



ORIGINAL ARTICLE

# Prevention and management of aggressive behaviour in patients at psychiatric hospitals: a document analysis of clinical practice guidelines in Hong Kong

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**ABSTRACT:** Patient aggressive behaviour remains a significant public health concern worldwide. The use of restraint and seclusion remains a last resort but not an uncommon practice in clinical psychiatry in the management of aggressive events. There seems to be a paucity of evidenced-based research examining the policy framework guiding the use of restraint and seclusion in Asia contexts. The purpose of this study was to conduct an analysis on the guidelines in psychiatric hospitals in Hong Kong, and to explore the extent to which these guidelines were aligned with the international clinical guidelines for the prevention and management of patient aggression in psychiatry. A descriptive document analysis was used to analyse the guidelines from four psychiatric hospitals in Hong Kong in comparison with the NICE (National Institute of Health and Care Excellence UK) guidelines. Data were collected from December 2017 to June 2018. A total of 91 written documents were retrieved. Preventing violence and aggression has the highest level of agreement (31%) while the use of restrictive interventions has the lowest level of agreement (12%). The sub-recommendation with most in line with the NICE guidelines were restrictive interventions, de-escalation, and improving service users' experiences. However, for

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*example, staff training, working with police, and reduced use of restrictive interventions seemed to have no agreement with the NICE guidelines. Variation exists between the Asian (Hong Kong) local policy framework/guidelines and the European (UK) national policy framework. There are also large discrepancies in the written guidelines on patient aggressive behaviour when comparing local policy frameworks, cluster-based documents, and departmental practices.*

**KEY WORDS:** *aggression, document analysis, psychiatric hospital, restraint, seclusion, violence.*

## INTRODUCTION

Psychiatric hospital units are one of the most prevalent settings in which workplace violence is reported (Edward *et al.* 2016). In acute care psychiatric settings, healthcare workers are often a victim of different types of aggressive behaviour, such as verbal assault (46.0% to 78.6%), threats (43.0% to 78.6%), and sexual harassment (9.5% to 37.2%) (d'Ettoire & Pellicani 2017). As a consequence, healthcare workers may suffer from physical injuries (Bordignon & Monteiro 2016; Lanctôt & Guay 2014), emotional damage (Bordignon & Monteiro 2016), depression, posttraumatic stress disorder (PTSD), anxiety, sleep disorders, and burnout (Lanctôt & Guay 2014). Being a victim of aggressive behaviour also has a negative detrimental impact on staff work performance (Bordignon & Monteiro, 2016; Lanctôt & Guay 2014). Leaves of absence from work may increase economic burdens and demands on staff (Lanctôt & Guay 2014). Various policies and treatment guidelines have been developed to support prevention and management of aggressive events in clinical practices (e.g. Government of South Australia 2015, National Institute for Health and Care Excellence [NICE] 2015, Registered Nurses' Association of Ontario 2009). In this paper, clinical guidelines for the prevention and management of patient aggression in psychiatry are explored.

## BACKGROUND

Clinical practice guidelines are systematically developed statements aiming to assist healthcare decision-making (World Health Organization 2003). At their best, the guidelines can support healthcare professionals, patients and their families, decision-makers, and legislators, in making decisions related to treatment (Francke *et al.* 2008). Therefore, a document analysis is a useful method to identify quality gaps between recommendations and practice. Previous analyses of healthcare policy documents have identified differences

in 'best practices' in Western countries, that is the United States and the UK (Simmons & Wright 2004). A document analysis of the national standards of violence prevention and management practices in 17 European countries showed that the practices related to violence management have major variations between different countries (Cowman *et al.* 2017). Analyses of existing policy documents have also revealed quality gaps and deviations between set standards and practice in mental health settings (Duffy & Kelly 2017; Vähäniemi *et al.* 2018).

Policy document analysis has been used to identify barriers towards new practices, ascertain a need for changes in legislation (Durbin *et al.*, 2013) and compare national legislation (Duffy & Kelly 2017). Kaltiala-Heino and Välimäki (2001) compared patients' rights in various healthcare acts in Finland and found discrepancies between the realization of patient rights among different target groups (e.g. people with mental illness, learning disability, infectious diseases, social work). More recently, Vähäniemi *et al.* (2018) conducted a national analysis of local healthcare strategies in 320 Finnish municipalities. They found that, although promotion of mental health and prevention of mental illness are well-described in Finnish policy documents, there is still room for development regarding the support of human rights for persons with mental health problems, and likewise for ensuring medication practices and evidence-based research, despite the fact that the importance of these areas is well-documented in international and national guidelines (WHO 2013). In Norway, Andersen *et al.* (2016) analysed written house rules within psychiatric hospitals and found that national policies may have little impact on local practices in psychiatric services.

To date, research on aggression and violence prevention and management practices in psychiatric hospitals has mainly focused on Western countries, and findings have shown that clinical practice varies between countries (Cowman *et al.* 2017; Kalisova *et al.* 2014), regions (Noorthoorn *et al.* 2016; Norum *et al.*

2013; Välimäki *et al.* 2019), and even within hospitals (Husum *et al.* 2010). In Asia, there seems to be insufficient empirical evidence to demonstrate that interventions used for the prevention and management of patient aggression are evidence-based practice (Zhou *et al.* 2016). Therefore, the purpose of this study was to conduct a descriptive document analysis on the hospital guidelines in psychiatric hospitals, and to explore the extent to which these hospital guidelines align with the national clinical guidelines for the prevention and management of patient aggression within inpatient psychiatry settings in Hong Kong. The study findings provide important information for the future development of clinical policy/guidelines to ensure that patients receive consistent evidence-based treatment across different local psychiatric settings.

