SafeWork NSW

Systems thinking for preventing work-related violence in NSW Hospitals

Overview

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Developed by the Centre for Human Factors and Sociotechnical Systems at UniSC for SafeWork NSW, in consultation with the Action Against Violence in NSW Hospitals Working Group.

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SafeWork NSW, 92–100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252 | Customer Experience 13 10 50
Website www.safework.nsw.gov.au

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1. Purpose

Work-related violence (WRV) in hospitals is a significant health and safety issue. Under workplace health and safety legislation, Persons Conducting a Business or Undertaking (PCBUs) have duties to manage risks associated with exposure to WRV. Systems thinking approaches provide a useful framework for the effective safety management of WRV.

This document aims to: (1) provide background on the issue of WRV in hospitals (2) provide an overview of systems thinking for the prevention of WRV in hospitals; and (3) provide an overview of resources developed to support the practical implementation of systems thinking in this context.

2. Background

Work-related violence (WRV) in hospitals represent a significant and growing problem worldwide (Mento et al., 2020; Liu et al., 2019). International studies of emergency department staff have found that between 23% and 92% have experienced physical violence and between 73% and 98% have experienced verbal forms of WRV (Cabilan & Johnston, 2019). The World Health Organisation (2020) estimates that between 8% and 38% of all healthcare workers globally will suffer physical violence during their careers. Concerningly, assaults on healthcare workers worldwide have been increasing over the past two decades (Mento et al., 2020) with the issue exacerbated by the COVID-19 pandemic (Halcomb et al., 2020). Previous research has suggested that violence is experienced in the healthcare industry and that for nurses, violence is often accepted as 'part of the job' (Jones & Lyneham, 2011).

Given the broad set of behaviours that make up WRV (see Box 1), it is likely that the full extent of the problem is not known, with estimates that 25% of incidents against nurses go unreported (Lyneham, 2000). Violence has significant negative outcomes for healthcare workers. In addition to physical injuries, regular exposure to various forms of violence including verbal abuse, threats and intimidation and sexual harassment, coupled with working conditions involving high job demands, long working hours and low job control, has serious impacts on the mental health and wellbeing of healthcare workers (Régis et al, 2022; Søvold et al., 2021). Previous research has illustrated that health problems experienced by healthcare staff (e.g., depression, burnout, pain) consequently result in poor quality care, patient harm, and increased costs (Halbesleben & Rathert, 2008; Halbesleben et al., 2008; Letvak, Ruhm & Gupta, 2012). In addition, exposure to, and fear of, WRV is a predictor of staff turnover (Adams, Ryan & Wood, 2021; Li et al., 2019), which can increase the workloads of remaining staff (Hayes et al., 2006), in turn increasing the risk of WRV (Shea et al., 2017).

Box 1

Violence refers to a broad set of behaviours. It may be in the form of physical assault, sexual assault / contact, intentionally coughing / spitting on someone, harassment, threats, bullying, intimidation, gendered violence, family violence that occurs in the workplace, verbal abuse, written abuse, armed robbery and malicious damage to property (NSW Health 2022; SafeWork NSW, 2022)

Recently, WRV in hospital and healthcare settings has been conceptualised as a complex and multi-factorial issue (Salmon, Coventon & Read, 2021; 2022). This previous work applied a set of systems thinking methods to the issue, identifying that factors across the hospital system play a role in WRV incidents. The work suggested that additional guidance for the healthcare sector would be useful to support the integration of systems thinking to support WRV prevention.

3. Systems thinking for violence prevention

It is becoming increasingly accepted that systems thinking approaches to workplace health and safety management are vital for achieving effective outcomes (Salmon, Read & Hulme, In press). The systems thinking philosophy proposes that incidents and adverse events emerge from the interactions between multiple components across entire complex systems (Leveson, 2004; Rasmussen, 1997). These interactions can be unpredictable and non-linear in nature (e.g., small causes can lead to large effects). The notion of system-wide interactions relates to the shared responsibility for safety that spans all levels of work systems, up to and including organisations, regulatory bodies, and governments. The overall system therefore should be the unit of analysis with attempts to understand and manage worker safety by 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. While systems thinking emphasises a shared responsibility for safety, it does not reduce or remove the specific responsibilities of any stakeholders to manage WRV. Instead, it can assist in clarifying the roles and responsibilities of different stakeholders and where their efforts fit within a broader picture.

Rasmussen's (1997) Risk Management Framework is a commonly applied systems thinking model that represents the individuals and organisations who share the responsibility for safety across system levels which are shown as a hierarchy. A key principle of the model is that safe system functioning requires 'vertical integration' across this hierarchy. When vertical integration is present, decisions that are made at higher levels of the system (e.g., governments) flow down the hierarchy and are reflected in the decisions and actions of individuals and organisations at the lower levels (e.g., supervisors or workers). This is often achieved via control mechanisms flowing down through the system. In addition, feedback mechanisms support the communication of information about the current state of safety and effectiveness of existing risk controls up the hierarchy to inform the decisions and actions of those at the higher levels. The combined action of control and feedback mechanisms creates a dynamic control loop that supports the continuous improvement of control measures.

Based on previous research applying a systems thinking approach to the issue of WRV in hospitals (Salmon, Coventon & Read, 2021; 2022), Figure 1 shows the system hierarchy for this context, including example control and feedback measures operating between hierarchical levels.

