australian study, authors Farrell and Cubit [17] undertook a descriptive evaluation of the content contained in 28 aggression management programs developed in eight countries against 13 criterion derived from recommendations from the Victorian Department of Human Services Health and Community Services Union, Australian Nursing Federation and Victorian Healthcare Industry Association [60], UK Central Council for Nursing Midwifery and Health - now referred to as Nursing Midwifery Council [61], ILO, International Council of Nurses, World Health Organisation and Public Services International [1]. A synthesis of core program components provides additional description of shared content among programs available in the public domain in 2005. Importantly, Farrell and Cubit [17] note a distinct lack of evidence supporting organisational outcomes of training including absenteeism, sick leave, security costs and litigation costs.

In reporting the outcomes of a New South Wales based program, "*A Safer Place to Work",* Grenyer et al [36] described core curricular for trainers. This involved and orientation to a program comprised of modules for responding effectively to challenging behaviour, aggression minimisation in high risk environments, aggression minimisation for managers and aggression minimisation training. Reviews of policies and resources, teaching strategies used and assessment procedures undertaken were also listed but are not described in detail.

In Victoria, Deans [32] described a program designed for use in a single ED located in regional Victoria. Key content areas were listed, but not described under the headings: environmental awareness, behavioural triggers, team awareness including team member's strengths and weaknesses, types of aggression, responses and management options, factors influencing effective communication, avoidance and deflection techniques, security and escort techniques.

Using a Delphi technique McCullough [62] provided a summary of strategies for minimising occupational violence toward nurses in remote areas. The expert panel was comprised of ten rural area nurses. Strategies for prevention were divided into primary, secondary

and tertiary categories Primary prevention included six elements: community specific orientation, hazard identification audit, education and training, policies and procedures, recruitment and retention strategies, community collaboration. Secondary prevention included four elements: de-escalation techniques, back-up assistance, restraint and medication and self-defence techniques. Five tertiary prevention elements are included: support for victims, telephone counselling, incident reporting, review of risk management processes and consequences for individual behaviour. Although no specific pedagogical approach for training was identified a variety of practical strategies for prevention were presented as a "tool box".

Table 1 displays a summary of the findings of the review in respect to the question: *what evidence is there for staff training requirements in the prevention of aggression and management of violence in acute health care*? It also shows the gaps identified in the literature review with respect to syllabus and training content.

Table 1. Summary statement and gaps identified in the literature review: Syllabus and program delivery

Content	There is agreement that a "core syllabus for aggression prevention and violence management" address the following content areas [3 13 16 17 40 46].	While there is consensus regarding many content areas the following gaps and recommended content for inclusion in training programs is listed below.
	- orientation to workplace prevention and specific response policies and procedures - a discussion of different types of aggression - an overview of the factors that influence aggressive and violent behaviours that includes gender and culture [1 47] - a discussion of, and training in, effective interpersonal communication skills - instruction in the use of de-escalation strategies - information regarding legal aspects for responding to aggression and violence (occupational health and safety laws, duty of care, mental health act, common law) - requirements for post incident debriefing	- detail regarding verbal de-escalation [64], - consideration of the consumers perspective [2 65] - inclusion of physical techniques [11 66] - use of therapeutic sedation [39 67 68] - assessment and management across the life span [69] - assessment and management for high risk populations including alcohol or substance intoxication / withdrawal, acute mental health and neurosurgery [28] - assessment and management for specific vulnerable populations such as victims of assault and trauma [1]
	Knowledge about mental health and psychological distress among non-clinical staff (administrative and security personnel) will reflect that of the general public. Basic training can improve mental health literacy among members of the public. This type of training may therefore be applicable to hospital administrative and security personnel [63].	There is little information regarding specialised syllabus content according to: - discipline (nursing, medicine allied health, security administrative staff); - work role (clinician, manager, trainer); - work context (high risk areas such as ED and mental health units compared to other areas [16 19] Levels of mental health literacy among non-clinical hospital staff (security and administrative staff) are not known.
Component	**Summary statement**	**Gaps identified**
Objectives	There is consensus regarding the overall purpose of training programs, which is to work proactively to manage aggression and violence [13 18]	There is limited information to inform program outcomes with respect to learning objectives in cognitive, psychomotor and affective domains [33 40] Little information is available to establish levels of educational objectives for knowledge, skills and attitudes [33]
Duration	There is agreement that the duration of programs be determined by staff role and frequency of clinical exposure [16 19] The duration of training is a critical factor influencing access, cost and sustainability of programs [29]	There is no agreement on the duration of aggression prevention and violence management programs. There is no agreement on the frequency of training or content and frequency of "refreshers/updates"
Target audience	There is agreement that frontline healthcare professionals, staff in administrative roles involving patient contact and hospital security personnel working in acute care hospitals must receive training based on the "core syllabus" [1 16 18 40]	There is little information regarding the benefits and limitations of multi-disciplinary programs in the area of aggression prevention and violence management [70]

3.1.2 Features of successful training programs

In defining the features of successful training programs the indicators of success must be clearly delineated. Beech and Leather [14] provide outcome measures for aggression prevention and violence management programs in healthcare as part of an integrated evaluation framework. According to their framework, immediate learning outcomes can be measured to determine the influence of training on participant knowledge, skills and attitudes. Similarly behaviours can be appraised by assessing individual performance in practice. As previously mentioned, in the introduction to this review, the organisational effect of training on patient and staffing outcomes is much more difficult to measure. Beech and Leather's framework [14] suggests that this be determined via assessments of work atmosphere, reported incidence figures for patient violence and consumer feedback. In addition, sickness, injury and compensation claims can be utilised as indicators of financial and human impact.

In respect to the immediate learning outcomes of training, research indicates that programs can be effective in improving health professional's levels of confidence in dealing with aggressive and violent patients [30 31 71]. Developing staff confidence and competence (self-efficacy) in managing aggression is also considered paramount to reducing the potential trauma associated with it [71]. Research also shows that staff attitudes regarding the causes of patient aggression influence the way they work to prevent and manage it in practice [31 65]. Yet evaluations of the outcomes of training on staff attitudes has produced mixed results [2 24 37]. Despite these limitations, there are some shared features of programs reporting positive results. The following discussion outlines the evidence and identifies relevant pedagogical features of the programs that have reported success.