## METHOD

### Design

A descriptive document analysis study design was used (Prior 2012). In our study, the guidelines refer to the policy documents developed by the Hospital Authority (HA) in Hong Kong. We included written policies or instructions on how to manage safety or prevent patient aggressive behaviour in psychiatric hospital wards. To obtain these, we conducted a document analysis, adopted from Münzberg *et al.* (2015). Existing guidelines used in the HA were compared with 'the golden standard' – the NICE evidence-based guideline (*NG10 Violence and aggression: short-term management in mental health, health and community settings*). The NICE guideline was selected because it is a well-known guideline for safeguarding patients and healthcare professionals, and preventing and managing violent situations (NICE 2015). For document analysis, we assessed at what level ('Level of evidence analysis,' Häske *et al.* 2016; Münzberg *et al.* 2015) the content of the target documents was in line with 'the golden standard'. The approach was selected because it offers a usable method to explore the quality of hospital and local corporate guidelines by comparing them with international evidence-based recommendations (Münzberg *et al.* 2015).

### Settings

The study was conducted in Hong Kong, located in the south-eastern part of China. Hong Kong is a high-income autonomous territory with a population of 7.5

million, 46% male and 54% female (Census & Statistics Department 2020). Hong Kong had a GDP per capita of 349,745 in 2017 (Census & Statistics Department 2018) and a life expectancy of 82.3 years for males and 87.7 for females in 2018 (Center for Health Protection 2019). In recent years, the total healthcare expenditure in Hong Kong has been around, HK\$61.9 billion (Chan 2018), and the recurrent funding to HA has been HK \$56 billion, which has been around 90% of the total operating expenditure (Hospital Authority 2018). Under the HA, the biggest healthcare provider in Hong Kong, there are seven hospital clusters: Hong Kong East Cluster, Hong Kong West Cluster, Kowloon Central Cluster, Kowloon East Cluster, Kowloon West Cluster, New Territories East Cluster, and New Territories West Cluster. There is currently one psychiatric hospital/unit in each cluster. As of 31 March 2019, there were 3,647 psychiatric beds and 18,501 discharges between 1 April 2018 and 31 March 2019 (Hospital Authority 2019).

The mental health service provision in Hong Kong is mainly divided into inpatient services, outpatient services, and community services. Major psychiatric hospitals in Hong Kong are further divided into different clinical specialties, catering to various age groups, from children to the elderly, with mental health disorders. These specialties include, for example, the Child and Adolescent Psychiatric Service, the Adult Psychiatric Service, the Psychogeriatric Service, the Substance Abuse Assessment Unit, and the Psychiatric Unit for Learning Disabilities. Mental health treatment is divided into pharmacological and non-pharmacological treatment approaches (e.g. Cognitive Behavioural Therapy, Cognitive Therapy, Mindfulness-based Stress Reduction) (Hospital Authority 2018).

### Recruitment

Convenience sampling was used for hospital recruitment. All the General Managers in nursing in the seven HA hospital clusters in Hong Kong were invited to participate in the study by the researchers in person via a hospital cluster meeting. Out of the seven clusters, four were willing to join the document analysis. The guidelines to be analysed in this study referred to written documents, including clinical practice guidelines, hospital policies, written house rules, and other documents that refer to treatment practices to patient aggression and coercive measures. The inclusion criteria stipulated that participation entities should be inpatient wards/units including general adult gazetted

(closed ward where patients are admitted compulsorily)/non-gazetted wards or other type of wards or units where patient aggression was managed with time-out, observations, de-escalation, medication, seclusion, physical restraint, or rapid tranquilization/sedation. Psychiatric outpatient departments, psychogeriatric inpatient units, and units with no direct inpatient care were excluded. Because the study focused on inpatient care for adults, recommendations for other settings (e.g. children, adolescents) were not adopted for the analysis matrix instrument.

### Data collection

The data collection period spanned from December 2017 to June 2018 using an agreed-upon protocol for the document analysis. The guidelines were derived from the collaborating hospitals and/or departments. The Guidelines for the HA psychiatric services are issued at three tiers: i) the Hospital Authority Head Office (HAHO); ii) Psychiatric Hospital/Departments of Psychiatry; and iii) individual psychiatric units. The Principal Investigator at each hospital collected the guidelines and provided the researchers with hard copies of the written guidelines. To locate relevant written documents, the search protocol was designed to capture an initial range of documents relating to the topic. Duplicated documents were identified and discarded in confidential waste to avoid any miscalculation of the level of agreement. The guidelines included in the analysis were written in English (most official documents are written in English in Hong Kong). All documents the collaborating hospitals and/or departments deemed relevant for our study topic, that is how to manage safety or prevent patient aggressive behaviour in psychiatric hospital wards, were included in our analysis. In practice, this meant that we included all documents dealing with patient restrictions, safety instructions, instructions involving the use of coercive measures, management of aggressive behaviour, etc. These topics were judged to be in line with the content of the NICE (2015) guideline we used as point of comparison in the level of evidence analysis: guideline for safeguarding patients and healthcare professionals, and preventing and managing violent situations (NICE 2015).

### Data categorization instrument

The guideline analysis was based on an analysis matrix instrument, adopted from the studies by Münzberg

*et al.* (2015) and Häske *et al.* (2016). The analysis matrix included the 116 key recommendations of NICE (2015), which was used to categorize the data (the updated guideline replaces the previous NICE guideline CG25). The NICE guideline was selected because it is recommended to be used in mental health, health, and community settings to safeguard and prevent patients and staff members from violence. The guideline was developed in collaboration with the National Collaborating Centre for Mental Health at the Royal College of Psychiatrists together with healthcare professionals, service users, carers, and technical staff.

The present study used key recommendations and sub-recommendations of the topics included in the NICE (2015) guideline (Table 1). In addition, each sub-recommendation was further divided into specific recommendations, which resulted in a total of 116 recommendations (4 key recommendations and 112 specific recommendations including sub-recommendations). These recommendations were used as a guide for data categorization.

### Data analysis

The document data were analysed using a modified level-of-evidence method from Münzberg *et al.* (2015). First, each HA document was analysed to establish which NICE (2015) guideline recommendations (Table 1) were included. This procedure was conducted by two independent researchers (TL and JV). They assessed the content of the HA written guidelines by comparing the content of the HA policy documents with 116 recommendations based on the NICE guideline. If a specific recommendation was found, that is, the guideline content was in line with NICE (2015) guideline, the researcher rated the value for the recommendation as '1' ('Yes'). A value of '0' ('No') was given if the NICE recommendations could not be found in the HA documents. Further, if the recommendation content was unclear or differed from the NICE guideline, the document was also given a value of 0. Taking the variations in legislation across different countries, slight differences were allowed. In cases where a whole key recommendation (e.g. Managing violence and aggression in children and young people) of the NICE guideline was not present in the HA documents, items were given a value of 'N/A'.

