



SafeWork NSW



Understanding and preventing work-related violence in hospital settings: A systems thinking approach

Final Report (Revised February 25, 2021)

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Executive Summary

Work-related violence in hospital settings is a complex and growing issue that has significant personal, societal and economic costs. The complexity and multi-factorial nature of the issue is such that it is extremely difficult to understand and manage, and interventions have had varying levels of success. Systems thinking is one approach that is currently popular in the field of safety science when attempting to understand and respond to complex safety-related issues.

As part of their ongoing efforts to support improved prevention and management of work-related violence in hospital settings, SafeWork NSW funded the Centre for Human Factors and Sociotechnical Systems to undertake an exploratory research project applying systems thinking to the issue of work-related violence in hospital settings in New South Wales (NSW).

The aims the research were to apply systems thinking methods to enhance understanding of work-related violence in hospital settings in NSW and to develop a series of novel interventions designed to support enhanced prevention and management of the issue. The research involved three phases, including:

1. Development of an ActorMap showing the stakeholders who share the responsibility for work-related violence in hospital settings in NSW;
2. Development of an AcciMap showing the factors which, according to the literature and subject matter experts, interact to create work-related violence in hospital settings in NSW; and
3. Development of a series of PreventiMaps outlining networks of potential interventions which could enhance the prevention and management of work-related violence in hospital settings.

All three phases involved the conduct of workshops with stakeholders who either currently share the responsibility for work-related violence in the healthcare sector; are responsible for designing and implementing incident prevention strategies within hospitals; or are experienced in human factors and systems thinking.

The findings demonstrate that work-related violence is an emergent property that is influenced by a large and diverse set of actors spanning multiple levels of the hospital system. In short, work-related violence is not a problem that is solely related to patients,

healthcare workers, and security staff. Rather, there are multiple actors who share the responsibility for work-related violence.

The findings also demonstrate that work-related violence incidents in hospital settings are caused by multiple contributory factors from across the hospital system. The high number of contributory factors identified during this research suggests that there are many different causal pathways which lead to incidents of work-related violence. Improved prevention and management of work-related violence can therefore only be achieved through system reform. To facilitate the identification of potential interventions, a series of key themes were identified. These include risk management, the provision of sufficient and capable staffing, timely and effective incident response, promoting the safety and dignity of patients and healthcare workers, incident reporting and learning systems, managing the risk of patients with a high propensity of violence, the design of hospital environments, collaboration, consultation and coordination across the hospital settings system, and public attitudes and behaviours towards healthcare workers. It is recommended that these themes be the immediate focus of future activities designed to enhance work-related violence prevention and management in hospital settings.

The final phase of the research resulted in a set of PreventiMaps showing potential interventions that could be explored in response to the key themes. The PreventiMaps include a range of interlinked interventions spanning all levels of the hospital setting system. A synthesis of the PreventiMaps revealed a core set of nine interventions which could have multiple positive impacts throughout the hospital system. It is recommended that stakeholders further investigate these nine interventions with a view to further development and implementation in the short term. In particular, the establishment of an independent multi-agency collaboration group is recommended as an important first step towards improved prevention and management of work-related violence in hospital settings in NSW.

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1. Introduction

WORK-RELATED VIOLENCE IN HOSPITAL SETTINGS

Work-related violence in hospitals is a complex and growing issue that has significant personal, societal and economic costs (Mento et al., 2020; World Health Organisation, 2020). Estimates vary, however, it has been suggested that up to 98% of emergency department staff experience physical or verbal forms of occupational violence (Cabilan et al., 2020) and that between 8% and 38% of all healthcare workers will suffer physical violence during their careers (World Health Organisation, 2020). Recent research suggests that the problem is of a similar scale in New South Wales (NSW) with a survey of nurses and midwives finding that close to half had experienced an episode of violence in the past week (Pich et al., 2019). Globally it has been noted that assaults on healthcare workers have been increasing over the past two decades (Mento et al., 2020).

Clearly action is required; however, the complexity of work-related violence in hospital settings is such that it is extremely difficult to understand and manage. Whilst various forms of intervention have been implemented globally, there have been varying levels of success (Morphet et al., 2018). Further work is required to form a more holistic understanding of the issue and develop new forms of intervention.

Systems thinking is one approach that is currently receiving significant attention in the field of safety science. Systems thinking methods can assist in the response to complex safety-related issues as they can be used to develop in-depth analyses of the system in which an issue occurs and identify what components of the system interact to create the issue. This provides a detailed description of contributory factors and supports the identification of 'leverage points' in the system where interventions can have large effects (Meadows, 2008). A more holistic consideration of hospital setting systems and the factors underpinning work-related violence can support the development of new interventions that go beyond the perpetrator and victims to consider the broader hospital system itself.

As part of their ongoing efforts to support improved prevention and management of work-related violence in hospital settings, SafeWork NSW funded the Centre for Human Factors and Sociotechnical Systems to undertake an exploratory research project applying systems thinking to the issue of work-related violence in hospital settings in NSW.

This report provides an overview of the findings from the project. The specific aims were to apply systems thinking methods to enhance understanding of work-related violence in hospital settings in NSW and to develop a series of novel interventions designed to support enhanced prevention and management of the issue. The outputs intend to support

SafeWork NSW in their efforts to better understand the contributory factors underpinning work-related violence in hospital settings and can potentially inform future decision making regarding the implementation of new interventions to prevent and manage work-related violence.

PROJECT PHASES, AIMS AND SCOPE

This report describes the findings from the following three interrelated phases:

1. **Development of an ActorMap for work-related violence in hospital settings in NSW.** An ActorMap was developed via a Subject Matter Expert (SME) workshop to identify the diverse set of actors who share the responsibility for work-related violence in hospital settings in NSW.
2. **Development of an AcciMap for work-related violence in hospital settings in NSW.** An AcciMap showing the factors which interact to create work-related violence in hospital settings in NSW was created based on a review of literature and two SME workshops. The AcciMap includes contributory factors across the hospital settings 'system', ranging from factors at the work environment and healthcare process levels to factors at the government and international levels.
3. **Development of recommendations for work-related violence interventions.** The final phase involved the development of a series of PreventiMaps to address work-related violence in hospital settings in NSW via an SME workshop. The PreventiMaps outline networks of potential interventions designed to optimise the prevention and management of work-related violence in hospital settings in NSW.

The specific aims and scope of the project were established by the research team in collaboration with the project management team at SafeWork NSW. These were determined as being to develop an ActorMap, AcciMap and PreventiMaps for work-related violence in hospital settings in NSW. Specifically, work-related violence was defined as:

“any incident where a person is abused, threatened or assaulted in circumstances relating to their work. Work-related violence covers a broad range of actions and behaviours that create a risk to health and safety” (SafeWork NSW, 2017).

Examples of work-related violence within this definition include (SafeWork NSW, 2017):

- any form of assault, such as biting, spitting, scratching, hitting, kicking punching, pushing, shoving, tripping, grabbing or throwing objects
- any form of indecent physical contact
- intimidating behaviour that creates a fear of violence, such as stalking or threatening to do any of the above.

A set of analysis boundaries were also specified for the project. These included that each of the three analysis phases would consider only:

1. Actors who have an influence on work-related violence in hospital settings in NSW;
2. Work-related violence that occurs in hospital settings, specifically within the boundary of hospital grounds; and
3. Service-related violence (e.g. between a patient and a healthcare worker) and internal violence (e.g. between healthcare workers).

Military hospitals, aged-care facilities, general practice facilities and home health care were deemed to be out of scope and were not considered during development of the ActorMap, AcciMap and PreventiMaps.

Formal approval for the research was provided by the University of the Sunshine Coast's Human Research Ethics Committee (A201441).

STRUCTURE OF REPORT

The report is structured to provide the reader with an overview of the systems thinking approach and methods adopted and the key findings from each research phase. An appendix section is included to provide specific research outputs.

Section 2 presents an overview of the systems thinking philosophy and its core principles along with an overview of the ActorMap, AcciMap and PreventiMap methods.

Section 3 presents an overview of phase 1 of the research, including an outline of the research methodology adopted, the resulting ActorMap, and a discussion of the key findings.

Section 4 presents an overview of phase 2 of the research, including an outline of the research methodology adopted, the resulting AcciMap, and a discussion of the key findings.

Section 5 presents an overview of phase 3 of the research, including an outline of the research methodology adopted, the resulting PreventiMaps, and a discussion of the key findings.

Section 6 summarises the findings from the overall research project and outlines a set of recommended steps for initiating the changes required to enhance the prevention and management of work-related violence in hospital settings in NSW.

2. Systems thinking

SYSTEMS THINKING

The term 'systems thinking' is used to describe a philosophy within the disciplines of human factors and safety science that is applied to understand and improve performance and safety in complex systems. It is most prominent in the area of accident prevention where it is characterised by a number of accident causation models and analysis methods (e.g. Dekker, 2011; Hulme et al., 2019; Leveson, 2004; Perrow, 1984; Rasmussen, 1997; Reason, 1997; Svedung and Rasmussen, 2002). These state-of-the-art models are underpinned by the notion that safety and accidents are emergent properties arising from non-linear interactions between multiple components across complex sociotechnical systems (e.g. Leveson, 2004). This creates a shared responsibility for safety that spans all levels of work systems, up to and including the government and international organisations. The overall system therefore becomes the unit of analysis with attempts to understand behaviour looking beyond the so-called 'sharp-end' (e.g. individuals directly involved in incidents and the immediate circumstances) to also consider factors within the broader organisational, social or political system. This means that decisions and actions made at government, regulatory and organisational levels all play a role in incident causation. Whilst various models exist, Rasmussen's risk management framework (Rasmussen, 1997) is one of the most commonly applied within the safety science literature (Hulme et al., 2019; Salmon et al., 2020).

RASMUSSEN'S RISK MANAGEMENT FRAMEWORK

Rasmussen's risk management framework (Rasmussen, 1997; See Figure 2.1) argues that systems comprise various hierarchical levels (e.g. government, regulators, company, company management, staff, and work), each of which contain actors (individuals, organisations or technologies) who are co-responsible for system performance and safety. According to the model, decisions and actions at all levels of the hierarchy interact to shape performance, meaning both safety and accidents are influenced by all actors, not just front-line workers. Further, the framework argues that accidents are caused by multiple contributing factors, not just one bad decision or action. A key implication is that it is not possible to fully understand safety and accidents by decomposing the system and examining its components in isolation; rather, it is the interactions between all system components that are of interest. The more that components and interactions are studied together, the closer one can get to understanding system performance and the factors influencing it.

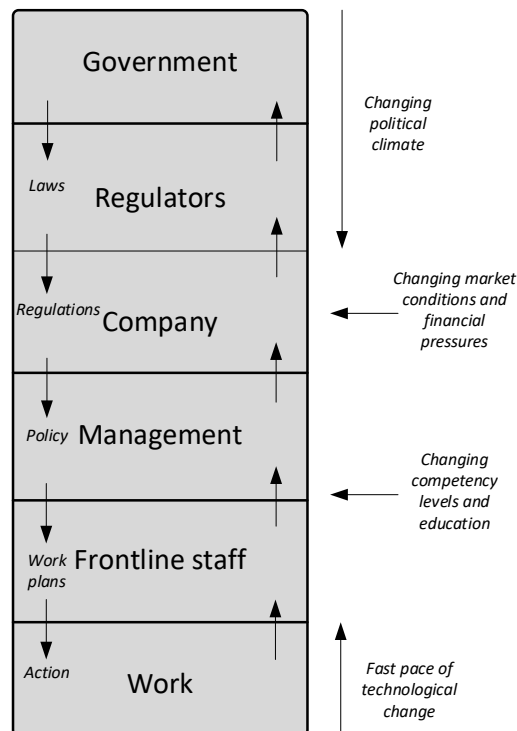


Figure 2.1. Rasmussen's risk management framework (adapted from Rasmussen, 1997).

Rasmussen's framework makes a series of assertions regarding safety and accident causation. These have been adapted below to fit the context of work-related violence in hospital settings:

1. Work-related violence is an emergent property that is impacted by the decisions and actions of all actors, not just healthcare workers, patients, family members and security staff alone;
2. Work-related violence incidents are caused by multiple contributing factors from across hospital systems, not just a single poor decision or action at the sharp-end;
3. Work-related violence incidents can result from a lack of poor communication and feedback (or 'vertical integration') across levels of hospital systems, not just from deficiencies at one level alone;
4. Lack of vertical integration is caused, in part, by lack of feedback across levels of hospital systems;
5. Behaviours within hospital systems are not static, they migrate over time and under the influence of various pressures such as production, financial, and psychological pressures;
6. Migration occurs at multiple levels of hospital systems;

7. Migration of practices cause hospital system defences to degrade and erode gradually over time, not all at once. Work-related violence incidents are caused by a combination of this migration and a triggering event(s).

A key feature of Rasmussen's risk management framework is that it provides the ActorMap and AcciMap methods to support systems thinking-based analyses of complex systems and adverse events.

ACTORMAP AND ACCIMAP

Together, ActorMap and AcciMap form an integrated accident analysis method which can be used to describe and analyse accidents in line with Rasmussen's risk management framework (Rasmussen, 1997). The methods were developed in response to limitations of other accident analysis methods such as an inability to model the network of contributory factors involved in accidents (Svedung & Rasmussen, 1997). To support application of Rasmussen's risk management framework, both methods view behaviour, safety and accidents as emergent properties that are created by the decisions and actions of all stakeholders within a system – politicians, chief executives, regulators, managers, supervisors, safety officers, and work planners – not just by those of front-line workers alone (Cassano-Piche et al, 2009). The methods thus differ from typical accident analysis methods in that, rather than identifying and apportioning blame at the sharp-end, it is used to identify and represent the causal flow of events upstream from the accident including the planning, management, governance and regulatory activities that may have contributed (Svedung & Rasmussen, 2002).

ActorMap forms the first analysis component and is used to provide a representation of the stakeholders ('actors') who operate within a particular system and thus share the responsibility for safety and accidents. The method typically involves identifying relevant actors at the following six hierarchical levels (though these are flexible and can be modified if required): government policy and budgeting; regulatory bodies and associations; local area government planning & budgeting (including company management); technical and operational management; physical processes and actor activities; and equipment and surroundings). The resulting ActorMap shows which actors operate with the system and at which level of they reside. For example, a generic ActorMap is presented in Figure 2.2.

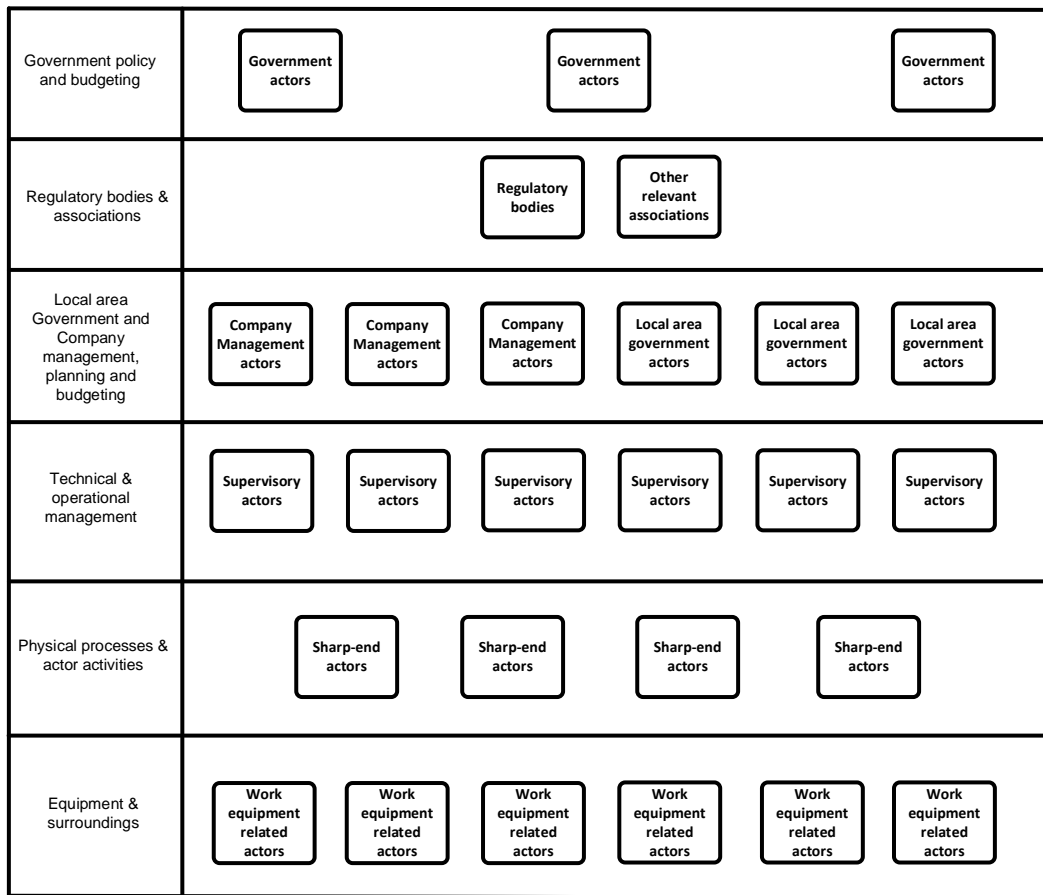


Figure 2.2 Generic ActorMap

Once the ActorMap is developed the AcciMap method is used to identify and represent contributory factors across the same hierarchical levels included in the ActorMap. When AcciMap is used to analyse a specific incident or accident, contributory factors are identified and placed at the relevant level and are subsequently linked between and across levels based on cause-effect relations. Alternatively, AcciMap can also be used to represent the contributory factors underpinning a general safety issue (as opposed to an individual accident event). This involves placing types or groups of contributory factors across the hierarchical levels without specifying the relationships between them (e.g. Salmon et al., 2014; 2020). A generic template for an AcciMap diagram is presented in Figure 2.3.

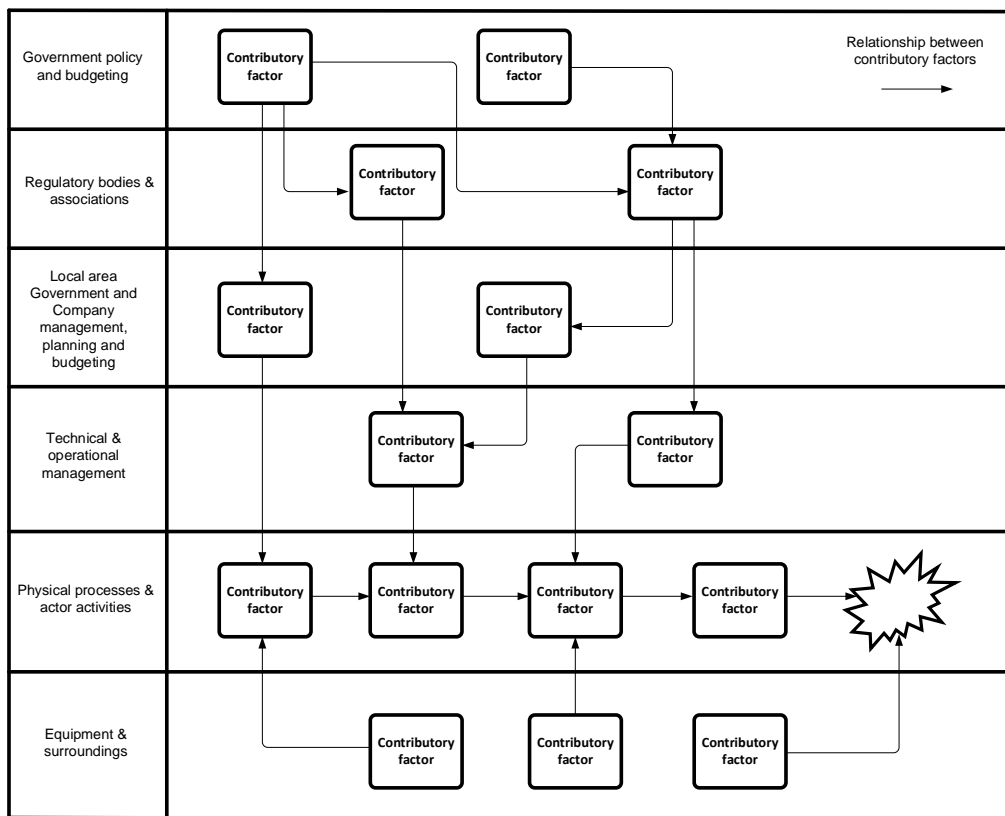


Figure 2.3 Generic AcciMap.