In terms of organisational outcomes, Arnetz & Arnetz [23] evaluated a program designed to help staff in healthcare settings to deal with patient violence toward staff. This was a twelve month multi-centre randomised cluster control study in Sweden. Study site comprised 47 units with five EDs, seven geriatric wards, 32 psychiatric wards, and three home health care sites. In total there were 1203 participants in the study. Given the complexity of the intervention an excellent response rate of 77% was achieved. Results indicated that when compared to controls, participants in the intervention group had improved knowledge of risk for violence. In addition, the intervention group had a 50%

greater rate of reporting of violent events; better awareness of risk situations; improved knowledge of how potentially dangerous situations could be avoided. A notable strength of the intervention was the individual nature of follow-up that linked learning to situational events via a process of individual and team de-briefing. As a multi-centre evaluation that included different speciality areas the results of this study are impressive.

In Canada, researchers Fernandes [34] et al sought to quantify the overall rate of violence in a single ED located in Vancouver British Columbia. In addition, they evaluated the effect of a four hour educational program on ED violence. The training Intervention was described as the "Prevention and Management of Aggressive Behaviour Program". This program is described as being based on Non-violent crisis intervention training model developed by Crisis Intervention Institute, Brookfield Wisconsin, USA [72]. Using a before and after study design they measured the influence of training on the number of aggressive events at three and six months. This involved reporting all episodes of violence, including direct experience of exposure to physical/verbal aggression, as well as and witnessed events of physical verbal abuse against other staff. A noticeable strength of this study is the inclusion of different professional groups including: nurses, physicians admitting clerk, social workers, ward aides, unit co-ordinators. The overall participation rate in the study was excellent with 84% of all surveys completed across three time periods. The researchers concluded that while the education program may temporarily reduce the number of events, the effects of training are not retained in the long term.

In a multicentre randomised control trial, Finish researchers Kontio et al [25] evaluated the effect of an e-learning program on professional competence in seclusion and restraint on job satisfaction and self-efficacy. The intervention was described as "ePsychNurse - net online training program". This involved providing structured feedback and group discussion of reported incidents using informal staff debriefings. The outcome measures were twofold: Registration of violent events using the Violence Incident Form (VIF-checklist [10]) and staff self-reported experience with threats and violence at work. In terms of pedagogy the program was described as using a reflective learning approach comprising peer discussion forum, reflective journal, individual assignment, virtual patient case, self -awareness exercises. In total the program ran over 120 hours. Evaluation of the program found that participant's knowledge on physical restraint improved in both groups while knowledge on seclusion remained unchanged and there

was no significant improvement in self-efficacy in either group. Despite these results the authors concluded that the program offered an affordable and easy training option.

In the USA, Irvine et al [26] evaluated an individualised internet training program designed to teach nurse aides strategies to prevent and respond to resident aggression. They conducted a randomized control trial to determine the effect of the intervention, a behaviourally focused and video-based training on behavioural change (self-efficacy, empathy, attitudes, and knowledge). These researchers reported positive effects on the outcomes for knowledge, attitudes, self-efficacy, and empathy. Medium to large effect sizes were maintained after two months. In addition the training was reported to be well received by participants. The authors conclude that Internet training is a viable approach to shape appropriate staff reactions to aggressive resident behaviours.

In New York, Lipscomb et al [73] sought to evaluate the impact of the guidelines on worker health and safety. They used a mixed-method design to determine the feasibility and impact of a participatory multi-faceted intervention to prevent workplace violence. The setting for the evaluation was three in-patient facilities. The study design included an extensive worksite analysis, staff focus groups, and a baseline and post-intervention survey of changes in staff perception of the quality of the program's elements and physical assault following implementation of the program.

The project's training element was described as participatory multidisciplinary workshop designed to increase management commitment and employee involvement in the violence-prevention process and to identify additional interventions. In training, staff learned how to interpret and use risk-assessment data, environmental surveys, and the staff survey findings. Joint management and labour teams facilitated small group discussions of specific problems and develop feasible solutions acceptable to staff and management. As a result staff perception of the quality of management commitment and employee involvement in violence-prevention was significantly improved in all worksites post-implementation. More recently the same research team [21] have presented a framework for translating workplace violence intervention research into evidence-based programs. This is consistent with Guidelines for Prevention of Workplace Violence in Health and Social Services [19]. The framework illustrates the relationships between the domains of violence, patients, care giving work environment, and external health care

policy. Accordingly hazard controls are identified and matched to the risk factors, and this then leads to benchmarking, monitoring, and evaluating program effectiveness.

In Australia, Gerdtz et al [2] conducted a multicentre evaluation of a rapid training program in the prevention and management of clinical aggression in 18 EDs. The intervention is described as a structured evidence-informed course which is delivered over a 45 minute staff in-service session. The program included three learning activities: DVD simulation of an episode of patient aggression in the ED, group discussion and facilitated reflection in which participants review the current approaches used to manage episodes of aggression in their workplace and consider the ways in which practice may be improved. This program was evaluated using a simple before and after design with the primary outcome of interest participant's attitudes toward the causes and management of clinical aggression on the MAVAS [56]. In addition to survey outcomes, unit managers and trainers were independently surveyed to describe any perceived behavioural changes in practice. Following the intervention significant attitude shifts were recorded on the MAVAS in 5/23 items. Despite training, participants remained undecided if it was possible to prevent patient aggression, and continued to be unsure about the use of physical restraint. Twenty eight (82.3%) managers' and trainers' eligible to be interviewed provided their perceptions of the impact of the program. Overall, these perceptions were consistent with the significant shifts observed in the survey items. The authors conclude that there was limited evidence to demonstrate that the program significantly modified staff attitudes toward the prevention of patient aggression using the MAVAS. However additional survey items that measure staff attitudes about the use of restraint in emergency settings were recommended to better understand decision making about restraining practices. Clearly further work is indicated to quantify the impact of training in practice.

