

Research letter

Use of physical and chemical restraints in medical teaching units

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We undertook a retrospective chart review of the use of physical and chemical restraints in patients on medical teaching units (MTUs) in an acute care hospital. The study was done to assess the incidence and type of restraint use, the indications for their use and the adequacy of documentation. Formal approval for the project from the University of Calgary Research Ethics Board was deemed unnecessary by the board since this was a quality-assurance study. We reviewed the charts of all patients admitted to the MTUs at the Foothills Medical Centre, Calgary, from Jan. 15 to Mar. 7, 1997. Patients were not interviewed. Although geriatric chairs and bedrails are considered restraints in the literature,¹ the hospital does not require orders for their use and therefore we did not include data regarding their use in our analysis.

A total of 156 patient charts were reviewed. There were 70 (44.9%) men and 86 (55.1%) women. The mean age was 59.0 (range 18–89) years, and the mean length of stay was 15.7 (range 1–238, standard deviation 24.5) days. A total of 18 patients (11.5%) were either physically (12 [7.7%]) or chemically (16 [10.3%]) restrained. Of the 12 patients who were physically restrained, 2 had all 3 types of restraints (posey jacket, wrist restraint, ankle restraint) applied in a 24-hour period. Of the 16 patients who were chemically restrained 13 were given haloperidol or lorazepam. Other medications used for restraint purposes were loxapine, clonazepam, diazepam, acetaminophen with codeine, and diphenhydramine. Nine patients had 1 medication, 6 patients had 2 medications, and 1 patient had 3 different medications prescribed. The duration of restraint use varied from 1 to 4 days for physical restraints and from 1 to 9 days for chemical restraints. Other significant results of the study are given in Table 1.

Two charts did not have physician orders written for physical restraints, and 4 contained blanket orders (e.g., “restrain patient PRN”). In 6 cases specific restraints (e.g., posey jacket or limb restraints) were ordered. Orders for chemical restraints usually had included the dose and frequency. No orders indicated time limits. Nurses’ notes contained indications for use of restraints, but they were sometimes vague or questionable (e.g., “to help set-

tle”). In general, the nurses were consistent in documenting that restraints were applied; however, most notes did not record any assessment of effectiveness or adverse effects. Only one chart had detailed notes regarding restraint use written by a physician. There was a general lack of documentation regarding restraint use, as has been documented previously in acute care hospitals.² Although most restraints were ordered by physicians, it became a nursing decision as to when they were used.

The incidence of physical restraint use in our study (7.7%) was comparable to that in other studies of restraint use on acute care wards (7.4% to 17%).^{3,4} The use of such restraints was not more common among older patients; this was surprising since confusion is the primary predictor of restraint use in acute care hospitals.⁵ It is unclear why the use of chemical restraints was more common than that of physical restraints. One may speculate that the latter were seen as less humane or more likely to cause harmful side-effects.

The majority of patients had both physical and chemical restraints applied. We suspect that physicians and nursing staff were simultaneously trying both types of restraints because they had little indication of which would work best. Combined use has not been previously studied. Research is needed to assess the effectiveness of each type of restraint alone, and in combination. We concur with the call for guidelines on the rational use of restraints.⁶

Table 1: Characteristics and outcomes of patients in medical teaching units in an acute care hospital, by restraint use

Characteristic/outcome	No. (and %) of patients*		p value
	Restraints not used n = 138	Restraints used n = 18	
Confusion or altered level of consciousness	19 (13.8)	12 (66.7)	< 0.001†
Falls	5 (3.6)	3 (16.7)	< 0.05†
Sacral ulcers	2 (1.4)	2 (11.1)	< 0.05†
Mean length of stay, d	14.7 d	25.8 d	< 0.001‡

*Unless otherwise stated.

† χ^2 test.

‡Student's *t*-test.

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