The Effect of Safewards on Reducing Conflict and Containment and the Experiences of Staff and Consumers: A Mixed-Methods Systematic Review

Kristel Ward-Stockham, RN, GCertANP, MANP
Clinical Nurse Specialist, Eastern Health, 1-15 Davey Drive, Ringwood East,
Kristel.ward@gmail.com
ORCID: https://orcid.org/0000-0003-4656-287X

Dr Suzanne Kapp
Lecturer. Department of Nursing, Faculty of Medicine, Dentistry and Health Sciences, 161 Barry Street, The University of Melbourne, Victoria 3010, Australia.
ORCID: https://orcid.org/0000-0002-5438-8384

Dr Rebecca Jarden
Lecturer. Department of Nursing, Faculty of Medicine, Dentistry and Health Sciences, 161 Barry Street, The University of Melbourne, Victoria 3010, Australia.
ORCID: https://orcid.org/0000-0003-4643-7147

Prof Marie Gerdtz
Professor and Head of Department of Nursing, Faculty of Medicine, Dentistry and Health Sciences, 161 Barry Street, The University of Melbourne, Victoria 3010, Australia.
ORCID: https://orcid.org/0000-0002-2100-994X

Dr Catherine Daniel
Lecturer. Mental Health Nursing. Department of Nursing, Faculty of Medicine, Dentistry and Health Sciences, 161 Barry Street, The University of Melbourne, Victoria 3010, Australia.
Consultation Liaison Psychiatry Nurse, The Royal Melbourne Hospital.
ORCID: https://orcid.org/0000-0002-1122-3950

ADDRESS FOR CORRESPONDENCE

Kristel Ward-Stockham, RN, GCertANP, MANP

Clinical Nurse Specialist, Eastern Health, 1-15 Davey Drive, Ringwood East

Kristel.ward@gmail.com

ORCID: https://orcid.org/0000-0003-4656-287X

Conflicts of Interest and Funding

The authors state that there was conflict of interests. No funding or scholarships were obtained for this research.

Keywords

Aggression; conflict; containment; inpatient; Safewards.

MRS. KRISTEL PEPPER WARD-STOCKHAM (Orcid ID : 0000-0003-4656-287X)

REBECCA JARDEN (Orcid ID : 0000-0003-4643-7147)

DR. MARIE GERDTZ (Orcid ID : 0000-0002-2100-994X)

DR. CATHERINE DANIEL (Orcid ID : 0000-0002-1122-3950)

Article type : Original Article

The Effect of Safewards on Reducing Conflict and Containment and the Experiences of Staff and Consumers: A Mixed-Methods Systematic Review

Abstract

Safewards is an internationally adopted framework that provides interventions to reduce conflict and containment in healthcare settings. This systematic review evaluated the effect of Safewards on conflict and containment events in inpatient units and the perceptions of staff and consumers. Quantitative, qualitative, and mixed-methods studies were considered for inclusion. Following the Joanna Briggs Institute methodology, two reviewers independently screened, appraised and extracted data. Qualitative data were synthesised using inductive-thematic analysis. Quantitative and qualitative data were integrated with a convergent-segregated approach and presented in tabular and narrative format. A search of thirteen databases and grey literature yielded fourteen studies of variable methodological quality. Four studies reported reduced rates of conflict and one study reported reductions were not statistically significant. Six studies reported reductions in rates of containment, three studies found no statistical significance and one study reported

statistically significant reductions at follow up. Staff and consumers in four studies reported an improved experience of safety. Three themes were developed: 1) therapeutic hold, cohesion, support and the environment, 2) conflict, containment and the experience of safety and 3) the complexities of adapting and embedding change. This review found most staff and consumers reported Safewards improved therapeutic relationships, cohesion and ward atmosphere. Staff and consumers reported improved ward atmosphere, leading to consumer-centred, recovery-oriented care. Safewards improved the experience of safety from the perspective of staff and consumers when combined with ongoing training, leadership and time for consolidation. While results are promising they should be used cautiously until more robust evidence is established.

Keywords
Aggression; conflict; containment; inpatient; Safewards.

Introduction

Hospitalisation may cause consumers to feel stressed, anxious and frustrated. Care practices, the cognitive and mental state of the consumer, and situational events such as use of restraints and redirection can trigger these feelings (Arnetz et al., 2015). Consumers may express their emotions through aggression and violence towards healthcare staff, resulting in conflict and safety issues for the consumer and healthcare provider. Containment of consumers following acute behaviours is a common occurrence globally (Mayers et al., 2010, Stensgaard et al., 2018, Baumgardt et al., 2019).

Workplace conflict can be defined as “incidents where an employee is abused, threatened or assaulted in circumstances related to their work, including commuting to and from work, involving an explicit or implicit challenge to their safety, well-being or health” International Labour Office et al. (2002, p. 3). Conflict has adverse effects on healthcare staff, including the negative perception of health and safety risks, poor satisfaction with working conditions and a negative impact on work productivity, satisfaction and occupational health (Escribano et al., 2019).

Containment is characterised by “intrusion of privacy, personal space or body; separation of a person from others or their property; and restrictions placed on freedom of physical

movement" (Bowers, 2006, p. 177). Containment is globally recognised as being un-therapeutic and may lead to a range of negative consequences for the consumer including unintended physical and/or psychological injury (Gaskin, 2013). Consumers experiencing containment have reported that communication from staff is inadequate, that they experience a heightening of their distress and feel that their human rights have been violated (Baumgardt et al., 2019, Fletcher et al., 2019a, Mayers et al., 2010). Preventing conflict and containment requires an effective evidence-based approach that is acceptable to consumers and healthcare providers.

The Safewards Model is designed to reduce conflict and containment in healthcare settings. There has been international recognition and acceptance of Safewards, evidenced by the translation of the model into multiple languages. Furthermore, Safewards is recommended in international mental health clinical practice guidelines (National Safety and Quality Health Service Standards, 2018). Prior to commencing this review, we did not identify a systematic review that appraised the effectiveness of Safewards in reducing rates of conflict and containment or which synthesised the perspectives of staff and consumers. Accordingly, this systematic review sought to answer the following questions:

1. What effect does the Safewards model have on reducing rates of conflict and containment in inpatient settings?

2. What effect does the Safewards model have on the experiences of inpatient staff and consumers?

The Safewards Model

Safewards is a multi-component, evidence-based model designed to reduce conflict and containment in healthcare settings (Bowers, 2014). Safewards promotes the use of ten core interventions to improve communication, therapeutic relationships and enhance a supportive, recovery-oriented ward atmosphere (Safewards Victoria, 2016). Safewards was initially developed for use by nurses working in adult acute mental health inpatient settings (Bowers, 2014) but has been since implemented locally and internationally in forensic inpatient wards (Cabral and Carthy, 2017, Kipping et al., 2019, Whitmore, 2017, Price et al., 2016, Maguire et al., 2018), secure, aged, adult, adolescent wards (Fletcher et al., 2017, Lickiewicz et al., 2020,

Dickens et al., 2020), facilities for the intellectually disabled (Riding, 2016, Davies et al., 2020) and emergency departments (Department of Health and Human Services, 2020).

The Safewards model describes the origin of conflict in inpatient wards as developing within the Physical Environment, Patient Community, Regulatory Framework, Patient Characteristics, Staff Team and Outside Hospital domains (Bowers, 2014). Each domain details staff and consumer modifiers, the related influence on conflict and the cyclical relationship of conflict and containment (Bowers, 2014). The Safewards domains identify flashpoints, defined as "social and psychological events that precede conflict" (Bowers, 2014, p. 500) at which consumers can potentially modify their behaviour and reactions. Staff can have an impact at flashpoints by modifying their behaviour, communication and reactions accordingly (Bowers et al., 2014). The interventions assist in identifying and reducing flashpoints through consumer engagement methods, specifically Bad News Mitigation, Know Each Other, Mutual Help Meeting, Calm Down Methods and Discharge Messages, and through effective communication using the interventions Clear Mutual Expectations, Soft Words, Talk Down, Positive Words, and Reassurance (Refer Table 1) (Bowers, 2014).

Methods

The systematic review employed a mixed-methods design and aligned with The Joanna Briggs Institute (2019) and the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines (Moher et al., 2009).

Search Strategy

Following The Joanna Briggs Institute (2019) three-step approach, reviewer KWS conducted a preliminary search using databases Cumulated Index to Nursing and Allied Health Literature (CINAHL), Medline, Embase, Emcare, Scopus and Web of Science. The initial search keywords were 'Safewards' AND 'Safe-wards' AND 'Safe+wards' within all text; no MESH terms were identified. No limits were set for year of publication, language or population. The preliminary search identified relevant articles using only one keyword, 'Safewards'. Systematic reviews investigating Safewards were not identified. Electronic databases were then searched, specifically CINAHL, Cochrane, Emcare, Embase, Health Collection, Joanna Briggs Institute,

MEDLINE, PsycINFO, ProQuest Central, Academic Search Complete, Web of Science Scopus, Wiley, and BioMed Central. A search of unpublished and grey literature repositories was conducted (Refer Table S1). Reference lists of selected studies were manually examined for further studies meeting the inclusion criteria. A complete search was conducted in December 2019 and re-run in February 2020 to add recency to the review.

Inclusion Criteria

Quantitative, qualitative or mixed-method studies were considered for inclusion if investigating: 1) rates of conflict, rates of containment or staff or consumer experience of safety or perspectives of Safewards, and 2) healthcare staff and inpatient consumers or wards from any inpatient setting globally.

Search results were exported to EndNote (Clarivate Analytics, 2019), collated, then exported to Covidence™ (Veritas Health Innovation, 2019) for duplicate removal, screening and data extraction. Two reviewers KWS and CD independently screened titles, abstracts and full text against inclusion criteria. Any disagreements were resolved through discussion by reviewers KWS and CD.

Appraisal of Methodological Quality

Two reviewers KWS and CD independently assessed the included studies for methodological quality utilising Covidence (Veritas Health Innovation, 2019) and using the appropriate standardised critical appraisal tool from The Joanna Briggs Institute (2020). Disagreements between reviewers KWS and CD were resolved following discussion with all reviewers.

Data Extraction

Data were extracted independently by two reviewers KWS and CD in Covidence™ (Veritas Health Innovation, 2019). Extracted data included bibliographic information, sample, population and setting, phenomena of interest, geographical location, ethics approval, study methods, data collection, data analysis, intervention fidelity measures, themes identified, results and outcomes relevant to the review questions.