Second, to increase the validity of analysis, the categorizations of two independent assessors were compared. In cases of discrepancy between the categorization results, the guidelines were reassessed

**TABLE 1** *The key and sub-recommendation topics*

Key recommendation topics	Sub-recommendation topics
Principles for managing violence and aggression	<ul style="list-style-type: none"> <li>• Improving service user experience</li> <li>• Staff training</li> <li>• Involving service users in decision-making</li> <li>• Preventing violations of service users' rights</li> <li>• Working with the police</li> </ul>
Anticipating and reducing the risk of violence and aggression	<ul style="list-style-type: none"> <li>• Reducing the use of restrictive interventions</li> <li>• A framework for anticipating and reducing violence and aggression in inpatient psychiatric wards</li> <li>• Assessing and managing the risk of violence and aggression</li> <li>• An individualized pharmacological strategy to reduce the risk of violence and aggression</li> </ul>
Preventing violence and aggression	<ul style="list-style-type: none"> <li>• Searching</li> <li>• Using medication p.r.n. (as necessary)</li> <li>• De-escalation</li> </ul>
Using restrictive interventions in inpatient psychiatric settings	<ul style="list-style-type: none"> <li>• Staff training</li> <li>• Staffing and equipment</li> <li>• Using restrictive interventions</li> <li>• Observation</li> <li>• Manual restraint</li> <li>• Mechanical restraint</li> <li>• Rapid tranquilization</li> <li>• Seclusion</li> <li>• Rapid tranquilization during seclusion</li> <li>• Post-incident debriefing and formal review</li> </ul>

and discussed by two researchers until a consensus was reached.

Third, the level of agreement in percentages (the content of each local guideline that was in line with the content of the NICE [2015] guideline) was calculated. The level of agreement can be interpreted as follows: i) in agreement (100% match between the content of the local document and the NICE guideline), ii) minor variation (99–51% match between the content of the local document and the NICE guideline), iii) major variation (50%–1% match between the content of the local document and the NICE guideline), and iv) no agreement (0%, no match at all).

Fourth, to gain a deeper understanding of the quality of the local clinical guidelines, the most and least commonly identified recommendation topics were calculated. To understand the average situation in Hong Kong, beyond the results in a single hospital, all items under each sub-recommendation were added together,

and the sum was multiplied by the number of hospitals (4 hospitals); this figure was then divided by the total of 'yes' answers from all the hospitals in the sub-recommendation. For example, a key recommendation topic, 'Principles for managing violence and aggression', has the sub-recommendation, 'Improving service user experience', with four items evaluated. So, the potential maximum amount of 'yes' answers from four hospitals would have been 16 (4\*4). In total, the hospitals had seven 'yes' answers for this sub-recommendation, making the overall agreement for this 44% (7/16).

## RESULTS

### Characteristics of the documents

Of the four local hospital clusters, 91 written documents, dated between 2014 and 2018 and comprising 593 pages of text, were analysed (14–32 documents on average per hospital). Guideline documents varied with some being targeted to all clusters and hospitals, while other documents were unique and targeted for individual hospitals or wards only. The documents were aimed at the hospital staff ( $n = 35$ ), patients and staff ( $n = 2$ ), both patients and family members ( $n = 8$ ), only family members ( $n = 1$ ), only patients ( $n = 2$ ), and everyone in the hospital ( $n = 4$ ). For the rest ( $n = 52$ ), it was not clear for whom the documents were specifically intended. Only two documents (2%,  $n = 91$ ) were in use in all four hospitals. The documents consisted of both official written hospital policies, guidelines, and instructions, and less official 'house rules'. The documents consisted of written text referring to legislation, policy, international literature and guidelines, with figures, tables, and pictures. A summary of the analysed documents is described in Table 2.

### Agreement level of the evidence

Generally, the analysis of the overall agreement level showed major variations in document content between the local guideline documents and the NICE (2015) guideline (agreement level 16–18%). Regarding the four key recommendation topics of the NICE guideline, the recommendation topic of 'Preventing violence and aggression' included the highest similarity to the content of the clinical guidelines in Hong Kong (total agreement among hospitals 31%). Nevertheless, the agreement level between the local clinical guideline and the NICE (2015) guideline was the lowest regarding 'Using restrictive interventions in inpatient

**TABLE 2:** A summary of the document types, target group of the document, and reference of the document

Type of document	Hospitals	Target group as stated in the document	Reference of the document
Advanced nursing standards for the management of the care of patients with violent tendencies	<i>n</i> = 4	Nursing staff	HA
Guideline on physical restraint for psychiatric patients	<i>n</i> = 4	Hospital mental health staff	HA
HA safety manual workplace violence	<i>n</i> = 3	All staff	HA
Basic nursing standards for patient care: physical restraint of patients	<i>n</i> = 3	Nursing staff	HA
Guidelines for the use of physical restraint	<i>n</i> = 3	Hospital mental health staff	HA
Notice for indecent behaviour	<i>n</i> = 2	All people in hospital	HA
			
Sheet of forbidden items	<i>n</i> = 2	Patients and family members	HA
Violence risk assessment and management record in psychiatric settings	<i>n</i> = 1	Nursing staff	Hospital
Notification of restraint/seclusion	<i>n</i> = 1	Nursing and medical staff	Hospital
Individual crisis plan	<i>n</i> = 1	Patients and nurses	Hospital
Admission notice	<i>n</i> = 1	Patients	Hospital
Admission pamphlet	<i>n</i> = 1	Patients and family members	Hospital
Orientation programme for patients on admission/transfer	<i>n</i> = 1	Patients and nurses	Hospital
Fact sheet for relatives: Applying physical restraint on patients	<i>n</i> = 1	Family members	Hospital
Emergency call bell panel	<i>n</i> = 1	Hospital staff	Ward
Duty/meal hour of HA supporting staff	<i>n</i> = 1	Nursing and supporting staff	Hospital
Therapeutic activities and information	<i>n</i> = 1	Patients and family members	Ward
Practice guide to patient's journey of recovery	<i>n</i> = 1	Nursing staff	Hospital
Sheet of forbidden items	<i>n</i> = 1	Patients and family members	Ward
Guidelines on the duty ward manager system	<i>n</i> = 1	Nursing staff, Department heads	Hospital
No smoking sign	<i>n</i> = 1	All people in hospital	Hospital
Guidelines on the management of patients under close observation	<i>n</i> = 1	Nursing staff	Hospital
Guidelines on time-out procedure	<i>n</i> = 1	Nursing staff	Hospital
Guidelines on assistance for psychiatric emergency on the ward	<i>n</i> = 1	All hospital staff	Hospital
Guidelines for handling patients with violent behaviour	<i>n</i> = 1	All doctors	Hospital
Daily schedule sheet	<i>n</i> = 1	Patients	Ward

