

Table 4 – Studies on Containment

Study	Setting: Country	Design	Total sample size (N)	Sample characteristics	Variables measured; outcomes measures; outcome tool	Primary finding (s)	Quality assessment score (%) and categorisation
Bowers et al. (2015)	Acute psychiatric wards within 15 hospitals (chosen at random) in the South East of England.	Cluster randomised control trial. Safewards compared to control group (staff physical health program).	N= 31 (wards)	Modal age group of staff was 40-49 years (33.7%), 59.4% of whom were female and 28.4% white British.	Total rates of conflict and containment, measured by the PSCC. APDQ; SHAS; WAS: SF	Relative to control, Safewards reduced containment events by 26.4% (95% CI 9.9-34.3%), $p < .01$ No significant different in the rates of zero event shifts for containment.	83% High
Dickens et al. (2020)	Eight adult mental health inpatient units from one large metropolitan local health district in Sydney, Australia.	Repeated measures within-subject design: pre and post. No control group.	N = 8 (wards)	Not provided	PCC-SR; VPC-14. Recording of ward characteristics including number of beds and ward function (acute versus non-acute service).	The mean (SD) reported containment incidents per shift fell from 6.81 (5.78) to 5.82 (4.62). Controlling for other variables, this represented a reduction of 12.0%. Violence prevention climate ratings did not change. Containment rates largely mirrored the acute/non-acute ward function, where rates were higher on acute wards overall.	81% High
Lickiewicz et al. (2020)	Psychiatric hospital, male adult inpatient wards in Poland.	Quasi-experimental, non-equivalent control group (TAU) design.	N= 450 (total male patients in both control and experimental periods)	Primary presenting difficulties were alcohol and drug issue (37-47% of sample); Schizophrenia (16-29%) and mood disorders (4-16%).	Incident data was compared with the corresponding eight-month time frame from the previous year. A document called the “Coercive Measure Card” was used to identify when restraint had been used.	Statistically significant reduction in number of mechanical restraint events during day shifts (21% $p < .01$), night shifts (27% $p < .01$) post-intervention. A significant different was also seen in the mean number of restraint events for both shift patterns post Safewards implementation (24% $p < .01$). Significant difference in number of patients restrained post-intervention (34% $p < .01$).	81% High

						Overall reduction of 31% in restraint episodes	
Fletcher et al. (2017)	Adult and adolescent mental health wards in Victoria, Australia.	Repeated measures between subjects: baseline, at intervention, post-trial and follow up. Compared to matched control group (TAU).	N = 44 (wards)	Both trial and control wards included a mix of both regional and urban wards within small and large organisations. No further detail provided.	Client Management Interface (CMI) provided data of seclusion events and number of beds. CMI data covered a 15-month period (three-month pre intervention - 12 months post trial) and was grouped into three time points for analysis. Rate of seclusion was calculated per 1000 occupied bed days, per ward, per month.	Seclusion rates did not differ at post-trial measurement, but then reduced by 36% at 12 month follow up compared to baseline, $p < .05$ No difference in seclusion rate was observed in control wards.	76% High
Baumgardt et al. (2019)	Two secure (locked) psychiatric wards in Berlin, Germany.	Repeated measures within and between group design using pre and post outcomes. No control group.	N = 103 (service-users)	Adults (age 17-91) with a range of mental health disorder diagnoses. Majority of wards were mixed-gender (n = 16). Ten wards were male only and five female only.	Coercive interventions measured 10 weeks pre and 10 weeks post Safewards implementation using frequency and duration.	Exposure to coercive interventions declined in both wards. On one ward this decrease was statistically significant ($p < .01$). Duration of coercive measures also reduced significantly on one ward $p < .05$ with effect size of Cohen's $d = .282$ (85% CI: -0.787 – 0.222)	62% Moderate
Stensgaard et al. (2018)	Adult psychiatric inpatient units in Southern Denmark.	Quasi-experimental design using interrupted time-series analysis on longitudinal data.	N= 26 (wards)	Sample characteristics were described within total N (commenced coercive measures) per quarter.	Data was collected using the Register of Coercive Measure in Psychiatric Treatment. Data was obtained retrospectively for a five-year period and exclusions made to filter the dataset.	The rate of coercive interventions fell significantly by 2% per quarter after the implementation of Safewards, when accounting for a pre-existing underlying decreasing trend. This suggested Safewards implementation resulted in continuing decreases in the frequency of coercive measures, but at a quicker rate.	62% Moderate