Data Synthesis

Quantitative data are presented in tabular format with a narrative synthesis. Relevant outcome measures of interest were discussed, grouped as conflict, containment, the experience of safety, and studies reported statistical significance (The Joanna Briggs Institute, 2019). Meta-analysis was not performed due to heterogeneity of the studies, particularly, relating to clinical setting, sample, methods and approach to statistical analysis. Qualitative study findings were analysed using inductive thematic analysis and are presented in tabular and narrative format. Inductive thematic analysis involved a six-step process as described by Kiger and Varpio (2020). Reviewer KWS developed preliminary themes by combining and comparing the data. Themes were analysed to ensure each was distinct from the others, contained supporting data, and was coherent in presentation. A level of credibility was assigned to each qualitative finding according to The Joanna Briggs Institute (2019, Chapter 2.7.6.3). Quantitative and qualitative findings were synthesised independently by KWS, then integrated using a convergent-segregated approach in narrative to address both research questions.

Results

Search Results

The review was conducted as per the protocol and the title was registered with The Joanna Briggs Institute on 13/01/2020. The search yielded 1726 studies identified as eligible for screening. The screening of titles and abstracts identified 55 results for full-text review, of which 14 studies were selected for inclusion. Authors of eleven non-English language publications were contacted for English translations, however, none were provided. The flow chart of search results is displayed in Figure 1.

Characteristics of Included Studies

The quantitative study designs included one randomised control trial (RCT) (Bowers et al., 2015), two time-series analysis (Stensgaard et al., 2018, Baumgardt et al., 2019), seven quasi-experimental before and after designs (Cabral and Carthy, 2017, Fletcher et al., 2017, Davies et al., 2020, Hottinen et al., 2019, Price et al., 2016, Maguire et al., 2018, Riding, 2016),

and two cross-sectional, post-implementation designs (Fletcher et al., 2019a, Fletcher et al., 2019b) (Refer Table 2). Of the eight studies reporting qualitative findings, six were mixed-methods studies. One was phenomenology (Higgins et al., 2018) and the remaining seven were reported as 'qualitative design' (Cabral and Carthy, 2017, Davies et al., 2020, Fletcher et al., 2019a, Fletcher et al., 2019b, James et al., 2017, Price et al., 2016, Maguire et al., 2018). Thematic analysis was used in four studies (Cabral and Carthy, 2017, Fletcher et al., 2019b, Fletcher et al., 2019a, James et al., 2017), thematic content analysis in two (Higgins et al., 2018, Maguire et al., 2018) and two studies did not state an approach to data analysis and results were presented in only narrative text (Davies et al., 2020, Price et al., 2016) (Refer Table 3).

The number of participating wards where Safewards was implemented totalled N = 121, median 10, IQR 1-16. One study did not report the number of wards (Riding, 2016). Eight quantitative studies included consumers exposed to conflict and/or exposed to containment (Baumgardt et al., 2019, Bowers et al., 2015, Davies et al., 2020, Fletcher et al., 2017, Maguire et al., 2018, Price et al., 2016, Riding, 2016, Stensgaard et al., 2018). Five qualitative studies, and four studies investigating nursing staff perceptions or experience of safety, included nursing staff as participants (Cabral and Carthy, 2017, Davies et al., 2020, Fletcher et al., 2019b, Higgins et al., 2018, Maguire et al., 2018, James et al., 2017, Hottinen et al., 2019). Four studies investigated inpatient consumers (Maguire et al., 2018, Cabral and Carthy, 2017, Hottinen et al., 2019, Fletcher et al., 2019a) and four studies were conducted with multidisciplinary team (MDT) members (Hottinen et al., 2019, Baumgardt et al., 2019, Davies et al., 2020, Fletcher et al., 2019b). One study did not report the number of participants (Riding, 2016).

Of the included studies five were conducted in Australia (Fletcher et al., 2019a, Fletcher et al., 2019b, Fletcher et al., 2017, Maguire et al., 2018, Higgins et al., 2018), six in the United Kingdom (Bowers et al., 2015, Cabral and Carthy, 2017, Davies et al., 2020, James et al., 2017, Riding, 2016, Price et al., 2016), one in Germany (Baumgardt et al., 2019), one in Finland (Hottinen et al., 2019) and one in Denmark (Stensgaard et al., 2018). The full ten Safewards interventions were implemented in eight studies (Baumgardt et al., 2019, Bowers et al., 2015, Davies et al., 2020, Maguire et al., 2018, Price et al., 2016, Hottinen et al., 2019, Higgins et al., 2018, James et al., 2017), nine to ten interventions in two studies (Fletcher et al., 2017, Fletcher et al., 2019b, Fletcher et al., 2019a), and "most of the interventions" were reported in one study (Cabral and Carthy, 2017, p. 168). One

study did not report how many interventions were implemented (Riding, 2016), and in one study implementation of interventions had commenced across included adult wards (Stensgaard et al., 2018). Intervention fidelity was measured using the Safewards Organisation Fidelity Checklist (SOFC) (Safewards.net, 2019) in eight studies (Bowers et al., 2015, Price et al., 2016, Maguire et al., 2018, Higgins et al., 2018, Fletcher et al., 2017, Cabral and Carthy, 2017, Baumgardt et al., 2019, Riding, 2016).

Quality Assessment

In total, twelve quantitative and mixed-methods studies were assessed for risk of bias, the outcome; low risk (five studies), moderate risk (six studies) and high risk (one study). Most studies reported a single measurement of outcome pre and post-intervention (Baumgardt et al., 2019, Cabral and Carthy, 2017, Davies et al., 2020, Hottinen et al., 2019, Maguire et al., 2018, Price et al., 2016, Riding, 2016, Stensgaard et al., 2018). Other treatments utilised was reported in two studies (Davies et al., 2020, Riding, 2016). One study provided limited information regarding methodology, participants and data analysis (Riding, 2016).

The eight studies included in the qualitative analysis were assessed for credibility the outcome: low (two studies) and high (six studies). One study (Higgins et al., 2018) stated a clear philosophical perspective and research methodology, and seven of the eight studies stated a qualitative design. The influence of the researchers was described in six studies (Fletcher et al., 2019a, Fletcher et al., 2019b, Higgins et al., 2018, Cabral and Carthy, 2017, James et al., 2017, Maguire et al., 2018), however, the cultural or theoretical position of the researcher was not reported in any studies. Five studies represented participant voices in conclusions drawn from data (Fletcher et al., 2019a, Bowers et al., 2015, Fletcher et al., 2019b, Higgins et al., 2018, Maguire et al., 2018).

Synthesis of Quantitative Studies

Strengths and Limitations of Included Studies

The quantitative outcomes measured specific conflict events (Davies et al., 2020, Maguire et al., 2018), and/or containment events (Baumgardt et al., 2019, Davies et al., 2020,

Maguire et al., 2018, Riding, 2016, Stensgaard et al., 2018, Fletcher et al., 2017). Certain events were excluded in two studies due to local laws and policies (Baumgardt et al., 2019, Stensgaard et al., 2018). The outcome measurements were reported as; events as per admissions (Baumgardt et al., 2019), per bed days (Fletcher et al., 2017) and per quarter (Stensgaard et al., 2018). Data were collected with a range of instruments including the Patient-Staff Conflict Checklist – Shift Report (PCC-SR) (Bowers et al., 2015, Davies et al., 2020, Price et al., 2016), the Essen Climate Evaluation Schema (EssenCES) (Cabral and Carthy, 2017, Hottinen et al., 2019, Maguire et al., 2018) and hospital reporting databases (Baumgardt et al., 2019, Fletcher et al., 2017, Maguire et al., 2018, Riding, 2016, Stensgaard et al., 2018) (Refer Table 4).

Rates of Conflict

Four studies reported a reduction of overall conflict (Bowers et al., 2015, Davies et al., 2020, Maguire et al., 2018, Price et al., 2016) and two of these reported statistically significant reductions (Bowers et al., 2015, Davies et al., 2020). Two studies reported reductions in overall conflict events; one study did not conduct statistical analysis (Maguire et al., 2018) and one study reported the reduction not to be statistically significant (Price et al., 2016). A reduction in individual conflict events was reported in two studies (Maguire et al., 2018, Davies et al., 2020). The events where reduction occurred included verbal and physical aggression towards people and property, absconding, medication-related behaviours (Davies et al., 2020), substance abuse, self-harm and medication refusal (Maguire et al., 2018).

Intervention fidelity was measured in three studies (Price et al., 2016, Bowers et al., 2015, Maguire et al., 2018). Low rates of intervention fidelity were suggested to have impacted on the effectiveness of Safewards on rates of conflict in one study (Price et al., 2016). Moderate intervention fidelity (38%) contributed to a 15% reduction in rates of overall conflict (Bowers et al., 2015), and high rates of intervention fidelity (94.75%) contributed to 65 fewer conflict events from the previous year (Maguire et al., 2018).

Rates of Containment

Three studies measured rates of containment using the PCC-SR (Bowers et al., 2015, Davies et al., 2020, Price et al., 2016) and five studies used mandatory reporting databases (Baumgardt et al., 2019, Fletcher et al., 2017, Maguire et al., 2018, Riding, 2016, Stensgaard et

al., 2018). Seven studies reported more than one type of containment (Baumgardt et al., 2019, Bowers et al., 2015, Davies et al., 2020, Price et al., 2016, Riding, 2016, Stensgaard et al., 2018, Maguire et al., 2018) and one study reported only the rate of seclusion (Fletcher et al., 2017). The reduction in rate of containment post-implementation of Safewards was reported to be statistically significant in six studies (Baumgardt et al., 2019, Bowers et al., 2015, Davies et al., 2020, Fletcher et al., 2017, Stensgaard et al., 2018, Riding, 2016) and prone restraint was eliminated in conjunction with Safewards, organisational policy and Positive Behavioural Support (PBS) changes in one study (Riding, 2016). The reduction in containment rates was reported as not statistically significant in three studies (Baumgardt et al., 2019, Maguire et al., 2018, Price et al., 2016). One study reported a statistically significant reduction in containment rates in one of two wards implementing Safewards (Baumgardt et al., 2019). Two studies reported a reduction in containment; however, the results were not statistically significant (Price et al., 2016, Baumgardt et al., 2019). Fletcher et al. (2017) reported no statistically significant reduction in the rate of seclusion during the outcome period of 12 weeks. However, the authors reported a statistically significant reduction during the 12-month follow-up period, attributed to the consolidation of the interventions (Fletcher et al., 2017). In one study, duration of containment events and range of containment types used were reduced (Baumgardt et al., 2019). Individual types of containment for which reduced rates were reported included use of medications, special observations, time out (Davies et al., 2020), physical restraint, prone restraint, emergency response belts (Riding, 2016) and seclusion (Riding, 2016, Fletcher et al., 2017). Intervention fidelity was reported as moderate to high in three studies that reported statistically significant reductions in conflict and containment (Fletcher et al., 2017, Baumgardt et al., 2019, Bowers et al., 2015), and high in one of two wards that did not report a statistically significant reduction in containment (Baumgardt et al., 2019).