Starting from the bottom of the AcciMap, the equipment and surroundings level includes factors associated with the work environment in terms of the physical and natural characteristics of the environment, such as buildings, infrastructure, equipment and tools. The physical processes and actor activities level provides a description of events at the sharp-end immediately prior to the incident in question. The remaining levels above the physical processes level enable analysts to identify the decisions and actions made by supervisors, managers, executives and actors at the regulatory and government levels that played a role in the incident.

Importantly for this research project, the ActorMap and AcciMap methods can be used to explore the actors and contributory factors associated with a set of incidents, or safety issue, beyond just looking at individual accidents or incidents. For example, these approaches have been applied previously to understand the factors influencing a wide range of issues including access to treatment for eating disorders (Lane et al., 2020), injury causation (Salmon et al., 2014) and road safety issues such as driver distraction (Young & Salmon, 2015).

PREVENTIMAPS

PreventiMap is a recently developed method which is used to depict the network of interventions that is required to respond to critical safety issues (Goode, et al., 2016). PreventiMaps are typically developed based on an AcciMap analysis of a particular issue, with the output intended to drive the development and implementation of effective interventions. PreventiMaps use the same hierarchical structure and levels as ActorMap and AcciMap and show what interventions are required at each level of the system in question to prevent or manage a particular safety issue. The interventions are linked in a network showing how interventions at one level can support those at other levels. A generic PreventiMap is presented in Figure 2.4.

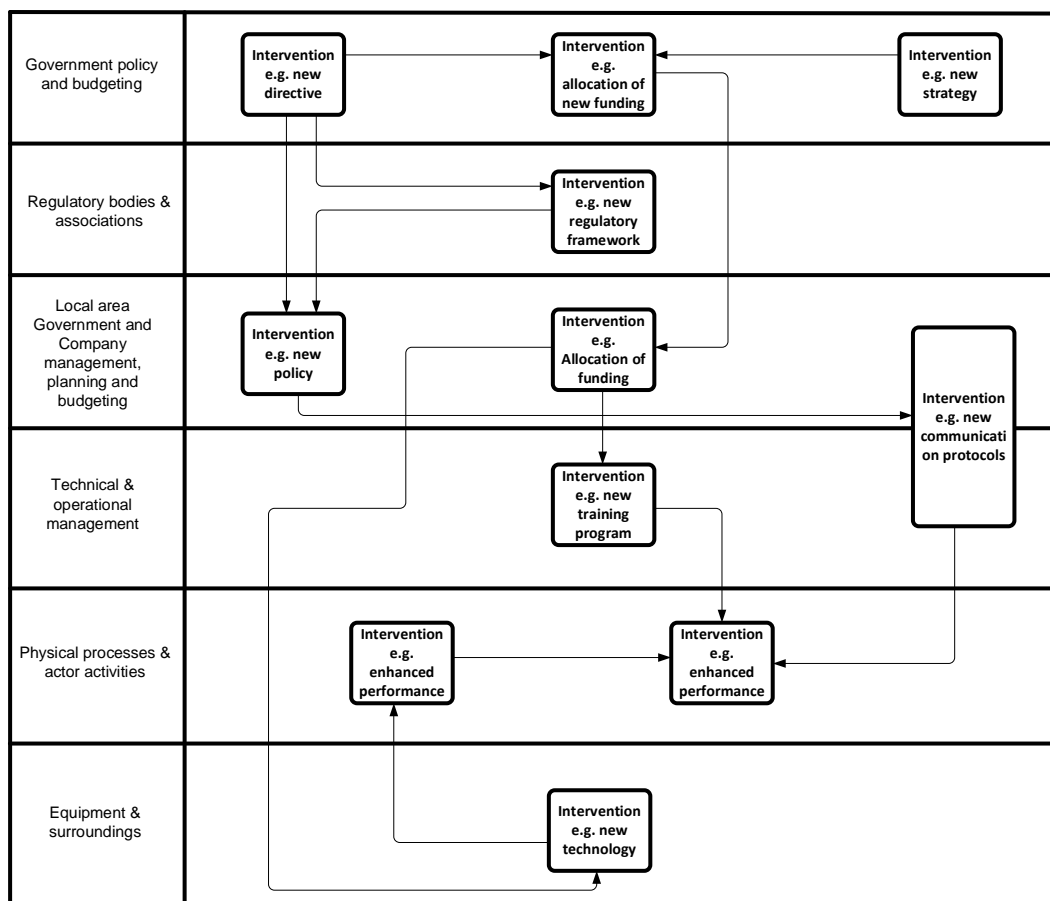


Figure 2.4 Generic PreventiMap

SUMMARY

This section has provided an overview of the systems thinking philosophy and the three methods applied in this project to understand and respond to complex issue of work-

related violence in hospital settings. To summarise, there are three key principles of the systems thinking approach that are important to consider when examining work-related violence in hospital settings.

First, work-related violence in hospital settings is created by an interacting network of contributory factors that spans all levels of hospital systems from the operational front-line (healthcare worker, equipment and environment) all the way up to, and including, regulation, government and relevant international bodies.

Second, this network of interacting contributory factors is created by the decisions and actions of all actors within the system, including front-line healthcare workers, workers, supervisors and managers, chief executives, regulators and relevant government personnel to name only a few. Accordingly, there is a shared responsibility for work-related violence that spans all levels of the work system.

Third and perhaps most important for the present project is that prevention activities should be blame free and take the overall hospital settings system as the unit of analysis rather than the individuals working within it. This involves going 'up and out' rather than 'down and in' during analysis efforts and considering all stakeholders when developing interventions (Dekker, 2011).

3. An ActorMap for work-related violence in hospital settings

INTRODUCTION

The aim of phase 1 of the research was to develop an ActorMap for work-related violence in hospital settings in NSW. The intention was to identify and document the stakeholders who share the responsibility for work-related violence in hospital settings in NSW. Whilst this is useful in of itself, the ActorMap was also developed to inform the identification of suitable participants for phases 2 and 3 of the research. This section presents an overview of the research methodology, the ActorMap, and the key findings from this phase of the research.

METHOD

Draft ActorMap development

A draft ActorMap was developed initially by the research team based on a review of relevant documentation and websites (e.g. NSW Ministry of Health website, Local Health District websites). This involved first modifying the original AcciMap level descriptions (see Figure 2.2) to fit the NSW context and then identifying relevant actors involved in healthcare delivery in hospital settings and the prevention and management of work-related violence and placing them at the appropriate level. A draft data dictionary was also developed describing the specific actors at each level of the draft ActorMap. The draft ActorMap and data dictionary were subsequently reviewed by members of the SafeWork NSW project management team and then refined by the research team based on the feedback provided.

Workshop 1

The draft ActorMap was reviewed and refined during an online zoom-based SME workshop (hereafter referred to as workshop 1). Recruitment of participants for the workshop targeted stakeholders who currently share the responsibility for work-related violence in the healthcare sector; individuals responsible for designing and implementing incident prevention strategies within hospitals; and individuals experienced in human factors and systems thinking. SafeWork NSW and the research team identified relevant SMEs via their industry networks and invited them to participate via email.

19 participants took part in workshop 1. An overview of the workshop participants' demographic information is presented in Table 3.1.

Table 3.1. Demographics for Workshop 1 participants

Gender	Male (n=7) Female (n=12)
Mean age in years	50.3 (SD=7.3)*
Current role	Chief Executive Officer / Director (n=5) WHS Managers (n=4) WHS Coordinators (n=4) Program Managers / Coordinators (n=4) Clinical Consultant (n=1) Inspector (n=1)
Organisation Types	Local Health Districts (n=10) NSW Ambulance (n=3) NSW Ministry of Health (n=3) Union (n=1) Privatised Service Provider (n=1) Regulator (n=1)
Mean years' experience in in current role	5.5 (SD=4.9)
Mean years' experience in roles where they shared the responsibility for work-related violence in the healthcare sector	14.6 (SD=7.8)**

* Missing data for two participants

** Missing data for three participants

During workshop 1 participants were given a presentation outlining the research project aims, systems thinking and the ActorMap method, and the phase 1 analysis aims and boundaries. Participants were then taken through each level of the draft ActorMap by the workshop facilitator. They were asked to confirm whether the actors included were appropriate and whether they felt that there were other relevant actors who should be added. Discussions regarding the level of influence of different actors led to shading of actors based on their decision-making authority in preventing or responding to a work-related violence incident. A member of the research team modified, removed or added actors using Microsoft Visio during the workshop based on participants' comments. Once the discussion for each level had concluded, an online poll system was used to gather participants' agreement on whether the contents of the ActorMap level were accurate. Once an agreement rate above 85% was achieved the workshop facilitator moved onto the next level of the ActorMap.

Following the workshop, the research team reviewed and refined the draft ActorMap and distributed it to participants via email for final review and comment. Participant feedback was incorporated by the research team.

RESULTS

The ActorMap for work-related violence in hospital settings in NSW is presented in Figure 3.1. A data dictionary describing each of the actors included in the ActorMap is presented in Appendix A.

Understanding and preventing work-related violence in hospitals: A systems thinking approach - ActorMap

Shaded boxes indicate actors with formal decision-making authority to prevent or respond to a work-related violence incident.

International	International Health Organisations	International Labour Organisation	International Organisation for Standardisation	International Practitioner Associations	International Union Organisations	World Health Organisation				
Government	Department of the Premier & Cabinet	Elected Officials	Federal Department of Health	Ministry of Health						
External Regulation, standardisation/coordination, industry representation and worker representation	Australian Commission of Safety & Quality in Healthcare	Australian Bureau of Statistics	Australian Health Infrastructure Alliance	Australian Security Industry Association Limited	Icare	Independent Commission Against Corruption				
	National Disability Insurance Agency	NSW Department of Justice	NSW Healthcare Complaints Commission	Professional Accreditation Bodies	Safe Work Australia	SafeWork NSW	Security Licensing & Enforcement Directorate			
	State Insurance Regulatory Authority	Unions	Practitioner/Industry Associations							
Healthcare Management / Centres of Expertise / Incident Response Management / Media	Agency for Clinical Innovation	Bureau of Health Information	Clinical Excellence Commission	Corrective Services NSW	Health Education & Training Institute	Legal Professionals	Labour Hire Companies	Media		
	Mental Health Review Tribunal	NSW Ambulance	NSW Fire & Rescue	NSW Healthshare	NSW Health Pathology	NSW Police	Private Hospitals	Privatised Service Providers	Public Guardian	Public Hospitals
	Tertiary Education Providers & Research Groups	Justice Health & Forensic Mental Health Network	Health Infrastructure NSW							
Healthcare Delivery Specialists / Coordinators / WHS specialists	Agency Carers (External)	Auditors & Investigators	Code Black Team Leaders	Dispatch Officers (Internal)	Dispatch Officers (External)	Educators & Trainers	External Medical Consultants	Health Relations Managers		
	Health Service Managers	WHS Consultant / Advisors								
Actors directly involved in violence within hospital settings	Ancillary Staff	Cleaning & Maintenance Staff	Family/Unpaid Carers/Visitors	Fire & Rescue Officers	Health & Security Assistants	Intruders	Medical Practitioners	Nursing Professionals	Paramedics	
	Patients	Patient Support & Assistants	Police Officers	Retail & Café Staff	Security Staff	Social Welfare Professionals	Specialist Medical Practitioners	Triage Staff	Volunteers	
Hospital Environment & Related Equipment	Ambulance Bay & Arrival Areas	Car Parking & External Areas	Communication Platforms	Education & Awareness Materials	Emergency Department	Emergency Service Vehicles	Furniture & Fittings	Healthcare Instruments & Equipment		
	Information Systems	Lifts & Stairwells	Nurse Stations	Offices & Staff Only Areas	Outpatient Clinics	Personal Protective Equipment	Pharmaceutical Storage	Public Areas & Toilets	Reception & Waiting Areas	Restraints
	Retail & Cafes	Safety Management systems	Security Systems	Treatment & Interview Rooms	Wards, inc Mental Health Wards					

Figure 3.1. ActorMap for work-related violence in hospital settings in NSW. Shaded boxes indicate actors with formal decision-making authority to prevent or respond to a work-related violence incident.

The following key findings can be taken from the ActorMap:

- There are a large and diverse set of actors and organisations who share the responsibility for work-related violence in hospital settings in NSW. This includes a total of 98 actors across seven levels of the NSW hospital system and extending beyond Government to include international organisations. It should be noted that some nodes in the ActorMap represent specific organisations or agencies (e.g. the Clinical Excellence Commission, the NSW Department of Justice, and the Ministry of Health) and some represent groups of individuals, organisations or agencies (e.g. Medical Practitioners, Health Service Managers, and Legal Professionals);
- According to Rasmussen's risk management framework, the decisions and actions made by the actors identified in the ActorMap interact to create work-related violence incidents. Likewise, each of the actors included has a role to play in enhancing the prevention and management of work-related violence in hospital settings in NSW; and
- The shading suggests that while many actors share the responsibility for addressing violence, relatively few have formal decision-making authority to prevent or respond to work-related violence incidents.

4. An AcciMap for work-related violence in hospital settings

INTRODUCTION

The aim of phase 2 of the research was to develop an AcciMap for work-related violence in hospital settings in NSW. The intention was to identify and document the network of contributory factors which, according to the literature and SME group, play a role in work-related violence in hospital settings in NSW. This section presents an overview of the research methodology, the AcciMap, and a summary of the key findings.

METHOD

Development of the AcciMap involved two activities: an 'umbrella' literature review and the conduct of two SME workshops.

Literature review

An umbrella review of the peer-reviewed literature relating to work-related violence in healthcare settings was undertaken. The aim was to identify the range of contributory factors described in the peer-reviewed literature as playing a role in work-related violence in hospital settings. An umbrella review considers published systematic literature reviews on the topic of interest. Hence the review focused only on systematic reviews of work-related violence in healthcare published in the peer-reviewed literature.

Electronic Search

Six databases (EBSCO, Informit, Proquest, PubMed, Scopus, and Web of Science) were searched for publications relating to violence in healthcare settings using the following search strategy "(Violen* OR Aggressi* OR Assault) AND (Hospital OR Healthcare OR Emergency department OR Ward) AND (Systematic Review OR meta-analysis) AND (Workplace OR Work-related)".

For publications to be eligible for inclusion in the review, they had to comply with the following criteria:

1. The aim of publication was to understand the factors that contribute to violent, aggressive, or assault related incidents in a healthcare setting (e.g. psychiatric unit, health facility, or hospital setting);
2. The publication must include an integrative, systematic or meta-analytic review of the peer-reviewed literature;
3. The publication must be published in the peer reviewed literature;
4. The publication must be available in English.

Figure 4.1 provides an overview of the process used to identify publications to be included in the umbrella review.

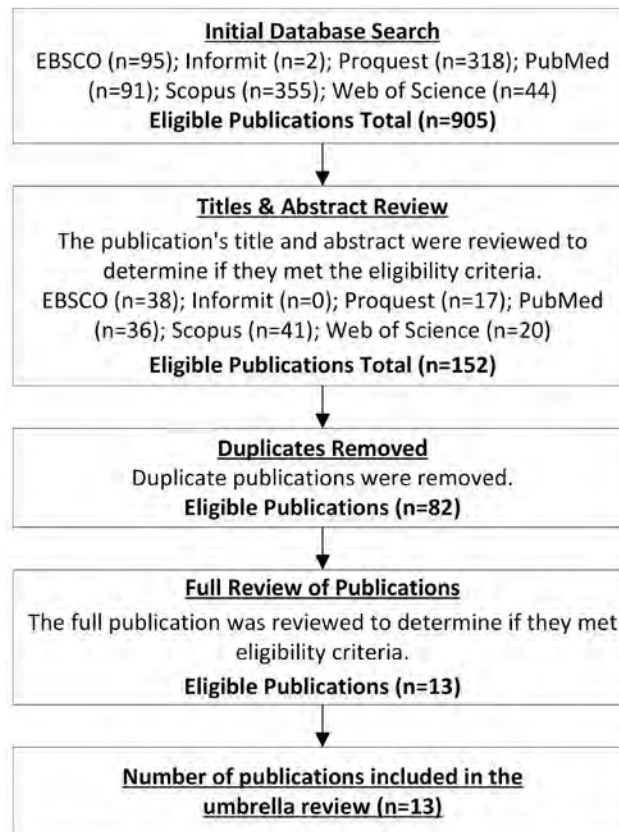


Figure 4.1 Publication selection process

Data extraction

Once publications were determined to meet the inclusion criteria, they were reviewed in full and the following data was extracted from each publication:

1. Journal name;
2. Year of publication;
3. Stated aim of the review;
4. Review type (systematic, integrative, meta-analytic);
5. Number of articles included within the review;
6. Type of violence (Patient to Healthcare Worker (HCW) or HCW to HCW);
7. Domain (psychiatric unit, health facility, or hospital setting); and
8. Contributory factors deemed to play a role in work-related violence in healthcare settings.

An overview of the data extracted is provided in Appendix B.

Contributory factors thematic analysis

One analyst collected and organised the contributory factors identified in each publication into the ActorMap's seven hierarchical levels using Nvivo 12. Nvivo is a software application used for the collection, organisation and analysis of a qualitative data. During a series of AcciMap development meetings, the USC research team confirmed that the contributory factors were placed at the correct level and used the Thematic Analysis Method (Clarke, Braun, & Hayfield, 2015) to organise the factors into themes. For example, the contributory factors 'communication skills' and 'unqualified staff' were coded into the 'HCW Knowledge, Skills, & Experience' theme and placed at the 'Actors directly involved in violence within hospital settings' level in the AcciMap. Further, the contributory factors 'Lighting', and 'Noise', 'Odours', and 'Temperature' were coded into the 'Noise and Ambiance' theme and placed at the 'Hospital environment and healthcare-related equipment' level.

This process resulted in a draft AcciMap. Following this, an associated data dictionary was then developed to provide a description of each of the contributory factors included in the AcciMap. The draft AcciMap was subsequently reviewed and refined by the research team during a series of AcciMap development meetings.

SME workshop

The draft AcciMap was reviewed and refined during two online SME workshops (hereafter referred to as workshops 2 and 3). Two workshops were required during this phase of the research to ensure that participant numbers were appropriate to allow the entire AcciMap to be considered within a four-hour timeframe. Participants from workshop 1 were invited to take part in workshops 2 and 3 via email.