Table 2 displays a summary of the findings of the review in respect to models for the prevention of aggression and management of violence and pedagogical approaches. It also shows the gaps identified in the literature review with respect to models and pedagogy.

Table 2. Summary statement and gaps identified from the literature review: Pedagogical approaches

Component	Summary statement	Gaps identified
Models of aggression prevention and management	There is agreement that training programs address situational/interactional causes of aggression in addition to internal (patient related - biomedical) and environmental factors [2 9 29].	There has been very little research into the effectiveness of programs that have adopted the situational/interactional model for aggression prevention and violence management [2 37].
		Although correlations between staff attitudes and management strategies are noted in the research literature, the relationship between staff attitudes and the management choices they make in actual practice has not been described.
Strategies	There is equivocal evidence regarding the sustained effect of online training when compared to usual methods of training (in-service/vocational education) on staff knowledge, self-efficacy and management of aggressive and violent behaviour [25 26].	There has been no analysis of the costs and benefits of online verses face-to-face programs.
	There is evidence that structured feedback and group discussion of actual incidents positively effects staff knowledge and awareness of risk for violence, reporting of events, how potentially dangerous situations could be avoided and how to deal with aggressive patients [23].	It is unclear how long the effect of structured feedback is sustained in practice.
	There is evidence that face-to-face aggression prevention and violence management programs that include combinations of didactic learning, role play reflection and simulation enhance staff knowledge, attitudes and self-efficacy toward the prevention and management of aggression and positively influence training outcomes in the short term [2 19].	It is unclear how long knowledge, skills and attitudes acquired in training are sustained in practice.

3.1.3 Evidence informing successful interventions

To establish best practice in the prevention and management of aggressive behaviours in patients admitted to acute hospital settings, Kynoch et al [74] conducted a systematic review. Of the 13 studies that met review criterion, only three studies specifically evaluated training outcomes [23 32 36]. Of these studies, all demonstrated some improvements in the levels of knowledge, skills and attitudes of acute care staff in the management of aggressive behaviour. Taken collectively the authors conclude that well

designed staff training programs to prevent patient aggression in acute care settings show that staff can be prepared to manage incidents by increasing their knowledge, confidence skills and attitudes [74].

In an integrated review of the literature, Canadian authors Wang et al [44] investigated violence prevention programs in the health sector. Recommendations for educational strategies arising from that review echoed the need to empower staff and build confidence in their ability to manage violent situations effectively. The authors advocate for base training in early recognition, verbal de-escalation physical defence techniques and patient restraint methods. In addition, specifically, skills in conflict resolution, early intervention and supervisory coaching are recommended to support staff in the application of techniques learned in training to actual practice.

In considering the evidence for adopting system wide interventions Wang et al also reviewed the literature related to "Zero Tolerance" policy. Previous studies of the impact of the "Zero Tolerance policies" in the UK (NHS) and in New South Wales have found this approach is likely to increase the use of high intensity interventions (such as physical and mechanical restraint) to manage challenging behaviours [75]; reduces staffs levels of confidence and skill in dealing with aggression [76]; is ineffective in altering staff perceptions about the level of managerial support to take action against perpetrators of aggressive and violent behaviour [21].

In an evaluation of workplace violence prevention programs, Peek-Asa et al [22] compared violence approaches in a stratified sample of 116 EDs located in California and New Jersey. This multi-method study involved conducting interviews, facility walk through, document analysis of policies procedures and a review of training materials. In regard to training, California scored significantly higher for training and policies and procedures, but there was no difference in security and environmental approaches taken across jurisdictions. Organisations with strong training programs were not more likely to have strong policies and procedures. Important gaps in programs were identified in both states. For example only half of the training programs lasted more than one hour in duration and it was common for training to be incomplete with respect to hospital policies and procedures. Many hospital employees did not receive training, this was especially so for physicians. The authors suggested in respect to this latter point that cost of attendance at training may represent a significant barrier to its uptake [22].

These results are echoed by Martindell [77] who studied violence protection policies and practices in Pennsylvania acute care hospitals. The researchers surveyed 157 acute care hospitals, and obtained a 60% response rate. Fewer than half of the organisations that responded to the survey provided self-defence training for employees (38%), but more than half (68%) offered some sort of violence prevention training to employees. Violence prevention training mandatory for ED staff in 36% of the hospitals surveyed. Participants were also asked to choose all barriers to compliance with a violence protection plan that applied. The respondents could choose more than one answer and identified insufficient staff training (70%) and that the time required in order to comply with all aspects of the program was prohibitive (70%). Cost factors were also flagged by many organisations as a barrier to prevention and management of aggression and violence (65%) as well as a perceived lack of need to comply due to low volume of violent acts in the ED (48%). Other barriers included failure to identify acts of violence, high turnover of ED staff, and lack of approval for the use of metal detectors. The survey findings highlighted gaps in violence protection practices including training.

In the following year Martindell [78] went on to publish commentary on violence in health care law, policy and training of health professionals in the USA. The focus for this review was on nurses and physicians. The author reported that currently only 18% of states in the USA currently mandate violence prevention training for ED staff. California was identified as the first state to enact legislation that requires acute care and psychiatric hospitals implement comprehensive workplace violence prevention programs and the first state to release guidelines on the establishment of such a program. Despite strong policy initiatives it would appear that the cost of training remains a significant barrier to the uptake of training.

Table 3 displays a summary of the key findings from the literature review and gaps identified with respect to assessment and evaluation.

Table 4 presents a summary of the findings from the literature review and gaps identified with respect to the governance and administration of training.