The Experience of Safety

The experience of safety was measured using the EssenCES in three studies (Cabral and Carthy, 2017, Hottinen et al., 2019, Maguire et al., 2018). The perceptions of staff and consumers on the experience of safety were measured using Likert scales in two studies (Fletcher et al., 2019a, Fletcher et al., 2019b). The experience of safety was reported to improve for staff and/or consumers in three studies (Maguire et al., 2018, Hottinen et al., 2019, Cabral and Carthy,

2017). There was no statistically significant difference in staff experience of safety in one study (Maguire et al., 2018), and although there was no statistically significant difference in the experience of safety for consumers, consumers did rate the experience of safety as higher than staff at baseline (Hottinen et al., 2019). Consumers reported they felt safer 95% of the time (Fletcher et al., 2019a) and staff reported they felt safer 50% of the time (Fletcher et al., 2019b). Staff felt that Safewards positively impacted on verbal conflict 45% of the time and physical conflict 55% of the time (Fletcher et al., 2019b). Consumers alternatively felt that Safewards positively impacted verbal conflict 25% of the time and physical conflict 25% of the time (Fletcher et al., 2019a).

Synthesis of Qualitative Studies

Three themes were identified: 1) therapeutic hold, cohesion, support and the environment, 2) conflict, containment and the experience of safety and 3) the complexities of adapting and embedding change. According to The Joanna Briggs Institute (2019, Chapter 2.7.6.3) the findings supporting the themes were assigned a level of credibility. Findings were rated as unequivocal 207, credible 48 and unsupported 74.

Theme 1. Therapeutic Hold, Cohesion, Support, and the Environment

Therapeutic hold refers to the relationship between staff and consumers and their perception of ward atmosphere. Cohesion and support underpin therapeutic relationships between consumers and staff, between consumers and professional relationships between staff, improving engagement in recovery.

Know Each Other, Mutual Help Meeting and Discharge Messages were identified as contributing to improved consumer relationships by instilling “principles of respect and humanity” (Fletcher et al., 2019b, p. 7), hope and reassurance, “If [an] inpatient you’re in a dark place, these bring you back to reality, safe and hope” (Fletcher et al., 2019a, p. 6), as well as feeling “part of a team”(Fletcher et al., 2019a, p. 7), less isolated and a sense of belonging (Fletcher et al., 2019b, Davies et al., 2020, Price et al., 2016). Clear Mutual Expectations and Know Each Other was shown to humanise staff and generate respect (Davies et al., 2020, Fletcher et al., 2019b). Staff realised their actions, behaviour, body language and language they used affected consumers (Davies et al., 2020, Higgins et al., 2018, Maguire et al., 2018, Price et

al., 2016). Staff also identified that Safewards is "…useful for positive patient outcomes" (Fletcher et al., 2019b, p. 7) and found that a "variety of interventions enhances consumer involvement in their care and treatment, hope and peer support, choice, dignity, and respect from staff toward consumers" (Fletcher et al., 2019b, p. 6). Consumers felt their voices were heard and that they contributed to the ward community and their treatment, because staff recognised their humanity which they believed improved interactions, outcomes and dignity (Fletcher et al., 2019a, Davies et al., 2020, Fletcher et al., 2019b).

Staff and consumers described positive changes within the wards post-implementation of Safewards (Davies et al., 2020, Fletcher et al., 2019a, Fletcher et al., 2019b, Maguire et al., 2018). Staff found inpatient nursing to be less task-orientated (Higgins et al., 2018) and felt Safewards "brings nursing back to basics, back to the patient" (Fletcher et al., 2019b, p. 7) and shifted attitudes towards consumer-oriented care (Cabral and Carthy, 2017). Staff reported Positive Words led to positive attitudes suggesting a "shift in culture and the shift in language used has been amazing. Staff attitudes have changed dramatically, and for the better" (Fletcher et al., 2019b, p. 7). Staff reported feeling more positive, attentive and supportive towards consumers, prioritising consumer voices and care and responding to positive consumer feedback by enhancing interventions (Davies et al., 2020, Fletcher et al., 2019b, Higgins et al., 2018). Know Each Other, Positive Words, and Clear Mutual Expectations contributed to enhancing staff relationships (Fletcher et al., 2019b, Fletcher et al., 2019a). Relationships between staff were perceived as cohesive, encouraging, collaborative and supportive (Davies et al., 2020), and "...created a more professional, supportive and positive workplace" (Fletcher et al., 2019b, p. 7).

Negative staff attitudes towards Safewards increased pressure on those leading the implementation of the intervention and negatively affected implementation (James et al., 2017). Negative feedback led to dilution and abandonment of interventions, suggesting that staff listened to and respected the opinions of consumers (James et al., 2017). Staff found difficulty engaging with consumers in forensic and intellectual disability care settings believing consumers could not understand interventions (Davies et al., 2020, Price et al., 2016). Some consumers were reluctant to interact with each other due to fear and a lack of confidence (Price et al., 2016).

Theme 2. Perceptions of Conflict, Containment and the Experience of Safety

Staff or consumers perceptions of safety in relation to conflict, containment, and a feeling of calmness on the ward was identified in seven studies (Davies et al., 2020, Fletcher et al., 2019a, Fletcher et al., 2019b, Maguire et al., 2018, Price et al., 2016, Higgins et al., 2018, Cabral and Carthy, 2017).

Staff and consumers reported a sense of calm on the wards and within themselves (Fletcher et al., 2019a, Fletcher et al., 2019b, Davies et al., 2020, Maguire et al., 2018). Calm Down Methods were identified by consumers as contributing to their ability to self soothe and enhanced their coping skills (Fletcher et al., 2019a). Consumers recognised the impact Safewards had on conflict (Maguire et al., 2018) reporting their perception of less bullying from staff (Fletcher et al., 2019a). Staff reported Safewards "…guides practice and helps us to understand the relationship between conflict and containment" (Fletcher et al., 2019b, p. 7) and felt more confident of preventing, recognising and managing flashpoints (Davies et al., 2020, Fletcher et al., 2019b). Staff and consumers reported feeling safer within wards, reduced fear of consumers and believed there to be fewer conflict events (Fletcher et al., 2019b, Maguire et al., 2018). High levels of consumer acuity and behavioural acuity would present disruptiveness and hostility to staff (Price et al., 2016), "…making them (staff) slower to take up the interventions…" (James et al., 2017, p. 6).

Staff reported that Safewards "…assisted in reducing restrictive interventions" (Fletcher et al., 2019b, p. 7) and reduced medication use and restrictive practices (Cabral and Carthy, 2017, Davies et al., 2020, Fletcher et al., 2019b, Maguire et al., 2018). Consumers observed that "These [interventions] were not used by the nurses, medication was offered rather than talking" (Fletcher et al., 2019a, p. 7). Some staff remained sceptical of the effect of Safewards intervention effects on conflict and continued to attribute conflict with the consumers' illness, behaviours, acuity and substance use (Price et al., 2016, Higgins et al., 2018).

Theme 3. The Complexities of Adapting and Embedding Change

The complexities of adapting and embedding change relates to perceptions of staff and consumers in relation to the implementation, effects and barriers to using Safewards. Safewards was viewed as "easy to implement" (Fletcher et al., 2019b, p. 7), more holistic, and generated

confidence in staff (Price et al., 2016). Early implementation of interventions was effective (Higgins et al., 2018) although rushing implementation of all ten interventions at once was problematic and staggered implementation was suggested (Price et al., 2016). Staff were likely to embrace interventions if felt they built on current practice or had a sound understanding of Safewards (James et al., 2017). Staff felt that "… once Safewards is understood it becomes simple to incorporate into a framework of practice. Safewards provides a convenient explanation for many nursing practices, and it is evidence-based" (Higgins et al., 2018, p. 8).

When staff viewed the interventions as needing advanced clinical skills or did not see an immediate effect, they would abandon utilisation leading to dilution of interventions (James et al., 2017). Lack of staff confidence was a barrier, for example, managing Mutual Help Meetings (Davies et al., 2020, James et al., 2017). The appropriateness and language of interventions within Soft Words, Talk Down, and Discharge Messages was suggested to be patronising and condescending (Higgins et al., 2018, Fletcher et al., 2019a) although staff identified they could "…put it in a different way to make it sound a bit more like a clinical strategy as opposed to talking to your toddler" (Higgins et al., 2018, p. 7). One study discussed how intervention posters were tokenistic and that staff did not utilise them (Price et al., 2016). When the consumer discharge rate was low, Discharge Messages generated feelings of hopelessness (Price et al., 2016), whereas when discharge rates were high, Discharge Messages created feelings of "hope and motivation" (Fletcher et al., 2019a, p. 6). Adaptations of the interventions that maintained the core concept of Safewards enhanced the intervention, such as the "…positive word tree…" adapted from Discharge Messages (James et al., 2017, p. 6). However, when interventions were adapted without maintaining the theoretical foundation of Safewards, interventions were diluted and potentially less effective (James et al., 2017).

Maintenance of the Safewards interventions required ongoing effort, regular auditing and feedback (Davies et al., 2020). Costs included the upkeep of materials that went missing or were broken (Davies et al., 2020) and the training of staff (Higgins et al., 2018). Lack of staff, high staff turnover and temporary staff were barriers identified in four studies (James et al., 2017, Higgins et al., 2018, Davies et al., 2020, Price et al., 2016). Staffing issues led to less staff being trained resulting in inadequate awareness, knowledge, utilisation or dilution of interventions (Higgins et al., 2018, James et al., 2017, Price et al., 2016). Consumers reported "full-time staff are usually better at it than casual/part-time staff, in my experience." (Fletcher et al., 2019a, p.

7), and managers identified that "…your gold standard would be that for everyone to have one day of training…" (Higgins et al., 2018, p. 9) but recognised difficulties meeting this target. Training only senior staff left front line staff inadequately informed about interventions. Training could be "too basic and condescending" (Higgins et al., 2018, p. 9) and inadequate education to prepare staff led to a lack of confidence and interventions were diluted or abandoned (James et al., 2017).