Workshop groups were then tailored to ensure that there was appropriate representation of stakeholders from across the ActorMap in both workshops. To achieve this, participants were divided into two groups based on the level of the ActorMap at which they currently work. Workshop 2 included representatives from unions, regulators, clinical consultants, and healthcare practitioners & hospital employees, and workshop 3 included representatives from public and private hospital management, work health and safety (WHS) managers/coordinators, and government departments.

A total of 16 participants took part in workshops 2 and 3. An overview of the participants is presented in Table 4.1.

Table 4.1 Demographic information for workshop 2 and 3 participants

Gender	Male (n=6) Female (n=10)
Mean Age in years (SD)	48.7 (SD=10.2)*
Roles	Chief Executive Officer / Director (n=2) WHS Manager (n=5) WHS Coordinators (n=3) Program Managers / Coordinators (n=3) Clinical Consultant (n=1) Inspector (n=1) Nursing Professional (n=1)
Organisation Types	Local Health District (n=8) NSW Ambulance (n=1) NSW Ministry of Health (n=2) Union (n=2) Privatised Service Provider (n=1) Regulator (n=2)
Mean years' experience in in current role (SD)	5.8 (SD=7.6)
Mean years' experience in roles where they shared the responsibility for work-related violence in the healthcare sector (SD)	11.6 (SD=8.9)**

*Missing data for one participant

** Missing data for two participants

At the beginning of workshops 2 and 3 participants were given a presentation outlining the research project aims, systems thinking and the AcciMap method, and the analysis aims and boundaries. Participants were then taken through each level of the level of the AcciMap by the workshop facilitator and asked to confirm whether they felt that the contributory factors included were relevant for the NSW context and whether there were other relevant contributory factors that should be added. Participants in workshop 2 reviewed the initial draft AcciMap developed by the research team and participants in workshop 3 reviewed the version updated with feedback from the participants in workshop 2. A member of the research team modified, removed or added contributory factors during each workshop based on participants' comments. Once the discussion for each level had ended, the online poll system was again used to gather participants' agreement on whether the contents of the AcciMap level were accurate. Once an

agreement rate above 85% was achieved the workshop facilitator moved onto the next level of the AcciMap.

Following workshops 2 and 3 the research team reviewed and refined the draft AcciMap and data dictionary, again using the Thematic Analysis Method. Participants were emailed a copy of the revised AcciMap and data dictionary and were invited to review and provide any final comments. The AcciMap and data dictionary were finalised based on the participants' feedback.

Identification of key themes

Once the AcciMap was finalised, the research team reviewed it to identify key themes that could be focused on during phase 3 of the research. This involved identifying sets of contributory factors in the AcciMap that interact and create an overall issue which plays a key role in work-related violence in hospital settings.

RESULTS

The full AcciMap developed based on the literature review and SME workshops is presented in Appendix C. A data dictionary describing each of the contributory factors included in the AcciMap is presented in Appendix D. As the full AcciMap is large and complex, a summary is presented in Figure 4.2.

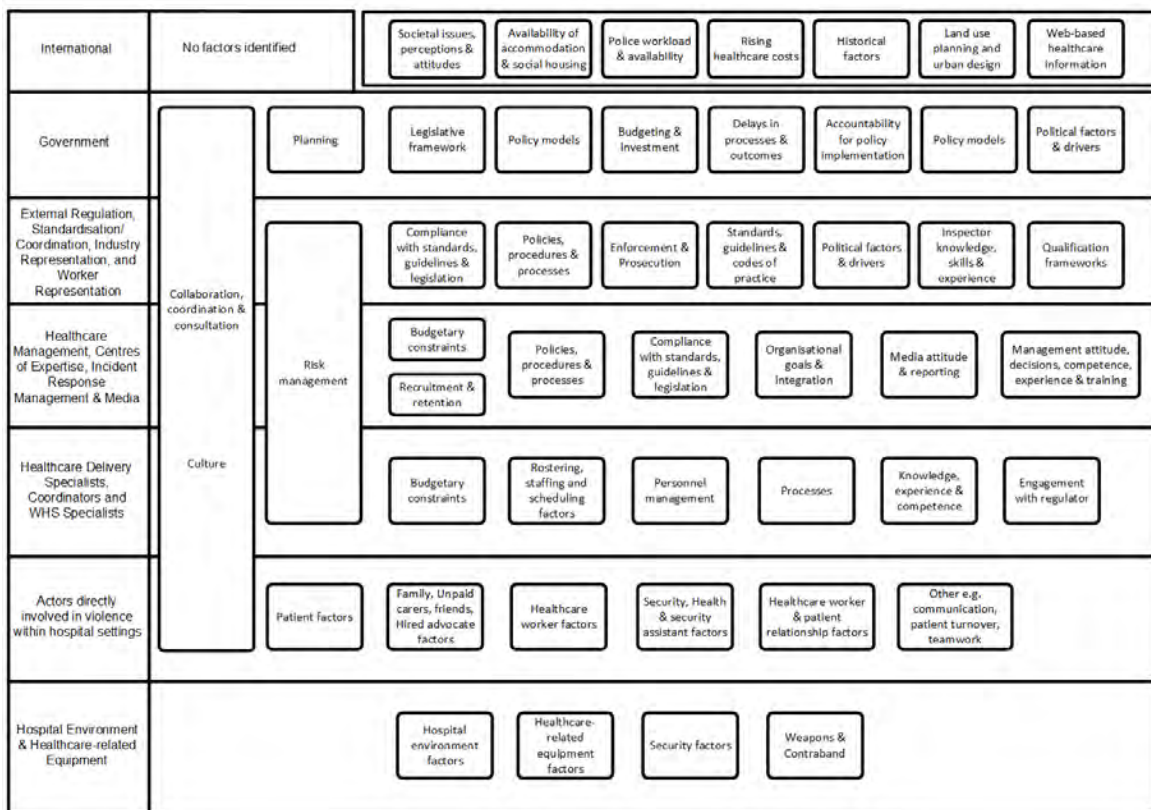


Figure 4.2. AcciMap showing the contributory factors involved in work-related violence in hospital settings in NSW.

As shown in Figure 4.2, a large set of contributory factors were identified across all levels of the NSW hospital settings system.

At the ‘Hospital environment and healthcare related equipment’ level, the contributory factors identified relate to the hospital environment (e.g. the design of hospital spaces, furniture and fixtures, access to food and drink), security equipment (e.g. inadequate security equipment, uniform design), healthcare related equipment and systems (e.g. Care plans/Action plans/Clinical behaviour management plans, medication storage, healthcare equipment used as a weapon), and contraband and weapons.

At the ‘Actors directly involved in violence within hospital settings’ level, the contributory factors identified relate primarily to patients (e.g. characteristics, attitude, mental state, satisfaction with care), healthcare workers (e.g. knowledge, skills and experience, attitude, fatigue and mental state, substance use), actors accompanying patients (e.g. family, unpaid carers, friends), security and Health & Security Assistants (HSAs), and the relationship between healthcare workers and patients (e.g. cultural/gender/religious diversity issues, patient demands on healthcare workers, invasion of privacy).

At the *'Healthcare delivery specialists, coordinators and WHS specialists'* level, ten contributory factors were identified ranging from budgetary constraints, personnel management, rostering, ward schedules and staff shortages to specialist and coordinator attitudes, knowledge, skills and experience, and willingness to engage with the regulator.

Outside of the bottom two levels of the AcciMap the *'Healthcare management, centres of expertise, incident response management and media'* level has the greatest number of contributory factors. These include factors relating to budget, recruitment and retention, policies, procedures and processes, compliance with standards, guidelines and legislation, organizational goals and integration of systems across organisations, the media, and management (e.g. attitude, competence, experience).

The *'External regulation, standardisation/coordination, industry representation and worker representation'* level include factors relating to compliance with standards, guidelines and legislation, policies, procedures and processes, enforcement and prosecution, standards, guidelines and codes of practice, political factors and drivers, inspector knowledge skills and experience, and qualification frameworks.

Contributory factors identified at the *'Government'* level include legislative framework, planning, policy models, budgeting and investment, process delays, accountability for policy implementation, policy models and political factors and drivers.

A set of contributory factors spanning multiple levels of the AcciMap were also identified. These include collaboration, consultation and coordination between actors across the hospital settings system, culture, and risk management practices.

Finally, a set of contributory factors deemed to be relevant but external to the hospital settings system were also identified. These included societal factors such as societal attitudes towards healthcare, increasing levels of alcohol and drug use, rising levels of anger and frustration in society, the rising costs of healthcare, urban planning and the availability of housing (e.g. a lack of accommodation or social housing for discharged patients), the availability of Police, and historical factors relating to the political and social treatment of doctors and healthcare professionals.

SUMMARY

The aim of phase 2 was to develop an ActorMap which depicts the contributory factors that play a role in work-related violence in hospital settings in NSW. The resulting AcciMap shows a complex and diverse set of contributory factors spanning six levels of the hospital settings system as well as a set of contributory factors deemed to reside outside of the hospital settings system. The contributory factors identified demonstrates the complexity of the issue, with a wide range of factors associated with multiple parts and stakeholders

of the hospital settings system. The high number of contributory factors identified also indicates that there are multiple different causal networks which interact to create work-related violence. In short, there are many ways in which work-related violence can emerge. As such, a key finding from phase 2 is that improving the prevention and management of work-related violence will not be a simple endeavor and that multiple interventions across all levels of the hospital settings system will be required. In short, fundamental changes to the hospital settings system are required.

To facilitate these changes, the following nine key themes were extracted from the AcciMap:

1. **Risk Management.** Refers to the guidelines, tools and processes that are used to manage the risks associated with work-related violence in hospital settings. Specific factors include risk management-related policies and procedures, risk assessment tools, risk management plans and the budget allocated to support risk management activities.
2. **Sufficient & Capable Staffing.** Refers to the recruitment, training, rostering and retention of sufficiently skilled staff to support the prevention and management of work-related violence in hospital settings. Example factors include recruitment processes, salary levels, training and education, rostering and planning, staff shortages, and HCW knowledge, skill and experience levels.
3. **Timely & Effective Incident Response.** Refers to a set of factors which prevent a timely and efficient response to work-related violence incidents, including incident response policies and procedures, staff training and education, HCW knowledge, skills and experience, and factors relating to security and healthcare and security assistant personnel including knowledge, skills and experience, workload, and role definition.
4. **Promoting the Safety & Dignity of Patients & Healthcare Workers.** Refers to a set of factors relating to balancing the need to promote the safety and dignity of patients and of healthcare workers. Factors include the prioritisation of patient safety over staff safety, culture, management attitude and decision making, and HCW knowledge, skills, experience and attitudes.
5. **Incident Reporting & Learning Systems.** Refers to a set of factors relating to the quality of the incident reporting learning systems used, their outputs, and the extent to which learning occurs. These include the incident reporting and learning system guidelines, policies and procedures, the design of the incident reporting system, the resources available to support appropriate and effective reporting, the response to incident reports and use of investigations and audits, and the skill sets of reporters and incident investigators.

6. **Managing Risk of Patients with High Propensity of Violence.** Refers to a set of factors which influence how well patients with a known high propensity for violence are managed, including National standards and codes of practice for work-related violence, budgetary constraints, HCW and security staff knowledge, skills and experience, rostering, care plans and action plans, culture, communication, and security equipment.
7. **The Design of Hospital Environments.** Refers to a set of factors relating to the design of hospital environments, including design guidelines, standards and processes, the physical design of hospital spaces themselves, furniture and fittings, and budgetary constraints surrounding hospital design.
8. **Collaboration, Consultation & Coordination across the System.** Refers to a set of factors which interact to limit collaboration, consultation and coordination across the hospital system. Examples include culture, communication and teamwork, a lack of consultation when making changes to policies and procedures, and silos across the hospital setting system.
9. **Public Attitudes and Behaviours towards Healthcare Workers.** Refers to a set of factors which influence public attitudes and behaviours towards healthcare workers, including societal attitudes towards healthcare workers, rising levels of societal anger, patient prejudices, attitudes and mental states, substance abuse, family member attitudes, and issues relating to cultural and religious diversity.

5. Strategies to prevent work-related violence in hospital settings

INTRODUCTION

The aim of phase 3 of the research was to develop a series of PreventiMaps describing potential interventions that could be explored in response to the key themes identified in phase 2. The intention was to identify and document potential networks of interventions which could be explored further following the project. This section presents an overview of the method, the PreventiMaps, and a summary of the key findings.

METHOD

Development of the PreventiMaps involved the conduct of an online SME workshop (hereafter referred to as workshop 4). Participants from workshops 1, 2 and 3 were invited participate in workshop 4 via email. 14 participants took part in workshop 4. An overview of the participants is presented in Table 5.1.

Table 5.1. Demographic information for workshop 4 participants

Gender	Male (n=5) Female (n=9)
Mean Age in years (SD)	50.3 (SD=7.6)*
Roles	Chief Executive Officer / Director (n=2) WH&S Manager (n=6) WH&S Coordinators (n=1) Program Managers / Coordinators (n=3) Clinical Consultant (n=1) Inspector (n=1)
Organisation Types	Local Health District (n=7) NSW Ministry of Health (n=2) Union (n=2) Privatised Service Provider (n=1) Regulator (n=2)
Mean years' of experience in in current role (SD)	5.8 years (SD=4.5)
Mean number of years' experience in roles where they shared the responsibility for work-related violence in the healthcare sector (SD)	9.4 (SD=5.7)*

* Missing data for two participants

During workshop 4 participants were given a presentation outlining the research project aims, systems thinking and system thinking design principles, and the PreventiMap method, and the analysis aims and boundaries. Various lateral thinking exercises were also used throughout the workshop to prime participants for creative and innovative thinking.

Given that the nine themes identified from the AcciMap were used to underpin this workshop, it was important to begin by giving participants the opportunity to provide their broader ideas regarding interventions. Therefore, at the beginning of the workshop the group was asked to respond to the question “What countermeasures can you think of that would help prevent violence in hospital settings” in the group chat function. Participants responses were themed by the research team and are provided in Appendix E.

Participants were then divided into three groups and each group was allocated to a member of the research team who subsequently acted as group facilitator. The three groups were then placed into separate Zoom breakout rooms and asked to develop a PreventiMap for one of the nine issues identified in phase 2 of the research. This involved the group discussing and agreeing on potential interventions for the issue in question and the group facilitator adding the interventions to a PreventiMap template in Microsoft Visio. After approximately 60 minutes of discussion, the groups returned from their breakout room to the main Zoom meeting room and the group facilitator presented an overview of the draft PreventiMap to all participants. This process was repeated three times with each group focusing on a different issue each time. The output of this process was nine draft PreventiMaps, one for each of the nine themes extracted from the AcciMap.

Following workshop 4 the research team reviewed and refined the nine PreventiMaps and developed a tenth aggregate PreventiMap which included strategies that were found in three or more of the original nine PreventiMaps. The nine PreventiMaps were then sent via email to workshop 4 participants for review and comment. Additional interventions suggested by two or more participants were incorporated into the PreventiMaps. Where one or more participants disagreed with an intervention within the PreventiMap, the intervention was highlighted. All other comments received are presented in Appendix G. These comments should be taken into account in any future consideration of the proposed interventions.

RESULTS

The nine PreventiMaps developed during workshop 4 are presented in Appendix F. In total, across the nine PreventiMaps, 133 interventions were identified. The aggregate PreventiMap, showing the strategies common across three or more of the original nine PreventiMaps, is presented in Figure 5.1.

The aggregate PreventiMap includes nine sets of interventions which would facilitate many of the other interventions identified by the SME group. These nine interventions span all system levels except for the international level. Whilst many other interventions were identified (see Appendix F), the interventions included in Figure 5.1. could form useful first steps in attempting to improve the prevention and management of work-related violence in hospital settings. In particular, it is the authors view that the interventions situated at the top three levels of the PreventiMap as well as the interventions which span multiple levels of the PreventiMap represent pressing areas for further exploration in terms of design, development and implementation.

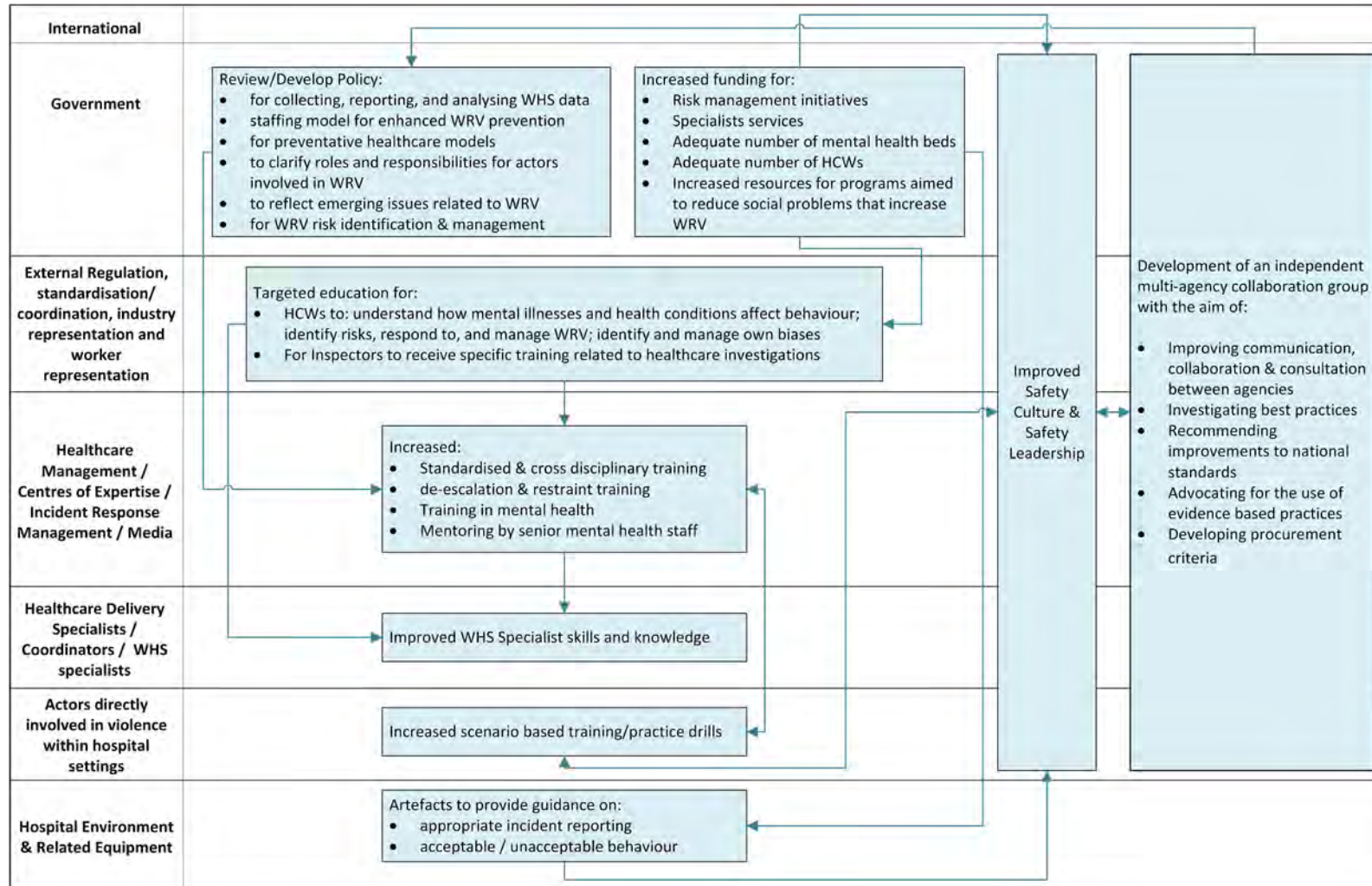


Figure 5.1. Aggregate PreventiMap showing the strategies common across three or more of the nine original PreventiMaps

6. Summary of project findings

This report provides an overview of the findings from an exploratory project which aimed to apply systems thinking methods to enhance our understanding of work-related violence in hospital settings in NSW and identify a series of potential interventions designed to support enhanced prevention and management of the issue. A number of key findings can be taken from the ActorMap, AcciMap and PreventiMaps during the research project.