*(Continued)*

psychiatric settings' (total agreement among hospitals 12%) (Table 3).

The sub-recommendation that was mostly in line with the NICE (2015) guideline was calculated. The sub-recommendation with the highest agreement was 'using restrictive interventions' (*n* = 11, 92%), followed by 'de-escalation' (*n* = 19, 53%) and 'improving service user experience' (*n* = 7, 44%).

However, there were a number of recommendations mentioned in the NICE (2015) guideline that did not

have any agreement with local clinical guidelines. These recommendations were 'staff training', 'working with the police', 'reducing the use of restrictive interventions', 'a framework for anticipating and reducing violence and aggression in inpatient psychiatric wards', 'an individualized pharmacological strategy to reduce the risk of violence and aggression', 'using p.r.n. medication', 'mechanical restraint', 'rapid tranquillization', and 'rapid tranquillization during seclusion' (0%) (Table 4).

TABLE 2: (Continued)

Type of document	Hospitals	Target group as stated in the document	Reference of the document
10 domains of de-escalation	<i>n</i> = 1	Staff	Ward
HA definition of workplace violence	<i>n</i> = 1	Nursing staff	HA
Guideline on restraint management	<i>n</i> = 1	Nursing staff	Hospital
Guideline on inpatient's parole	<i>n</i> = 1	Nursing staff	Hospital
Guidelines on managing high-risk patients with dangerous objects in general hospitals	<i>n</i> = 1	Nursing staff	HA
Mental health regulations	<i>n</i> = 1	All people in hospital	Legislative
Safety manual workplace violence	<i>n</i> = 1	Healthcare and administrative staff	Hospital
Physical restraint (information for patients and families)	<i>n</i> = 1	Patients and family members	Hospital
Handling of workplace violence	<i>n</i> = 1	Healthcare and administrative staff	Hospital
Guideline on the use of physical restraint in the department of psychiatry	<i>n</i> = 1	All healthcare staff	Hospital
Visitor card (notice to visitors of rules and regulations for visits in the hospital)	<i>n</i> = 1	Patients and family members	Hospital
Ward activity schedule	<i>n</i> = 1	Patients and family members	Ward

DISCUSSION

In this study, we assessed the extent to which the guidelines from four psychiatric hospitals in Hong Kong are in line with the NICE guideline 'Violence and aggression: short-term management in mental health, health, and community setting' (NICE 2015). We found that the content of some of the local hospital guidelines is far from being in accordance with the NICE (2015) guideline, which often has been valued as 'the golden standard'. Of particular interest, the use of restrictive intervention has the lowest level of agreement when compared with the NICE guideline. Hospital and local corporate guidelines related to patient aggression and violence in Hong Kong focus strongly on restrictive practices, but reduction plans to decrease the use of these coercive methods are less often described. Seemingly, the standards of

national committees are not fully implemented in clinical practice and treatment practices may differ among regions (Aggarwal, Cedeno, John, & Lewis-Fernandez 2017). A high patient-to-staff ratio and overcrowded clinical environments in Hong Kong may be major concerns in the use of restraint and seclusion. Nonetheless, the Hospital Authority in Hong Kong has provided a multi-level structured staff training for the management of patient violence, including theory, de-escalation as well as breakaway techniques, control, and restraint. All staff working in in-patient hospital settings are required to attend this mandatory training prior to working in a healthcare setting. However, these practices were not visible in the documents provided for this study, and therefore on this measure, we did not find any agreement between local staff training and the recommendations of the NICE (2015) guideline.

**TABLE 3** Agreement level between clinical guidelines and NICE (2015) key recommendations

Hospital	NICE key recommendations (number of recommendations, <i>N</i> )	Agreement level† % ( <i>n</i> )
Hospital 1	Principles for managing violence and aggression ( <i>N</i> = 14)	36 (5)
Hospital 2		14 (2)
Hospital 3		21 (3)
Hospital 4		21 (3)
Hospital 1	Anticipating and reducing the risk of violence and aggression ( <i>N</i> = 17)	29 (5)
Hospital 2		6 (1)
Hospital 3		6 (1)
Hospital 4		12 (2)
Hospital 1	Preventing violence and aggression ( <i>N</i> = 21)	24 (5)
Hospital 2		33 (7)
Hospital 3		33 (7)
Hospital 4		33 (7)
Hospital 1	Using restrictive interventions in inpatient psychiatric settings ( <i>N</i> = 64)	8 (5)
Hospital 2		17 (11)
Hospital 3		11 (7)
Hospital 4		13 (8)

†The extent (amount) to which the recommendations are in line with the content of the documents analysed.