Challenges arose in keeping interventions up to date, motivating staff and getting staff and consumers to participate in interventions such as Know Each Other and Discharge Messages (Davies et al., 2020). Motivation for the use of interventions was needed for implementation and maintenance (Higgins et al., 2018, James et al., 2017). Staff reacted to team dynamics and peer influence through role modelling (Davies et al., 2020, James et al., 2017). Studies identified that senior and in-charge staff were more appropriate as intervention leads due to their influence with peers (Higgins et al., 2018, James et al., 2017). A strong role model who was a motivating intervention lead led to staff embracing interventions (Davies et al., 2020, Higgins et al., 2018, James et al., 2017).

Staff attitudes were influenced by strong ward culture, leadership and values of staff (James et al., 2017). Resistive staff had negative perceptions and felt Safewards was "…stuff they learnt 20 years ago…" (Higgins et al., 2018, p. 7), or "…stuff we already do…" (Price et al., 2016, p. 18). Experienced staff were resistive towards Safewards and felt the model was for junior staff who were found to be receptive to Safewards (Higgins et al., 2018, Price et al., 2016). However, some experienced staff embraced Safewards expressing "It feels like we desperately needed something to remind us why we got into nursing, it brings it back to basics, and it brings it back to the patient" (Fletcher et al., 2019b, p. 7). Some staff felt they held more responsibility than consumers and had issues with power-sharing (Fletcher et al., 2019b, James et al., 2017). Some staff felt they had no skills or communication deficits (Higgins et al., 2018, James et al., 2017) or that Safewards was for consumers who were receptive to care (Price et al., 2016). The presence or absence of leadership and when support was withdrawn led to the success or failure of implementation (Price et al., 2016, Higgins et al., 2018, James et al., 2017). As one study concluded, staff stopped utilising interventions (James et al., 2017) while another study reported staff felt Safewards would still be used in twelve months (Fletcher et al., 2019a).

Synthesis of Quantitative and Qualitative Studies

Safewards implementation differed between wards, significantly reducing conflict in three studies and reducing containment in five studies. The experience of safety also significantly improved in four studies. Staff felt more confident in dealing with conflict behaviours, recognising and reacting with early interventions to flashpoints. This avoided an escalation of behaviours and helped to reduce coercive practices. Both staff and consumers found the interventions assisted in promoting a positive and calmer environment, improved the ward atmosphere and increased the experience of safety.

One study found no statistically significant reductions in rates of conflict, and three studies found no statistically significant reductions in containment. Lack of effect was suggested to reduce fidelity of the interventions that occurred due to staff turnover, ineffective staff training and staff attitudes. Higher acuity on wards would cause disruptiveness and hostility to staff (Price et al., 2016), linked to higher staff turnover, and more temporary staff, who are not trained in Safewards. This led to interventions being not well known or inadequately utilised, of which consumers were aware. Staff resistance and negative attitudes were barriers leading to inadequate fidelity. Motivating and supportive attitudes were identified to be best modelled by senior staff who have a positive peer influence. Inadequate training was identified for various reasons, including temporary staff, lack of time and not training frontline staff. However, data for the attendance and the professions of staff trained were not reported for most studies. Consumer and staff cohesion and support improved therapeutic and professional relationships, leading to a calmer, recovery-oriented ward atmosphere.

Discussion

This systematic review evaluated the effect of Safewards by answering the following questions: What effect does the Safewards model have on reducing rates of conflict and containment? and What effect does the Safewards model have on the experiences of inpatient staff and consumers? The implementation of Safewards reduced rates of conflict in three studies (Bowers et al., 2015, Davies et al., 2020, Maguire et al., 2018), reduced rates of containment in five studies (Bowers et al., 2015, Baumgardt et al., 2019, Davies et al., 2020, Riding, 2016, Stensgaard et al., 2018) and was found to improve over time with consolidation

(Fletcher et al., 2017). Fidelity of interventions was attributed to reductions in conflict and containment (Fletcher et al., 2017, Baumgardt et al., 2019, Bowers et al., 2015). Nurses who are enthusiastic about or view interventions as beneficial to current practice consolidate interventions through continuous practice, thereby improving fidelity (Bossert et al., 2020). This implies that the interventions in studies reporting high fidelity were readily accepted and embedded into current nursing practice. This was reflected in the qualitative findings, for example, Safewards was "easy to implement and adopt to current practice" (Fletcher et al., 2019b, p. 7).

No statistically significant difference in rates of conflict were reported in one study (Price et al., 2016) and no statistically significant difference in rates of containment was found in a further two studies (Price et al., 2016, Maguire et al., 2018). These results were attributed to low fidelity of interventions secondary to staff resistance (Price et al., 2016). The SOFC (Safewards.net, 2019) has not been formally evaluated for reliability, validity or sensitivity. The SOFC is subject to bias as it only assesses observed interventions and not the level of engagement or understanding that the staff have of the interventions or the Safewards model (Baumgardt et al., 2019, Maguire et al., 2018). Most studies have not reported who conducted the fidelity testing, how they were trained and may be used inconsistently by research assistants. Therefore, the SOFC effectiveness cannot be ensured, limiting the inferences of studies that fidelity influenced effectiveness and implementation.

While results are promising, it is difficult to establish a clear relationship between Safewards and reduced rates of conflict and containment due to disparities in demographic variances, study methods and study time frames, limiting review synthesis to a narrative discussion. Due to implementation complexity, studies involving multi-component interventions often differ in their evaluation of the same phenomena, resulting in heterogeneous data (Higgins et al., 2019). This review included one RCT, seven quasi-experimental studies, two time-series analysis and two cross-sectional studies, which may lack the explanatory power, rigour, or power of effect to determine a direct correlation and allow for a broad generalisation of Safewards. Stronger, more rigorous studies are needed to support the effectiveness of Safewards on rates of conflict and containment. While an RCT is a robust method to explore cause and effect relationships, blinding is not always possible in multi-component interventions in healthcare and limits generalisability due to overestimated treatment effects (Higgins et al., 2019, Park et al.,

2014). For example, Bowers et al. (2015) had difficulty blinding staff, due to the possibility of staff crossing between the intervention and control wards. While an RCT has a more rigorous design, it frequently fails to capture the impact on social behaviours (Park et al., 2014) that is needed in evaluating implementation of complex healthcare interventions. A time-series analysis or quasi-experimental design may better suit the implementation of complex healthcare interventions but are more prone to bias (Higgins et al., 2019). The lack of comparison groups, reporting on other treatments in place and single measurements of outcomes pre- and post-implementation in the quasi-experimental studies included in this review increased the risk of bias and reduced confidence in attributing the effect of Safewards in reducing conflict and containment.

Resistance to the interventions slowed implementation and reduced the dose-effect of Safewards (Cabral and Carthy, 2017, Higgins et al., 2018, James et al., 2017, Price et al., 2016, Baumgardt et al., 2019, Kipping et al., 2019). Introducing evidence-based nursing practice is complex and resistance to change is common for various reasons, including staff not viewing a need for change, the solution or method of implementation is inappropriate, or staff are committed to practicing in a particular way (Salam and Alghamdi, 2016). Overcoming resistance to change requires training tailored to suit the context, communication between management and staff, justification for change and identification of motivational staff willing to assist in implementation (Darker et al., 2018). Effective leadership enhances implementation by facilitating training, improving awareness and ensuring consolidation of quality improvement initiatives (Darker et al., 2018). Senior staff display expertise and promote positive change by exerting their influence through empowerment, enabling co-workers to deepen nursing practices and create supportive opportunities (Higgins et al., 2018, James et al., 2017). Facilitated discussion and strong intervention leads can support ongoing education, promote engagement, encourage sceptical staff to reflect on their practice and how Safewards could improve practice fidelity (Whitmore, 2017, Cabral and Carthy, 2017, Higgins et al., 2018, Dickens et al., 2020, Baumgardt et al., 2019, James et al., 2017).

Staff felt that consumers displaying high acuity behaviours were not receptive to the interventions which led to abandonment (Price et al., 2016, Fletcher et al., 2019b). Higher ward acuity has been reported to contribute to a sense of powerlessness and lack of autonomy for staff, making feasibility of new practice change implementation less of a priority (Laker et al., 2014).

Staff who feel consumers would not benefit from interventions due to acuity (Higgins et al., 2018, James et al., 2017, Price et al., 2016, Whitmore, 2017) or understanding (Davies et al., 2020) occurs when staff feel they have little power over implementation (Laker et al., 2014). Staff and consumer co-design in implementing practice change allows influence and advocation for staff and consumers (Groenwald and Eldridge, 2020). Engaging staff as stakeholders through co-design and modification in implementation of newly implemented practice change is integral to ensure acceptance into practice through engagement, improve fidelity, ensure consistent and safe patient-centred outcomes utilising clinical governance (National Health and Medical Research Council, 2018, Kipping et al., 2019).

Evaluation of the implementation of Safewards identified changes in the way restrictive intervention are used or how conflict occurs. As mechanical restraint decreased, forced medications increased (Stensgaard et al., 2018) and as rates of special observations, use of medications, and time out declined, there was an increase in milder conflict behaviours such as general rule-breaking and refusing to get out of bed, potentially indicating a substitution effect. This substitution effect supports a positive shift towards the practice "to provide for persons to receive assessment and treatment in the least restrictive way possible with the least possible restrictions on human rights and human dignity" (Government of Victoria, 2014, p. 21).

Despite statistically not-significant reductions in rates of conflict and containment, the experience of safety was found to improve for staff and consumers following implementation of Safewards (Maguire et al., 2018), implying that Safewards has a positive effect on promoting calmness and a sense of safety. A sense of safety has a healing effect on consumers and provides an effective treatment environment (Maguire et al., 2018, Schalast et al., 2008). Safewards improved staff autonomy and confidence, providing a holistic approach to recovery-orientated treatment (Fletcher et al., 2019b, Higgins et al., 2018, Maguire et al., 2018). Consumers reported Safewards interventions generated feelings of dignity, respect, hope and motivation, thereby aiding their recovery (Lickiewicz et al., 2020, Fletcher et al., 2017, Higgins et al., 2018, Maguire et al., 2018, Fletcher et al., 2019b) and improving communication and relationships (Higgins et al., 2018, Maguire et al., 2018). Therapeutic relationships are built on trust, respect, understanding, empathy and availability. Consumers report they value therapeutic relationships and have improved compliance with therapy when engaged with staff (Hewitt and

Coffey, 2005). Safewards was reported to increase therapeutic relationships by improving positive interactions and cohesion for consumers and staff (Fletcher et al., 2019a, Fletcher et al., 2019b, Higgins et al., 2018, Cabral and Carthy, 2017, Maguire et al., 2018, James et al., 2017, Price et al., 2016, Davies et al., 2020).