Table 3. Summary statement of literature review and gaps identified: Assessment and evaluation

Component	Summary statement	Gaps identified
Assessment	Preliminary work has been reported on behavioural healthcare competencies. This work provides direction for further research and the development of educational programs aimed to build hospital staff behavioural healthcare competency [79].	There is limited information available in published literature on aggression prevention and violence management to guide the assessment of knowledge, skills or attitudes [33][79]. We found no assessment tools in published literature on aggression prevention and violence management for measuring higher order cognitive tasks and decision making skill.
Monitoring	There is agreement that up to date centralised records of staff attendance at training should be maintained by employers [19]. There is agreement that rates of training should be monitored at an organisational level by discipline and work area [19].	
Evaluation	Evaluation of training outcomes has predominantly focussed on staff satisfaction, confidence and competence (self-efficacy) and attitudes. There is evidence that developing staff self-efficacy in managing aggression is paramount to reducing the potential trauma associated with it. There is evidence in the mental health literature that staff attitudes toward the causes of aggression and violence in health care settings influences self-reported management decisions.	There were no consumer outcomes reported including complaints, injuries or psychological trauma. The impact of training on organisational factors, such as sick leave, turnover, use of increased staffing, and time required for emergency responses is unknown.

Table 4. Summary statement of literature review and gaps identified: Governance and administration

Component	Summary statement	Gaps identified
Accreditation of programs	Accreditation for aggression prevention and violence management programs has been suggested as a strategy for standardising training curricula.	Internationally we found no jurisdiction had successfully accredited aggression prevention and violence management programs, however moves to do so have recently been attempted in the United Kingdom.
Trainer preparation	There is agreement that the quality and sustainability of programs requires advanced training and/or a credentialing process of trainers [19 40].	There is no established criterion for advanced training and credentialing of aggression prevention and violence management trainers.
Policies and procedures	There is agreement that changes to organisational policies and response procedures regarding the prevention of aggression and management of violence are addressed in regular training up-dates.	
Data use	There is agreement that organisational data on rates of aggression and violence, staff injuries and rates of attendance at training be used to inform the delivery of training [21].	Problems with standardised reporting of incidents within organisations and across the jurisdiction limit the capacity of training to respond to changes in severity or prevalence of incidents.
Standards	Correlations have been observed between levels of aggression and violence in hospital wards and perceived safety and quality of care by consumers [23].	National Safety and Quality Health Service Standards do not currently address workplace aggression and violence [80]}.

3.2 Summary of findings and implications of this review for training in the prevention and management of clinical aggression in the State of Victoria

Internationally, the state of evidence for staff training requirements in the prevention of aggression and management of violence in acute health care is limited. In terms of training content there is widespread international agreement of the core components to be including in violence prevention and aggression management programs. These components may be considered a template for "core training syllabus" for health workers, administrative and security staff working in Victorian hospitals.

While there is consensus in the literature regarding a core syllabus some specific inconsistencies were identified with respect to particular content areas. For example, we found there was minimal evidence to describe and support the use of specific verbal de-escalation skills and techniques [64]. Similarly there was little information available on: how to integrate the consumers perspective or the "patient experience" in training [32][59]; the extent and type of physical techniques taught to different levels of staff [68]; the indications for, and medications used, to achieve therapeutic sedation [36][69][70]. What was also lacking was information regarding the assessment and management of acute behavioural issues across the life span [26]; the skills required for the assessment and management for specific high risk populations such as alcohol or substance intoxication/withdrawal, acute mental health, and neurosurgery [28]; and the knowledge and skills required to assess and manage specific vulnerable populations such as victims of assault and trauma [1]. Based on these additional gaps in training content, consideration should be given to the development of additional modules to supplement a core training syllabus for the jurisdiction.

In conducting the literature review it was apparent that the vast majority of papers addressed the learning needs of nurses, with far fewer related to medical staff and security personnel. In respect to the latter, it is worth noting that although security staff may receive local training, there is no requirement for them to undertake specific training in mental health literacy or to meet competency standards in respect to physical interventions in order to be licensed [7]. This finding is concerning given that mental health literacy among members of the general public in Australia is known to be poor. For example, research shows that many members of the public cannot recognise common mental health disorders or different types of psychological distress [63]. When compared to mental health professionals, members of the public also have different beliefs about the causes of mental disorders and the ways to effectively manage it. Basic training has been shown to improve mental health literacy among members of the public. Accordingly, this type of training may be suitable for hospital administrative and security personnel in Victorian hospitals, who are equally as likely as

nurses and doctors to encounter people with mental health problems or psychological distress.

In this review, a clear gap was also identified regarding specialised content for different disciplines (nursing, medicine allied health, security administrative staff); work role (clinician, manager, and trainer). Little evidence was available to guide training requirements based on work context, however the grey literature commonly described a tiered training structure for high risk areas such as EDs and mental health units from other types of areas [16] [19]. In Victorian hospitals it is estimated that up to three quarters of all episodes of clinical aggression are reported to occur in EDs and mental health units. Given the time and cost associated with training, it is appropriate to consider the development of a tiered approach to training that is based on both rates of exposure by clinical area and staff role.

In respect to the evidence for methods of instruction, the results of two randomised control trials [25] [26] report different outcomes regarding the effects of online training when compared to usual methods (in-service/vocational education) on staff knowledge, self-efficacy and management of aggressive and violent behaviour [25] [26]. There is, however some evidence that face-to-face aggression prevention and violence management programs which include combinations of teaching methods can positively influence learning outcomes, at least in the short term [2] [32]. In addition, there is strong evidence to support the use of that structured feedback and group discussion of actual incidents [23] [34] to positively effects staff knowledge and awareness of risk for violence.

Staff education is an effective strategy for improving health professional's levels of confidence in dealing with aggressive and violent patients [74] [81]. Research shows that staff attitudes regarding the causes of patient aggression influence the way they work to prevent and manage it in practice [65]. A sizable body of work in nursing suggests that training models for the prevention of aggression and violence in hospitals must address staff attitudes about the reasons for the behaviour and consider the role of environmental and inter-personal factors as important triggers [2] [9] [31] [56] [65]. In addition, researchers advocate a strong focus on the effective communication, de-escalation techniques and the adoption the least restrictive interventions to ensure patients and staff remains safe [2] [31] [82].