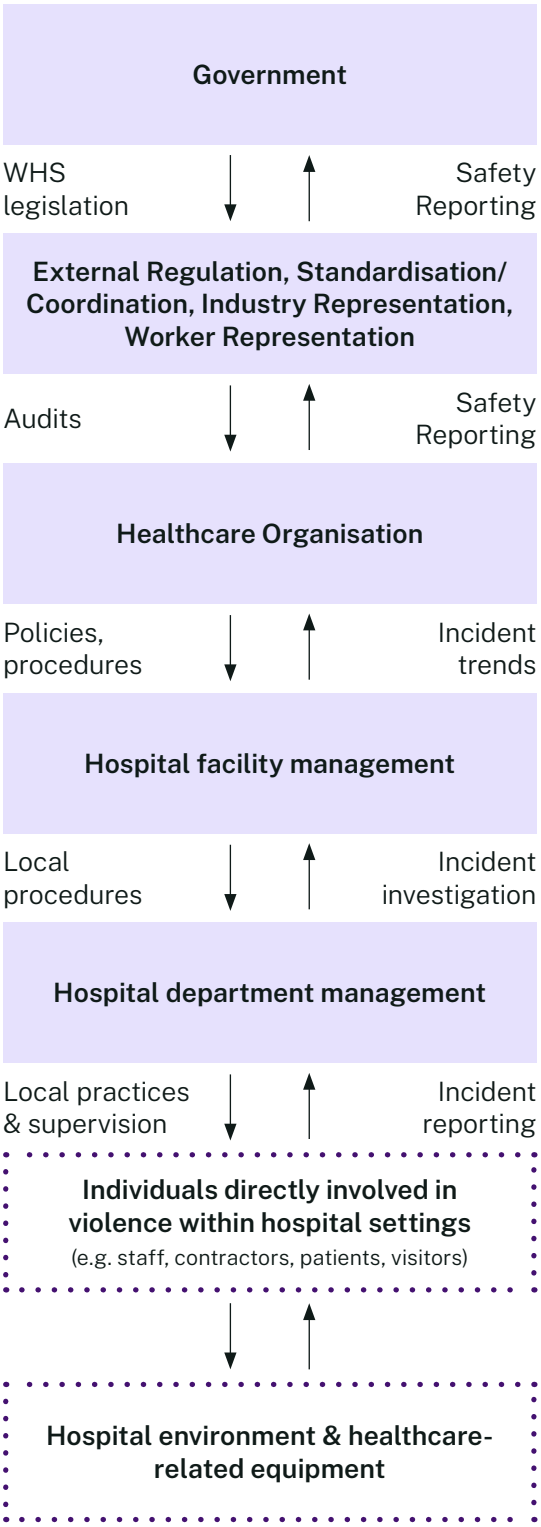

Figure 1. Rasmussen's (1997) Risk Management Framework adapted for WRV in hospitals. Example control mechanisms are shown on the left-hand side of the model (controls flowing down through the system hierarchy); example feedback mechanisms are shown on the right-hand side (information flowing up through the system hierarchy)

4. Overview of resources

A suite of systems thinking resources, underpinned by Rasmussen's (1997) Risk Management Framework, has been developed to support the healthcare sector to address WRV in hospitals. Table 1 provides an overview of the resources, including target users and suggested uses for each resource. This represents an initial set of resources, based on priorities identified via consultation with the Action Against Violence in NSW Hospitals Working Group. Future resources may be developed and added based on sector requirements.

Overall, it is suggested that the resources be considered for implementation as part of wider organisational strategies for WRV prevention and management. Where possible, having executive / senior management accountability for monitoring and evaluation of the healthcare organisation's approach to WRV prevention is ideal, within a clinical portfolio given the multifaceted nature of WRV and its significant clinical implications. Regular reporting to the Chief Executive Officer / Board is recommended to be established. Reporting should incorporate aspects covered by the tools such as risk management of WRV (i.e., status of risks, risk controls implemented), investigation progress and findings, and reporting levels for WRV incidents.

Table 1: Systems thinking resources

Resource	Description	Target users	Sugested uses
1. Multi-Level Risk Assessment Toolkit	Guidance on managing risks associated with WRV from a systems thinking perspective, with tools for stakeholders at various system levels.	Healthcare leaders with responsibility for risk assessment and management.	As a reference to complement existing risk assessment processes or adopted as the organisation's risk assessment approach. Note, implementation of the full toolkit may require investment of significant time / resources.
2. Incident Investigation Guidance	Guidance on systems thinking principles for WRV incident investigations. Case studies are provided to demonstrate how the principles can be applied.	Healthcare leaders responsible for WRV incident investigations.	As a reference for investigators, including step-by-step support to identify system-wide contributory factors to WRV incidents. May also be used to inform training and professional development for investigators.
3. Reporting Culture Improvement Roadmap	A roadmap of initiatives for improving WRV reporting culture across timescales (short, medium and long-term) and system levels.	Leaders across the healthcare system with responsibilities for WHS or WRV prevention initiatives.	As a gap analysis tool or a prompt for identifying new initiatives during activities such as: – Risk assessments (i.e., for risk control identification). – Strategic / annual planning. – Planning of projects aimed to improve WHS / WRV.

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