Internal validity of the Review

Meta-analysis was not possible as data was found to have high heterogeneity arising from research conducted in clinically diverse settings, diversity of outcome measurement tools and diversity in statistical reporting and methodology. Accordingly, a narrative synthesis of outcome measures was chosen for this review. Three included studies had low methodological quality increasing risk of bias, which was considered throughout the synthesis. It is suggested that more rigorous research is needed to examine the effectiveness of the Safewards model for reducing conflict and containment. There was limited evidence in the literature regarding the consumers' perspectives and there was a high representation of adult services, limiting the generalisation to the staff of adult inpatient wards. Only English studies were included, and this is a limitation that could be overcome in future reviews. This review included an extensive grey literature search, however, none of the studies identified fit the inclusion criteria.

Conclusion

This systematic review evaluated the effect of Safewards on conflict and containment events in inpatient units and the perceptions of staff and consumers. Safewards recognises and mitigates multiple types of conflict at various stages and has the potential to prevent triggers that lead to containment. Implementing the ten recommended interventions of the Safewards model was found to improve staff and consumer cohesion, encourage therapeutic relationships through enhanced communication and promote a sense of calm and safety on inpatient wards. The interventions provide tools for engagement, to enhance communication and provide clarity for recovery-oriented treatment. Quantitative evidence reported rates of conflict and containment reduced with the implementation of Safewards, and these rates continue to improve with consolidation. In studies where rates of conflict and containment were not found to decrease, the qualitative evidence assisted in identifying barriers to implementation, potentially reducing the dose-effect of Safewards. Staff and consumers reported the interventions led to positive changes

in practice and ward atmosphere. Therapeutic relationships were found to develop between staff and consumers, and professional relationships between staff developed. Overall, enhanced relationships and communication led to a more peaceful environment, where staff and consumers felt safe, listened to, motivated and hopeful, contributing to a consumer-centred, recovery-orientated ward atmosphere.

While results of reduced rates of conflict and containment are hopeful, Safewards should be implemented cautiously until more robust evidence is established. The findings of reduced rates of conflict and containment, cohesion within inpatient wards, enhanced therapeutic relationships and improved ward atmosphere must be considered in light of the perceived barriers. The main barriers to implementing Safewards model included staff resistance to change, inadequate training, staff turnover, temporary staff and lack of support from senior staff and organisations. Staff turnover and temporary staff, ward acuity and complex behaviours are confounding variables that reflect the real-time process of ward environments. Organisational commitment and training were influencers that assisted in mitigating barriers arising during implementation of Safewards. Staff engagement through training and leadership promoted motivation and positive views. This is necessary for implementation and adherence to interventions. Implementation can be resource-heavy and ongoing support at management and senior staff levels is required for successful implementation.

Recommendations for Practice

Recommendations were graded using The Joanna Briggs Institute (2020) Grades of Recommendation and GRADEpro software (McMaster University, 2020).

Grade A Recommendations

It is recommended that healthcare organisations consider implementing Safewards in inpatient wards given the potential to reduce conflict and containment, improve safety and ward atmosphere for staff and consumers. Significant planning and co-design should consider ward service type, ward culture, and leadership models. Training and resources for Safewards should be available to all staff. Strong intervention leads should be implemented to provide education

and promote staff engagement of Safewards, and to promote motivation and sustainability of Safewards in the long term.

Grade B Recommendations

Rigorous approaches to measuring intervention fidelity are recommended to assess staff consolidation of Safewards interventions, intervention feasibility at a ward level and to support implementation efforts. Measuring ward atmosphere from the perspectives of staff and consumers at regular intervals is recommended to assess changes in ward culture, attitude changes, compare staff and consumer experiences of inpatient care and support implementation efforts and sustainability.

Recommendations for Research

This systematic review identified several gaps in the evidence base. Firstly, it is recommended that more rigorous studies for comparison and analysis be utilised. Further qualitative inquiry to gain a deeper understanding of perceptions of staff and consumers and ward atmosphere is also recommended.

Secondly, identification of interventions contributing to specific outcomes and individual effectiveness should be identified. Identifying the effectiveness and flexibility of the interventions would allow further research of Safewards to be extended beyond mental health to other high-risk areas of healthcare.

Third, a lack of consumer perspectives was reported, and feedback from families and carers has not been included. Research would benefit from further analysis of consumer and carer preferences to alternative restrictive interventions and preferences for Safewards interventions.

Finally, future research should focus on testing the validity and reliability of the Safewards Organisation Fidelity Checklist to provide an accurate measure of implementation and engagement of interventions. There is also the potential to explore how to assess the staff's understanding of the theory behind the model, which may contribute to improved fidelity.

Relevance to Clinical Practice

This review offers healthcare providers and organisations with a synthesis of evidence for the use of Safewards in reducing conflict, containment and minimising the use of restrictive interventions. This, in turn, aims to keep staff and consumers safe and provide a therapeutic, consumer-centred ward atmosphere to promote recovery-oriented care. The review provides support for an international practice-change to reduce and eliminate containment and implement alternative interventions to decrease incidence of physical and psychological harm for both staff and consumers. Research into the Safewards model provides staff with confidence to manage conflict and avoid containment, improving workplace practice and safety in the workplace.

Conflicts of Interest and Funding

The authors state that there was no conflict of interests. No funding or scholarships were obtained to conduct this research.

Data Availability Statement

The data that supports the findings of this study are available within the review, within the supplementary material and upon request of the author.

References

Arnetz, J. E., Hamblin, L., Essenmacher, L., Upfal, M. J., Ager, J. & Luborsky, M. (2015). Understanding patient-to-worker violence in hospitals: a qualitative analysis of documented incident reports. 71**,** 338-348.

Baumgardt, J., Jäckel, D., Helber-Böhlen, H., et al. (2019). Preventing and Reducing Coercive Measures—An Evaluation of the Implementation of the Safewards Model in Two Locked Wards in Germany. Frontiers in Psychiatry, 10.

Baumgardt, J., Jäckel, D., Helber-Böhlen, H., et al. (2020). Corrigendum: Preventing and reducing coercive measures - An evaluation of the implementation of the Safewards model in two locked wards in Germany. Frontiers in Psychiatry, 11.

Bossert, J., Wensing, M., Thomas, M., et al. (2020). Implementation of the milestones communication approach for patients with limited prognosis: evaluation of intervention fidelity. BMC Palliative Care, 19.

Bowers, L. (2006). On conflict, containment and the relationship between them. Nursing Inquiry, 13**,** 172-180.

Bowers, L. (2014). Safewards: a new model of conflict and containment on psychiatric wards. Journal of Psychiatric and Mental Health Nursing, 21**,** 499-508.

Bowers, L., Alexander, J., Bilgin, H., et al. (2014). Safewards: the empirical basis of the model and a critical appraisal. J Psychiatr Ment Health Nurs, 21**,** 354-364.

Bowers, L., James, K., Quirk, A., Simpson, A., Stewart, D. & Hodsoll, J. (2015). Reducing conflict and containment rates on acute psychiatric wards: The Safewards cluster randomised controlled trial. International Journal of Nursing Studies, 52**,** 1412-1422.

Bowers, L., James, K., Quirk, A., et al. (2016). Corrigendum to "Reducing conflict and containment rates on acute psychiatric wards: The Safewards cluster randomised controlled trial" [Int. J. Nurs. Stud. 52 (September (9)) (2015) 1412–1422]. International Journal of Nursing Studies, 58**,** 102.

Cabral, A. & Carthy, J. (2017). Can Safewards improve patient care and safety in forensic wards? A pilot study. British Journal of Mental Health Nursing, 6**,** 165-171.

Clarivate Analytics (2019). EndNote. In: PA (Ed). United States of America: Clarivate Analytics.

Darker, C. D., Nicolson, G. H., Carroll, A. & Barry, J. M. (2018). The barriers and facilitators to the implementation of National Clinical Programmes in Ireland: using the MRC framework for process evaluations. BMC Health Services Research, 18.

Davies, B., Silver, J., Josham, S., et al. (2020). An evaluation of the implementation of Safewards on an assessment and treatment unit for people with an intellectual disability. Journal of Intellectual Disabilities**,** 174462952090163.

Department of Health and Human Services (2020). Safewards in Emergency Departments - trial. In: Victoria, G. o. (Ed). Victoria: Government of Victoria.

Dickens, G. L., Tabvuma, T. & Frost, S. A. (2020). Safewards: Changes in conflict, containment, and violence prevention climate during implementation. International Journal of Mental Health Nursing.

Escribano, R. B., Beneit, J. & Luis Garcia, J. (2019). Violence in the workplace: Some critical issues looking at the health sector. Heliyon, 5**,** e01283.

Fletcher, J., Buchanan-Hagen, S., Brophy, L., Kinner, S. A. & Hamilton, B. (2019a). Consumer perspectives of Safewards impact in acute inpatient mental health wards in Victoria, Australia. Frontiers in Psychiatry, 10.

Fletcher, J., Hamilton, B., Kinner, S. A. & Brophy, L. (2019b). Safewards impact in inpatient mental health units in Victoria, Australia: Staff perspectives. Frontiers in Psychiatry, 10.

Fletcher, J., Spittal, M., Brophy, L., et al. (2017). Outcomes of the Victorian Safewards trial in 13 wards: Impact on seclusion rates and fidelity measurement. International Journal of Mental Health Nursing, 26**,** 461-471.

Gaskin, C. (2013). Reducing restrictive interventions: Literature review and document analysis. Melbourne, Victoria, Australia: Department of Health and Human Services,.

Government of Victoria (2014). Mental Health Act 2014 Authorised Version No. 022. In: Victoria., G. o. (Ed). 26 of 2014. (p. 21). Australia.

Groenwald, S. L. & Eldridge, C. (2020). Politics, power, and predictability of nursing care. Nursing Forum, 55**,** 16-32.

Hewitt, J. & Coffey, M. (2005). Therapeutic working relationships with people with schizophrenia: Literature review. Journal of Advanced Nursing, 52**,** 561-570.