There is a growing body of work world-wide advocating that training in the prevention and early management of aggression and violence requires the development of clinical leadership skills for local managers [21] [44] [73]. Specifically, skills in conflict resolution, early intervention and supervisory coaching are have been found to successfully support staff in the application of techniques learned in training to actual practice [21] [44] [73] [82]. Feedback to staff

and the delivery of "as required education sessions" have found to be useful in reducing the incidence of violence and aggression both in Victoria and elsewhere [44][82].

In relation to assessment, some preliminary work has been reported in the literature on behavioural healthcare competencies. This work provides direction for further research and the development of educational programs aimed to build hospital staff behavioural healthcare competency [79], however the process for assessing competencies in simulation or in practice have not been described and additional research in this areas is required before assessment of competencies in the management of clinical aggression are included in training programs.

Currently, there is limited information available in published literature on aggression prevention and violence management to guide the assessment of knowledge, skills or attitudes [33][79]. Similarly this review was unable to identify any assessment tools in published literature on aggression prevention and violence management for measuring higher order cognitive tasks and decision making skills. The development and testing of suitable assessment tools to determine learning outcomes from both core and modularized training are required to ensure a quality training framework is developed for the prevention and management of clinical aggression in Victorian hospitals.

In terms of monitoring training effectiveness there is agreement in the literature that up to date centralised records of staff attendance at training be maintained by employers [19]. Likewise, rates of training should be monitored at an organisational level by discipline and work area [19]. In Victorian hospitals responsibility for the maintenance of training records lies with individual hospitals and may be monitored as part of hospital accreditation processes.

3.3 Training for clinical aggression – A survey of current practice in Victoria

Based on initial consultations and on the preliminary literature review, an instrument was developed by the project team to obtain the following:

- Details of clinical aggression training
- The security response to incidents
- Governance structures for clinical aggression preventing and training
- Methods of evaluation
- Barriers to training
- Key successes in this field.

Appendix 2 contains the instrument sent to Health services.

The Department of Health provided key contacts for improving hospital safety and security within each Health service. The instrument was sent out through these contacts.

We received a 100% response rate to the survey by Victorian hospitals. This appears to reflect the high priority of this issue for hospitals and the willingness to collaborate on solutions. Not every hospital was able to provide detailed answers to some items.

The responses were collated into the following tables.

3.4 Training for clinical aggression – Gap analysis

The literature review identifies some evidence for training content but not enough to provide a complete syllabus. However, there is consistency across a range of health service in the core syllabi being provided.

No definitive length of training can be recommended but a tiered level with higher risk areas should be considered. Modular training allows specialised areas such as obstetrics or adolescents to get additional material not required overall.

Training can be provided by internal or external providers but a means of credentialing trainers should be established. This is necessary to ensure that the standard of training meets the minimum acceptable standards.

All training should have associated competencies that can be evaluated. Whilst recognised that this is a complex issue across the sector, it is an essential requirement for all staff training. Current evaluation is almost always done by staff feedback (confidence) or using KPIs such as work cover claims or incidence rates. These can be supportive but are insufficient on their own.

Recommendations for minimum training components for all staff within the organisation include:

- orientation to current policies and procedures
- recognition of early signs of agitation
- an introduction to de-escalation techniques

Minimum training could be partly tailored to specific staff groups such as clerical and administrative but the minimum components are expected to be very similar for all staff.

All security officers should be licensed and trained to a minimum Certificate 2 to work in healthcare settings. Additional credentialed training should be undertaken in such areas as:

- communication
- health literacy, especially around mental health
- de-escalation
- restraint techniques

Aggregated incident reports and major incidents should be reviewed by a hospital committee with a wide spectrum of disciplines including OH&S, nursing, medical, security, mental health and where appropriate police or ambulance invitees. Specific issues related to training should be reviewed at these meetings.

4. Results – Organisational response to clinical aggression

4.1 Literature review

What evidence is there a supporting system wide security and clinical response to aggression and violence (Code Grey) in acute care hospitals?

The evidence supporting the use of system wide responses to patient aggression and violence in healthcare is scant. In fact we were only able to identify 10 relevant documents, all of which are descriptive in nature. There is a distinct lack of empirical data, to show for example, that the implementation of any system wide approach to aggression prevention and violence management improved patient outcomes (by for example reducing episodes of restraint, seclusion or ED length of stay) [3]. Similarly there was little information available to demonstrate that this approach represented a safe or cost effective approach to the prevention of staff or patient injuries [3].

One of the earliest publications to report on the establishment of a system wide approach to aggression prevention and management was reported at the Finders Medical Centre in South Australia. Here Brayley et al [83] described in detail the establishment of a violence management team response to agitated patients with in a general hospital and presented data related to the first two years of operation. The response team was comprised of a doctor, a nurse and four hospital "orderlies". Across the study period there were 282 responses, most often to patients with organic mental disorders (45%), substance abuse disorders (18%) and personality disorders (15%). In 30% of calls, verbal de-escalation was sufficient to manage the patient; however, 62% of patients needed physical restraint and 53% received therapeutic sedation. The authors concluded that this coordinated response provided an effective mechanism for dealing with patient aggression and violence in acute care settings. In addition to this the authors note that the Violence Management Team response protocol supports the monitoring of events for quality assurance purposes, and provides data to determine the causes of patient violence and to implement prevention programs including training.

Although international descriptions of coordinated responses to patient aggression and violence are scant, a comprehensive description of a very similar approach is available from Work Safe British Columbia in Canada [84]. This clinically lead repose is termed "Code White" and is activated in the event of escalating acute agitation. The response is but one component of a broader program, to prevent and respond to aggression and violence in healthcare settings. Interestingly, team composition is flexible and is determined according to individual situational and client needs. While this approach is relatively similar to others

reported in Australia we identified no evolution of effectiveness in either the grey literature or peer reviewed publications.

In the state of Victoria, four publications have been produced describing system wide security responses to patient aggression and violence [3 11 85 86], of which three studies involve EDs [60 85 86] and one study involves general ward environments [11]. Taken together these papers describe procedures for "Code Grey" with some descriptive outcomes in five Victorian hospitals.