WORK-RELATED VIOLENCE AS A SYSTEMS PHENOMENON

The first and most important finding from the research is the confirmation that work-related violence in hospital settings is a complex systems problem. Specifically, Rasmussen's seven accident causation tenets (outlined in section 2) were clearly demonstrated in the analysis outputs. First, as shown by the ActorMap and AcciMap, work-related violence is an emergent property that is influenced by a large and diverse set of actors spanning multiple levels of the hospital system. The analyses therefore confirms that work-related violence is not a problem that is solely related to patients, healthcare workers, and security staff. Rather, there are multiple actors who share the responsibility for work-related violence.

Second, the AcciMap demonstrates that work-related violence incidents are caused by multiple contributory factors from across the hospital settings system and not by the decisions and actions of patients, healthcare workers and security staff alone. Given the number and nature of contributory factors identified, it is clear that there are many different causal pathways which lead to incidents of work-related violence. The implication of this is that improved prevention and management of work-related violence can only be achieved through system reform and that targeting individual components in isolation will have only a minimal impact.

Third, the AcciMap shows how a lack of communication and 'vertical integration' plays a key role in work-related violence incidents and indeed their prevention. Specifically, various contributory factors relating to communication, collaboration, coordination and consultation, and feedback across the healthcare settings system were identified. These included a lack of communication and collaboration, coordination and consultation at various levels and issues with the reporting and feedback mechanisms available to support learning and prevention activities. A key finding from the research is that, in relation to work-related violence at least, vertical integration across the NSW hospital settings system

is currently sub-optimal. A key strategy moving forward will be to focus on enhancing communication and collaboration, coordination and consultation across the system.

Fourth, various example pressures which may be influencing the migration of practices were found at multiple levels of the NSW hospital settings system. For example, budgetary constraints and pressures were identified at multiple levels of the AcciMap and these were reported to have an influence on various other contributory factors such as staff recruitment, retention, and training. A key implication of this is that consideration should be given to how issues at higher levels of the NSW hospital settings system are influencing behaviour within hospitals.

THE FACTORS WHICH CONTRIBUTE TO WORK-RELATED VIOLENCE IN HOSPITAL SETTINGS

The AcciMap shows that, according to the literature and the SME group, multiple factors interact to create work-related violence incidents. These factors span six of the seven levels of the hospital settings system, and an additional set of factors external to the hospital settings system were identified. It is important to note that the factors identified do not relate to specific incident or set of incidents and therefore different combinations of the factors may occur in different incidents. A key implication from the AcciMap is that future efforts to improve prevention or management of work-related violence should attempt to address as many of the contributory factors identified as possible. To support this, nine key themes were extracted from the AcciMap with the intention of specifying ‘leverage points’ where interventions could have widespread effects on multiple contributory factors. The nine themes were risk management, the provision of sufficient and capable staffing, timely and effective incident response, promoting the safety and dignity of patients & healthcare workers, incident reporting and learning systems, managing the risk of patients with a high propensity of violence, the design of hospital environments, collaboration, consultation and coordination across the hospital settings system, and public attitudes and behaviours towards healthcare workers. It is recommended that these nine themes should be the immediate focus of future activities designed to enhance work-related violence prevention and management in hospital settings.

TOWARD THE IMPROVED PREVENTION AND MANAGEMENT OF WORK-RELATED VIOLENCE

The final phase of the research involved the development of PreventiMaps showing a series of potential interventions that could be explored in response to the key themes outlined above. The resulting nine PreventiMaps include a range of interlinked interventions spanning all levels of the hospital setting system. The proposed interventions

all warrant further investigation, refinement and development; however, a review and synthesis of the PreventiMaps, resulting in the aggregate PreventiMap, revealed a core set of interventions. These potentially represent the first set of interventions required to initiate improved prevention and management of work-related violence in hospital settings in NSW. Notably, it is likely that many of the interventions identified in the original nine PreventiMaps will be facilitated by the nine common interventions. It is therefore recommended that stakeholders further investigate the nine common interventions with a view to further development and implementation in the short term.

One intervention in particular, the establishment of an independent multi-agency collaboration group may represent an important first step in this process. Such a group could work to build on the present research by further assessing the feasibility, practicality, efficacy and sustainability of the interventions identified, and developing, designing and implementing the other potential interventions based on future research and international best practice. The research team is aware of a similar approach being used in Victoria to tackle the issue of safety at rail level crossings. The Victorian Railway Crossing Safety Steering Committee is a Ministerial Advisory Committee established under legislation and includes representatives from the relevant risk owners from the rail and road industry (both government and non-government organisations).¹ The Committee establishes strategies and action plans and monitors their implementation across the industry. Other models may also be considered. Importantly, this project has demonstrated that there is strong commitment from stakeholders across the hospital system in NSW to reduce work-related violence and create safer workplace environments for healthcare workers in NSW. The establishment of the multi-agency collaboration group would provide an opportunity to continue this engagement while improving communication and coordination across stakeholders, thus contributing to a wider cultural change.

STUDY LIMITATIONS

Three study limitations are worth noting. First, the interventions proposed within the PreventiMaps are not evidence-based; that is, we did not use evidence from the scientific literature to identify interventions or further refine the interventions proposed. Rather, the intention was to include potential interventions using the knowledge of stakeholders

¹ For more information see <https://www.ptv.vic.gov.au/footer/legal-and-policies/victorian-railway-crossing-safety-strategy/>

working within the system. Caution is therefore urged when interpreting the PreventiMaps. Further research exploring the evidence surrounding the efficacy of the proposed interventions is recommended.

Second, only a small number of participants from the lower levels of the NSW hospital system (e.g. clinical staff) took part in the workshops. Additional participants from the lower levels would have provided useful additional perspectives. Future intervention development activities should attempt to involve such participants in addition to the broader stakeholder group.

Third and finally, whilst the literature review was comprehensive, it revealed a lack of Australia-specific research on work-related violence in hospital settings. It is therefore recommended that further research be undertaken to explore work-related violence causation and prevention specifically in Australian hospital settings.

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Appendices

APPENDIX A – ACTORMAP DATA DICTIONARY

Levels	Actors
International	International Health Organisations
	International Labour Organisation
	International Organisation for Standardisation
	International Practitioner Associations <ul style="list-style-type: none"> • International Council of Nurses • International Society for Quality in Health Care • Public Services International
	International Union Organisations, for example: <ul style="list-style-type: none"> • Global Nurses United • International Hospital Federation • Public Services International
	World Health Organisation
Government	Department of the Premier and Cabinet
	Elected Officials
	Federal Department of Health
	Ministry of Health
External Regulation, standardisation/coordination, industry representation, and worker representation	Australian Commission of Safety & Quality in Healthcare
	Australian Health Infrastructure Alliance
	Australian Security Industry Association Limited (ASIAL)
	Icare
	Independent Commission against Corruption
	Justice Health & Forensic Mental Health Network
	National Disability Insurance Agency
	NSW Department of Justice
	NSW Healthcare Complaints Commission
	Professional Accreditation Bodies, for example: <ul style="list-style-type: none"> • APHRA • Nursing and Midwifery Board of Australia
	Safe Work Australia
	SafeWork NSW
	Security Licensing & Enforcement Directorate (SLED)
	State Insurance Regulatory Authority (SIRA)

Levels	Actors
	<p>Unions, for example:</p> <ul style="list-style-type: none"> • Australian Council of Trade Unions • Australian Salaried Medical Officers' Federation • Australian Services Union • Community and Public Sector Union • Health Services Union • NSW Nurses & Midwives Association • Occupational Health Services Union <p>Practitioner/Industry associations, for example:</p> <ul style="list-style-type: none"> • Aged and Community Services Australia • Australian College for Emergency Medicine • Australian Healthcare and Hospitals Association • Australian Institute of Health & Safety • Australian Institute of Health and Welfare • Australian Medical Association • Australian Nursing and Midwifery Federation • Australian Private Hospitals Association • Health Services Association of NSW (HAS NSW) • NSW Nurses and Midwives' Association (NSWNMA) • NSW Rural Doctors Network (RDN) • Nursing and Midwifery Council of NSW • Rural Doctors Association (NSW)
Healthcare Management / Centres of Expertise / Incident Response Management / Media	<p>Agency for Clinical Innovation (ACI)</p> <p>Bureau of Health Information</p> <p>Clinical Excellence Commission (CEC)</p> <p>Corrective Services NSW</p> <p>Health Education and Training Institute (HETI)</p> <p>Legal Professionals, for example:</p> <ul style="list-style-type: none"> • Solicitors • Barristers <p>Labour Hire Companies, for example:</p> <ul style="list-style-type: none"> • Security Contractor Providers <p>Media</p> <p>Mental Health Review Tribunal</p> <p>NSW Ambulance</p> <p>NSW Fire and Rescue</p>

Levels	Actors
	<p>NSW Healthshare</p> <p>NSW Health Pathology</p> <p>NSW Police</p> <p>Private Hospitals, including:</p> <ul style="list-style-type: none"> • Boards of Directors • Committees • Chief Executive Officers • Chief Financial Officers <p>Privatised Service Providers, for example:</p> <p>St Vincent’s Health</p> <p>Public Guardian</p> <p>Public Hospitals, including:</p> <ul style="list-style-type: none"> • Boards of Directors • Committees • Chief Executive Officers • Chief Financial Officers <p>Tertiary Education Providers & Research Groups, for example:</p> <ul style="list-style-type: none"> • TAFE • Universities
<p>Healthcare Delivery Specialists/Coordinators/ WHS specialists</p>	<p>Agency Carers (External)</p> <ul style="list-style-type: none"> • Paid carers who support the patient while they are in hospital • Patient Care Associates <p>Auditors & Investigators, including:</p> <ul style="list-style-type: none"> • Safety and Security Auditors and Investigators <p>Code Black Team Leaders</p> <p>Dispatch Officers (Internal)</p> <p>Dispatch Officers (External), for example:</p> <ul style="list-style-type: none"> • 000 call operators <p>Educators & Trainers</p> <p>External Medical Consultants, for example:</p> <ul style="list-style-type: none"> • Psychiatrists <p>Health Relations Managers</p>

Levels	Actors
	<p>Health Service Managers, for example:</p> <ul style="list-style-type: none"> • Nurse Managers • Ward Manager • Duty Operations Manager • Medical Leads • Clinical / Medical Directors
Actors directly involved in violence within hospital settings	<p>WHS Consultants/Advisors</p> <p>Ancillary Staff, for example:</p> <ul style="list-style-type: none"> • Ward Assistants • Bed Managers • Car Parking Attendants • Concierge • Administrative Staff • Transport Officers
	<p>Cleaning and Maintenance Staff, for example:</p> <ul style="list-style-type: none"> • Gardeners/Ground Staff • Cleaners • Maintenance/Engineering Staff
	<p>Family/Unpaid Carers/Visitors</p>
	<p>Fire & Rescue Officers</p>
	<p>Health & Security Assistants</p>
	<p>Intruders</p>
	<p>Medical Practitioners, for example:</p> <ul style="list-style-type: none"> • Generalist Medical Practitioners • Medical Practitioners in training <p><u><i>Terminology from the Australian Standard Classification of Occupations (ASCO)</i></u></p>
	<p>Nursing Professionals, for example:</p> <ul style="list-style-type: none"> • Registered Nurse • Enrolled Nurse • Assistant in Nursing • Registered Midwives • Registered Mental Health Nurses • Patient/Psychiatric/Medical Specials • Nursing Professionals in Training <p><u><i>Terminology from the Australian Standard Classification of Occupations (ASCO)</i></u></p>

Levels	Actors
	Paramedics
	Patients
	Patient Support & Assistants, for example: <ul style="list-style-type: none"> • Outpatient support assistance • Community Services Carers • Residential Carers • Department of Communities and Justice Carers • Customer Support Officers
	Police Officers
	Retail & Café Staff, for example: <ul style="list-style-type: none"> • Food Services Staff • Gift Shop Retail Assistants
	Security Staff
	Social Welfare Professionals, for example: <ul style="list-style-type: none"> • Social Workers • Counsellors • Psychologists • Ministers of Religion • Welfare Workers • Including social welfare professionals in training <u>Terminology from the Australian Standard Classification of Occupations (ASCO)</u>
	Specialist Medical Practitioners, for example: <ul style="list-style-type: none"> • Anaesthetists • Dermatologists • Emergency Medicine Specialists • Psychiatrists • Radiologists • Surgeons • Specialist medical practitioners in training <u>Terminology from the Australian Standard Classification of Occupations (ASCO)</u>
	Triage Staff
	Volunteers
Hospital Environment & Related Equipment	Ambulance Bay & Arrival Areas, for example: <ul style="list-style-type: none"> • Arrival areas to specialist mental health wards

Levels	Actors
	Car Parking & External Areas, for example: <ul style="list-style-type: none"> • No smoking areas
	Communication Platforms, for example: <ul style="list-style-type: none"> • Telephone • Video Conference facilities • Intercoms • Intranet • Telehealth
	Education & Awareness Materials, for example: <ul style="list-style-type: none"> • Posters • Brochures
	Emergency Department (ED)
	Emergency Service Vehicles
	Furniture & Fittings, for example: <ul style="list-style-type: none"> • Lights/lighting • Chairs • Fire extinguishers
	Healthcare Instruments & Equipment
	Information Systems, for example: <ul style="list-style-type: none"> • eHealth NSW • Clipboards • Patient Records
	Lifts & Stairwells
	Nurse Stations
	Offices & Staff Only areas, for example: <ul style="list-style-type: none"> • Lunchrooms • Staff toilets and showers • Locker rooms • Hospital Administration areas
	Outpatient Clinics
	Personal Protective Equipment, for example: <ul style="list-style-type: none"> • Bullet/Stab proof vests • Facemasks • Gloves • Body Worn Cameras

Levels	Actors
	Pharmaceutical Storage, for example: <ul style="list-style-type: none"> • Drug rooms • Dispensing areas
	Public Areas & Toilets
	Reception & Waiting Areas
	Restraints, for example: <ul style="list-style-type: none"> • Chemical restraints • Physical restraints
	Retail & Cafes, for example: <ul style="list-style-type: none"> • Shops • Cash handling areas
	Safety Management Systems, for example: <ul style="list-style-type: none"> • Incident reporting systems
	Security Systems, for example: <ul style="list-style-type: none"> • Camera systems • Duress alarms • Swipe card access points
	Treatment and Interview rooms, for example: <ul style="list-style-type: none"> • Triage
	Wards, for example: <ul style="list-style-type: none"> • Acute Aged care • Child/Paediatric • Intensive Care Unit • Maternity/Delivery Wards • Mental Health Wards • Mental Health Wards • Recovery Wards • Theatre Recovery

APPENDIX B – ARTICLES INCLUDED IN UMBRELLA REVIEW

Journal Name & Year of Publication	Stated Aim of the Review	Review Type	Number of Articles included in the review	Type of Violence	Domain
Salzmann-Erikson, M., & Yifter, L. (2020). Risk factors and triggers that may result in patient-initiated violence on inpatient psychiatric units: an integrative review. <i>Clinical nursing research</i> , 29(7), 504-520.	To identify and describe risk factors and triggers that may result in patient-initiated violence on inpatient psychiatric units.	Integrative Review	18	Patient - HCW	Psychiatric Unit
Lu, L., Dong, M., Wang, S. B., Zhang, L., Ng, C. H., Ungvari, G. S., ... & Xiang, Y. T. (2020). Prevalence of workplace violence against health-care professionals in China: a comprehensive meta-analysis of observational surveys. <i>Trauma, Violence, & Abuse</i> , 21(3), 498-509.	This study is a meta-analysis of the pooled prevalence of WPV against health-care professionals in China and its associated risk factors.	Meta-analysis	47	Patient – HCW	Health Care Organisations

Journal Name & Year of Publication	Stated Aim of the Review	Review Type	Number of Articles included in the review	Type of Violence	Domain
MohammadiGorji, S., Bosch, S. J., Valipoor, S., & De Portu, G. (2020). Investigating the Impact of Healthcare Environmental Design on Staff Security: A Systematic Review. <i>HERD: Health Environments Research & Design Journal</i> , 1937586720921407.	To systematically review the literature regarding the role of the physical environment in preventing or mitigating aggressive behavior toward healthcare professionals in acute care, outpatient, and psychiatric/behavioral health facilities.	Systematic Review	15	Patient – HCW	Healthcare facilities
Nowrouzi-Kia, B., Chai, E., Usuba, K., Nowrouzi-Kia, B., & Casole, J. (2019). Prevalence of type ii and type iii workplace violence against physicians: a systematic review and meta-analysis. <i>The International Journal of Occupational and Environmental Medicine</i> , 10(3), 99.	To determine the types and prevalence of WPV among doctors.	Systematic Review & Meta Analysis	13	Patient – HCW HCW - HCW	General Hospitals Psychiatric Wards Psychiatric hospitals
Ireland, C. A., Ireland, J. L., Jones, N. S., Chu, S., & Lewis, M. (2019). Predicting security incidents in high secure male psychiatric care. <i>International Journal of Law and Psychiatry</i> , 64, 40-52.	The contribution of environmental and organisational factors in predicting security incidents within high security male psychiatric settings.	Systematic Review	41	Patient – HCW	In-patient psychiatric, forensic psychiatric or prison population