Higgins, J. P. T., López-López, J. A., Becker, B. J., et al. (2019). Synthesising Quantitative Evidence In Systematic Reviews Of Complex Health Interventions. BMJ Global Health, 4**,** e000858.

Higgins, N., Meehan, T., Dart, N., Kilshaw, M. & Fawcett, L. (2018). Implementation of the Safewards model in public mental health facilities: A qualitative evaluation of staff perceptions. International Journal of Nursing Studies, 88**,** 114-120.

Hottinen, A., Rytilä-Manninen, M., Laurén, J., Autio, S., Laiho, T. & Lindberg, N. (2019). Impact of the implementation of the Safewards model on the social climate on adolescent psychiatric wards. International Journal of Mental Health Nursing, n/a.

International Labour Office, International Council of Nurses, World Health Organization & Public Services International (2002). Framework Guidelines for Addressing Workplace Violence in the Health Sector. In: Sector, J. P. o. W. V. i. t. H. (Ed). (p. 3). Geneva.

James, K., Quirk, A., Patterson, S., Brennan, G. & Stewart, D. (2017). Quality of intervention delivery in a cluster randomised controlled trial: A qualitative observational study with lessons for fidelity. Trials, 18**,** 1-10.

Kiger, M. E. & Varpio, L. (2020). Thematic analysis of qualitative data: AMEE Guide No. 131. Medical Teacher**,** 1-9.

Kipping, S. M., De Souza, J. L. & Marshall, L. A. (2019). Co-creation of the Safewards model in a forensic mental health care facility. Issues in Mental Health Nursing, 40**,** 2-7.

Laker, C., Callard, F., Flach, C., Williams, P., Sayer, J. & Wykes, T. (2014). The challenge of change in acute mental health services: Measuring staff perceptions of barriers to change and their relationship to job status and satisfaction using a new measure (VOCALISE). Implementation Science, 9**,** 23.

Lickiewicz, J., Adamczyk, N., Hughes, P. P., Jagielski, P., Stawarz, B. & Makara-Studzińska, M. (2020). Reducing aggression in psychiatric wards using Safewards-A Polish study. Perspectives in Psychiatric Care.

Maguire, T., Ryan, J., Fullam, R. & McKenna, B. (2018). Evaluating the introduction of the Safewards model to a medium- to long-term forensic mental health ward. Journal of Forensic Nursing, 14**,** 214-222.

Mayers, P., Keet, N., Winkler, G. & Flisher, A. (2010). Mental health service users' perceptions and experiences of sedation, seclusion and restraint. Int J Soc Psychiatry, 56**,** 60-73.

McMaster University, d. b. E. P., Inc.) (2020). GRADEpro GDT: GRADEpro Guideline Development Tool [Software].

Moher, D., Liberati, A., Tetzlaff, J. & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Medicine, 6**,** e1000097.

National Health and Medical Research Council (2018). Guidelines for guidelines: Engaging stakeholders. Australia: Australian Government Minister for Health and Ageing.

National Safety and Quality Health Service Standards (2018). User Guide for Health Services Providing Care for People with Mental Health Issues. In: National Safety and Quality Health Service Standards (Ed). Sydney, Australia: Australian Commission on Safety and Quality in Health Care.

Park, T., Usher, K. & Foster, K. (2014). The Challenges of Conducting a Nurse-Led Intervention in a Randomized Controlled Trial with Vulnerable Participants. Nursing Research and Practice, 2014**,** 1-6.

Price, O., Burbery, P., Leonard, S. & Doyle, M. (2016). Evaluation of safewards in forensic mental health: Analysis of a multicomponent intervention intended to reduce levels of conflict and containment in inpatient mental health settings. Mental Health Practice, 19**,** 14-21.

Riding, T. (2016). Exorcising restraint: Reducing the use of restrictive interventions in a secure learning disability service. Journal of Intellectual Disabilities & Offending Behaviour, 7**,** 176-185.

Safewards Victoria (2016). Safewards handbook training and implementation resource for Safewards in Victoria. In: Health, D. o. (Ed). Victoria, Australia Government of Victoria.

Safewards.net (2019). Safewards. United Kingdom.

Salam, M. & Alghamdi (2016). Nurse educators: Introducing a change and evading resistance. Journal of Nursing Education and Practice, 6.

Schalast, N., Redies, M., Collins, M., Stacey, J. & Howells, K. (2008). EssenCES, a short questionnaire for assessing the social climate of forensic psychiatric wards. Criminal Behaviour and Mental Health, 18**,** 49-58.

Stensgaard, L., Andersen, M. K., Nordentoft, M. & Hjorthøj, C. (2018). Implementation of the Safewards model to reduce the use of coercive measures in adult psychiatric inpatient units: An interrupted time-series analysis. Journal of Psychiatric Research, 105**,** 147-152.

The Joanna Briggs Institute (2019). Joanna Briggs Institute reviewers' manual. In: The Joanna Briggs Institute (Ed). South Australia: The Joanna Briggs Institute,.

The Joanna Briggs Institute (2020). The Joanna Briggs Institute approach to evidence-based healthcare. In: Institute, T. J. B. (Ed). The Joanna Briggs Institute.

Veritas Health Innovation (2019). Covidence systematic review software. Melbourne, Australia: Veritas Health Innovation.

Whitmore, C. (2017). Evaluation of Safewards in forensic mental health: A response. Mental Health Practice, 20**,** 26-29.

Table 1. Safewards Intervention Descriptions

Intervention	Explanation
Clear Mutual Expectations	To be used in place of rules and regulations to clarify consistent behaviours expected from staff and consumers.
Soft Words	A range of consumer appropriate words or phrases to assist staff with effective communication during interactions.
Talk Down/ Through	De-escalation skills to manage escalating conflict and agitation. This intervention builds on existing training and expands on emotional and psychological regulation of staff, and cohesion of multidisciplinary teams.
Positive Words	The use of Positive Words during handover by relating behaviours to psychological functioning.
Bad News Mitigation	Developing pre-planned management for psychological and emotional support, to deliver news that may be perceived as stressful to the consumer.
Know Each Other	Building rapport through sharing common background information with staff and consumers.
Mutual Help Meeting	Frequent ward meetings to encourage valued contributions and support from and between consumers.
Calm Down Methods	A set of tools and resources that assists consumers in using their existing coping mechanisms and exploring new ones.
Reassurance	Providing Reassurance to consumers and staff who have been involved in or witnessed conflict and/or containment.
Discharge Messages	Messages of advice and experience from consumers who are being discharged to encourage hope.

Adapted from (Safewards.net, 2019, Safewards Victoria, 2016)

Table 2. Quantitative Study Characteristics

Author	Country, setting, participants	Aim, study design	Safewards interventions	Outcomes assessed, data collection
Baumgardt et al. (2019)	Berlin, Germany 2 Secure locked inpatient psychiatric wards 103 Consumers exposed to containment	Evaluate the implementation of Safewards with regard to coercive interventions Quasi-experimental, prospective	Ten Safewards interventions Noted: Implementation on Ward A was interrupted for eight months due to workload and team change	Frequency and duration of coercive interventions including mechanical restraint, forced medications, limitation of freedom and combinations of these Routine hospital data for consumers exposed to coercive interventions Safewards Organisation Fidelity Checklist (Safewards.net, 2019) 4-8 months post-implementation, assessed eight interventions; Clear Mutual Expectations, Talk Down, Soft Words, Discharge Messages, Know Each Other, Calm Down Methods, Mutual Help Meeting, and Positive Words
Bowers et al. (2015)	London, United Kingdom 31 Total adult acute psychiatric inpatient wards 16 Intervention wards 15 Control wards	Test the efficacy of the Safewards interventions to reduce conflict and containment rates Randomised control trial	Intervention wards: Ten Safewards interventions Control wards: Interventions for staff physical health including desk exercises, pedometer-based competitions, healthy snacks, diet assessment and individualised feedback, health and exercise magazines, health promotion literature; links to local	Rates of total conflict including for example verbal aggression, suicide attempts, alcohol use, attempted absconding Rates of total containment including for example coerced medication, seclusion, restraint, special observations Intervention wards: Patient-Staff Conflict Checklist – Shift Report, Attitude to Personality

Table 2. Quantitative Study Characteristics

Author	Country, setting, participants	Aim, study design	Safewards interventions	Outcomes assessed, data collection
			sports and exercise facilities	Disorder Questionnaire, Self-harm Antipathy scale, Ward Atmosphere Scale, Safewards Organisation Checklist Control wards: Short form health survey for health interventions Safewards Organisation Fidelity Checklist
Davies et al. (2020)	United Kingdom 1 seven bed assessment and treatment unit Consumers with intellectual disabilities 10 Staff including nurses, healthcare support workers, occupational therapist, psychologist, assistant psychologist, and behavioural clinical specialist	Evaluate the effectiveness of implementing Safewards Mixed-methods Quasi-experimental, prospective Qualitative informal feedback	Ten Safewards interventions Pre-existing model; Positive Behavioural Support	Rates of conflict including aggression (verbal and physical), self-harm, general rule-breaking, drug or alcohol use, absconding, medication-related behaviours and containment Rates of containment including pro-re-nata/intra-muscular medications, nursed in extra care area, seclusion, special observations, restraint, and time-out Patient-Staff Conflict Checklist – Shift Report
Fletcher et	Victoria, Australia 44 Adult	Evaluate if the rate of	Intervention wards: Nine to ten Safewards	Rates of seclusion

Table 2. Quantitative Study Characteristics

Author	Country, setting, participants	Aim, study design	Safewards interventions	Outcomes assessed, data collection
al. (2017)	mental health wards, adolescent mental health wards 13 Intervention 31 Comparison	seclusion in trial sites differs from the rate of seclusion in comparison wards, pre-trial to post-trial and follow-up Is there a dose-response relationship between intervention fidelity and rates of seclusion in trial sites? Quasi-experimental, prospective	interventions Comparison wards: Usual care Noted: All Victorian wards were part of Reducing Restrictive Interventions projects	State-wide mental health data from the Client Management Interface Safewards Organisation Fidelity Checklist modified to record consistency of interventions within each ward, used at four time-points
Maguire et al. (2018)	Victoria, Australia 1 forensic medium to long-term mental health inpatient ward for men 12 Staff 14 Consumers	Investigate if the introduction of Safewards changes incidents of conflict events and rates of containment events Evaluate the fidelity of the introduction of Safewards interventions and whether there were any changes to	Ten Safewards interventions	Conflict including attempted absconding, being affected by substances or alcohol, self-harm, medication refusal, physical, verbal, and aggression toward property Containment including seclusion, physical restraint, and mechanical restraint. Ward atmosphere including the experience of safety, therapeutic relationships, and patient

