Outcomes of the Victorian Safewards trial in 13 wards: Impact on seclusion rates and fidelity measurement

Justine Fletcher,1 Mathew Spittal,1 Lisa Brophy,1,2 Holly Tibble,1 Stuart Kinner,1,3,4,5 Steve Elsom6 and Bridget Hamilton6

1Melbourne School of Population and Global Health, The University of Melbourne, 2Mind Australia, 3Murch Children’s Research Institute, 4School of Public Health and Preventive Medicine, Monash University, Melbourne, Victoria, 5Griffith Criminology Institute and Menzies Health Institute Queensland, Griffith University, Brisbane, Queensland, and 6School of Health Sciences, The University of Melbourne, Melbourne, Victoria, Australia

ABSTRACT: Restrictive practices are used in response to conflict and aggression in psychiatric inpatient settings. Reducing such practices is the focus internationally of policy and legislative change, many initiatives, and a growing body of research. Safewards is a model and a set of 10 interventions designed to reduce conflict and containment in inpatient services. In the current study, we aimed to assess the impact of implementing Safewards on seclusion in Victorian inpatient mental health services in Australia. The study used a before-and-after design, with a comparison group matched for service type. Thirteen wards opted into a 12-week trial to implement Safewards and 1-year follow up. The comparison group was all other wards (n = 31) with seclusion facilities in the jurisdiction, matched to service type. Mandatorily-reported seclusion event data for all 44 wards over a 15-month period were analysed using negative binomial regression. Adherence to Safewards was measured via fidelity checklists at four time points: twice during the trial, post-trial, and at 1-year follow up. Seclusion rates were reduced by 36% in Safewards trial wards by the 12-month follow-up period (incidence rate ratios (IRR) = 0.64,) but in the comparison wards seclusion rates did not differ from baseline to post-trial (IRR = 1.17) or to follow-up period (IRR = 1.35). Fidelity analysis revealed a trajectory of increased use of Safewards interventions after the trial phase to follow up. The findings suggest that Safewards is appropriate for practice change in Victorian inpatient mental health services more broadly than adult acute wards, and is effective in reducing the use of seclusion.

KEY WORDS: aggression, mental health service, mental illness, psychiatry, Safewards, seclusion.

INTRODUCTION

Internationally, there is recognition that inpatient mental health services are under increasing pressure to treat people with the most acute symptoms of mental illness (Allison & Bastiampillai 2015; Foster et al. 2007; Green & Griffiths 2014). In light of this, high levels of distress, agitation, and aggressive behaviour, and the use of restrictive interventions to manage aggression, have
become the focus of research and legislative changes internationally (Bowers 2014; Brophy et al. 2016b; LeBel et al. 2014; McSherry 2008). In the context of being involuntarily treated in an inpatient ward and experiencing an acute phase of severe mental illness, it is common for consumers to feel distressed and show agitated behaviour, sometimes including verbal or physical aggression, self-harm, or attempts to abscond (Bowers et al. 1999; Dumais et al. 2011). Collectively, these situations have been termed ‘conflict events’ (Bowers 2014). Restrictive interventions are coercive measures that include seclusion and restraint. Seclusion has been defined as ‘the deliberate confinement of a person in a room or area that he or she cannot freely exit’ (Kinner et al. 2016, p.2). The high degree of conflict and restrictive interventions occurring in inpatient mental health wards has been identified as a significant problem over the past two decades, both in Australia (Australian Human Rights Commission, 1993, Oster et al. 2016) and around the world (Boumans et al. 2015; LeBel et al. 2014). Policy changes, practice initiatives, and a growing body of research have been directed at improving nursing interventions in response to conflicts and reducing reliance on restrictive interventions (Boumans et al. 2014; van de Sande et al. 2013; Wharewera-Mika et al. 2016).