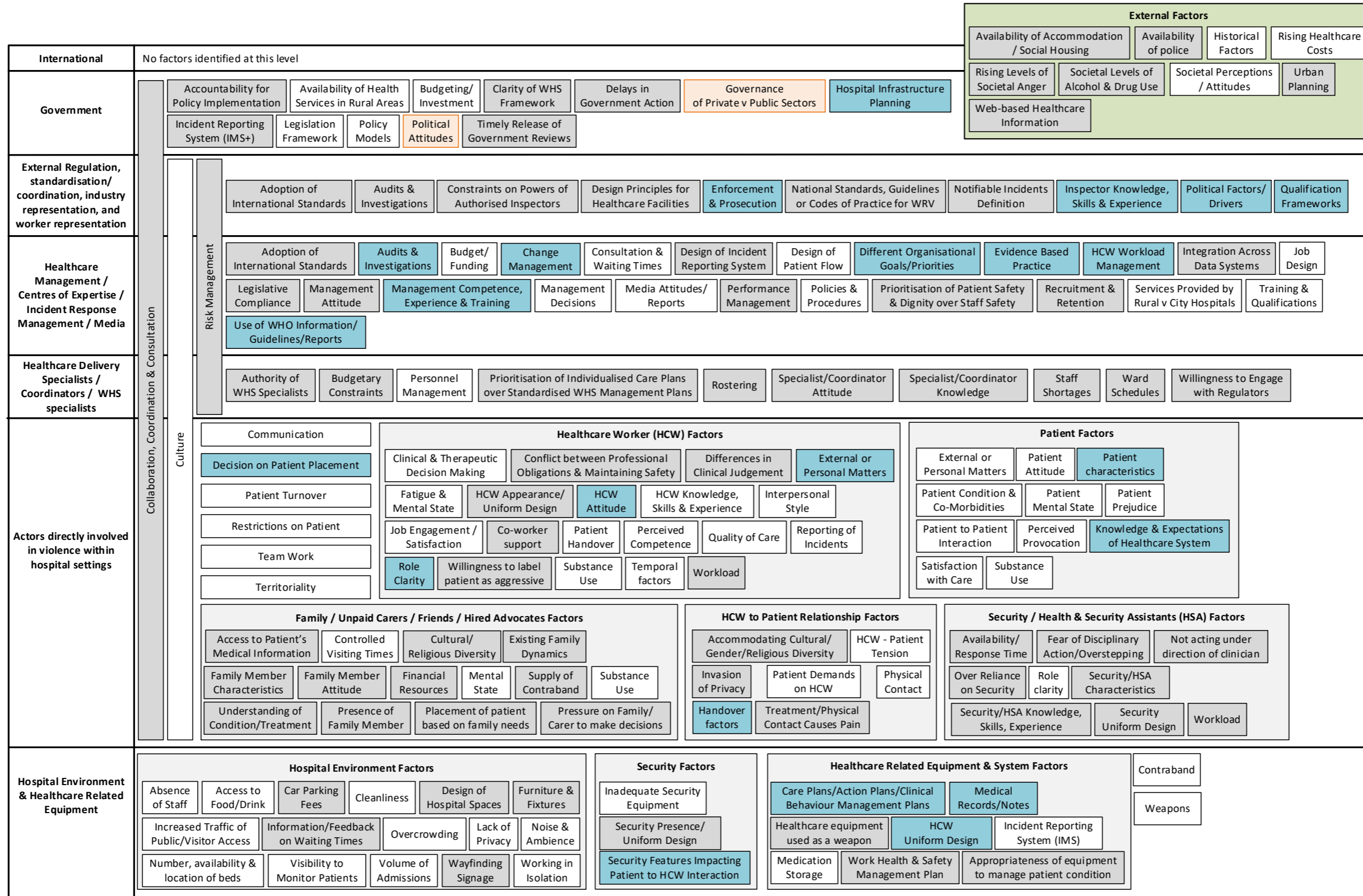
Journal Name & Year of Publication	Stated Aim of the Review	Review Type	Number of Articles included in the review	Type of Violence	Domain
Nowrouzi-Kia, B., Isidro, R., Chai, E., Usuba, K., & Chen, A. (2019). Antecedent factors in different types of workplace violence against nurses: a systematic review. <i>Aggression and Violent Behavior, 44</i> , 1-7.	The purpose of this systematic review is to identify the antecedent factors in different types of workplace violence against nurses and understand its impact in order to promote safe working conditions in health care.	Systematic Review	13	Patient – HCW HCW - HCW	Home care & healthcare facilities
de Sousa, L. S., Oliveira, R. M., Ferreira Brito, Y. C., Cavalcante Fernandes, B. K., Montesuma, F. G., & Melo Dodt, R. C. (2018). Workplace violence in the hospital obstetrics. <i>Journal of Nursing UFPE/Revista de Enfermagem UFPE, 12</i> (10).	To identify the manifestations of workplace violence in hospital obstetrics, as well as their related factors, consequences, and management strategies.	Integrative Review	11	Patient - HCW	Obstetrics
Blackstock, S., Salami, B., & Cummings, G. G. (2018). Organisational antecedents, policy and horizontal violence among nurses: An integrative review. <i>Journal of Nursing Management, 26</i> (8), 972-991.	To explore the organisational antecedents related to horizontal violence among nurses and the extent to which policy initiatives reduce its incidence.	Integrative Review	22	HCW - HCW	Health care organisations

Journal Name & Year of Publication	Stated Aim of the Review	Review Type	Number of Articles included in the review	Type of Violence	Domain
lozzino, L., Ferrari, C., Large, M., Nielszen, O., & De Girolamo, G. (2015). Prevalence and risk factors of violence by psychiatric acute inpatients: a systematic review and meta-analysis. <i>PLoS One</i> , 10(6), e0128536.	To use meta-analysis to estimate the pooled rate of violence in published studies, and examine the characteristics of the participants, and aspects of the studies themselves that might explain the variation in the reported rates of violence (moderators).	Systematic Review & Meta Analysis	35	Patient – HCW HCW - HCW	Psychiatric unit
Edward, K. L., Stephenson, J., Ousey, K., Lui, S., Warelow, P., & Giandinoto, J. A. (2016). A systematic review and meta-analysis of factors that relate to aggression perpetrated against nurses by patients/relatives or staff. <i>Journal of Clinical Nursing</i> , 25(3-4), 289-299.	To identify the factors that related to aggression (verbal abuse or physical abuse/assault) perpetrated against the nurse or other health professionals by patients/relatives or staff. In the light of the paucity of systematic reviews on this common issue in nursing, the objective was to present a comprehensive systematic review and meta-analysis of these papers.	Systematic Review & Meta Analysis	14	Patient – HCW HCW - HCW	Healthcare facilities

Journal Name & Year of Publication	Stated Aim of the Review	Review Type	Number of Articles included in the review	Type of Violence	Domain
Pompeii, L., Dement, J., Schoenfisch, A., Lavery, A., Souder, M., Smith, C., & Lipscomb, H. (2013). Perpetrator, worker and workplace characteristics associated with patient and visitor perpetrated violence (Type II) on hospital workers: A review of the literature and existing occupational injury data. <i>Journal of Safety Research</i> , 44, 57-64.	To inform the development of an online hospital violence surveillance system aimed at capturing circumstances surrounding these types of events from workers.	Systematic Review	18	Patient – HCW HCW - HCW	Hospital setting
Papadopoulos, C., Ross, J., Stewart, D., Dack, C., James, K., & Bowers, L. (2012). The antecedents of violence and aggression within psychiatric in-patient settings. <i>Acta Psychiatrica Scandinavica</i> , 125(6), 425-439.	To systematically review the types and proportions of antecedents of violence and aggression within psychiatric in-patient settings.	Systematic Review & Meta Analysis	71	Patient - HCW	Psychiatric unit
Cornaggia, C. M., Beghi, M., Pavone, F., & Barale, F. (2011). Aggression in psychiatry wards: a systematic review. <i>Psychiatry Research</i> , 189(1), 10-20.	1. Epidemiology of episodes of aggressiveness in psychiatric wards. 2. Demographic and clinical variables associated with aggression in psychiatric wards.	Systematic Review	22	Patient – HCW	Psychiatry wards

APPENDIX C - ACCIMAP

AcciMap showing the contributory factors involved in work-related violence in hospital settings in NSW. White boxes = Factors identified from the literature; Grey = workshop 2 input; Blue = workshop 3 input; Orange = workshop 2 and 3 participants disagreed on the inclusion of these factors).



APPENDIX D – ACCIMAP DATA DICTIONARY

Multi Level Factors

Collaboration, Coordination & Consultation between Stakeholders, for example:

- collaboration
 - need for improved collaboration strategies
 - lack of collaboration on strategies used to manage violence
 - lack of collaboration between stakeholders across all Australian states and territories
- consultation:
 - consultation when making policy changes
 - consultation with HCWs, worker representatives and subject matter experts
 - feedback being ignored
 - consultation with WHS representatives when designing hospital spaces
 - consultation happens too late – the hospital space has already been built, then HCW's are consulted.
 - investigating extreme symptoms of dementia, and have not included HCW's who work directly with tier 7 dementia patients
- coordination
 - coordination & formation of code black response team
 - include a mix of clinical and security staff with special skills
 - how a group of people come together to manage a situation
 - lack of a coordinated code black response
 - coordinated effort to manage safety
 - relationships between departments
 - lack of standardisation about how different professionals work together to manage incidents and how they take action

Culture, for example:

- acceptance of bullying as part of work environment
- acceptance of the system in crisis
- acceptance of violence
- attitudes/ingrained cynicism
- conflict between quality and safety
- desire to maintain positive relationships
- failure to enforce own policies
- exchanging information between agencies (e.g. hospital wards/departments, police, social work department), including sharing information with police about the LHD procedures
- loyalty to colleagues
- management style
- management feedback to HCW
- mutual respect between HCW disciplines
- patient dignity

- patient needs prioritised over staff needs
- perception of blame culture (if you report something someone will be blamed for it).
- reporting = negative effects on customer service reports
- safety climate
- safety reporting culture
- silos
- underreporting due to fear of consequences

Risk Management, for example:

- standardisation of WRV management
- disagreement on violence prevention management strategies or controls
- disparity between how the LHD and the regulatory bodies think that the risk should be managed
- standardised risk assessment tools
- lack of tools to manage aggression
- standardised hierarchical controls
- guidance materials
- implementation of risk management practices
- not implementing or following up audit investigations
- use of audit & investigation outcomes
- conflicting implementation of risk management practices
- opportunities to develop action plans
- lack of resources to support the implementation of action plans
- barriers for implementing change
- standardised and appropriate WHS management plans
- lack of standardised risk controls for wards
- use of seclusion rooms and restraints
- preventative measures
- organisational safety security measures

International

No factors identified at this level

Government

Accountability for Policy Implementation

Availability of Health Services in Rural Areas

Budgeting/Investment, for example:

- medical schemes
- funding for training
 - physical restraint training
 - violence prevention training

Clarity of WHS Framework

Delays in Government Action
Governance of Private v Public Sectors
<p>Hospital Infrastructure Planning, for example:</p> <ul style="list-style-type: none"> • to support increasing population • to support increase number of tier 7 dementia patients • increasing the amount of beds in emergency and intensive care, but not accommodating the increase in mental health people in the area • a lack of design, use and anticipation for the demand of services • building heritage permits • local government planning / design requirements • design of hospital to fit local context
Incident Reporting System (IMS+)
<p>Legislative Framework, for example:</p> <ul style="list-style-type: none"> • Mental Health Act • conflict between legislation • gaps in WHS legislative framework • legislation surrounding the use of restraints • notification requirements • lack of clarity about which framework takes precedence • contradictions between Mental Health Act and the WHS Act regarding the HCW's obligations when responding to WRV • policy may not be the applicable for city v rural hospitals. • conflicting legislation for allied health organisations, private hospitals and public hospitals
<p>Policy Models, for example:</p> <ul style="list-style-type: none"> • neoliberalism • violence prevention training state-wide system/policy • rural cooperative medical schemes • conflicting policies for rural v city hospital • policy not recognising staff needs/impacts • policy prioritises patient needs over staff needs
<p>Political Attitudes, for example:</p> <ul style="list-style-type: none"> • elected official attitudes
<p>Timely Release of Government Reviews, for example:</p> <ul style="list-style-type: none"> • interim report – improvements to security in hospitals
External Regulation, Standardisation/Coordination, Industry Representation, & Worker Representation
Adoption of International Standards
Audits & Investigations, for example:

<ul style="list-style-type: none"> • takes too long to serve improvement notices • inability to enforce hierarchy of controls • communication of audit outcomes • time taken to conduct the investigation • complexity of investigations and information required
<p>Constraints on Powers of Authorised Inspectors, for example:</p> <ul style="list-style-type: none"> • unable to provide advice on suitable controls for risk management
<p>Design Principles for Healthcare Facilities, for example:</p> <ul style="list-style-type: none"> • principles to design waiting areas (make them more welcoming, friendly and patient friendly) • designs are patient centred and does not consider the safety of the HCW • formal workplace accommodation policies
<p>Enforcement & Prosecution, for example:</p> <ul style="list-style-type: none"> • lack of deterrents for non-compliance • time taken to prosecute • complexity of prosecution • enforcement of WHS Act • constraints on inspectors to enforce WHS Act
<p>National Standards, Guidelines or Codes of Practice for WRV, for example:</p> <ul style="list-style-type: none"> • disparity between international and national standards • the national work cover audit tool, we audit to conflicting standards, we have an auditing standard that does not meet that requirement. the lack of adoption of the accepted standards across Australia and internationally re risk and WHS and maybe security.
<p>Notifiable Incidents Definition, for example:</p> <ul style="list-style-type: none"> • incidents are only notifiable if the injured person is admitted as an inpatient • notifiable incidents should include equipment damage
<p>Inspector Knowledge, Skills & Experience, for example:</p> <ul style="list-style-type: none"> • understanding of how clinical conditions and symptoms contribute to violence
<p>Political Factors/Drivers</p>
<p>Qualification Frameworks, for example:</p> <ul style="list-style-type: none"> • lack of standardised competency framework for health security officers • including suitable theory and practical training
<p>Healthcare Management / Centres of Expertise / Incident Response Management / Media</p>
<p>Adoption of International Standards, for example:</p> <ul style="list-style-type: none"> • certification for ISO Standards
<p>Audits & Investigations, for example:</p> <ul style="list-style-type: none"> • implementation of audit and investigation outcomes/findings • oversight of auditing and investigation

<ul style="list-style-type: none"> • lack of accountability for developing/implementing controls • lack of learning across incidents • failure to investigate incidents • communication regarding investigation progress • lack of governance over audit processes • governance of escalation pathway to senior executives to take action and provide resources
<p>Budget/Funding, for example:</p> <ul style="list-style-type: none"> • economic funding shortfalls • financial pressures • funding for additional HCW's • conflicting budgetary goals • insufficient organisational resources
<p>Change Management, for example:</p> <ul style="list-style-type: none"> • hard to achieve due to budget and the number of stakeholders involved • ability to implement change management • delays in implementing policy
<p>Consultation & Waiting Times, for example:</p> <ul style="list-style-type: none"> • short consultation times • waiting times
<p>Design of Incident Reporting System, for example:</p> <ul style="list-style-type: none"> • time required to complete an incident report form
<p>Design of Patient Flow, for example:</p> <ul style="list-style-type: none"> • after being triaged, some patients return to the waiting area, which might feel like stepping backward in the care process
<p>Different Organisational Goals / Priorities, for example:</p> <ul style="list-style-type: none"> • political factors influencing decision making (e.g. union, regulator, organisation may all have different positions on an issue due to historical factors or political positioning) • organisational priorities
<p>Evidence Based Practice, for example:</p> <ul style="list-style-type: none"> • reliable research that we can draw on to make informed decisions.
<p>HCW Workload Management, for example:</p> <ul style="list-style-type: none"> • workload • shift work (i.e. transition from early to late shift) • labour environment • number of hours to patients' days • stressed • overworked
<p>Integration Across Data Systems</p>

<p>Job Design, for example:</p> <ul style="list-style-type: none"> • HCW busy with documentation • HCW busy with formal meetings with patients • HCW busy with general surveillance • HSA Officers allocated cleaning and wardsmen duties and are unavailable to attend immediately to an incident • expectations about career growth • lack of opportunities to learn and improve on skills • lack a variety of tasks • ability & support for WHS Professionals to investigate & implement change across multiple business areas
<p>Legislative Compliance</p> <ul style="list-style-type: none"> • WHS Act
<p>Management Attitude, for example:</p> <ul style="list-style-type: none"> • private hospitals do not have issues with occupational violence, because they are private patients. • failure to acknowledge problem & risks
<p>Management Competence, Experience and Training, for example:</p> <ul style="list-style-type: none"> • understanding their obligations • manager ability
<p>Management Decisions</p>
<p>Media Attitude / Reports</p>
<p>Performance Management, for example:</p> <ul style="list-style-type: none"> • addressing bullying behaviour • monitoring bullying behaviour • inconsistent and inflexible application of rules • lack of key performance indicators for management and specialists/coordinators • failure to enforce key performance indicators • failure to enforce policies (e.g. zero tolerance policy)
<p>Policies & Procedures, for example:</p> <ul style="list-style-type: none"> • too many unnecessary guidelines • lack of policies regarding visiting times • standardisation of policies and procedures across LHDs and departments • policy to reducing the use of seclusion rooms and restraints • policies regarding smoke free environments, lead to removing smoking areas, and patients having nowhere to smoke. • procedures for managing violent incidents • contradictory policies and procedures due to the conflict in the legislations that underpin the policy or procedure.

<ul style="list-style-type: none"> • policies and procedures for the use of physical and chemical restraints. Policies and procedures relating to the use of manual restraints, policy was developed in line with the Mental Health Act and does not consider the WHS Act
<p>Prioritisation of Patient Care, Safety, & Dignity over Staff Safety, for example:</p> <ul style="list-style-type: none"> • prioritisation of patient’s safety and needs over staff safety • decisions to make HCW treat aggressive patients outside of seclusion rooms
<p>Recruitment & Retention Practices, for example:</p> <ul style="list-style-type: none"> • timeframe for recruiting • lack of staffing or continuity • casualisation of workforce • recruitment is based on budgets, not on risk assessment. • attracting competent and experienced staff • failure to recruit compliant and experienced staff • recruitment or retention strategies • ordered overtime • insufficient HCW staff, for example: <ul style="list-style-type: none"> ○ staff scheduling ○ patient to nursing day ○ broken promises to increase security staff
<p>Services Provided by Rural v City Hospitals</p>
<p>Training & Qualifications, for example:</p> <ul style="list-style-type: none"> • aggression management training • communication training • not qualified • level of education • physical restraint training • investigation training • standardised training
<p>Use of World Health Organisation Information / Guidelines / Reports</p>
<p>Healthcare Delivery Specialists / Coordinators / WHS specialists</p>
<p>Authority of WHS Specialists</p>
<p>Budgetary Constraints</p>
<p>Personnel Management, for example:</p> <ul style="list-style-type: none"> • managing conflict within team
<p>Prioritising Individualised care plans over standardised WHS Management plans, for example:</p> <ul style="list-style-type: none"> • focus on developing individualised care plans over standardised care plans?
<p>Rostering, for example:</p> <ul style="list-style-type: none"> • rostering people with adequate skills and experience

<ul style="list-style-type: none"> rostering teams with adequate Skill Mix
<p>Specialist/Coordinator Knowledge, for example:</p> <ul style="list-style-type: none"> don't know how to close out investigations or put controls in place
<p>Specialist/Coordinator Attitude, for example:</p> <ul style="list-style-type: none"> their different perceptions about what is violence (i.e. managers have a different perception about what is violence. perceptions on WRV WHS staff in some of the LHD's the relationship between the clinical and staff safety.
<p>Staff Shortages</p>
<p>Ward Schedules, for example:</p> <ul style="list-style-type: none"> waking people up in the middle of the night for medication getting patient ready for appointments
<p>Willingness to Engage with Regulators, for example:</p> <ul style="list-style-type: none"> fear or lack of engagement with regulators
<p>Actors directly involved in violence within hospital settings</p>
<p>Communication, for example:</p> <ul style="list-style-type: none"> communication with patient miscommunication lack of explanation of care handover misunderstanding patient receiving bad news family member / support person communicating information about the patient's triggers not feeling included in treatment decisions information about treatment, including the side effects, name of drug etc communication about patient's history of violence/aggression/forensic history between agencies information about wait times communication between LHD's (e.g. patients are triaged at one hospital, and sent to another hospital and information is not communicated) ability to communicate that patient's behaviour has initiated a code black.
<p>Decision on Patient Placement</p>
<p>Patient Turnover</p>
<p>Restrictions on Patients, for example:</p> <ul style="list-style-type: none"> denied access to coping strategies HCW removes family member limiting patient freedoms management of ward ordering patients