Table 2. Quantitative Study Characteristics

Author	Country, setting, participants	Aim, study design	Safewards interventions	Outcomes assessed, data collection
		ward atmosphere Mixed-methods Quasi-experimental, retrospective Qualitative feedback		cohesion Victorian Health Incident Management System, for incidents and near misses Client Management Interface for seclusion and restraint data Essen Climate Evaluation Schema Safewards Organisation Fidelity Checklist adapted in Fletcher et al. (2017) study, used four times total, every three months post-implementation and further adapted to include open-ended question
Price et al. (2016)	United Kingdom 6 Forensic medium secure mental health wards 3 Intervention wards 3 Control wards	Evaluate the effect of Safewards Mixed-methods Quasi-experimental, non-randomised control trial service evaluation Qualitative, informal interviews	Intervention wards: Ten Safewards interventions Control wards: Ten Safewards interventions during the outcome period	Conflict – undefined Containment – undefined Patient-Staff Conflict Checklist – Shift Report Safewards Organisation Fidelity Checklist

Table 2. Quantitative Study Characteristics

Author	Country, setting, participants	Aim, study design	Safewards interventions	Outcomes assessed, data collection
Riding (2016)	United Kingdom 1 Specialist learning disability foundation trust, medium and low secure service Adults with a learning disability	Describe the nature and impact of a restraint reduction strategy in response to the national Positive and Safe programme Quasi-experimental, quality improvement project, prospective	Ten Safewards interventions Changes to programme management changes Changes to Positive Behavioural Support Program Pre-existing interventions; Positive Behavioural Support	Containment specifically prone restraint, emergency response belts, physical and mechanical restraint, seclusion, and rapid tranquillisation Central Incident Register – newly developed and implemented Regular fidelity testing (no tool specified)
Stensgaard et al. (2018)	Southern Denmark Adult psychiatric hospitals	Investigate whether the implementation of the Safewards model reduced the frequency of coercive measures Quasi-experimental, retrospective	Ten Safewards interventions or implementation of Safewards had started	Frequency of overall coercive measures, mechanical restraint and forced sedation Register of coercive measures, a mandated register
Cabral and Carthy (2017)	London, United Kingdom Forensic psychiatric wards 89 Consumers	Evaluate the implementation of Safewards interventions and to explore their impact in	Most of the ten Safewards interventions were implemented	Ward atmosphere including patient cohesion, the experience of safety and therapeutic relationships Essen Climate Evaluation Schema collected at baseline and six months post-implementation

Table 2. Quantitative Study Characteristics

Author	Country, setting, participants	Aim, study design	Safewards interventions	Outcomes assessed, data collection
	102 Staff	this forensic service Mixed-methods, service evaluation Quasi-experimental, prospective Qualitative, focus groups		Safewards Organisation Fidelity Checklist adapted from Safewards.net (2019)
Fletcher et al. (2019b)	Victoria, Australia 14 Adult, adolescent, aged and secure extended units 103 Inpatient staff including nurse educators, managers, associate nurse managers, nurse specialists, registered and enrolled nurses, and consumer consultants	Understand the impact of Safewards from the perspectives of the staff Mixed-methods Cross-sectional, post-intervention Qualitative, survey feedback	Nine to ten Safewards interventions, implementation occurred during Fletcher et al. (2017) study	Perceptions of safety Cross-sectional post-intervention survey 5-point Likert scale including feedback
Fletcher et al. (2019a)	Victoria, Australia 10 Adult, adolescent, aged	Describe the impact of Safewards on consumer experiences	Safewards interventions, implementation occurred during Fletcher et al. (2017) study	Perceptions of safety Cross-sectional post-intervention survey 5-point

Table 2. Quantitative Study Characteristics

Author	Country, setting, participants	Aim, study design	Safewards interventions	Outcomes assessed, data collection
	and secure extended units 72 Consumers	Mixed-methods Cross-sectional, post-intervention Qualitative, survey feedback		Likert scale including feedback
Hottinen et al. (2019)	Helsinki, Finland 6 closed adolescent inpatient wards 166 Staff 88 Consumers	Investigate the implementation of the Safewards, more specifically, the impact on social climate, assessed by both inpatients and staff Quasi-experimental, prospective	Ten Safewards interventions	Ward atmosphere including patient cohesion, experience of safety and therapeutic relationships Essen Climate Evaluation Schema pre- and post-intervention

Table 3. Qualitative Study Characteristics

Author	Country, setting, participants	Aim	Safewards interventions	Outcomes assessed, data collection
Cabral and Carthy (2017)	London, United Kingdom Forensic psychiatric wards 9 Staff	Evaluate the implementation of Safewards interventions and to explore their impact in this forensic service	Reported most of the ten Safewards interventions were implemented	Ward atmosphere including patient cohesion, the experience of safety and therapeutic relationships Essen Climate Evaluation Schema collected at baseline and six months post-implementation Intervention leads collected feedback from ward staff and consumers during a meeting and then attended a free association narrative interview style focus group
Davies et al. (2020)	United Kingdom 1 Assessment and treatment unit for consumers with intellectual disabilities 10 Safewards intervention leads	Evaluate the effectiveness of implementing	Ten Safewards interventions Pre-existing models; Positive Behavioural Support	Feedback on individual Safewards interventions Feedback summary incorporating four open-ended questions and experiences from each intervention lead
Fletcher et al. (2019a)	Victoria, Australia Adult, adolescent, aged and secure extended inpatient mental health	Describe the impact of Safewards on consumer experiences	Five Safewards interventions including Clear Mutual Expectations, Mutual Help Meeting, Calm Down Box, and	Perceptions of consumers regarding the acceptability, applicability, and impact of Safewards

Table 3. Qualitative Study Characteristics

Author	Country, setting, participants	Aim	Safewards interventions	Outcomes assessed, data collection
	wards 72 Inpatient consumers		Discharge Messages Implementation occurred during study by Fletcher et al. (2017)	Likert scale incorporating optional feedback A nurse educator or consumer consultant assisted the completion of surveys with some consumers
Fletcher et al. (2019b)	Victoria, Australia Adult, adolescent, aged and secure extended inpatient mental health wards 103 Inpatient staff including nurse educators, managers, associate nurse managers, nurse specialists, registered and enrolled nurses, and consumer consultants	Understand the impact of Safewards from the perspectives of the staff	Nine to ten Safewards interventions Implementation occurred during Fletcher et al. (2017) study	Perceptions of staff regarding the acceptability, applicability, and impact of Safewards Likert scale incorporating optional feedback
Higgins et al. (2018)	Queensland, Australia 3 acute mental health wards 15 Registered nurses	Explore nursing staff perceptions of the factors impacting on their capacity to establish Safewards	Ten Safewards interventions	Nursing staff perceptions of Safewards Semi-structured interviews guided by Michie's integrative framework Audiotaped and transcribed

Table 3. Qualitative Study Characteristics

Author	Country, setting, participants	Aim	Safewards interventions	Outcomes assessed, data collection
James et al. (2017)	London, United Kingdom 16 mental health wards 11 Research assistants, including 6 healthcare assistants, 2 mental health nurses and 2 assistant psychologists	Describe the different ways in which Safewards interventions were implemented Explore the contextual factors moderating the quality of intervention delivery	Ten Safewards interventions Implemented during study by Bowers et al. (2015)	Moderators to intervention delivery Observational data collected by research assistants Research assistants recorded the most notable response of nursing staff using a structured data collection sheet, at each visit Research assistants participated in one 2-hour focus group to gain feedback (audio-recorded and transcribed)
Maguire et al. (2018)	Victoria, Australia Male forensic medium to the long-term mental health inpatient unit 1 20 bed ward 14 Consumers 12 staff	Investigate if after the introduction of Safewards, there were any changes to incidents of conflict events and rates of containment events Evaluate the fidelity of the introduction of Safewards interventions and whether there were any changes to ward atmosphere	Ten Safewards interventions	Ward atmosphere, specifically patient cohesion, the experience of safety and therapeutic relationships Open-ended questions included in the Safewards Organisation Fidelity Checklist

Table 3. Qualitative Study Characteristics

Author	Country, setting, participants	Aim	Safewards interventions	Outcomes assessed, data collection
Price et al. (2016)	United Kingdom Six forensic medium secure mental health wards Intervention: Three acute wards (one 16-bed male patients, one 9-bed female patients and one 4-bed female patients) Control: Three acute wards (two ten-bed male patients and one 12-bed female patients) Staff of acute forensic wards	Evaluate the effect of Safewards	Intervention wards: Ten Safewards interventions during the beginning of the implementation period Control: Ten Safewards interventions during the last week of the implementation period	Staff feedback on implementations of Safewards and individual interventions Informal individual and group meetings with staff of all wards (notes taken)

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
Baumgardt et al. (2019) †	Controlled interrupted time series Baseline - 11 weeks prior (t0) Implementation - 10 months Outcome period - 11 weeks post (t1)	103 Consumers exposed to containment	Coercive intervention events: • Occurred on 250 occasions - ward A: n t0 = 79, n t1 = 93; ward B: n t0 = 57, n t1 = 21 • In 103 patients - ward A: n t0 = 34, n t1 = 41, ward B: n t0 = 20, n t1 = 8 • Less consumers were exposed to coercive measures in both wards between t0 and t1. However, the decrease was statistically significant only in ward B [$\chi 2(1, n = 182) = 9.30, p = 0.003$] Range of all coercive interventions per patient decreased in both wards between t0 and t1: • Ward A: range t0= 1–26, range t1= 1–10 • Ward B: range t0= 1–15, range t1= 1–13 Consumers average exposure to coercive interventions after the implementation of Safewards: • Ward A 2.33 times before and 2.27 times after • Ward B 2.85 times before and 2.63 times after Total duration of coercive interventions in relation to the overall duration of the hospital	Low ⊕⊕⊕◯ Moderate

