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Application of Physical Restraints in Adult Intensive Care Units: Results of a Local Survey

Physical Restraint Taskforce

Specialty Advisory Group (Critical Care)

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Introduction

Physical restraints are commonly utilized in intensive care unit (ICU) to prevent patients from self-harm and to facilitate therapeutic interventions. However, use of physical restraints may be associated adverse events. Therefore its use should be kept to the minimal duration and only when indicated.

Objectives

As a quality improvement initiative, Physical Restraint Taskforce was established under Specialty Advisory Group (Critical Care) in 2013 to evaluate nursing practice on physical restraint utilization and to provide recommendations on use of physical restraints in local ICUs.

Methodology

Monthly prevalence survey was conducted in fifteen ICUs between January 2015 and December 2015. Data were prospectively collected. Physical restraint rate, patient characteristics and factors affecting physical restraint application were determined. Statistical analysis was performed as appropriate.

Result

Among 1805 patients recruited in the survey period, 731 patients were physically restrained, accounting for a prevalence rate of 40.5%. Restrained patients were predominantly male (68.0%) and the mean age was 65.3 ± 15.5 years. Patients in restrained group were generally older ($p < 0.01$), predominantly male ($p < 0.01$) and had a lower GCS score ($p < 0.01$). More restrained patients were receiving invasive mechanical ventilation ($p < 0.01$), sedation and analgesic infusion ($p < 0.01$), being nursed in isolation room ($p = 0.01$) or had a past history of fall ($p < 0.01$) or self-extubation ($p < 0.01$). Chemical restraint practice ($p = 0.98$) and nurse-to-patient ratio ($p = 0.24$) were similar between restrained and non-restrained patient groups. No major restraint-associated injury was reported.

Based on results of the survey, a nursing practice guide on use of physical restraint in intensive care units was finalized in 2017. The guide included recommendations on 1) Risk Assessment, 2) Care process, and 3) System and Support. Further initiative to support nursing decision in restraint application in ICU is underway.