	<ul style="list-style-type: none"> • patient restraint (containment strategies, locked in for their own protection, use of coercive measures) • rejection of application for discharge • searching patient • separation of patients from families
Family / Unpaid Carers / Friends / Hired Advocates	Access to Patient’s Medical Information, for example: <ul style="list-style-type: none"> • family’s perception about what they can and can’t know about the patient (i.e. patient/doctor confidentiality for patients aged 18 years and older) • access to doctors
	Controlled Visiting Times, for example: <ul style="list-style-type: none"> • access to patient • COVID-19 restrictions restricting visitor’s access to patients • uncontrolled visiting times
	Cultural/Religious Diversity, for example: <ul style="list-style-type: none"> • respecting the cultural requirements of the family members • language barriers
	Existing Family Dynamics, for example: <ul style="list-style-type: none"> • dynamics of power/decision making within the family • existing violence issues
	Family Member Characteristics, for example: <ul style="list-style-type: none"> • language, literacy & numeracy difficulties • disability
	Family Member Attitude, for example: <ul style="list-style-type: none"> • bias towards HCW and the HC environment • family unwilling to discharge patient • frustration with care received
	Financial Resources
	Mental State, for example: <ul style="list-style-type: none"> • anxiety • tension
	Supply of Contraband
	Substance Use, for example: <ul style="list-style-type: none"> • intoxication
	Understanding of Condition/Treatment, for example: <ul style="list-style-type: none"> • knowledge about the patient’s condition, symptoms, and treatment
	Placement of Patient based on Family Needs, for example: <ul style="list-style-type: none"> • family wants patient close to home where they can visit.
	Presence of Family Member, for example:

	<ul style="list-style-type: none"> to calm the patient
	Pressure on Family / Carer to Make Decisions
HCW to Patient Relationship	Accommodating Cultural/Gender/Religious Diversity <ul style="list-style-type: none"> language barriers respecting the cultural requirements of both the patient and the HCW
	HCW to Patient Tension, for example: <ul style="list-style-type: none"> dispute nurses as gatekeepers
	Invasion of Privacy <ul style="list-style-type: none"> searching patient's bags
	Patient Demands on HCW
	Physical Contact, for example: <ul style="list-style-type: none"> physical contact with patient
	Treatment/Physical Contact Causes Pain
Healthcare Worker (HCW)	Clinical & Therapeutic Decision Making, for example: <ul style="list-style-type: none"> decisions that benefited the safety of the patients decision making too slow HCW making conflicting clinical or therapeutic decisions
	Conflict between Professional Obligations & Maintaining Safety <ul style="list-style-type: none"> pressure to prioritise patient safety and needs over HCW safety HCW are threatened that they will be reported and lose their registration if they do not care for the patient.
	Differences in Clinical Judgement
	External or Personal Matters <ul style="list-style-type: none"> personal matter what is happening for HCW at home and outside the workplace
	Fatigue & Mental State, for example: <ul style="list-style-type: none"> anxious burnout individual affect stress
	HCW Appearance / Uniform Design <ul style="list-style-type: none"> healthcare related equipment on the HCW uniform being used as weapons HCW role is not identifiable by their uniform (i.e. registered nurses v assistant nurses) unintended provocative behaviour, for example: healthcare worker clothing
	HCW Attitude, for example:

	<ul style="list-style-type: none"> • commitment to patients and their interests • respect for and value of patient • lack of respect for other roles • tolerance of violence • perception of work-related violence • bias or compliancy towards patients • bias towards relationship between aggression and mental/physical conditions (i.e. the patient didn't mean to do it, it was because they were sick) • cognitive bias between mental health conditions and physical conditions – there is a perception at times where a person gets pigeon hold by their diagnosis. • bias based on their cultural beliefs • feelings that they must sacrifice their safety for the patient • expecting violence is a part of their workday • perception that the code black team are solely responsible for managing the situation.
	<p>HCW Knowledge, Skills and Experience, for example:</p> <ul style="list-style-type: none"> • Knowledge <ul style="list-style-type: none"> ○ awareness of what is violence ○ perception of what is violence ○ knowledge about patient condition or triggers ○ understanding of processes ○ knowledge about the triage system ○ knowledge of what their role is in an incident ○ misperceptions of causes of patient behaviour • Skills <ul style="list-style-type: none"> ○ lack of violence prevention skills ○ lack of de-escalation skills ○ lack of skills to deal with co-mobilities. • Experience <ul style="list-style-type: none"> ○ intuition ○ job tenure ○ preparation for violent situation ○ awareness of those around them as they enter a room ○ prior Experience of WRV ○ vulnerability / resilient to WRV
	<p>Interpersonal Style, for example:</p> <ul style="list-style-type: none"> • body language • lack of communication skills • tone of voice
	<p>Job Engagement / Satisfaction, for example:</p>

	<ul style="list-style-type: none"> • cynicism • turnover intention • motivation
	<p>Co-worker support, for example:</p> <ul style="list-style-type: none"> • “eat their young” • support for agency nurses
	<p>Patient Handover, for example:</p> <ul style="list-style-type: none"> • Incomplete handover that includes information about patient’s triggers
	Perceived Competence
	<p>Quality of Care</p> <ul style="list-style-type: none"> • providing care in corridors • medication errors • staff error
	<p>Reporting of Incidents, for example:</p> <ul style="list-style-type: none"> • fear of reporting incidents • nobody was hurt; therefore, i won’t bother reporting incident
	<p>Willingness to label a patient as aggressive, for example:</p> <ul style="list-style-type: none"> • they think that that will affect how people with deal with them
	Role Clarity
	Substance Use
	Temporal Factors
Patient Factors	<p>External or Personal Matters, for example:</p> <ul style="list-style-type: none"> • financial stressors • lack of health insurance • life stressors • unresolved family problem • disruptive visit from family / friends • child being removed by NSW Health child wellbeing unit
	<p>Patient Attitude, for example:</p> <ul style="list-style-type: none"> • feelings of neglect • feelings of injustice • feelings of superiority • those who practice violence see it as their right • attitude towards the way the hospital was managed
	<p>Patient Characteristics, for example:</p> <ul style="list-style-type: none"> • age • education • employment status

	<ul style="list-style-type: none"> • gender • history of aggression • cultural requirements • health literacy • language, literacy and numeracy difficulties • history of psychiatric admissions • housing status (e.g. from single households) • marital status • personality traits • physical injury illness diagnosis (cognitive disorder, dementia, disease severity) • nationality • smoking habits • socio economic status (homelessness or social welfare)
	<p>Patient Condition & Co-Morbidities (Both diagnosed or undiagnosed), for example:</p> <ul style="list-style-type: none"> • acute medical condition • acquired brain injury • CPK level • hallucinations • length of illness • pain • paranoia • severity of illness • response to treatment • including undiagnosed mental health conditions • mental health diagnosis (bipolar, depression, mood disorder, personality disorder, psychosis, schizoaffective, schizophrenia, substance use disorder)
	<p>Patient Mental State, for example:</p> <ul style="list-style-type: none"> • anger • anxiety • confusion • depression • distress • embarrassment • fear • frustration • mental emotional stress • patient mood or cues • sexual frustration • suicide ideation
	<p>Patient Prejudice, for example:</p>

	<ul style="list-style-type: none"> • racism • sexism
	<p>Patient to Patient Interaction, for example:</p> <ul style="list-style-type: none"> • competition • conflict • miscommunication • physical contact • reaction to sexual approach • retaliation • teasing bugging • victim doing something patient wanted stopped
	<p>Perceived Provocation</p>
	<p>Knowledge and Expectations of Healthcare System, for example:</p> <ul style="list-style-type: none"> • expectations of care • not understanding triage system categories • knowledge of nurse's roles • self-diagnosis technology (including Dr. google and iTriage) • requesting unnecessary tests etc
	<p>Satisfaction with Care, for example:</p> <ul style="list-style-type: none"> • notions of poor-quality health care • Lack of choice of HCW providing treatment (e.g. gender of the HCW)
	<p>Substance Use, for example:</p> <ul style="list-style-type: none"> • Intoxicated
<p>Security / Health & Security Assistants (HAS)</p>	<p>Availability/Response Time</p> <ul style="list-style-type: none"> • insufficient assistance from security • timely response to duress alarms
	<p>Fear of Disciplinary Action/Overstepping</p>
	<p>Not acting under the direction of clinician</p>
	<p>Over Reliance on Security</p>
	<p>Role Clarity</p> <ul style="list-style-type: none"> • lack of knowledge regarding security role and powers • what is their role in an incident

	<p>Security/HSA Characterises, for example:</p> <ul style="list-style-type: none"> • gender • level of fitness • health & wellbeing
	<p>Security Knowledge, Skills & Experience</p> <ul style="list-style-type: none"> • lack of knowledge / commitment / skillset • lack of experience • lack of de-escalation skills • security are dealing with a number of different wards, they are multi knowledge on different areas, there could be confusion and lack of standardisation in their procedures and training
	<p>Security Uniform Design, for example:</p> <ul style="list-style-type: none"> • uniform style (i.e. police or military style)
	<p>Workload, for example:</p> <ul style="list-style-type: none"> • dual roles
<p>Teamwork, for example:</p> <ul style="list-style-type: none"> • cliques • power differentials • collegial work teams • division between healthcare workers • lack of cooperation between staff • negative peer relationships • peer relationships • relational aspects of team • suboptimal relationships 	
<p>Territoriality, for example:</p> <ul style="list-style-type: none"> • territoriality is a term associated with nonverbal communication that refers to how people use space (territory) to communicate ownership or occupancy of areas and possessions. 	
<p>Hospital Environment & Related Equipment</p>	
<p>Hospital Environment</p>	<p>Absence of Staff, for example:</p> <ul style="list-style-type: none"> • workplace size • security personal location • visibility of security staff
	<p>Access to Food/Drink, for example:</p> <ul style="list-style-type: none"> • access to nutritional food or drink
	<p>Car Parking Fees</p>
	<p>Cleanliness</p>

	<p>Design of Hospital Spaces, for example:</p> <ul style="list-style-type: none"> • building layout / triage room layout • car parking, lighting, monitoring and location • construction not fit for purpose • entrapment points • environmental stimulation (excessive or lack of stimulation, lack of positive distraction) • designated smoking areas • number and location of emergency exits • number and location of duress alarms • adequate outdoor space and natural light • adequate safe spaces for HCW for when incident occur • provision of smoking areas • provision of areas with low stimulation and high security for patients with psychotic and intoxication • patient centred design • pod size (division of rooms into clusters dedicated to a specific patient population type or acuity) • use of shatter proof glass • doors to access seclusion areas being removed by patients • providing care in corridors • retrofit designs that are not fit for purpose • size and nature of bathrooms • accessibility to spaces for those who are elderly (uneven ground etc)
	<p>Furniture & Fixtures, for example:</p> <ul style="list-style-type: none"> • chairs are easily movable and easy to lift • uncomfortable chairs
	<p>Increased Traffic of Public/Visitor Access</p>
	<p>Information/Feedback about Waiting Times</p>
	<p>Lack of Privacy, for example:</p> <ul style="list-style-type: none"> • lack of personal space
	<p>Noise & Ambience, for example:</p> <ul style="list-style-type: none"> • lighting • noise • odours • temperature
	<p>Number, Availability & Location of Beds, for example:</p> <ul style="list-style-type: none"> • patients being allocated to beds in wards that are not suitable for their condition • number of beds available

	Overcrowding
	<p>Visibility to Monitor Patients/Visitors, for example:</p> <ul style="list-style-type: none"> • ability to monitor patients • peer to peer visibility • sight between registration to treatment zone • visibility of the entrance from the of point of registration • visibility of the entrance from the security station • visibility from security location to triage • visibility of the entrance from triage
	Volume of Admissions
	<p>Wayfinding Signage, for example:</p> <ul style="list-style-type: none"> • signage to direct patients
	<p>Working in Isolation, for example:</p> <ul style="list-style-type: none"> • HCW working alone
Healthcare Related Equipment & Systems	<p>Care Plans or Action Plans or Clinical Behaviour Management Plan</p> <ul style="list-style-type: none"> • used to document the management strategies for violent/aggressive patients • identifies risks • manages the safety of the patient • prioritises the safety of the patient over the HCW
	Lack of equipment for specific medical conditions
	<p>Medical Records / Notes</p> <ul style="list-style-type: none"> • difficult to read • difficult to find relevant/important information • consistently communicate relevant information about the patient • electronic medical records not shared between LHDs • ability to flag aggressive patients using the Electronic Medical Record
	Healthcare Equipment used as a Weapon
	<p>HCW Uniform Design, for example:</p> <ul style="list-style-type: none"> • inability to differentiate between HCW roles based on their uniform
	Incident Reporting System (IMS)
	Mediation Storage
	<p>Work Health & Safety Management Plan, for example:</p> <ul style="list-style-type: none"> • manages the safety of the people around the patient
	<p>Appropriateness of equipment to manage patient condition, for example:</p> <ul style="list-style-type: none"> • wheelchairs with weight restrictions

Security	<p>Inadequate Security Equipment, for example:</p> <ul style="list-style-type: none"> • location of duress alarms • lack of personal duress alarms • lack of access control • lack of metal detectors • lack of security cameras / CCTV • lack of signage • location of security equipment • non-functioning security equipment • reducing the time automatic doors stay open • security dog teams
	<p>Security Presence / Uniform Design</p> <ul style="list-style-type: none"> • placement of security equipment on uniform makes the equipment accessible to violent person. • appearance and design on the uniform (i.e. police or military style) • presence of security staff
	<p>Security features impacting HCW to patient interaction, for example:</p> <ul style="list-style-type: none"> • security screens impact the ability for HCW and Patient to talk to and hear each other
Contraband	
<p>Weapons, for example:</p> <ul style="list-style-type: none"> • weapon possession • patient found weapons 	
External	
<p>Availability of Accommodation / Social Housing, for example:</p> <ul style="list-style-type: none"> • lack of accommodation or social housing for discharged patients 	
<p>Availability of Police, for example:</p> <ul style="list-style-type: none"> • police drop off violent members of the public and are not able to support the management of the violent patient throughout the admission because they need to attend another emergency 	
<p>Historical Factors, for example:</p> <ul style="list-style-type: none"> • historical political positions and conditions 	
Rising Healthcare Costs	
Rising Levels of Societal Anger	
<p>Societal Levels of Alcohol & Drug Use, for example:</p> <ul style="list-style-type: none"> • increased use of alcohol & drugs 	
<p>Societal Perceptions / Attitudes, for example:</p> <ul style="list-style-type: none"> • perception that hospitals are the source of money and drugs 	

- gendered assumptions that devalue a HCW's knowledge and care work
- perception of hospital's quality of care
- attitudes of locals

Urban Planning

- infrastructure insufficient for increasing population

Web-based Healthcare Information, for example:

- access to pre-existing knowledge of health care (i.e. 'Dr. Google')

APPENDIX E – COUNTERMEASURE BRAINSTORMING EXERCISE

The following list provides the participants verbatim responses to the question “What countermeasures can you think of that would help prevent violence in hospital settings”.

Australia Wide Governance

Clinical & Non-Clinical staff - Skills, Knowledge, Experience

- Better understanding of the patient/family’s emotions and fears by HCWs of the situation they are in
- Better communication skills by HCWs particularly for medicos
- Virtual training material, evidence based to be shared across organisations. promoting consistency
- More targeted training for staff, focusing on specific cohorts of pts
- Better training & regular drills- violence prevention, but also clinical - dementia, borderline personality etc
- Resources and training they need for security to do their job as safely as possible
- Support for WHS professionals to allow their expertise to be heard and utilised effectively
- De-escalation training, identifying potential aggressive persons, interaction techniques - constantly evolve

Culture

- Government and organisations to acknowledge that staff safety is as important as patient safety
- Hospitals to be serious about risk management instead of 'putting out fires'
- More respect for security officers, as part of breaking down the broader caste system in hospitals, which sees security given the respect
- More respect for nurses clinical views on risk from doctors - suitable medical management
- Re high risk patients - there are major issues with bed types and numbers. e.g. approx. 50 mental health intensive care beds statewide - insufficient, not enough long term acute mental health beds, no beds for tier 7 dementia, not enough places for acquired brain injury etc

Coordination, Communication, & Collaboration

- Co-ordination between NDS and Public Hospitals so that people with disabilities can be discharged without unnecessary delays

- systems which foster clear communication and consistency of application

Risk Assessment/Controls

- Appropriate risk assessments/controls for known high risk patients
- Pre-admission risk assessment where possible to be simplified and specific

Sufficient number of Clinical and Non-Clinical Staff

- Funding for people and working environment to meet demand
- Enough staff, properly trained
- More mental health nurses allocated to EDs on a permanent basis
- Staffing levels adequate in high risk areas

External Support

- Better social services to deal with and prevent domestic violence. leaving better staffed police to deal with acute episodes of violence in healthcare settings.

Design of Hospital Environments

- Design of higher risk areas, and the environment to be optimal to be a calming influence
- Design of safe structures and work environments
- Design of acute care settings to accommodate people with dementia/mental health/disabilities
- Funding for people and working environment to meet demand
- Appropriately designed purpose built facilities
- Environments which meet the needs of the patient/consumer so minimise escalation of adverse behaviour

Design of Safe Practices and Processes

- Design of safe work processes

Training for Clinical and Non-Clinical Staff

- Specialised training for in dementia management for non-aged care units

Triage and Patient History Available across LHDs

- Better documentation of patient history of OVA so that HCWs can better prepare for interactions
- Triaging and patient history to be made available across LHDs.