Despite its ethical (Kontio *et al.* 2010) and safety concerns (Kersting *et al.* 2019), seclusion and restraint are still often used to manage patient violence and aggression, for example, in Europe (Kalisova *et al.* 2014; Välimäki *et al.* 2019). The major justifications for the use of physical restraint and seclusion can be to maintain patient safety and the safety of other patients and staff on the ward (Gerace & Muir-Cochrane 2019). In this light, patient and staff safety surpasses and overrides patient autonomy in the use of physical restraint and seclusion. It has already been pointed out by various authors that patient autonomy and safety creates a dilemma in psychiatric treatment (e.g. Chiovitti 2011; Haugom *et al.* 2019). Based on the ethical principles by Beauchamp and Childress (2013), Montaguti *et al.* (2019) have stated that it is quite simplistic to find sensible ethical reasoning for the use of seclusion and restraint in psychiatric care. For example, patient seclusion and restraint can be rationalized based on safety issues and patient beneficence; if a patient lacks decision-making capacity, they may make decisions that may put the health and well-being of themselves and others at risk. The patient's autonomy must be overridden in these special circumstances. Further, if health-care workers cannot coerce patients and they harm themselves, the patients may be undertreated, or go without the treatment they need (justice). Montaguti *et al.* (2019) also assert that in some cases the use of

**TABLE 4** Sub-section topics and hospital guideline agreement

Key recommendation topic	Sub-recommendation of the topics	Agreement level % ( <i>n</i> )
Principles for managing violence and aggression	Improving service user experience	44 (7)
	Staff training	0 (0)
	Involving service users in decision-making	5 (1)
	Preventing violations of service users' rights	13 (1)
Anticipating and reducing the risk of violence and aggression	Working with the police	0 (0)
	Reducing the use of restrictive interventions	0 (0)
	A framework for anticipating and reducing violence and aggression in inpatient psychiatric wards	0 (0)
	Assessing and managing the risk of violence and aggression	18(5)
Preventing violence and aggression	An individualized pharmacological strategy to reduce the risk of violence and aggression	0 (0)
	Searching	8 (3)
	Using p.r.n. medication	0 (0)
	De-escalation	53 (19)
	Staff training	0 (0)
	Staffing and equipment	8 (1)
	Using restrictive interventions	92 (11)
	Observation	2 (2)
	Manual restraint	25 (11)
	Mechanical restraint	0 (0)
Rapid tranquillization	0 (0)	
Using restrictive interventions in inpatient psychiatric settings	Seclusion	8 (1)
	Rapid tranquillization during seclusion	0 (0)
	Post-incident debrief and formal review	2 (1)

coercive measures could eventually have a positive therapeutic impact by intervening in disruptive behaviour (non-maleficence) (Montaguti *et al.* 2019). On the other hand, the balance between patient safety and autonomy in daily clinical practice is always difficult to maintain. Therefore, regardless of a patient's mental status, the dignity of the patient should always be taken into account when coercion is being considered in patient care (Hem *et al.* 2014). If other options fail and physical restraint is used to control violent behaviour to prevent harm, patients still deserve to be respected and their perspectives listened to in psychiatric settings (Spinzy *et al.* 2018).

In promoting a safe treatment environment with fewer coercive measures (Bowers *et al.* 2015; Garriga *et al.* 2016), staff must be able to assess risk, for

example, by noticing warning signs, to help prevent patient aggressive behaviour (Abderhalden *et al.* 2008; van de Sande *et al.* 2011). In addition, simple interventions, such as offering a patient shorter waiting times, something to drink or eat, and maintaining a positive and kind attitude towards the patient, can also have significant impacts on reducing violence (Rueve & Welton 2008). In this study, we did not find any agreement between the NICE (2015) guideline recommendations – ‘reducing the use of restrictive interventions’ and ‘a framework for anticipating and reducing violence and aggression in inpatient psychiatric wards’ – and local documents. Several international organizations have made statements regarding the need to reduce all forms of coercion in psychiatric care (e.g. Council of Europe 2019; American Psychiatric Nurses Association 2018). Therefore, based on our findings, there is still a need, at every psychiatric care organization, to ensure that staff have updated information and training available for how to use alternative methods for seclusion and restraint and for reducing all forms of coercion in their daily work.

Organizational goals, for example, maintaining ward milieu, providing a therapeutic environment, and facilitating treatment outcomes (Lai *et al.* 2011), can increase the use of physical restraint. The risk of excessive use of such restraint can depend on a number of factors, such as staff attitudes towards restrictive practices (Happel & Harrow 2010), organizational (Husum *et al.* 2010), and cultural influences (Gowda *et al.* 2018), current policies (Fiorillo *et al.* 2011; Luciano *et al.* 2018), availability of a seclusion room (Pettit *et al.* 2017), and safety issues (Molewijk *et al.* 2017). Nevertheless, the adverse physical consequences (e.g. discomfort, injury) (Kersting *et al.* 2019) and psychological consequences (fear, shame, anxiety, trauma) of seclusion and restraint on patients should not be under-estimated (Ling *et al.* 2015). Patients who have experienced restraint and seclusion may lose trust and rapport with healthcare providers in a therapeutic relationship (Ling *et al.*, 2015). Stakeholders at the organizational level may therefore need to strike a balance between the direct and indirect costs on close patient monitoring versus risk of staff injury and absenteeism (Hallett *et al.* 2014).

Close monitoring of patients, as a stand-alone intervention or combined with the use of seclusion and restraint, is an area in psychiatric inpatient care that would require more attention. In the present study, we found very limited information about how monitoring and observation is instructed in local hospitals, and the

information that was found was generally not in line with the NICE (2015) guideline. If staff were trained in relational skills for rapport-building while being in close contact with a patient suffering from serious symptoms, such as agitation, they could help patients feel safe and build a trusting relationship (Insua-Summerhays *et al.* 2018). Enhancing staff’s relational skills could also potentially decrease the number of staff injuries, while it has been suggested that nursing staff showing empathy could itself reduce the use of seclusion and restraint (Yang *et al.* 2014).

The international NICE (2015) guidelines have provided clear and thorough evidenced-based practice recommendations to guide the prevention of violence and aggression. Findings that emerged from our study raised some concern about variations between evidence and recommendations, as has been raised before in other settings (Bekkering *et al.* 2013; Sinclair *et al.* 2013). More significantly, there seem to be large variations in the contents of the guidelines in the four collaborating local hospital clusters and the four NICE key recommendations (Table 3). In fact, all these clusters are sanctioned under the Hospital Authority in Hong Kong. It is clear that these four collaborating hospitals were following the Hospital Authority Head Office (HAHO) guidelines and Nursing Care Standards. However, it is plausible that some hospitals might have developed their own guidelines to serve individual clusters in order to cater for the service needs of their clients (Oxman *et al.* 2007) resulting in the large variations at the agreement level with the NICE key recommendations. The variation in different clusters indicates a lack of consensus and systematic development in the enactment of these guidelines.