Background

The Australian Institute of Health and Welfare (Australian Institute of Health and Welfare, 2014b) estimates that 2–3% of the Australian population is affected by serious problems of mental health, most commonly severe depression, anxiety, or psychosis. Morgan et al. (2012) estimated that 64 000 people accessed public mental health services annually for severe mental illness. In 2015–2016 in the Australian state of Victoria, 67 555 people were registered as consumers of government mental health services (Victorian Department of Health and Human Services, 2016). According to the 2016 Victorian Government Mental Health Annual report, in 2015–2016 there were 18 684 admissions of adults in a public mental health services, and 58% of hospitalsizations were compulsory admissions (i.e. people were admitted without their consent for compulsory treatment) (Victorian Department of Health and Human Services, 2016). Lengths of stay were reported to be brief, averaging 9.6 days for adults (Victorian Department of Health and Human Services, 2016). This indicates that people are treated in hospital only for the most acute phase of care.

Restrictive interventions have long been used by staff in inpatient wards to manage conflict events (Happell & Harrow 2010), and seclusion has been relied upon in particular in Australian services (Oster et al. 2016). Across all jurisdictions currently in Australia, legislation allows for the use of restrictive interventions, including seclusion, to manage potentially-dangerous situations involving patients whose legal status is involuntary. Reduction in the use of restrictive interventions is a national priority in Australia, requiring that practice is consistent with the underlying principles in mental health legislation, including recovery-oriented practice, and Australia’s obligations under the United Nations Convention of the Rights and Persons with Disability.

Harms associated with seclusion have been widely reported. The use of seclusion is not supported by research to be therapeutic (Sailas & Fenton 2000), rather it has been linked to negative consequences for mental health-care consumers and staff (Victorian Government Department of Health, 2013). Consumers report feeling distressed, angry, or anxious, consider that their human rights have been infringed, or might be retraumatized if they have a history of abuse (Bower et al. 2003; Brophy et al. 2016b). Feelings of distress have also been reported by patients who witness seclusion without being secluded themselves (Bower et al. 2003). In addition, staff might experience distress and feel conflicted between maintaining control and upholding their professional values to provide care and support. Furthermore, the use of restrictive interventions has been found to result in substantial cost to staff time (Bower et al. 2003; Victorian Government Department of Health, 2013). Awareness of these negative effects of restrictive practices has led to a strong desire from all key parties, including mental health professionals, people who have experienced seclusion, their family members and supporters, and human rights bodies, to reduce to an absolute minimum restrictive practices in mental health settings (Brophy et al. 2016a; Keski-Valkama et al. 2007; Kinner et al. 2016; McSherry 2008).

LeBel et al. (2014) highlight that, while efforts are being made internationally to reduce restrictive practices, there has been limited useful reporting of these efforts. Since 2006, there has been a national focus on reducing coercive practices in Australia (Commonwealth of Australia, 2009) and rates of seclusion have since been reported systematically by state and territory. Across Australia, rates of seclusion have reduced, on average, 11% per year for the past 5 years. However, at the national level, child and adolescent services have a higher rate of seclusion than adult and aged

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acute services (Australian Institute of Health and Welfare, 2014b). The most recent reporting period reveals that, by state, the rate of seclusion ranged from 0.9 per 1000 bed days to 19.7 per 1000 bed days. In Victoria, the rate of seclusion in inpatient units per 1000 occupied bed days was reduced from 9.8 in 2013–2014 to 9.1 in 2015–2016 (Victorian Department of Health and Human Services, 2016). These rates are consistent with recent reports from other Australian states (Oster et al. 2016). Therefore, there appears to be some evidence of a reduction in the rate of seclusion in Australia as a result of legislation and policy change. However, limited attention has been given to researching methods of practice change or interventions that would further support this reduction and potentially eliminate the use of restrictive practices altogether (Brophy et al. 2016a).

Effort has been undertaken to identify the conflict events, including physical and verbal aggression, absconding, and self-harm, that might contribute to the use of restrictive practices (Bowers & Crowder 2012; Bowers et al. 2011; Stewart et al. 2012). Even so, a key limitation of research in this area has been the focus on one particular issue in isolation; for example, absconding or self-harm. A review of seclusion reduction interventions highlighted the need for multifactorial interventions to achieve effective change in restrictive practices (Gaskin et al. 2007). Bowers et al. contributed literature reviews (Alexander & Bowers 2004; Bowers & Jeffery 2008; Bowers et al. 2008a, 2011; Dack et al. 2013; van der Merwe et al. 2009) and empirical research (Bowers & Crowder 2012; Bowers et al. 2013a,b) assessing a range of conflict events or containment events (e.g. seclusion, restraint, special observation, or time out). These investigators addressed significant conflict and containment issues facing inpatient mental health by developing a theoretical model alongside a set of evidence-based strategies in an attempt to reduce conflict events, and thereby reduce the need for containment (Bowers & Crowder 2012; Bowers et al. 2008b, 2013b). Findings from literature reviews and empirical research were synthesized, and Bowers et al. (2014) developed Safewards. Safewards as a model and a set of interventions has subsequently been adopted in several contexts internationally to support the aim of reducing restrictive practices on inpatient units.