Action taken against PCUB failing to provide safe work spaces and Perpetrators of violence

- Regulator actions to be taken against organisations to fail to provide a safe environment for staff
- Consequences for behaviors

Revision of the Triage Process

- Triage of mental health patients away from EDs
- Redesign of how people affected by drug and alcohol are taken to EDs by police
- Safer and more efficient pathways for admission of patients affected by AOD & acute mental illness

Sufficient Number of Beds

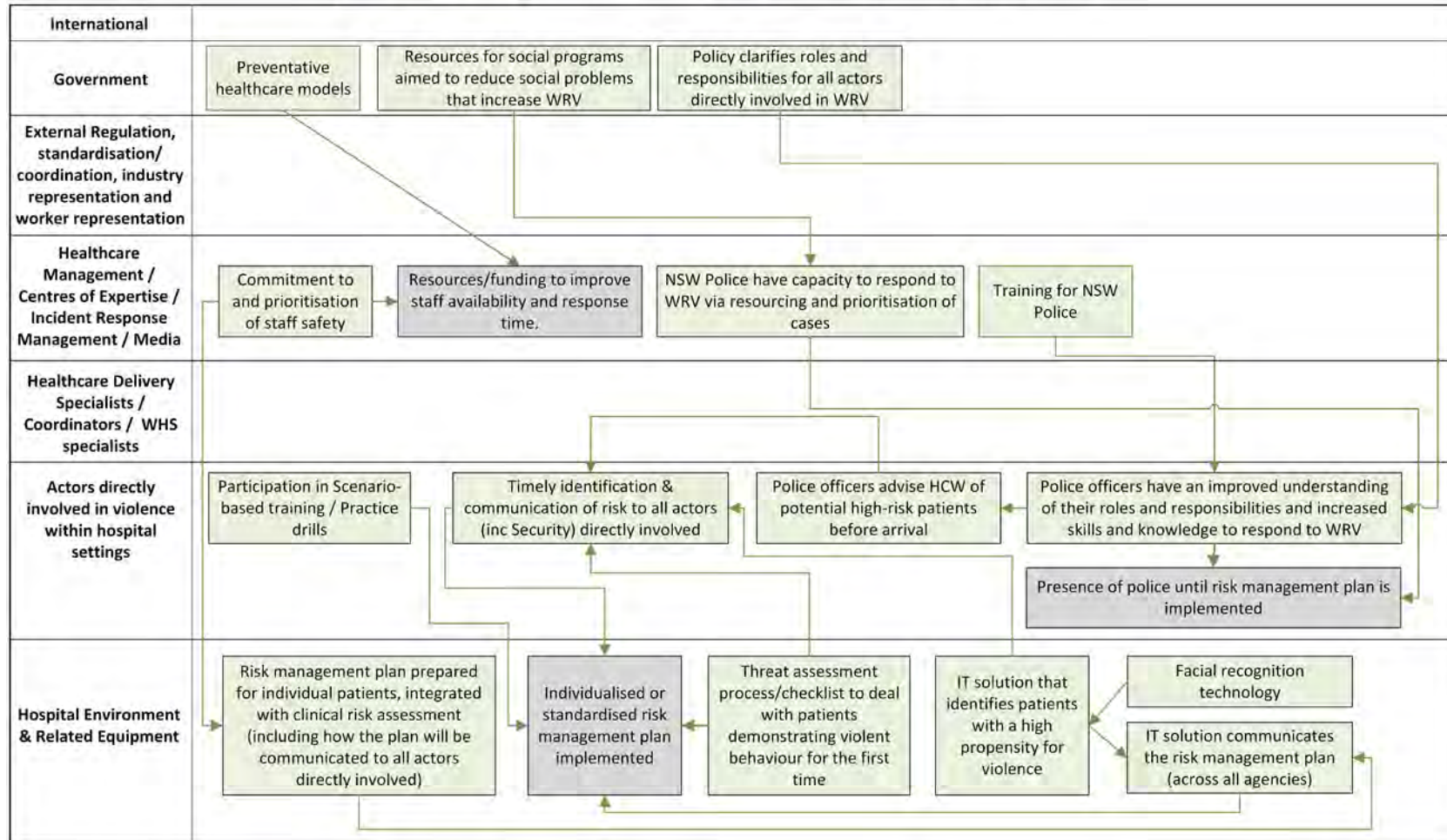
- More appropriate beds (and staffing) for high acuity, high risk patients - e.g. tier 7 BPSD (Dementia), acquired brain injury, high acute mental health etc
- Increase number of mental health beds available
- More beds in acute mental health settings, so people aren't waiting in ED for days

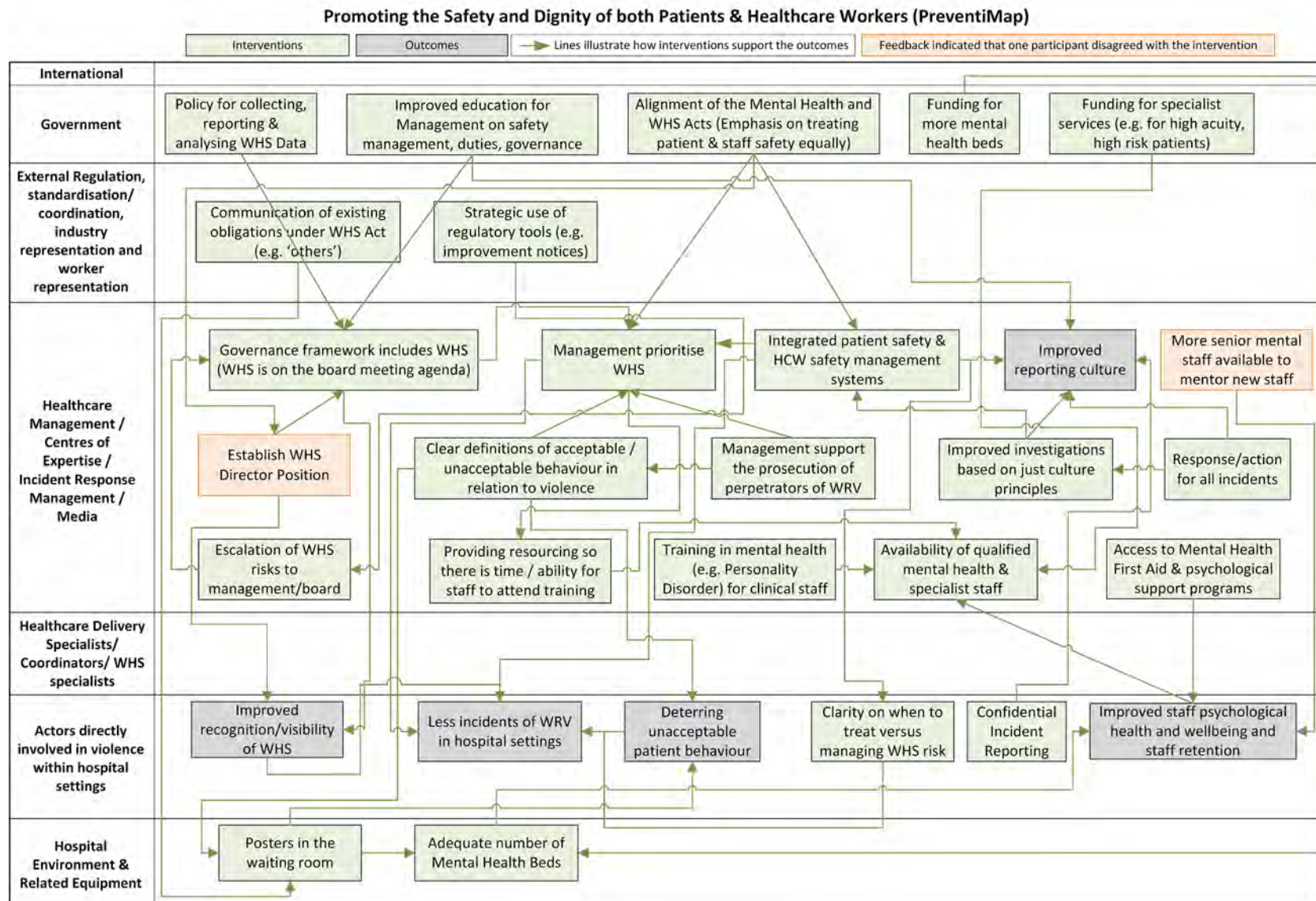
External Interventions

- Community workers to have technologies to better actively monitor them
- Early intervention for people with mental health issues in the community to avoid the need to come to EDs in a crisis
- Better care in private aged care facilities to avoid admission of people with dementia
- Improved systems for safety of HCWs out in the community
- Improve media communications to send the message that Occupational Violence and Aggression is not acceptable

APPENDIX F – PREVENTIMAPS

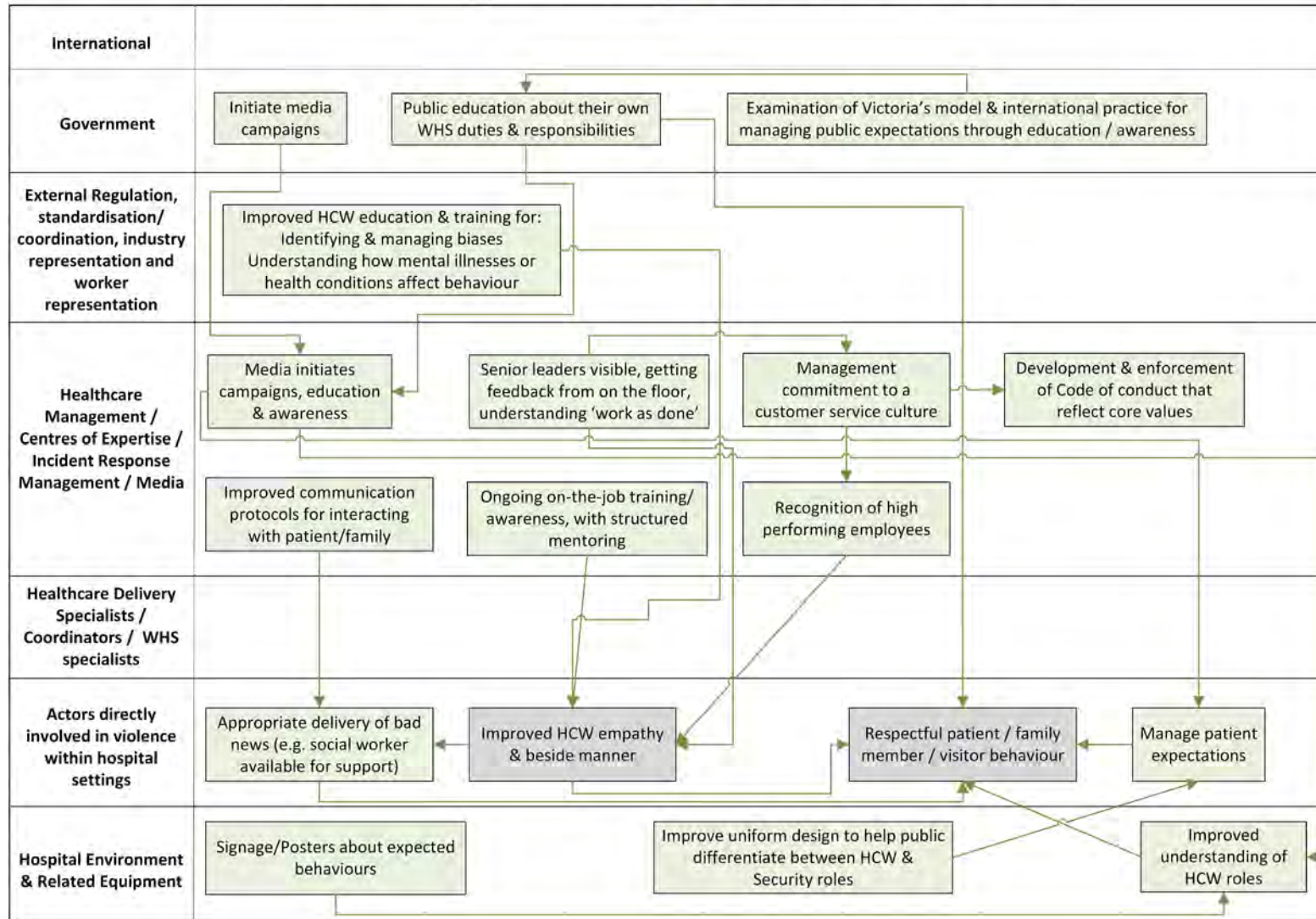
Managing Risk of Patients with High Propensity of Violence (PreventiMap)



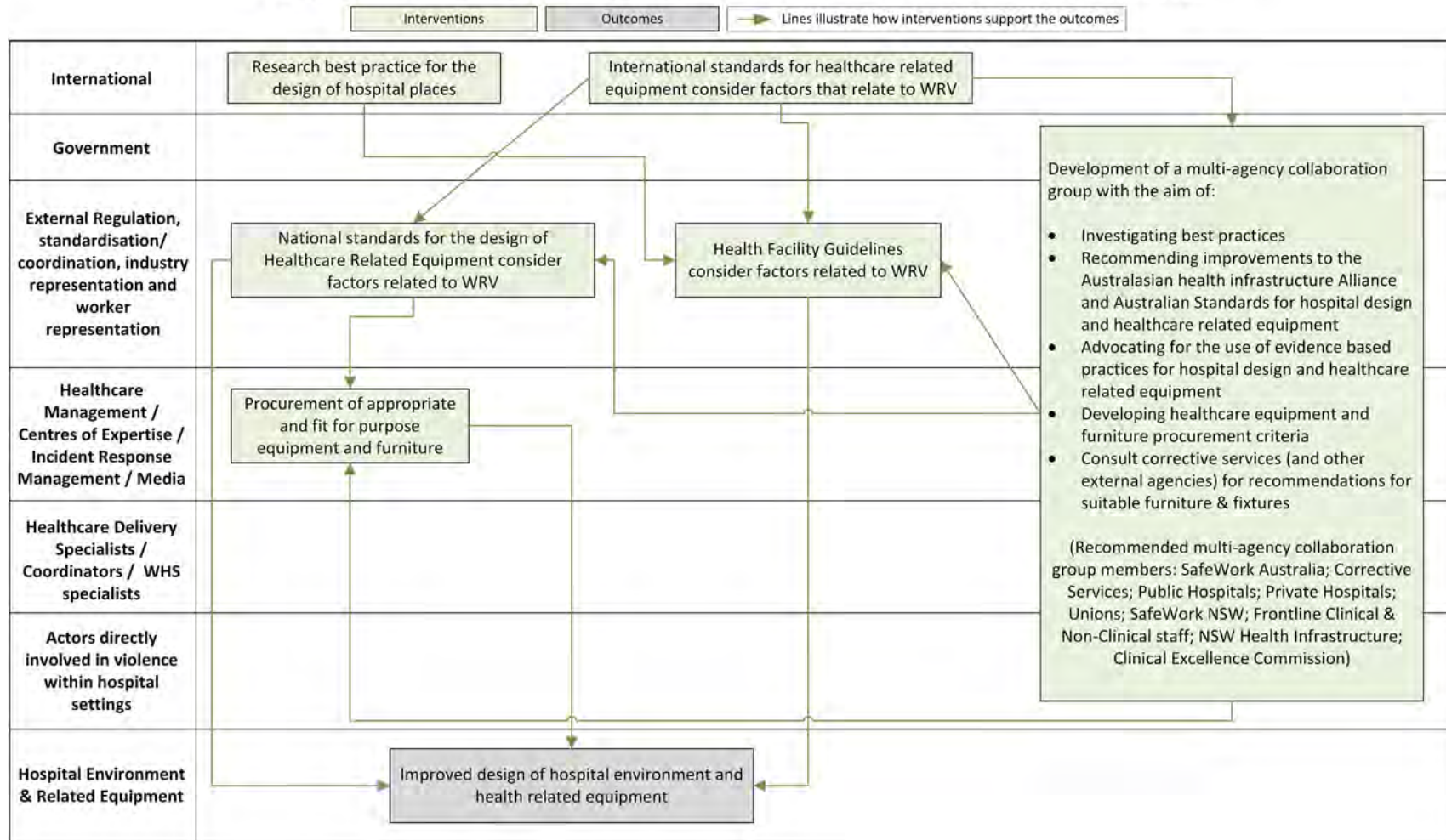


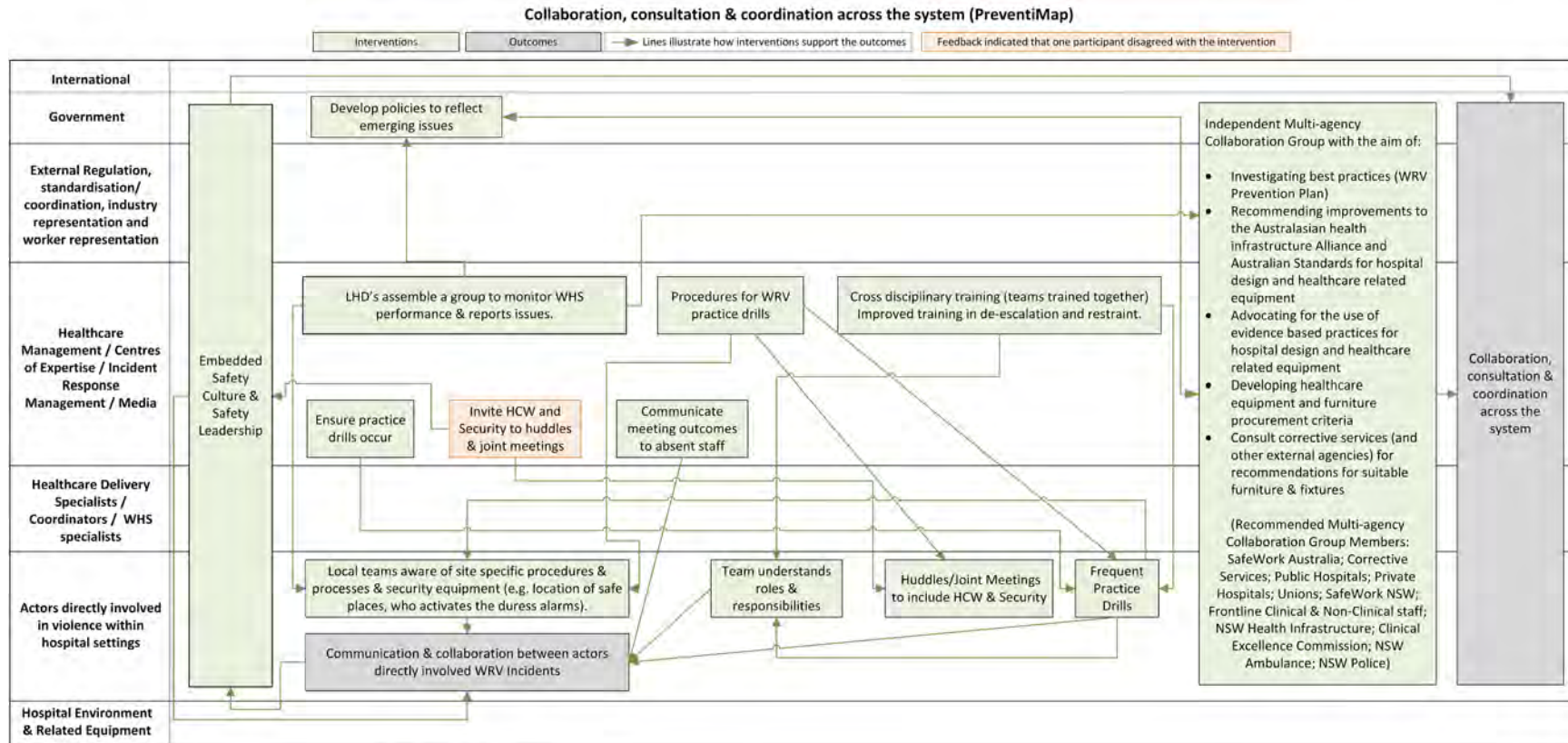
Respectful public attitudes and behaviours towards healthcare workers (PreventiMap)