### Limitations

This study has some major limitations to take into account. First, the analysis focused on the material hospitals delivered for the purposes of this research, and no further details related to clinical practice were retrieved. Thus, some individual recommendations by the NICE guideline (2015) may have been in place in the daily practices at the research sites but were not available for document analysis in this study. Second, the analysis was conducted by two non-local researchers, and only content in English was analysed. Third, the NICE guideline (2015) includes some specific features, which are not comparable to Hong Kong practices, for example, differences in Mental Health Acts. If a specific legislation was described while describing

the NICE recommendations, analysers aimed to judge only broad content and not to expect a full match between guidelines. However, there might have been cases where differences between countries may have decreased in agreement level while analysing the data.

## CONCLUSION

This study highlights the importance of the utilization of a national policy framework in guiding the establishment of local operational and clinical guidelines in the prevention of violence and aggression in clinical psychiatry on different tiers. Despite there being some evidence showing that the local policies and guidelines are in line with the NICE guidelines in preventing violence and aggression on the level of HA, disconnection between staff training and reduced use of restrictive interventions can still be found. Such disconnect may contribute to large variations in the use of physical restraint and seclusion among different hospital clusters within the same contexts, and this variation may influence patient treatment outcomes and jeopardize the quality of patient care.

## RELEVANCE FOR CLINICAL PRACTICE

The principles of the establishment and development of policy framework and clinical guidelines are to ensure consistency, uphold professionalism, and enhance good quality patient care in the process of service delivery. This study indicates areas to be developed where the biggest discrepancies exist to better guide daily practices. Based on these study results, areas to be developed in the guideline content are mostly related to constructing a clear plan of how to reduce the use of restrictive interventions in psychiatric care. Patients are the end-users and service recipients of the healthcare service provision, and their involvement in this planning process should be encouraged. While the guidelines were focused on restrictive practices, in the future, more preventive and alternative methods should be clearly put into practice, including pharmacological strategies. Restraint application should be more restricted in guidelines, because this can directly result in a significant reduction in the use of restraints (Lorenzo *et al.* 2014). The incorporation of a national framework should be seriously considered, especially in the context of staff training and reduction in use of restrictive intervention in the management of patient aggression and violence in clinical psychiatry in Hong Kong.

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## REFERENCES

- Abderhalden, C., Needham, I., Dassen, T., Halfens, R., Haug, H. & Fischer, J. (2008). Structured risk assessment and violence in acute psychiatric wards: randomised controlled trial. *British Journal of Psychiatry*, 193 (1), 44–50.
- Aggarwal, N., Cedeno, K., John, D. & Lewis-Fernandez, R. (2017). Adoption of the national CLAS standards by state mental health agencies: a nationwide policy analysis. *Psychiatric Services*, 68 (8), 856–858.
- American Psychiatric Nurses Association (2018). Position Statement: The Use of Seclusion and Restraint. <https://www.apna.org/m/pages.cfm?pageID=3728#PositionStatement>. Accessed: 26 March 2020.
- Andersen, A., Larsen, I. & Topor, A. (2016). Caring through discipline? Analyzing house rules in community mental health services in Norway. *Scandinavian Psychologist*, 3, <https://doi.org/10.15714/scandpsychol.3.e1>.
- Beauchamp, T. L. & Childress, J. F. (2013). *Principles of biomedical ethics*. New York: Oxford University Press.
- Bekkering, G., Aertgeerts, B., Asueta-Lorente, J. *et al.* (2013). Practitioner Review: Evidence-based practice guidelines on alcohol and drug misuse among adolescents: a systematic review. *Journal of Child Psychology and Psychiatry*, 55 (1), 3–21.
- Bordignon, M. & Monteiro, M. (2016). Violência no trabalho da Enfermagem: um olhar às consequências. *Revista Brasileira De Enfermagem*, 69 (5), 996–999.
- Bowers, L., James, K., Quirk, A. *et al.* (2015). Reducing conflict and containment rates on acute psychiatric wards: The Safewards cluster randomised controlled trial. *International Journal of Nursing Studies*, 52 (9), 1412–1422.
- Census and Statistics Department (2020). The Government of the Hong Kong Special Administrative Region.