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
Bowers et al. (2015) ‡	Cluster randomised control trial Controlled trial matched with randomisation of two wards per hospital, except for one hospital with three wards in which two of three wards were included in the study Baseline - 8 weeks Implementation - 8 weeks Outcome period - 8 weeks	16 Intervention wards 15 Control wards 564 Total staff	Total rates of conflict reduction after the implementation of Safewards: • 15.0% (95% CI 5.7–23.7%), relative to the control. Baseline mean conflict events 5.22, SD 6.32., IQR 1-7. Treatment effects estimate 0.850, CI 0.763-0.943, p = 0.001 Total rates of containment reduction after the implementation of Safewards • 23.2% (95% CI 9.9–35.5%), relative to the control. Baseline mean containment events 1.26, SD 1.93, IQR 0-2 Treatment effects – estimate 0.768, CI 0.655-0.901, p = 0.004 Intervention fidelity mean was 38% (SD 8, range 27-54% n = 271)	Low ⊕⊕⊕⊕ High
Davies et al. (2020)	Mixed-methods Repeated measures Baseline - one month (t1) Implementation – twelve months Outcome period - one month (t2)	Staff of a 7-bed acute assessment and treatment unit inpatients, including nurses, healthcare support workers, occupational therapist, psychologist, assistant psychologist, and behavioural clinical specialist	Reductions in mean rates of conflict events between time 1 (t1) and time 2 (t2) occurred after the implementation of Safewards in: • Aggression – t1 n = 77, mean 5.87, t2 n = 76, mean 1.41, z- -6.526, p = 0.01 • Verbal aggression - t1 n = 77, mean	Moderate ⊕⊕⊕◯ Moderate

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
		7 Baseline consumers 8 Outcome period consumers	3.67, t2 n = 76 mean 0.95, z- -6.418, p = 0.01 • Physical aggression against objects - t1 n = 77, mean 1.63, t2 n = 76 mean 0.22, z- -5.157, p = 0.01 • Physical aggression against others - t1 n = 77, mean 0.62, t2 n = 76 mean 0.24, z- -2.437, p = 0.05 • Absconding - t1 n = 77, mean 0.34, t2 n = 76 mean 0.01, z- -2.171, p = 0.05 • Attempting to abscond- t1 n = 77, mean 0.33, t2 n = 76 mean 0.01, z- -2.171, p = 0.05 • Medication-related behaviours- t1 n = 77, mean 0.55, t2 n = 76 mean 0.25, z- -2.085, p = 0.01 • Refused PRN medication but later accepted - t1 n = 77, mean 0.20, t2 n = 76 mean 0.04, z- -2.634, p = 0.01 Reductions in mean rates of containment	

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
			events between time 1 and time 2 occurred after the implementation of Safewards: • Containment - t1 n = 77, mean 2.68, t2 n = 76 mean 0.83, z- -5.618, p = 0.01 • Given psychotropic medication - t1 n = 77, mean 1.05, t2 n = 76 mean 0.41, z- -3.730, p = 0.01 • Special observations continuous - t1 n = 77, mean 1.10, t2 n = 76 mean 0.17, z- -5.132, p = 0.01 • Time out - t1 n = 77, mean 0.19, t2 n = 76 mean 0.00, z- -3.407, p = 0.01 • There was a significant increase in the rate of refusing to get up between time one and time two - t1 n = 77, mean 0.00, t2 n = 76 mean 0.07, z- -2.033, p = 0.05	
Fletcher et al. (2017)	Quasi-experimental - before-and-after with a comparison group Comparison trial matched on same	44 Overall wards 13 Intervention 31 Comparison	Seclusion rates per 1000 occupied bed days in intervention wards after the implementation of Safewards:	Low ⊕⊕⊕⊕ High

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
	service type, adult and adolescent Baseline – three months Implementation – three months Outcome period – three months Follow-up – twelve months		• Pre-trial period seclusion rate baseline 14.1 • Post-trial period seclusion rate 15.8, IRR 1.03, CI 0.66 - 1.58, p = 0.931 • Follow-up period intervention wards seclusion rate 10.1, IRR 0.64, CI 0.41 - 1.00, p = 0.04, 36% reduction from baseline Seclusion rates per 1000 bed days in comparison wards after the implementation of Safewards: • There was no difference in seclusion rates from pre-trial to post-trial, seclusion rates increased • Seclusion rates trended down for all wards over the 15 months, although had a high degree of variation Intervention fidelity in adult services was consistent over the four timepoints: • Time 1 48%, time 2 64%, time 3 78%, time 4 95% Intervention fidelity in adolescent/youth	

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
			services began with high fidelity then scores varied: • Time 1 71%, time 2 76%, time 3 93%, time 4 90%.	
Price et al. (2016)	Mixed-methods Service evaluation Non-randomised control, matched on size, gender, and function Baseline - two weeks Implementation - ten weeks Outcome period - ten weeks	Staff of acute forensic wards 3 Intervention wards 3 Control wards	Rates of conflict events after the implementation of Safewards: • Intervention wards reported no statistical significance in reduction of conflict (p = 0.91, z-score -0.12) compared with the control wards Rates of containment events after the implementation of Safewards: • Intervention wards reported no statistical significance in rates of reduction (p = 0.39, z-score -0.87) compared with the control wards • Rates of conflict and containment were reduced in the intervention wards but failed to reach statistical significance Intervention fidelity to the interventions in all six wards was 27.28% overall	Moderate ⊕⊕◯◯ Low

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
Riding (2016)	Service evaluation Baseline - Twelve months Implementation – Ten months Outcome period - monthly from the beginning of trial	Calderstones Partnership National Health Service Trust	Rates of containment after the implementation of Safewards: • Physical restraint rates reduced by 42% • Prone restraint was eliminated • Emergency response belts rates initially increased, then reduced by 52% • Seclusion rates reduced by 42% • Rapid tranquillisation rates initially increased, but ruled out as artifact of the new reporting system and were found to reduce by 52% Intervention fidelity was not reported	High ⊕◯◯◯ Very low
Stensgaard et al. (2018)	Interrupted time-series January 1, 2012–March 31, 2017	15 Wards	Quarterly frequency rates of overall coercive measures after the implementation of Safewards: • Pre-intervention period (n = 610) decreasing 1% per quarter, $p < 0.001$, 95% CI: 1%–2% • Post-intervention period (n = 585), 3% per quarter, $p<0.001$, 95% CI:	Low ⊕⊕⊕⊕ High

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
			2%–5% • A statistically significant effect of a 2%, p = 0.03 Quarterly frequency rates of mechanical restraint after the implementation of Safewards: • Pre-intervention period was decreasing 4% per quarter p< 0.001, 95% CI: 3%–5% • Post-intervention rates were stable • Pre- and the post-intervention difference was not statistically significant, p = 0.40 Quarterly frequency rates of forced restraint after the implementation of Safewards: • Pre-intervention increasing at a rate of 3% per quarter, p < 0.001, 95% CI: 2%–4% • Post-intervention was decreasing at a rate of 8% per quarter, p < 0.001, 95% CI: 5%–11%	
Maguire et	Mixed-methods	12 Staff	Conflict events per 1000 occupied bed days	Low

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
al. (2018)	Quasi-experimental before and after Baseline – twelve months Outcome period – twelve months	14 Consumers One 20 bed ward	per quarter after the implementation of Safewards: • Total aggression incidents in 2015+2016 (n = 189) • There were 65 fewer conflict events after the implementation of Safewards • Reductions occurred in affected by alcohol or drugs, self-harm, and medication refusal • There were increases in attempted absconding Containment events per 1000 occupied bed days per quarter after the implementation of Safewards: • Rates of seclusion in 2015 were 0.82, and in 2016 were 0.82 • Rates of physical restraint rates in 2015 were 3.00 and in 2016 were 3.52 • Rates of mechanical restraint rates in 2015 were 0, and in 2016 were 1.09	⊕⊕⊕⊕ High

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
			The experience of safety for consumers after the implementation of Safewards: • Improved but was not statistically significant • 2015 mean 11 (n = 14), 2016 mean 13 (n = 11), u = 69.5, p = 0.68 The experience of safety for staff after the implementation of Safewards: • 2015 mean 7.5 (n = 22), 2016 mean 13 (n = 17), p = 0.01 Intervention fidelity was consistent: • Time 1+2 (5 interventions), time 1 100%, time 2 100% • Time 3-4 (10 interventions), time 3 85%, time 4 94% • Overall intervention fidelity rates were 94.75%	
Cabral and Carthy (2017)	Mixed-methods Service evaluation Quantitative and qualitative methodology September 2014 to May 2015	89 Consumers 102 Staff 6 Wards	The experience of safety for staff and consumers after the implementation of Safewards: • Baseline (n = 59), consumers (n = 41), staff (n = 18), mean 1.36	Moderate ⊕⊕◯◯ Low

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
			• Post-intervention (n = 66), consumers (n = 30), staff (n = 36), mean 2.17 Intervention fidelity was not reported	
Hottinen et al. (2019)	Quasi-experimental Pre-post experimental Baseline – Two months Implementation - Twelve months Outcome period - Two months	134 Baseline staff 115 Post-implementation staff 42 Baseline consumers 39 Post-implementation consumers	The experience of safety for consumers after the implementation of Safewards: • Pre-intervention (n = 42), mean 12.86, SD 4.73 • Post-intervention (n = 38), mean 14.32, SD 3.26, p = 0.25 The experience of safety for staff after the implementation of Safewards: • Pre-intervention baseline (n = 131), mean 6.71, SD 4.68 • Post-implementation (n = 115), mean 8.17, SD 4.95, p = 0.01	Moderate ⊕⊕⊕⊕ High
Fletcher et al. (2019b)	Mixed-methods Cross-sectional post-intervention survey Post-study period December 2015 and April 2016, twelve months post-implementation	103 Inpatient staff	After the implementation of Safewards, staff perceived Safewards usually or always impacted on: • Absconding (n = 30%) • Property damage (n = 35%) • Physical conflict (n = 45%) • Verbal conflict (n = 55%)	Moderate ⊕⊕⊕◯ Moderate

Table 4. Quantitative Results

Author, year	Methodology, duration of study	Sample	Results	Risk of bias, grade level of certainty §
Fletcher et al. (2019a)	Mixed-methods Cross-sectional post-intervention survey Post-study period January-March 2016, Nine-twelve months post-implementation	72 Current inpatient consumers	Staff reported a perceived reduction in physical and verbal aggression and felt safer After the implementation of Safewards, consumers perceived Safewards usually or always impacted on: • Absconding (n = 12%) • Property damage (n = 14%) • Physical conflict (n = 25%) • Verbal conflict (n = 25%) • Felt safer (n = 31%) Consumers reported the impact of verbal and physical aggression had reduced because of Safewards	Moderate ⊕⊕⊕◯ Moderate

Note. † Updated from **Baumgardt et al. (2020)**, ‡ Updated from **Bowers et al. (2016)**, § **McMaster University (2020)**