Safewards model and UK trial

Safewards is a theoretical model and set of 10 interventions developed and trialled in the UK. The Safewards model provides a conceptual framework regarding conflict and containment events on acute mental health wards, and proposes 10 interventions designed to reduce conflict and containment events (Bowers 2014).

The simple form of the Safewards model is presented in Figure 1 (Bowers 2014). The model shows that there is a linear relationship between originating domains, flashpoints, and conflict events, whereby the originating domains (e.g. a physical aspect of the ward) might give rise to flashpoints (a situation signalling and preceding, for example, physical aggression), which can then set in motion an incident of conflict, possibly resulting in containment. The relationship between conflict and containment is reciprocal, given that research shows the use of containment can also lead to further conflict. The model also indicates that the influence of staff modifiers, such as staff interactions with patients, could be present at every level. Patient modifiers, such as patient response to another patient, can influence processes either before or after a flashpoint, and patient modifiers are also influenced by the staff modifiers. The 10 interventions that comprise the Safewards intervention are outlined in Table 1.

The Safewards model and these 10 interventions were tested in a single, blind, randomized, controlled trial (RCT) with a sample of 31 wards in the UK. Results of the RCT suggested that the implementation...
of the Safewards model and 10 interventions resulted in a significant decrease in conflict and containment events (15% and 24%, respectively) (Bowers et al. 2015). However, in light of the limitations of the UK Safewards RCT, as described by Bowers et al. (2015), such as lack of long-term follow up, and further limitations proposed by Mustafa (2015) regarding the blinding of the investigators and levels of compliance to the intervention, additional research is needed to assess the efficacy of the Safewards model and the 10 interventions.

Safewards: Victorian trial

In July 2014, a new Mental Health Act was enacted for the Australian State of Victoria, a key goal of which is for mental health services to reduce, and where possible, eliminate, the use of restrictive interventions. In support of this goal, each health service was asked to submit a proposal to the government outlining initiatives they would use to reduce the use of restrictive interventions. As a result, seven health services nominated the implementation of Safewards as their initiative, including four different ward types: adult acute, adolescent acute, aged acute, and secure extended care units. The government initiated the Victorian Safewards trial to support these mental health services to achieve this goal. Therefore, wards were funded on an opt-in basis to implement Safewards over a 12-week trial period, with follow up for 1 year. Implementation in Victoria provides an opportunity to extend the use of Safewards beyond acute adult wards, to explore the applicability of Safewards in the Australian mental health system, and to address a number of methodological concerns raised in relation to the UK RCT.

Reporting of seclusion is mandatory for staff of inpatient wards in Victoria. The use of seclusion is unambiguous in its reporting (occurrence or non-occurrence), thus seclusion is one ideal outcome measure to use in the assessment of the effectiveness of the Safewards intervention. Measurement of the level of fidelity to the Safewards model and interventions over a 12-month period also allowed the researchers to better assess the dose effects of intervention than was evident in the UK trial. Therefore, the aims of the present study were to compare seclusion rates between Safewards trial wards and other Victorian mental health wards (comparison wards), and to investigate the impact Safewards has on the use of seclusion in trial wards. Specifically, the primary research questions were: (i) Is the rate of seclusion in trial sites different from the rate of seclusion in comparison wards, pretrial to post-trial and follow up?; and (ii) Is there a dose–response relationship between intervention fidelity and rates of seclusion in trial sites?