As part of the work undertaken to inform the Ministerial Taskforce on Occupational Violence in Nursing [3], the Victorian Department of Human Services investigated the prevalence of Code Grey and Code Black events within the acute hospital setting [3]. Over a six-month period, 2,662 potential or aggressive events occurred across in the four hospitals: 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 was estimated to equate to 680 minutes (11.3 hours) of nursing time per day.

In this study it was clear that there was a 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 found that the clinical response to patient violence was managed at four different levels according to the nurses' assessment of the severity of the response. These discrete response categories are defined as follows:

- Security assistance, requested but no code 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 (Code Black) to actual or potentially aggressive behaviour involving a weapon or representing a serious threat to personal safety.

This type of response is supported by Rees et al [70] who raise some concerns about the level of security involvement in aggression management. These authors suggest that in some instances security presence may exacerbate problems, in which case a "show of support" rather than a "show of force" is all that is necessary. The first level of response described in the aforementioned study [3] would be consistent with this philosophy and consistent with the principle of maintaining patient safety in the least restrictive environment. This type of

approach also balances security requirements by while maintaining a strong clinical lead to ensure de-escalation strategies are optimised.

Since the report of the Taskforce on Occupational Violence in Nursing [3] two further Australian studies have described system wide security responses to unarmed threats and characterised events in terms of demographic and clinical features [85] [86]. Knott et al [85] reported that in the majority of cases patients arrive to the ED in a behaviourally disturbed state requiring early intervention. Notably, the times most likely to result in a Code Grey coincided with time when there was the least amount of available resources in the ED. These authors concluded that a rapid and a coordinated approach by ED to this population is required to optimize patient and staff outcomes.

More recently Hopper et al [86] published a paper reporting the development, structure and implementation of a Code Grey response in a specialist paediatric hospital. This was modelled on the approach reported by Knott et al [85] and involved a formal integrated security and clinical system wide response to acute agitation and aggression. A modification of this approach was that staff from four different clinical areas, led by an Emergency consultant and a hospital administrator, made up a rostered multidisciplinary Code Grey team. Prospective audit of events over 14 months, found there were 104 incidents when the team was activated, involving patients in 75 cases and visitors in 29 cases. Incidents occurred at equal frequency on wards and in the ED. Patients involved were most commonly affected by a mental disorder, frustration and/or a developmental disability. The majority of patient aggressors showed physical aggression towards people or objects or self-harming behaviour. Visitor aggressors were mostly verbally aggressive. For patients, the team used verbal de-escalation, physical restraint, sedation and mechanical restraint. For episodes were visitors were violent, verbal de-escalation occurred in half of the cases and in one third of cases visitors left or were removed. Several patient and staff injuries were documented.

In yet another Victorian study, Williamson et al [87] investigated patient demographic factors associated with Code Grey events that occurred in the general wards at the study hospital during a six month period. The identified that the diagnoses associated with increased risk of a Code Grey event were delirium and dementia. They also found that patients were more likely to have a Code Grey event if they were older (> 65 years), male, and a recipient of Veterans' Affairs pension, had never been married, or had been admitted to the ward via the ED.

To summarise, the level of evidence supporting the use of a system wide security response to patient aggression is limited to only a few studies, most of which have been conducted in Victoria Australia.

In all cases, the approach has been represented as a practical solution for effectively managing cases of acute agitation and in fewer examples, aggressive visitors [86]. In addition, the systematic repose permits on-going monitoring of aggression and violence within organisations and facilitates.

Qualitative data in the form of interviews with clinicians (nurses) indicate a stepwise approach to determining security requirements in preventing aggression and managing violence these steps include: requesting security assistance as a "show of support"; activating a system wide approach to actual or potential patient aggression (Code Grey/Planned Code Grey) or standby [84-88] and activating a hospital wide security response for potential/actual aggression involving a weapon (Code Black).

Table 7 displays a summary of evidence describing the use of system wide responses to patient aggression and violence in healthcare.

Table 7. Studies and reports describing the use of system wide responses to patient aggression and violence in healthcare.

Author	Aim	Approach	Intervention/ Findings	Conclusions
Brayley et al [83] Australia	To describe the establishment of a Violence Management Team to agitated patients with in a general hospital and presented data related to the first two years of operation.	Retrospective audit of response data.	**Intervention**: Code Grey Team doctor, a nurse and four hospital "orderlies". **Findings**: There were 282 responses, most often to patients with organic mental disorders, substance abuse disorders and personality disorders. 30% of responses, verbal de-escalation was sufficient to manage the behaviour; 62% of patients needed physical restraint 53% received therapeutic sedation.	Coordinated response provided an effective mechanism for dealing with patient aggression and violence in acute care settings. The approach permitted monitoring for quality assurance purposes. Data to determine the causes of patient violence and to implement prevention programs was also facilitated.
Work Safe British Columbia [84] Canada	To present a coordinated procedure for responding to acute behavioural disturbance in acute health care settings.	Clinical Guideline for "Code White" which is a coordinated trained team response to behavioural emergencies within healthcare settings (British Columbia Canada)	**Intervention**: Code White response procedure and implementation strategy.	A comprehensive operational approach is presented which includes an implementation strategy , this is comprised of: • Needs assessment for policy intervention • Code white team • Code white interventions • Escalation path (police)
Victorian Department of Health Nurse	To describe the prevalence and impact of Code Grey and Code Black events in three Melbourne metropolitan health care	Retrospective audit of six months of Code Grey and Code Black events in four Victorian hospitals.	2264 Code Grey and Black events across four sites in six months. Response procedures varied by hospital	Considerations put to the task force included the following: • A clear statement of expected behaviour