- Population Estimates. <https://www.censtatd.gov.hk/hkstat/sub/so150.jsp>. Accessed: 20 January 2020.
- Census and Statistics Department (2018). The Government of the Hong Kong Special Administrative Region. Gross Domestic Product Third Quarter 2018. <https://www.statistics.gov.hk/pub/B10300012018QQ03B0100.pdf>. Accessed: 20 January 2020.
- Center for Health Protection (2019). The Government of the Hong Kong Special Administrative Region. Life expectancy at Birth (male and female), 1971-2018. <https://www.chp.gov.hk/en/statistics/data/10/27/111.html>. Accessed: 20 January 2020.
- Chiovitti, R. F. (2011). Theory of protective empowering for balancing patient safety and choices. *Nursing ethics*, 18 (1), 88–101.
- Council of Europe Committee on Social Affairs, Health, and Sustainable Development (2019). Ending coercion in mental health: the need for a human rights-based approach. Strasbourg: Council of Europe Committee on Social Affairs, Health and Sustainable Development. [http://www.europeanrights.eu/public/atti/COE\\_2158\\_Rec\\_ommandations\\_ENG.pdf](http://www.europeanrights.eu/public/atti/COE_2158_Rec_ommandations_ENG.pdf). Accessed: 26 March 2020.
- Chan, M. B. (2018). The 2017-18 Budget. <https://www.budget.gov.hk/2017/eng/index.html>. Accessed: 20 January 2020.
- Cowman, S., Björkdahl, A., Clarke, E., Gethin, G. & Maguire, J. (2017). A descriptive survey study of violence management and priorities among psychiatric staff in mental health services, across seventeen European countries. *BMC Health Services Research*, 17, 59. <https://doi.org/10.1186/s12913-017-1988-7>
- Duffy, R. & Kelly, B. (2017). Concordance of the Indian Mental Healthcare Act 2017 with the World Health Organization's Checklist on Mental Health Legislation. *International Journal of Mental Health Systems*, 11, 48. <https://doi.org/10.1186/s13033-017-0155-1>
- Durbin, A., Durbin, J., Hensel, J. & Deber, R. (2013). Barriers and enablers to integrating mental health into primary care: a policy analysis. *The Journal of Behavioral Health Services & Research*, 43 (1), 127–139.
- Edward, K., Stephenson, J., Ousey, K., Lui, S., Warelow, P. & Giandinoto, J. (2016). A systematic review and meta-analysis of factors that relate to aggression perpetrated against nurses by patients/relatives or staff. *Journal of Clinical Nursing*, 25 (3–4), 289–299.
- d'Ettorre, G. & Pellicani, V. (2017). Workplace Violence Toward Mental Healthcare Workers Employed in Psychiatric Wards. *Safety and Health at Work*, 8 (4), 337–342.
- Fiorillo, A., De Rosa, C., Del Vecchio, V. *et al.* (2011). How to improve clinical practice on involuntary hospital admissions of psychiatric patients: Suggestions from the EUNOMIA study. *European Psychiatry*, 26 (4), 201–207.
- Francke, A., Smit, M., de Veer, A. & Mistiaen, P. (2008). Factors influencing the implementation of clinical guidelines for health care professionals: A systematic meta-review. *BMC Medical Informatics and Decision Making*, 8 (1):28.
- Garriga, M., Pacchiarotti, I., Hidalgo, D., Bernardo, M. & Vieta, E. (2016). Detection and management of agitation in psychiatry: A Delphi expert consensus study. *European Psychiatry*, 33, S170.
- Gerace, A. & Muir-Cochrane, E. (2019). Perceptions of nurses working with psychiatric consumers regarding the elimination of seclusion and restraint in psychiatric inpatient settings and emergency departments: An Australian survey. *International Journal of Mental Health Nursing*, 28 (1), 209–225.
- Government of South Australia (2015). Policy Guideline Preventing and Responding to Challenging Behaviour, Violence and Aggression Policy Guideline. <https://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/resources/policies/preventing+and+responding+to+challenging+behaviour+violence+and+aggression+policy+guideline> Accessed: 20 January 2020 .
- Gowda, G. S., Lepping, P., Noorthoorn, E. O. *et al.* (2018). Restraint prevalence and perceived coercion among psychiatric inpatients from South India: A prospective study. *Asian Journal of Psychiatry*, 36, 10–16.
- Hallett, N., Huber, J. & Dickens, G. (2014). Violence prevention in inpatient psychiatric settings: Systematic review of studies about the perceptions of care staff and patients. *Aggression and Violent Behavior*, 19 (5), 502–514.
- Happell, B. & Harrow, A. (2010). Nurses' attitudes to the use of seclusion: A review of the literature. *International Journal of Mental Health Nursing*, 19 (3), 162–168.
- Haugom, E. W., Ruud, T. & Hynnekleiv, T. (2019). Ethical challenges of seclusion in psychiatric inpatient wards: a qualitative study of the experiences of Norwegian mental health professionals. *BMC Health Services Research*, 19 (1), 879.
- Hem, M. H., Molewijk, B. & Pedersen, R. (2014). Ethical challenges in connection with the use of coercion: a focus group study of health care personnel in mental health care. *BMC medical ethics*, 15, 82.
- Hospital Authority (2018). Hospital Authority Annual report 2017–2018. [http://www.ha.org.hk/ho/corpcomm/AR201718/PDF/HA\\_Annual\\_Report\\_2017-18.pdf](http://www.ha.org.hk/ho/corpcomm/AR201718/PDF/HA_Annual_Report_2017-18.pdf) Accessed: 20 January 2020.
- Hospital Authority (2019). HA Statistical Report 2018–2019. <https://www3.ha.org.hk/data/HAStatistics/StatisticalReport/2018-2019> Accessed: 9 March 2020.
- Husum, T., Bjørngaard, J., Finset, A. & Ruud, T. (2010). A cross-sectional prospective study of seclusion, restraint and involuntary medication in acute psychiatric wards: patient, staff and ward characteristics. *BMC Health Services Research*, 10 (1), 89.
- Häske, D., Stuke, L., Bernhard, M. *et al.* (2016). Comparison of the Prehospital Trauma Life Support recommendations and the German national guideline on treatment of patients with severe and multiple injuries. *Journal of Trauma and Acute Care Surgery*, 81 (2), 388–393.
- Insua-Summerhays, B., Hart, A., Plummer, E., Priebe, S. & Barnicot, K. (2018). Staff and patient perspectives on