### METHODS

#### Study design

The present study was a before-and-after study with a comparison group, identified as belonging to the same

<table>
<thead>
<tr>
<th>Safewards intervention</th>
<th>Description</th>
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<tbody>
<tr>
<td>Clear mutual expectations</td>
<td>Involves negotiation process between nurses and consumers; resulting expectations are displayed in a poster</td>
</tr>
<tr>
<td>Soft words</td>
<td>Encourages deliberate use of consumer-centred language by nurses; encouraged via a set of signs/framed statements, one displayed prominently in staff space and changed frequently</td>
</tr>
<tr>
<td>Talk down</td>
<td>Is a structured, de-escalation approach, supported by champion role modelling and individually mentoring staff; key elements are displayed in a poster</td>
</tr>
<tr>
<td>Positive words</td>
<td>Structures every nursing handover to include positive comments about each consumer</td>
</tr>
<tr>
<td>Bad news mitigation</td>
<td>Involves staff sharing at handover any knowledge about consumer experience of bad news or potential events (e.g. denied leave), making priority of listening to consumer concerns when this happens</td>
</tr>
<tr>
<td>Know each other</td>
<td>Requires everyday introductory information about each staff member and each consumer to be displayed in a folder, poster, or similar for all people in the ward to read</td>
</tr>
<tr>
<td>Mutual help meeting</td>
<td>Is a daily or frequent facilitated ward meeting structured to encourage the sharing of thanks, support, and requests between consumers</td>
</tr>
<tr>
<td>Calm down methods</td>
<td>Provides a set of resources for sensory self-soothing (e.g. herbal tea, blankets, soft toy, iPods with music, stress balls) freely available for consumers in the ward</td>
</tr>
<tr>
<td>Reassurance</td>
<td>Requires the deliberate rounding by nurses to explain and provide support to every consumer who might have been impacted specifically after a conflict event in the ward</td>
</tr>
<tr>
<td>Discharge messages</td>
<td>Involves collecting and displaying in the ward encouraging messages from consumers as they leave the ward to other consumers</td>
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service type, that is, adult and adolescent. The study was conducted between March 2015 and April 2016, with Victorian inpatient mental health services.

**Ethics approval**

Ethics approval was obtained from the University of Melbourne Human Ethics Sub-Committee (Melbourne, Vic., Australia; ID: 1443604), as well as Victorian Human Research Ethics Multi-Site (Melbourne, Vic., Australia; ID: 15225L) approval for each of the seven involved health services.

**Study setting**

The wards implementing Safewards were provided three train-the-trainer sessions to representative nurse educators by the Victorian Department of Health and Human Services, who then rolled out local training, reaching an estimated 75% of nurses employed on the wards. In terms of compliance, the goal rate of fidelity to the intervention was set prior to the start of the trial to be at least 70% by the end of the trial. Setting this minimum target was seen as prudent from the perspective of the Victorian Department of Health and Human Services.

**Data collection**

Overall, 44 inpatient mental health wards were included in the present Safewards paper, representing two service types. Thirteen wards implemented Safewards, and 31 served as comparison wards. Comparison wards were identified and grouped according to service type. In both the trial and comparison groups, there was a mix of regional and urban wards, and large and small organizations. In large organizations, some wards are connected. The number of wards for each service type is indicated in Table 2. While the Safewards trial included aged care and secure extended care units (SECU), they were excluded from the present study to reduce heterogeneity, and because rates of seclusion (the primary outcome in this paper) in these wards were zero or near zero, such that we had a floor effect that would preclude observation of a reduction over time.

**Measures**

Two sources of data were used in the present study. The first is the state-wide mental health data from the Client Management Interface (CMI), and the second is the Fidelity Checklist.

The CMI data represent all records of mental health service contacts that are reported to the Victorian Government. The evaluators were provided with de-identified per admission data regarding all mental health inpatient consumers in Victoria. Linked data were provided about seclusion events, and also the numbers of available beds. These data enabled generation of per-ward seclusion rates, standardized to allow for variations in ward size and occupancy. CMI data were obtained for a 15-month period, beginning 3 months prior to the Safewards trial and ending 12 months after the start of the trial.