Interventions Outcomes Lines illustrate how interventions support the outcomes

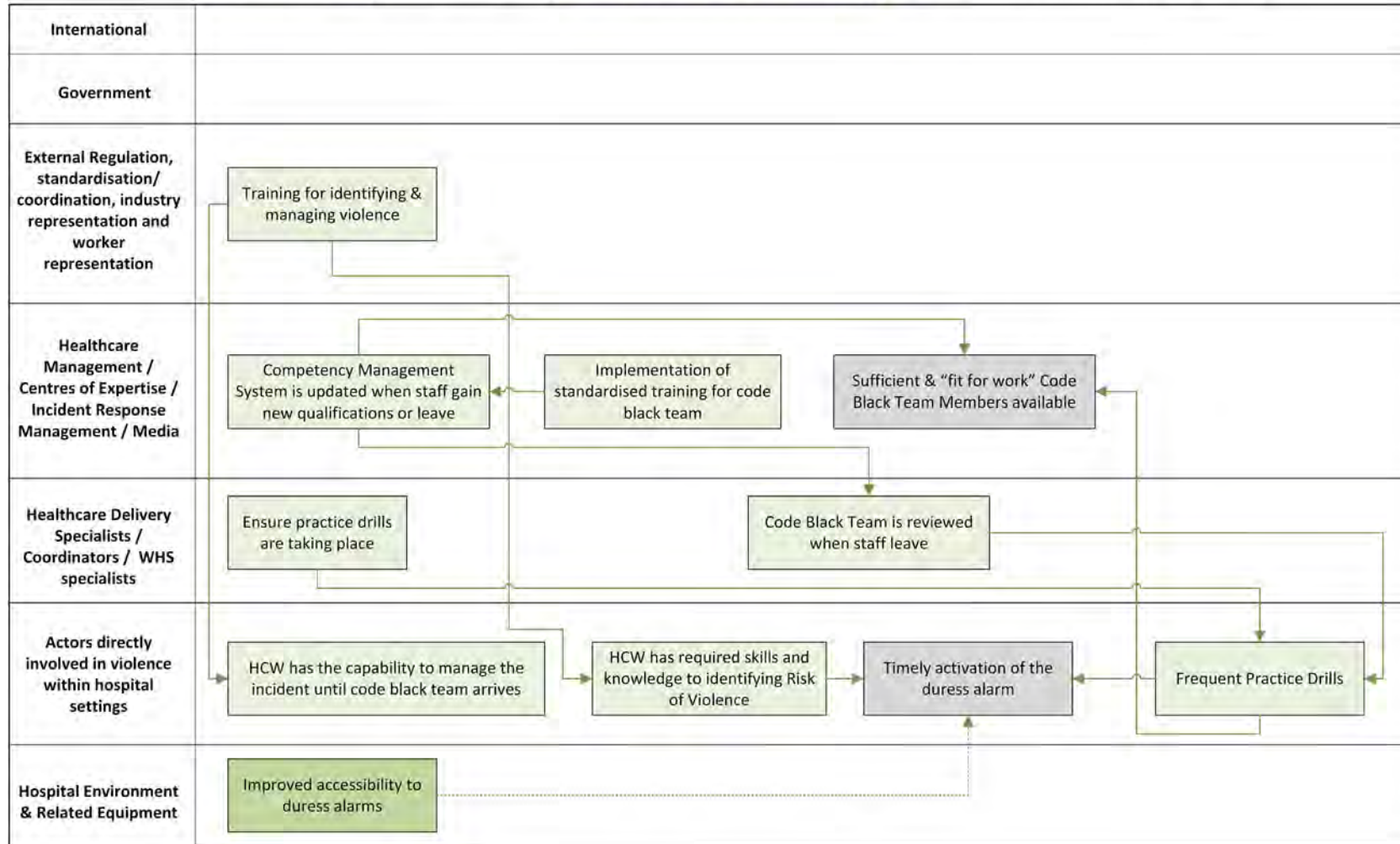
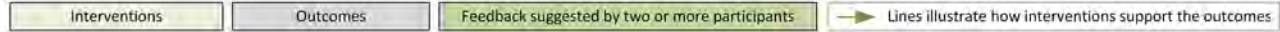


Designing better hospital spaces to support prevention & response to violent incidents (PreventiMap)



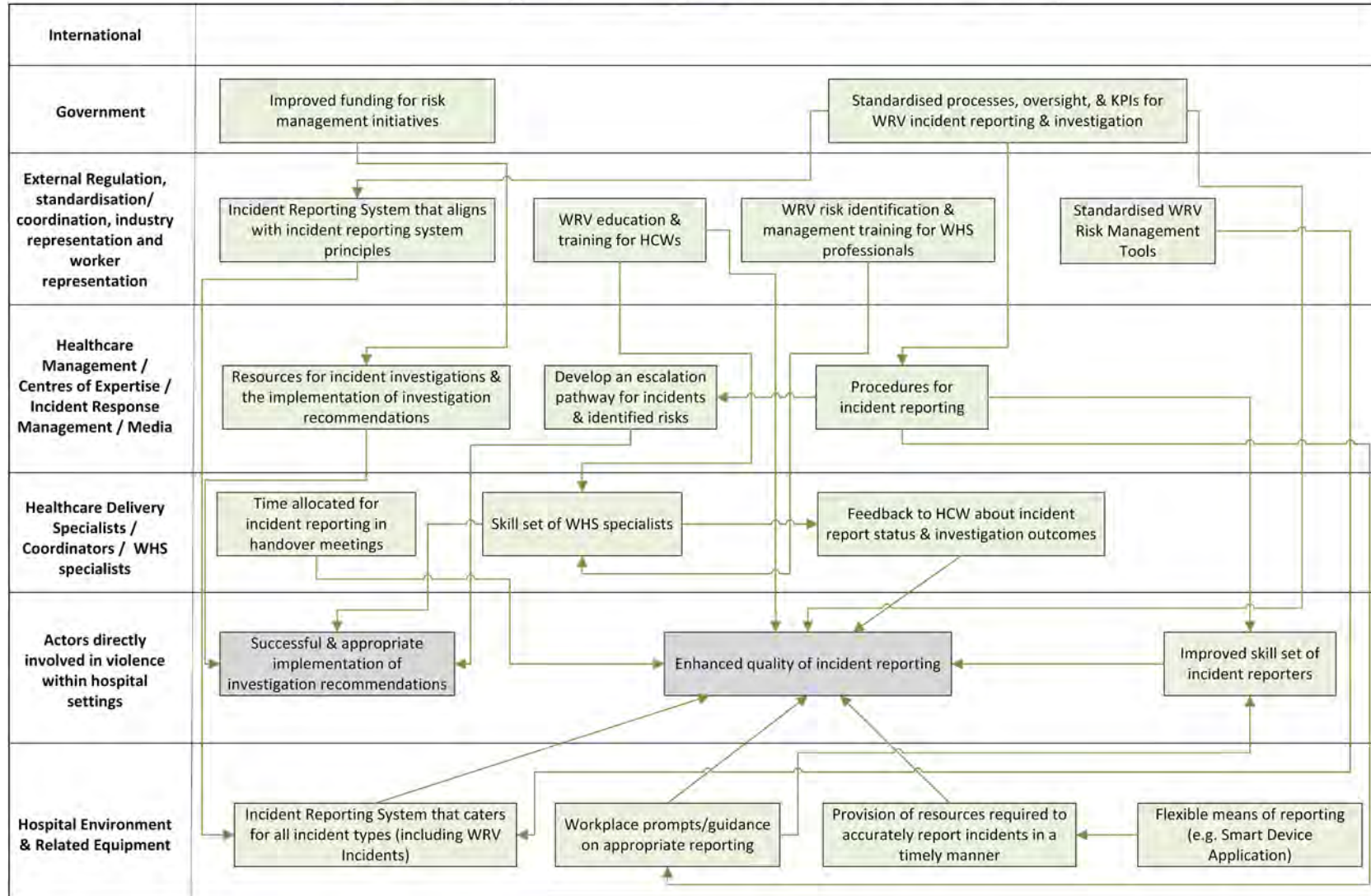


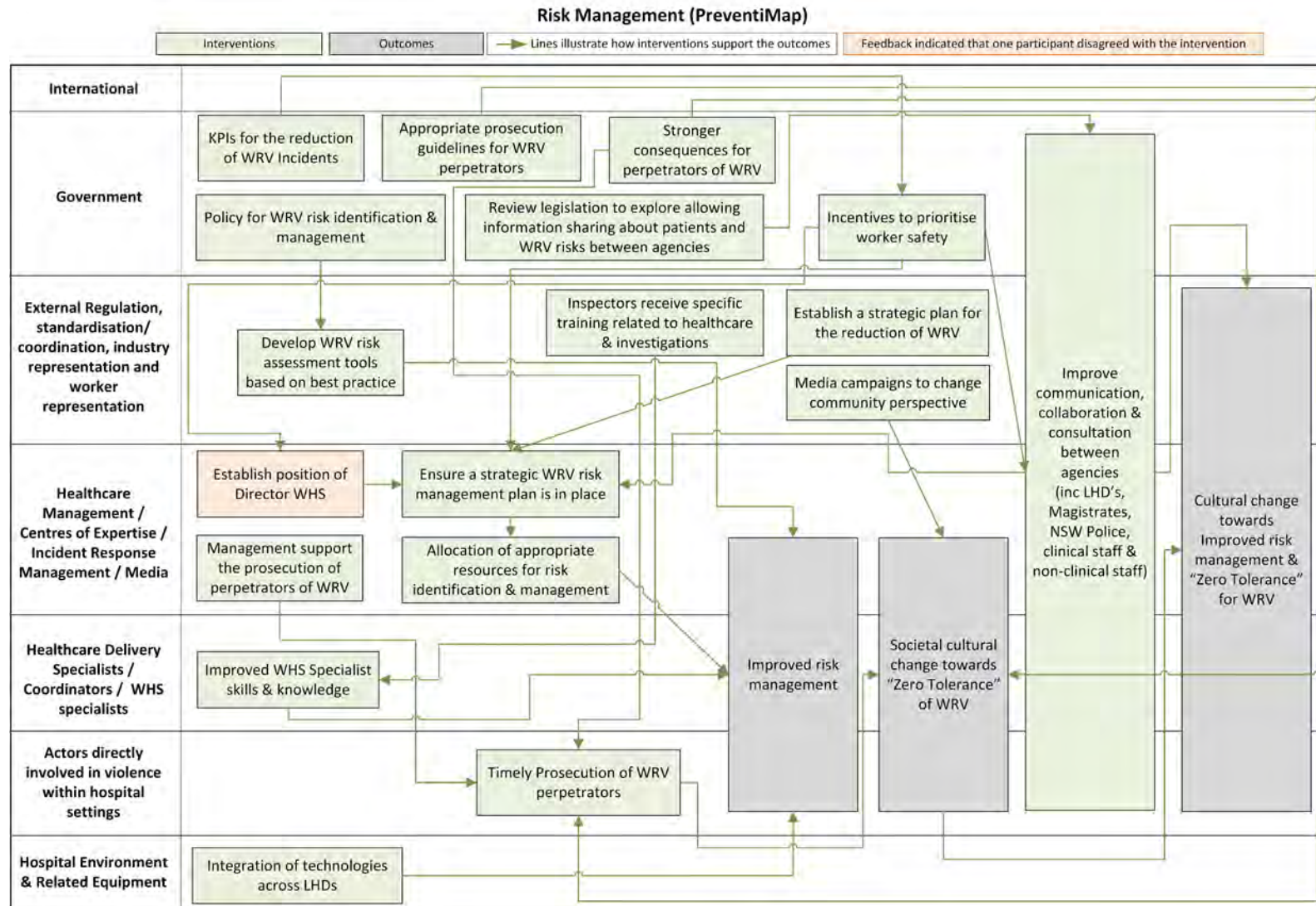
Timely & Effective Incident Response (PreventiMap)



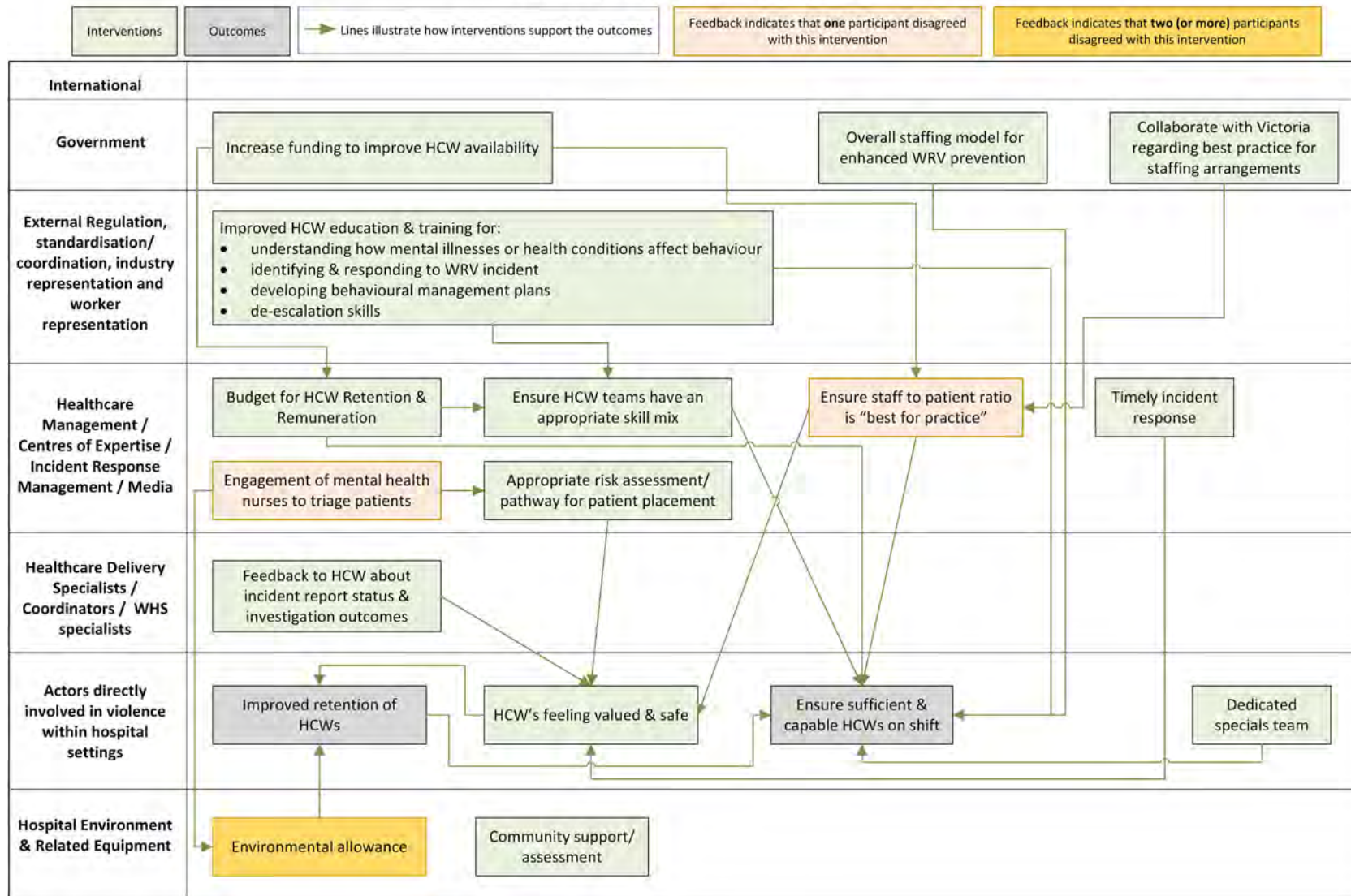
Optimising Incident Reporting & Learning Systems (PreventiMap)

Interventions Outcomes Lines illustrate how interventions support the outcomes





Sufficient & Capable Staffing (PreventiMap)



APPENDIX G – PARTICIPANT FEEDBACK ON PREVENTIMAPS

PreventiMap	Feedback
<p>Managing Risk of Patients with High Propensity of Violence</p>	<ul style="list-style-type: none"> • Include: Funding for adequate staff to patient ratios and increasing the number of speciality units that are built securely • Include: Exploration into the use of Psychiatric and Non-Prescription Drug Assessment (PANDA) • Include: Sufficient number of beds in psychiatric/mental health intensive care units for patients with severe behavioural & psychological symptoms (including dementia) • Include: Adequate Staff to Patient Ratio • Include: Body cameras on security staff
<p>Promoting the Safety and Dignity of both Patients & Healthcare Workers</p>	<ul style="list-style-type: none"> • Include: Increased specialist residential aged care services for Tier 7 dementia patients • Comment: There is an assumption throughout the PreventiMap is that violence is perpetrated by those with mental health issues only. • Change “Clarity on when to treat versus managing WHS Risk” to “Clarity on how to treat while maintaining staff safety” • Change “Confidential incident Reporting” to “The option of confidential incident reporting”. Confidential incident reporting does not allow for transparency or feedback which has been identified as other interventions. • Change “Improved Reporting Culture” to “Supported reporting culture”. • Comment: Please revise “More senior mental staff available to mentor new staff” as this should be more about improving capacity in other staff as well. • Change “Funding for specialist services (e.g. for high acuity, high risk patients) to “Funding for evidence-based services” • Change “Establish WHS Director Position” and “Escalation of WHS Risks to Management/Board to “Governance structure ensures a pathway for WHS issues to be escalated to CEOs” • Change “Deterring unacceptable patient behavior” to “Deterring unacceptable behavior”

PreventiMap	Feedback
	<ul style="list-style-type: none"> • Comment: There is a box that talks about training in mental health and this is very important. Also need training and dedicated programs for personality disordered patients (this is one of the highest risk groups and most difficult to treat clinically), and training and specialist residential aged care services for severe BPSD (behavioural and psychological symptoms of dementia), currently there are no services in NSW that will house tier 7 BPSD patients, so they get 'stuck' in the public hospital system as there is nowhere else to go, (residential aged care is federally funded) • Aligning staff safety with patient safety in all facets - risk management/incident investigation / quality improvement systems and auditing
Respectful public attitudes and behaviours towards healthcare workers	<ul style="list-style-type: none"> • Change "Signage/Posters about expected behaviours" to "Signage/Posters about expected behaviours & descriptions about the patient journey" • Include an intervention for the design of therapeutic and calming environments • Change "Appropriate delivery of bad news (e.g. social worker available for support" to "Appropriate delivery of bad news (e.g. Social support available)" • Revise "Respectful patient / family member / visitor behavior" to include staff members as empathy is different.
Designing better hospital spaces to support prevention & response to violent incidents	<ul style="list-style-type: none"> • Comment: This is not limited to design matters, but all violence prevention strategies
Collaboration, consultation & coordination across the system	<ul style="list-style-type: none"> • Delete "Invite HCW and Security to huddles and joint meetings" • Comment: "Each facility should have an occupational violence prevention plan in place with oversight of the plan by a committee that includes worker representation. This group to review all occupational violence incidents, monitor trends, recommendations from investigations etc. (as per Victoria)"
Timely & Effective Incident Response	<ul style="list-style-type: none"> • Include the following interventions from the Collaboration, consultation, and coordination PreventiMap: • "Cross disciplinary training (teams trained together). Improved training in de-escalation and restraint"

PreventiMap	Feedback
	<ul style="list-style-type: none"> • “Procedures for WRV practice drills” • “Ensure practice drills occur” • Suggestion to remove “Competence management system is updated when staff gain new qualifications or leave”.
Optimising Incident Reporting & Learning Systems	<ul style="list-style-type: none"> • No feedback received
Risk Management	<ul style="list-style-type: none"> • Change “Develop new policy for WRV risk identification & management” to “Evidence based policy for WRV risk identification and management” • Change “Inspectors receive specific training related to healthcare investigations” to “Inspectors receive specific training related to healthcare risk, controls & investigations” • Change “Establish WHS Director Position” to “Governance structure ensures a pathway for WHS issues to be escalated to CEOs” • Change “Improved risk management” to “Staff and patient risk management is embedded” • Change “Regulators establish strategic plan for the reduction of WRV” to “Regulators establish strategic plan for the reduction of WRV in collaboration with stakeholders” • At the External Regulation, standardisation/coordination, industry representation and worker representation level, include an intervention for “Timely & Appropriate prosecution for PCUB’s that do not provide a safe environment for staff and patients. • Comment: “In the preventimap on risk management there is a lot of discussion around prosecution of perpetrators, however there will only ever be a very small number of perpetrators who would be prosecuted as most perpetrators of violence in hospitals have an underlying clinical issue that is affecting their behaviour (e.g. acute mental illness, acquired brain injury, dementia etc). There is a current NSW Health policy that says that police should be called and an event number obtained etc when staff are assaulted.”
Sufficient & Capable Staffing	<ul style="list-style-type: none"> • Change “Collaborate with Victoria regarding best practice for staffing arrangements” to “Collaborate with other organisations regarding best practice for staffing arrangements”

PreventiMap	Feedback
	<ul style="list-style-type: none"> • Change “Ensure staff to patient ratio is “best for practice” to “Implement staffing model” and move this intervention to the External regulation, standardization/coordination, industry representation and worker representation level as this is an industrial matter. • Comments regarding “Environment allowance”: • Evidence does not support allowances as a prevention or safety control • Yes, to funding for infrastructure improvements, No, to individual/employee allowance. • Change “Engagement of mental health nurses to triage patients” to “Appropriate staff to triage mental health issues” • Change “Dedicated specials team” to “Specialist resources are appropriate”

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