

Seclusion and Psychiatric Intensive Care Evaluation Study (SPICES): combined qualitative and quantitative approaches to the uses and outcomes of coercive practices in mental health services

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Scientific summary

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Scientific summary

Background

A primary purpose of psychiatric inpatient care is to keep acutely ill patients and those around them safe from harm. Within hospital, a number of different methods are used either to directly prevent a patient from engaging in behaviour that is likely to result in injury or to curtail such behaviour should it occur. Seclusion and transfer to psychiatric intensive care are two common methods. By seclusion we mean the isolation of a patient in a locked room. Previous research suggests that up to half of patients may be secluded, mostly, but not only, to contain aggressive behaviour. Secluded patients may be younger and less likely to suffer from depression, and the experience of seclusion can make patients feel angry, lonely, sad, hopeless, punished and vulnerable. By psychiatric intensive care unit (PICU) we mean a specialist ward with more robust security and higher nurse staffing levels. Previous research in the UK suggests that typical PICU patients in the UK are male, younger, single, unemployed, suffering from schizophrenia or mania, from a black Caribbean or African background and legally detained, and have a forensic history. The most common reason for admission is aggression management and most patients stay for ≤ 1 week.

There is a widespread aspiration to reduce the use of coercive interventions; the persistence of this use may reflect a belief that such interventions are effective in reducing harms, but this belief is supported by little or no evidence. In addition, previous descriptions of the costs associated with the use of seclusion and a PICU have been rudimentary. A PICU in particular is an expensive option, not least because of the higher staff-to-patient ratios involved.

Some hospitals do not have seclusion rooms or easy access to an on-site PICU. Although it is known that this limits the use of those options, it is not known how these differences affect patient management and outcomes. This report describes two studies that address these issues.

Objectives

To assess the predictors, outcomes and consequent cost of seclusion and PICU care (study 1) and to describe differences in the management of disturbed patient behaviour related to differential availability (study 2).

Methods

Study 1

The Biomedical Research Centre Clinical Records Interactive Search tool was used to extract anonymised data from the electronic medical records of a large NHS trust providing secondary mental health care. PICU care within this trust was provided by five wards (four general adult and one forensic), all of which had access to a seclusion room. Two data sets were derived. The PICU data set comprised all 986 transfers of patients from general adult acute wards to a non-forensic PICU ward between April 2008 and April 2013, together with 994 patient-day combinations randomly selected from the set of patient-day combinations defined by all days within general adult admissions on which a transfer to a PICU did not occur. The seclusion data set comprised all 990 transfers into seclusion occurring on the four non-forensic PICU wards within the study period, together with 1032 patient-day combinations randomly selected from the set of patient-day combinations defined by all days within admissions to non-forensic PICUs during which a transfer into seclusion did not occur. Cases and controls in both data sets were not mutually exclusive at

the patient level; for example, one patient could contribute one or more PICU transfers as well as one or more PICU non-transfers.

We examined (1) predictors of the use of seclusion and a PICU, and of treatment duration in both; and (2) the effect of treatment on adverse incidents, length of stay, costs and the cost-effectiveness of these treatments. Predictors of treatment included a wide range of demographic and clinical factors [age, sex, ethnicity, diagnosis, time since admission and Mental Health Act status (Great Britain. *Mental Health Act*. London: The Stationery Office; 1983)] and behavioural precursors of treatment (potentially relevant behaviours occurring in the 3 days prior to PICU transfer/seclusion initiation or randomly sampled 'non-transfer' date, identified from electronic medical records using keywords). With regard to outcome measures, keywords were used to identify adverse incidents noted in the clinical records that were manually reviewed and summed to produce a count of the number of incidents of general aggression and general violence during a 7-day follow-up period, and the number of serious incidents within a 30-day period. We extracted the length of stay for the part of the inpatient episode remaining after PICU/seclusion transfer or the 'non-transfer' date, as well as service use and costs within 7, 30 and 365 days of that date. Logistic regression analyses were conducted (1) to investigate the extent to which demographic/clinical factors predicted treatment receipt after adjusting for behavioural precursors and (2) to derive propensity scores allowing us to judge the extent of common support and the possibility of estimating the causal effect of each intervention on outcomes (violent and aggressive incidents) and associated cost-effectiveness. We planned to use random-effects Poisson regression for the outcomes analysis and linear regression supported by bootstrapping for analyses of length of stay, cost and cost-effectiveness.