The Fidelity Checklist is a brief, standardized audit tool used by the UK Safewards trial team and available as freeware on the UK Safewards website (Bowers et al. 2015). This tool was modified and used to collect data about the consistency with which each of the 10 interventions was implemented in each ward. The checklist enabled scoring of overall fidelity with intervention implementation per site at four time points throughout the study. A member of the research team attended each ward for between 30 and 60 min per visit: during the trial in March 2015 (time 1) and May 2015 (time 2), immediately postimplementation in June 2015 (time 3), and again in March 2016 (time 4).

**Data analysis**

CMI data were grouped into three time points: pretrial (1 December 2014–28 February 2015), post-trial (1 June–31 August 2015), and follow up (1 December 2015–29 February 2016).

Descriptive analyses assessed the ward characteristics and rates of seclusion for all trial and comparison wards for the 15-month trial and post-trial period. For all analyses, the number of operational beds available for each ward per month was used to calculate the number of seclusion events per 1000 occupied bed days per ward per month. The rate of seclusion per 1000 occupied bed days was suitable in the present study, as it aligned with the method suggested by Bowers (2000), and aligns with standard Victorian Government reporting (Australian Institute of Health and Welfare, 2014a).

Research question 1 related to seclusion rates. Analysis of seclusion rates in trial and comparison wards

<table>
<thead>
<tr>
<th>Service type</th>
<th>Trial wards (n = 13)</th>
<th>Comparison wards (n = 31)</th>
</tr>
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<tbody>
<tr>
<td>Adult</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td>Adolescent</td>
<td>3</td>
<td>8</td>
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from pretrial to post-trial and follow up was conducted using negative binomial regression. The outcome variable was the number of seclusion episodes in each ward for each time point, and the number of available beds was used as an offset term. The key predictors were trial phase (pretrial, post-trial, and follow up) and terms for ward occupancy rates and service type. Our modelling strategy was to fit an interaction term between trial phase and exposure to Safewards (trial or comparison ward). On the basis that we observed a significant interaction between the two results ($P = 0.04$), we then refit the model stratified by the trial site. We did this because stratified models are easier to interpret than models with interaction terms.

Research question 2, regarding the dose–response relationship between intervention fidelity and rates of seclusion in trial sites, was answered with an analysis of CMI data and fidelity scores.

The Fidelity Checklist data were scored and analysed in a manner consistent with that used in the UK Safewards trial (Bowers et al. 2015). That is, each intervention was recorded as either being present or not, and for some interventions, the evaluators were required to count the number of occurrences; for example, evaluators counted discharge messages up to 10. Each intervention then received a score out of a maximum 10. For example, for the ‘soft words’ intervention, the presence of a poster would result in a 10/10, and poster absence would result in zero out of 10, whereas for the ‘discharge messages’ intervention, the score was a composite of the presence of a display and then number of messages displayed, so the score ranged from zero to 10. The result is an overall fidelity score out of 100. Changes in fidelity over the four time points were graphed in conjunction with 3-monthly seclusion rates to examine the relationship between fidelity and seclusion rates for the Safewards trial wards.

A composite two-way area graph of seclusion rates was combined with a scatterplot of fidelity scores over time for adult and adolescent wards to depict the relationship between fidelity scores over the life of the trial in relation to seclusion rates. Coefficients were transformed into incidence rate ratios (IRR) to assist interpretation. All analyses were undertaken using Stata v14.0 (StataCorp, College station, TX, USA).

RESULTS

Seclusion rates in trial and comparison wards

Seclusion rate per 1000 occupied bed days were comparable for trial and comparison wards in the pre- and post-periods (Table 3). However in the follow-up period in the Safewards group, seclusion rates decreased, whereas in the comparison group, seclusion rates increased. Occupancy rates are a measure of how many people are on the ward as a percentage of the ward capacity, and occupancy rates tended to be slightly higher in trial wards than comparison wards throughout the 15-month period.

As indicated in Table 4, in comparison to the seclusion rate in the pretrial period, there was no evidence of a change in the seclusion rate in the post-trial period (IRR = 1.03) in the trial wards, but there was a 36% reduction from baseline to the follow-up period (IRR = 0.64). These results were independent of the overall occupancy rate and the service type.

A different pattern emerged for the comparison wards. There was no evidence that the seclusion rates in the post-trial period (IRR = 1.17) or the follow-up period (IRR = 1.35) were different from the pretrial period.