		Retrospective comparison to TAU.		<p>53.3% male patients. Average age of 41 years.</p> <p>Pre-intervention N/year: 53.2% male, median age 43 years.</p> <p>Post-intervention N/year: 53.5% male, median age 40 years.</p>	Frequency of coercive measures was used as the primary outcome.	<p>The rate of forced sedation also fell significantly by 11% per quarter after accounting for projected trend of a 3% increase.</p> <p>No significant effects were found for rates of mechanical restraint.</p>	
Davies et al. (2020)	Acute assessment and treatment unit for people with intellectual disabilities in South Wales, UK.	Mixed methods design: repeated measures (pre and post) and qualitative feedback. No control group.	N = 15 (service-users)	Not provided	PCC-SR.	<p>Significant reductions overall post-intervention for containment ($z = -5.618$, $p < 0.01$).</p> <p>Nine out of 31 sub-questions on the PCC-SR showed significant reductions between time one and time two.</p> <p>Qualitative feedback did not relate to the effectiveness of the model on conflict, containment or ward climate.</p>	54% Moderate
Maguire et al. (2018)	Male forensic medium-long term mental health ward in Victoria, Australia.	Mixed methods; repeated measures within subjects (pre and post). Retrospective comparison to TAU.	N = 28 (unique service users)	<p>Mean age of 44.3 years. 100% were male.</p> <p>Primary diagnoses were schizophrenia and</p>	Incident data was retrieved from the Victorian Health Incident Management system (VHIMS) and compared with incident data from the year prior.	<p>Rates of seclusion (per 1000 occupied bed days) remained the same. Physical and mechanical restraint rates increased.</p> <p>Qualitative data indicated that participants were of the view that Safewards improved containment rates.</p>	54% Moderate

				<p>schizoaffective disorder.</p> <p>Average length of stay was 8.3 years.</p> <p>Mean age of staff was 47.8 years.</p>	<p>Ward climate was assessed using the EssenCES.</p> <p>Content analysis used to evaluate free-text answers in the fidelity checklist to elicit patient and staff views of Safewards.</p>		
Price et al. (2016)	Six wards within a regional medium secure forensic unit in the UK.	Service evaluation using a non-randomised controlled design, repeated measures between and within subjects. Control group received TAU.	N = 61 (service-users)	<p>Intervention sample consisted of: One 16 bed male acute ward, one nine-bed female acute ward, and a four-bed female acute ward.</p> <p>Control wards comprised of: Two, ten-bed male acute wards and one 12-bed female acute ward.</p>	<p>PCC-SR was used to measure conflict and containment.</p> <p>Safewards Researcher Fidelity Checklist was used weekly to measure adherence to the interventions.</p> <p>Staff feedback was collected through individual and group meetings.</p>	<p>Between-ward analysis indicated no statistically significant benefit of Safewards compared to control wards. Containment reduced in intervention wards (non-significant). A significant relationship was found between ward and containment.</p> <p>Staff feedback was mixed- no formal analysis of feedback was conducted but the dominant view was that staff did not deem the Safewards interventions to be effective for conflict and containment rates on the male wards.</p>	38% Low

PCC-SR = Patient Staff Conflict Shift Report; PSCC = Patient Staff Conflict Checklist (Bowers et al., 2005); APDQ = Attitudes to Personality Disorder Questionnaire (Bowers & Allan, 2006); SHAS= Self-harm Antipathy Scale (Patterson, Whittington, & Bogg, 2007); Ward Atmosphere Scale (Moos, 1996); SF-36v2 short form health survey (Ware Jr, 2000); EssenCES = Essen Climate Evaluation Schema Questionnaire (Schalast, Redies, Collins, Stacey, & Howells, 2008); VPC-14 = Violence Prevention Climate-14 (Hallett et al., 2018).