- therapeutic engagement during one-to-one observation. *Journal of Psychiatric and Mental Health Nursing*, 25 (9–10), 546–557.
- Kalisova, L., Raboch, J., Nawka, A. *et al.* (2014). Do patient and ward-related characteristics influence the use of coercive measures? Results from the EUNOMIA international study. *Social Psychiatry and Psychiatric Epidemiology*, 49 (10), 1619–1629.
- Kaltiala-Heino, R. & Välimäki, M. (2001). Involuntary commitment in health care; an analysis of the status and rights of involuntarily treated psychiatric patients in comparison with patients treated involuntarily under other acts. *European Journal of Health Law*, 8 (4), 299–316.
- Kersting, X., Hirsch, S. & Steinert, T. (2019). Physical harm and death in the context of coercive measures in psychiatric patients: a systematic review. *Frontiers in Psychiatry*, 10, 400.
- Kontio, R., Välimäki, M., Putkonen, H., Kuosmanen, L., Scott, A. & Joffe, G. (2010). Patient restrictions: Are there ethical alternatives to seclusion and restraint? *Nursing Ethics*, 17 (1), 65–76.
- Lai, C., Chow, S., Suen, L. & Wong, I. (2011). The effect of a restraint reduction program on physical restraint rates in rehabilitation settings in Hong Kong. *Rehabilitation Research and Practice*, 2011, 284604.
- Lancôt, N. & Guay, S. (2014). The aftermath of workplace violence among healthcare workers: A systematic literature review of the consequences. *Aggression and Violent Behavior*, 19 (5), 492–501.
- Ling, S., Cleverley, K. & Perivolaris, A. (2015). Understanding mental health service user experiences of restraint through debriefing: a qualitative analysis. *The Canadian Journal of Psychiatry*, 60 (9), 386–392.
- Lorenzo, R., Miani, F., Formicola, V. & Ferri, P. (2014). Clinical and organizational factors related to the reduction of mechanical restraint application in an acute ward: an 8-year retrospective analysis. *Clinical Practice & Epidemiology in Mental Health*, 10 (1), 94–102.
- Luciano, M., De Rosa, C., Sampogna, G. *et al.* (2018). How to improve clinical practice on forced medication in psychiatric practice: Suggestions from the EUNOMIA European multicentre study. *European Psychiatry*, 54, 35–40.
- Molewijk, B., Kok, A., Husum, T., Pedersen, R. & Aasland, O. (2017). Staff's normative attitudes towards coercion: the role of moral doubt and professional context—a cross-sectional survey study. *BMC Medical Ethics*, 18 (1), 37.
- Montaguti, E., Schürmann, J., Wetterauer, C., Picozzi, M. & Reiter-Theil, S. (2019). Reflecting on the reasons pros and cons coercive measures for patients in psychiatric and somatic care: the role of clinical ethics consultation. A Pilot Study. *Frontiers in Psychiatry*, 10, 441.
- Münzberg, M., Mutschler, M., Paffrath, T. *et al.* (2015). Level of Evidence Analysis for the Latest German National Guideline on Treatment of Patients with Severe and Multiple Injuries and ATLS. *World Journal of Surgery*, 39 (8), 2061–2067.
- National Institute for Health and Care Excellence (2015). Violence and aggression: short-term management in mental health, health and community settings. NICE guideline [NG10]. <https://www.nice.org.uk/guidance/ng10/resources/violence-and-aggression-shortterm-management-in-mental-health-health-and-community-settings-1837264712389>. Accessed: 20 January 2020.
- Noorthoorn, E., Voskes, Y., Janssen, W. *et al.* (2016). Seclusion reduction in Dutch mental health care: did hospitals meet goals? *Psychiatric Services*, 67 (12), 1321–1327.
- Norum, J., Olsen, A., Nybrodahl, I. & Sørgaard, K. (2013). Compulsory and voluntary admission in psychiatric hospitals in northern Norway 2009–2010. A national registry-based analysis. *Nordic Journal of Psychiatry*, 67 (1), 47–52.
- Oxman, A., Lavis, J. & Fretheim, A. (2007). Use of evidence in WHO recommendations. *The Lancet*, 369 (9576), 1883–1889.
- Pettit, S. A., Bowers, L., Tulloch, A. *et al.* (2017). Acceptability and use of coercive methods across differing service configurations with and without seclusion and/or psychiatric intensive care units. *Journal of Advanced Nursing*, 73 (4), 966–976.
- Prior, L. (2012). Document Analysis. In: L. Given (Ed). *The SAGE Encyclopedia of Qualitative Research Methods* (pp. 231–232). Thousand Oaks: SAGE Publications Inc.
- Registered Nurses' Association of Ontario (2009). Preventing and Managing Violence in the Workplace. Best Practice Guideline. <https://rnao.ca/bpg/guidelines/preventing-and-managing-violence-workplace>. Accessed: 20 January 2020.
- Ruebe, M. & Welton, R. (2008). Violence and Mental Illness. *Psychiatry (Edgmont)*, 5 (5), 34–48.
- van de Sande, R., Nijman, H., Noorthoorn, E. *et al.* (2011). Aggression and seclusion on acute psychiatric wards: effect of short-term risk assessment. *British Journal of Psychiatry*, 199 (6), 473–478.
- Sinclair, D., Isba, R., Kredon, T., Zani, B., Smith, H. & Garner, P. (2013). World Health Organization Guideline Development: An Evaluation. *PLoS One*, 8 (5), e63715.
- Simmons, L. & Wright, D. (2004). National Practice Guidelines for Mental Health Care. *Journal of Health & Social Policy*, 19 (2), 59–80.
- Spinzy, Y., Maree, S., Segev, A. & Cohen-Rappaport, G. (2018). Listening to the patient perspective: psychiatric inpatients' attitudes towards physical restraint. *The Psychiatric Quarterly*, 89 (3), 691–696.
- Vähäniemi, A., Warwick-Smith, K., Hätönen, H. & Välimäki, M. (2018). A national evaluation of community-based mental health strategies in Finland. *International Journal for Quality in Health Care*, 30 (1), 57–64.
- Välimäki, M., Yang, M., Vahlberg, T., *et al.* (2019). Trends in the use of coercive measures in Finnish psychiatric hospitals: a register analysis of the past two decades. *BMC Psychiatry*, 19 (1), 230. <https://doi.org/10.1186/s12888-019-2200-x>

- World Health Organization (2003). Global Programme on Evidence for Health Policy. Guidelines for WHO Guideline. [Ebook]. Geneva. [http://apps.who.int/iris/bitstream/handle/10665/68925/EIP\\_GPE\\_EQC\\_2003\\_1.pdf;jsessionid=62D743B320A41FE0D355218F764D5B2D?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/68925/EIP_GPE_EQC_2003_1.pdf;jsessionid=62D743B320A41FE0D355218F764D5B2D?sequence=1). Accessed: 20 January 2020.
- World Health Organization (2013). Mental health action plan 2013 – 2020. [http://www.who.int/iris/bitstream/10665/89966/1/9789241506021\\_eng.pdf?ua=1](http://www.who.int/iris/bitstream/10665/89966/1/9789241506021_eng.pdf?ua=1). Accessed: 20 January 2020.
- Yang, C. P., Hargreaves, W. A. & Bostrom, A. (2014). Association of empathy of nursing staff with reduction of seclusion and restraint in psychiatric inpatient care. *Psychiatric Services*, 65 (2), 51–254.
- Zhou, J., Witt, K., Xiang, Y., Zhu, X., Wang, X. & Fazel, S. (2016). Violence risk assessment in psychiatric patients in China: A systematic review. *Australian & New Zealand Journal of Psychiatry*, 50 (1), 33–45.