Study 2

We selected eight hospitals in London and the north-west of England: two each without seclusion rooms or an on-site PICU, two with both and two each in which only one of the two interventions was available. We approached nursing staff working on acute psychiatric wards caring for male patients and asked them to participate. A total of 206 nurses and health-care assistants completed a questionnaire on their attitudes to and use of a wide range of containment methods, including seclusion and a PICU, as well as a video-based assessment showing a patient whose behaviour was becoming increasingly aggressive and in which the respondent was required to state at which point they would initiate manual restraint. A total of 81 qualified nurses from the same wards were also interviewed, with the aim of eliciting any escalation pathway in use at their hospital. Standardised vignettes of disturbed patient behaviours were presented to the interviewees; these described how staff would respond to these behaviours, what interventions would be used and in what order. The interviews were thematically analysed and the data were converted into quantitative form. The impact of the availability of seclusion and a PICU was tested using chi-squared tests and logistic regression.

Results

Study 1

The use of a PICU was associated with younger age, male sex, bipolar disorder, being detained, the first 7 days of the admission (among males), as well as behaviour connected with absconding, abuse, aggression, agitation, attacking, absence without leave, being manic, throwing and violence. The use of seclusion was associated with younger age, the first 7 days of the admission and ward, as well as with behaviour connected with abuse, aggression, agitation, arousal, assault, hitting, restraint, shouting (among women), threatening, throwing and violence. Although there were differences in costs and outcomes in unadjusted analyses, an examination of the distribution of propensity scores showed that treated and control observations were poorly comparable and the common support condition was not met; therefore, we did not attempt to derive estimates of causal effects.

Study 2

Staff at hospitals without seclusion rooms used more rapid tranquillisation by intramuscular injection when faced with the most risky and severe behaviours by patients. They also made greater use of the observation of the patient in a separate room by themselves, accompanied by one or more staff members or with a staff member stationed at the door of the room, methods that might be summarised as 'nursing in a side room'. Despite not having a dedicated seclusion room, such hospitals still (albeit apparently rarely) secluded patients using an ordinary room and outside any hospital policy. Staff at hospitals without access to seclusion rated it as less acceptable and were slower to initiate manual restraint. Staff at hospitals with seclusion rated it as more acceptable and were quicker to initiate manual restraint. Hospitals without an on-site PICU made less use of a PICU, but used more seclusion (when it was available), de-escalation and 'within-eyesight' observation. The availability of seclusion or a PICU was not associated with attitudes to any other forms of containment.

Limitations

Study 1

The study was conducted in a single NHS trust, which potentially limits the extent to which the findings can be generalised to other psychiatric hospitals (particularly those outside the UK). Entries made in electronic patient record systems may be subject to unknown bias; moreover, potentially important variables may not be recorded systematically or at all, a problem that applies at the individual patient level as well as at the team and organisation level. Unmeasured confounding can potentially affect any analysis based on observational data; in the case of our outcome analyses, the greater problem was the poor overlap of covariate patterns between treated and control observations (lack of common support).

Study 2

The interviews were complex, difficult, constrained by the need for standardisation and collected in small numbers at each hospital. The interview vignettes were restricted to male patients only and, thus, may not be applicable to the management of disturbed female patients. The interviewee responses may have been influenced by the desire of staff to show their wards in a good light; thus, they may have preferentially described ideal rather than actual practice on their wards. Only eight hospitals participated, and local policies for the use of seclusion or a PICU may have varied in important ways, affecting the results obtained.

Conclusions

Services considering expanding access to seclusion or a PICU should do so with caution, as at present it is not possible to state that such services reduce aggression. Indeed, although we were unable to address this question satisfactorily within study 1, some sources of evidence suggest that coercion may serve to increase aggression. Therefore, it remains good practice to prioritise therapeutic, as opposed to coercive, interventions in the management of disturbed behaviour. Given the importance of the issues of coercion and violence in inpatient mental health services, there is a requirement for further research, probably studying more sites and using stronger, including randomised, designs to look at coercive interventions as well as potential therapeutic alternatives. In the meantime, those planning and managing services should concentrate their efforts on overall conflict and containment reduction strategies.

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