Fidelity and seclusion for trial wards

The trajectory of improvement of each service type over the course of the trial period is highlighted in Table 4. Each 10-point range indicates that one intervention is being implemented; for example, a score of 45 indicates that at least four interventions are being implemented. Adult services showed consistent improvement over the four time points. At the initial fidelity visit, on average, these services were delivering four interventions (Table 5). By the last fidelity visit, nine interventions on average were being delivered. In contrast, the adolescent/youth services began the trial with high fidelity; seven interventions at time 1. For the remaining fidelity visits, the scores varied between seven and nine, consolidating with nine interventions 12 months after the trial began.

| TABLE 3: Seclusion and occupancy rates, trial and comparison wards |
|--------------------|----------------------|----------------------|----------------------|----------------------|
|                    | Trial wards          |                    | Comparison wards     |                    |
|                    | Pretrial | Post-trial | Follow up | Pretrial | Post-trial | Follow up  |
| Seclusion rate†    | 14.1    | 15.8      | 10.1        | 14.1    | 15.9      | 21.9        |
| Occupancy rate     | 94.2    | 92.7      | 89.0        | 91.2    | 85.2      | 86.2        |

†Seclusion rates are reported as a rate/1000 occupied bed days.
For adult and adolescent wards that implemented Safewards, the average seclusion rate for all wards trended down over the 15-month period, with a high degree of variation between the seclusion rates of some wards (Fig. 2). Fidelity scores showed a strong trajectory of improvement in the number of Safewards interventions that were being implemented, which continued to improve after the end of the trial period at the end of May 2015. This graph shows that seclusion was not significantly reduced immediately post-trial implementation, where fidelity was only moderate, but in the follow-up period, where seclusion was reduced significantly. The graph highlights that fidelity to intervention was excellent; on average, wards were implementing nine of the 10 interventions.

DISCUSSION

The findings from the present study provide evidence that implementing the Safewards intervention in Victorian adult and adolescent inpatient mental health services can reduce the use of seclusion. The results of the negative binomial regression indicate a 36% (P = 0.04) reduction in the rate of seclusion in Safewards trial wards from the pretrial period to follow up. This finding is in contrast to the increased rate of seclusion indicated in the comparison wards over the same timeframe.

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The findings from the independent fidelity checklists show that the goal set at the start of the trial to reach 70% fidelity was achieved by the end of the trial (time 2). Fidelity with the intervention steadily improved throughout the 12-week trial, and the trajectory of improvement continued throughout the 12-month follow-up period. At the completion of the follow-up period, on average, wards were implementing nine out of 10 Safewards interventions, thus indicating a high ‘dose’ of the intervention. The last 3 months of the follow-up period coincided with the significant improvement in the rates of seclusion. In contrast to the Victorian fidelity scores, the UK trial was 16 weeks in total (8 weeks of implementation and 8 weeks’ outcome period), and achieved on average 50% fidelity by the end of 16 weeks (Bowers et al. 2015).

The findings of the current study are positive. Safewards implementation success seems linked to high fidelity; as wards opted in, it might have been that staff on participating wards were highly motivated to change. Additionally, reasons for success could be attributed to two key activities that were unique to the Victorian trial: first, there was a concerted and systematic effort to train staff prior to the commencement of the 12 week trial; second, the fidelity monitoring of the Victorian trial was extended beyond the trial period for 12 months. Victorian staff were involved in interactive training utilizing the UK Safewards training materials and other materials developed locally for the trial. It is
likely that the concerted effort to train all staff had a positive impact on the level of fidelity achieved in the 12-week trial period and beyond. In contrast, staff training in the UK trial was self-directed, whereby staff were provided with Safewards training material and access to videos (Bowers et al. 2015).

The advantage of the extended follow up of the Victorian study was that there was evidence that, after the trial period was complete and the direct funding and extra support stopped, all wards continued to implement Safewards. The fidelity scores highlighted that it took 12 months for implementation efforts to be consolidated, and ward staff were able to sustain implementation on average for nine out of 10 interventions. Furthermore, the Victorian trial highlighted that fidelity with the intervention can be achieved across a broader range of inpatient mental health services, such as acute adolescent wards.