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Policy Branch [3] Australia	agencies and one regional centre. To identify situations and specific patient groups more susceptible to being involved in violent incidents within the workplace. To identify best practice in the management of patient violence and aggression directed towards nurses and other health care staff.	Code Grey system wide security response to actual and potential aggression and violence.	however more than half of the events occurred in the ED. Report prepared for Ministerial Taskforce on Occupational Violence in Nursing. 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.	• 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 clinical and security features. • Formation of multidisciplinary Code Grey/Black committees
Knott et al [85] Australia	To evaluate the precipitants, subject characteristics, nature and outcomes of unarmed threats in the ED.	A 12 month prospective survey of security codes precipitated by an unarmed threat (Code Grey).	Data were collected on 151 subjects. The Code Grey rate was 3.2/1000 ED presentations. They were most frequent on Saturday and in the late evening/early morning. Median time to be seen by a doctor was eight minutes and median time from presentation to Code was 59 min. Sixteen subjects had a history of violence, 45 were affected by alcohol, 25 had used illicit drugs and 79 had a significant mental illness contributing to the Code Grey. There were verbal or physical threats of	Acutely agitated subjects pose a threat to themselves and the staff caring for them. The reason for the agitation is multifactorial and the majority arrive in a behaviourally disturbed state requiring early intervention. The times most likely to result in a Code Grey coincide with least available resources: ED and hospital risk management policies must account for this. A coherent approach by ED to this population is required to optimize patient

			violence made to staff on 104 occasions and a perceived threat of patient self-harm on 114 occasions.	and staff outcomes.
			Seventy-one patients required psychiatric admission, 49 were involuntarily.	
Kelley et al. [89] United States	Describes a rapid response team approach to providing the best possible care and treatment of a patient with escalating aggressive/violent behaviour.	Descriptive case study.	**Intervention:** De-escalation to early warning signs of aggression agitation. "Code S". The attending physician and the primary nurse perform the clinical assessment, making decisions to meet the patient's needs for safety and control. During a Code S, the clinical staff remains in the foreground, with one person communicating with the patient; and the security staff stay in the background. Security personnel sometimes are directed by clinical staff to stay out of sight of the patient.	Data are not available regarding the frequency of "takedowns" before implementation of the Code S procedure, but anecdotal reports from clinical and security staff estimate that take-downs occurred between 50% and 80% of the time when security was called for a person whose behaviour was escalating.
Hopper et al. [86] Australia	To describe the development, structure and implementation of a formal system of aggression management, and to document its utilisation during the first year of operation.	Design and setting: A prospective audit at a major children's hospital in Melbourne. Outcome measures: utilisation patterns from prospective data forms augmented by retrospective review of security logs and medical records for 14 months. Intervention delivered by	Over 14 months, there were 104 incidents when the team was activated, involving patients in 75 cases and visitors in 29 cases on wards and in the ED. Patients involved were most commonly affected by a mental disorder, frustration and/or a developmental disability. Visitor aggressors were mostly verbally	An aggression management team can be established in a Children's hospital setting. Management and outcomes will differ between patients and visitors who are the subject of the Code

		multidisciplinary Code Grey team.	aggressive (and occasionally physically violent). For patients, the team used verbal de-escalation (56/75 events), physical restraint (34/75), sedation (23/75) and mechanical restraint (15/75). For visitors, verbal de-escalation occurred in 17/29 cases and 10/29 visitors left or were removed. Several patient and staff injuries were documented.	
Prescott et al [90] USA	To describe the use of rapid response teams and their influence on use of mechanical restraints in an acute psychiatric care setting.	Rapid cycle process improvement		Mechanical restraints were reduced by 36.4% from baseline and sustained over one year.
Williamson et al [87] Australia	To Identify patient demographic factors associated with Code Grey events that occurred in the general wards at the study hospital during a six month period.	Retrospective clinical audit of 112 Code Grey events at St Vincent's Hospital Melbourne.	**Intervention**: Code Grey alert and Code Grey response. For the Code Grey alert an emergency response team trained in aggression management arrived to assist staff in an event of unarmed patient aggression where there is a risk of harm to the patient or others. Hospital staff are encouraged to initiate this response when the situation is escalating and the increased resources/skills of the emergency response team are required to re-establish a	Diagnoses associated with increased risk of a Code Grey event were: delirium and dementia. Patients were more likely to have a Code Grey event if they were: • over 65, male • a recipient of Veterans' Affairs pension • had never been married • had been admitted through the ED

safe environment. Communication strategies focussed on de-escalating the situation are the preferred intervention.

If this is not successful, the patient may be physically restrained and sedation may also be administered according to the hospital's Code Grey procedure.

4.2 Current practice

The Australian Standard (AS4083), "Planning for Health Care Emergencies", outlines the procedures for dealing with both armed and unarmed personal threats[4]. However, emphasis is on armed confrontation and illegal occupancy. Section 5.6.2 concerns unarmed confrontation and summarises procedures into eight lines. There is almost no detail provided for clinical aggression and nothing about the specific issues regarding the management of threats when they is a conflicting duty of care to a patient of client of the health care system.

Although a number of organisations have seen it necessary to create an alternate Security Code to a Code Black, this is not standard and the procedures are developed locally without reference to any documentation other than the Australian Standard for a Code Black. It is recommended that a standard framework be created for responding to unarmed clinical aggression and this be differentiated from a Code Black. This framework requires essential components for all organisations but will recognise that it must allow flexibility for the large spectrum of clinical aggression, both in type and volume that exists across Victorian Health care organisations. Even within an organisation, differing areas and campuses may vary in the resources available to respond. The framework should also allow for the increasing use of a tiered response within a Code Grey security call. This allows for adjustment of resources and urgency of response based on the level of threat. However, standardisation of terms within Victoria is recommended to avoid any confusion for staff moving between organisations.

Table 8 summarises the Code Grey procedure in those Victorian Healthcare services that provided details. Terms vary across organisations for similar roles. Several hospitals have an aggression management team or emergency response team but the nomenclature has been simplified for clarity. There is variation in all aspects including team personnel, whether the Code is tiered and whether it is a stand-alone policy with its own governance. The larger hospitals have more staff attending a response (especially security) but not necessarily a greater spread of expertise. By necessity the smaller organisations must pull staff from a mix of locations. Only the triggers for initiating a Code are consistent across organisations.

4.3 Recommendations for standardisation of practice

There is broad consensus for a standardised organisational response to clinical aggression. It is recommended that the term "Code Grey" be considered for this type of response. Code Blacks are designated National Standards and should be called for major incidents requiring police attendance and whenever weapons are involved. Many hospitals have a tiered response to medical emergencies with a Code Blue for patient arrest and a MET call for rapid deterioration, the establishment of a Code Grey allows for a tiered response to clinical aggression not requiring police to attend.