There are gaps evident in the present study. First, seclusion is a rare event, and previous research shows that there are more proximal practices of containment, such as special observation, intramuscular medication, and time out (Bowers et al. 2015). The use of the Patient Staff Conflict Checklist (PCC), developed by Bowers et al. (2013b, 2015) in the UK RCT, enabled the impact of Safewards to be evaluated across a number of meaningful indicators of conflict and containment. Unfortunately, the use of the PCC was not feasible in the present study, as it was considered too demanding on staff time to complete, and the researchers noted the low completion rate in the UK trial (Bowers et al. 2015). It is a limitation of the present study that we were unable to report on an objectively-measured outcome for aged and SECU services. Given the almost zero rate of seclusion for these services, this was not a sensitive indicator of change, despite the high fidelity with the intervention achieved in these services. Therefore, future research should focus on the development of a more proximal measure of conflict and containment to provide objective feedback on the outcomes of using the Safewards model and interventions. In the case of services for aged persons, attention must be paid to restraint use, as this has been identified as a more common strategy (Gerace et al. 2013).

Second, while this study involved wards in seven health services across urban and regional Victoria, it still only covered one Australian state, so our ability to generalize about the compatibility of Safewards to the Australian context is limited. However, the present study does provide evidence that the Safewards model and its 10 interventions have applicability outside the UK setting.

The present study found a 36% reduction in containment events in the Victorian context, which is comparable to a 24% reduction in containment events reported for the UK trial. Mustafa (2015) argued that fidelity to the intervention was low in the UK RCT, up to 50% immediately after the outcome period (16 weeks), which then calls into question what exactly was impacting upon conflict and containment. However, as discussed, fidelity to the intervention was an important factor in the present study, and it appears that the longer-term follow up of measuring fidelity to the intervention alleviates some of the limitations raised by Mustafa regarding the UK trial. Also, for the Victorian trial, it was made explicit by the funding body, the Victorian Department of Health and Human Services, that all wards were expected to implement all 10 interventions, and training resources were
committed to enable this. Thus, the degree of implementation in Australia was significant, and gives weight to the findings that it is in fact Safewards implementation that is having an impact upon rates of seclusion. Practically, it was evident that there were significant challenges for staff to implement all 10 interventions as rapidly as in the UK trial. The increase in fidelity scores over the project period offers weight to the suggestion that slower implementation might be more successful. Further, organizational changes in leadership, other policy demands on the units, and staff churn might make it difficult to implement practice changes.

The present study has key strengths, such as an extended follow-up period and an objective measure of containment events. A number of limitations are also evident. First, lack of measurement of changes to conflict and to containment events, apart from seclusion, that are targets of the Safewards model and interventions is a significant limitation that prevented an analysis of the impact of Safewards in aged and SECU services. Second, a lack of fidelity measurement at more regular intervals is problematic; more regular fidelity measurements might have added some detail about implementation after the initial period of the trial and after the end of the associated funding. Third, the study is confined to one jurisdiction in Australia, and so it is possible that the successes here might not translate in other jurisdictions. Fourth, while this study involved a comparison group, there was no randomization involved.

CONCLUSION

The present study adds much needed evidence to the literature about a practice change initiative that supports legislative and policy directions to reduce, and if possible, eliminate the use of seclusion and restraint in inpatient mental health services. Safewards is a complex intervention developed in the UK that has been successfully implemented in Victoria, Australia. This evaluation of the Victorian trial provides new evidence that Safewards is applicable, and can be implemented on wards other than adult acute inpatient wards. Future research should focus on a method of measuring conflict and containment events on inpatient wards that is fast, accurate, and simple for staff to use, so that future implementation of Safewards can be studied in greater depth than the present study.

The present study is relevant for clinical practice, as it adds detail to the implementation of Safewards: specifically, implementation of Safewards to a point of sustainability takes 6–12 months, when a concerted training effort precedes the implementation. Safewards is applicable in adolescent acute wards, which is an extension of the use of Safewards beyond the UK trial. Finally, it is effective in reducing rates of seclusion significantly when implemented sustainably over a 6–12-month period.

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