All organisations should develop key performance indicators on their management of clinical aggression. These indicators will vary by organisation but should encompass staff training, incidents that result in injury to staff or patients, and outcomes of clinical aggression responses.

Code Greys should be called for unarmed threats and initiate an internal hospital response. Code Greys must be clinically led. The team requires a minimum of three persons to manage the limbs if required, one to manage the head and a team leader. The composition of the team should be trained security staff, trained staff from the local area and trained staff responding hospital wide. In high risk areas such as Mental Health and Emergency, the teams are typically ward based supplemented by security. Lower risk areas may benefit by having a hospital based response.

Procedures must be established for all clinical areas within a health service. These will be modified for levels of staff training and risk profile. It is recognised that all areas carry some risk.

Data on Code Greys should be recorded and reviewed at established multi-disciplinary meetings. The membership be reflective of the broad impact that clinical aggression has across an organisation. Aggregated data and serious incidents should be reviewed and fed back into policy development and staff training..

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Appendix 1: Project Team

Associate Professor Jonathan Knott is an Emergency Physician at Royal Melbourne Hospital and Clinical Sub-Dean for Emergency Medicine at the University of Melbourne. He is on the Board of the Postgraduate Medical Council of Victoria, the Minister of Health's Hospital Safety and Security Advisory Committee and on the Department of Health's reduction of restrictive practices steering committee. He has published and presented nationally and internationally on acute agitation, restraint and clinical aggression.

Associate Professor Marie Gerdtz is a registered nurse and academic. She is currently employed by the Department of Nursing at The University of Melbourne and holds a position as an Honorary Nurse Researcher at Melbourne Health. Marie has qualifications and substantial experience in the specialties of emergency nursing, adult education and nursing research. Her work in the prevention and management of aggression commenced in 2005 as project lead for a study funded by the Victorian Department of Human Services titled: Occupational Violence in Nursing: An analysis of the phenomenon of patient aggression and Code Grey/Black events in four Victorian hospitals. This work was funded to support the recommendations of Victorian Ministerial Taskforce in the prevention of occupational violence in nursing.

Following on from this project, she worked in partnership with Ms Vikki Dearie, Ms Cathy Daniel and the *Violence in ED Action Group* at Royal Melbourne Hospital to develop and pilot test the Management of Clinical Aggression Rapid Emergency Department Intervention (MOCA-REDI) at Melbourne Health. The pilot MOCA-REDI program was funded by the Department of Health in 2009-2010. With additional support from the department of Health Emergency Care Improvement and Innovation Clinical Network the revised MOCA-REDI program was implemented and evaluated in 18 EDs across Victoria.

Ms Cathy Daniel is a registered psychiatric nurse and has worked for Consultation Liaison Psychiatry at the Royal Melbourne Hospital assisting staff to manage behavioural disturbance in acute health for the past eight years. For the last five years Cathy has also been training staff at Royal Melbourne Hospital and is a credentialed to provide education in the Management of Clinical Aggression program. Cathy has experience implementing (MOCA REDI) into over 20 health services in Victoria. Cathy has a Masters Research Degree in minimising mechanical restraint in acute health and is currently a PhD Candidate at The University of Melbourne.

Ms Vikki Dearie, is a registered psychiatric nurse and has worked in healthcare since 1992. She is currently the MOCA Coordinator within Melbourne Health and has held that position for five years. A large component of her role has been devoted to developing and delivering evidence based tailored education for Melbourne Health staff that is directly relevant and applicable to the varied clinical settings. Her focus has been improving flexibility and access to education, and the promotion of prevention and use of non coercive interventions to manage escalating aggression. Vikki was responsible for the successful funding application and subsequent development of the MOCA REDI pilot project in collaboration with Royal Melbourne Hospital ED and the University of Melbourne in 2009.

Ms Angela Holsheimer is a registered nurse and has worked in healthcare since 2004 both in Australia and the UK. Angela is an Associate Nurse Unit Manager at The Royal Melbourne Hospital ED and has an avid interest in reducing and managing clinical aggression in our hospitals. Angela is currently studying a Master of Advanced Practice, Emergency Nursing stream through Griffith University.

Appendix 2: Violence Prevention and Management Training Standards Questionnaire

Please complete this questionnaire to provide us with more information on your organisation current violence prevention and management practices. The more detail provided, the better we can describe current practices.

1. What is the name of the training program your organisation uses? Was this developed in-house?

2. What modes of delivery are used for violence prevention and management training to **clinical staff** at your organisation?
   a. online
   b. face to face
   c. self directed learning package,
   d. simulation and role play
   e. combination of methods(please describe)

3. Are there any differences in the training delivered to nurses and doctors? (please describe)

4. What is the total length of the training program? (please describe if tiered programs)

5. Is there any assessment attached to this training? If so what form does it take?

6. Compared to the training that is delivered to clinical staff in your organisation what are the key differences (if any) in that provided to **security and clerical staff**?
   a. Please describe any differences:
   b. Does the program for clerical and security staff include a mental health literacy component?

7. How frequently must **clinical staff** attend training?
   a. is there a refresher program or do staff re do the same course?

8. Who provides the training?
   a. internal provider
   b. external provider

9. What education is provided to trainers and how are the trainers skills maintained?

10. How does your organisation evaluate the success of the training?

11. In terms of governance, how are training outcomes linked to quality improvement activities in your organisation?

12. Does your organisation have Key Performance Indicators (KPIs) for violence prevention and management training?
    a. Please describe these KPIs

13. What response does your organisation have in place for managing actual and potentially violent episodes?
    a. Code Grey Only
    b. Code Grey and Planned Code Grey
    c. Other type of response (Please describe)

14. What are your organisations major barriers in the delivery of violence prevention and management training?

15. What would you consider to be your organisations biggest win in violence prevention and management training?

16. Are there any other issues regarding training you would like to discuss?