

The Effects of “Never Pressure Injury” on the Incidence of Pressure Injuries in Critically Ill Patients

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Abstract : NPI uses technology sensorization of things and processed by AI system. The main features are an individual interface pressure sensor system in contact with the mattress and a position management system where the sensor detects the determined pressure with automatic pressure reduction and distribution. The role of NPI is to monitor, identify the risk and manage the interface pressure automatically when the determined pressure is detected. This study aims to evaluate the effects of “Never Pressure Injury (NPI),” an innovative mattress, on the incidence of pressure injuries in critically ill patients. An observational case-control study was employed to compare the incidence of pressure injury between the case and the control group. The control group comprised 80 critically ill patients admitted to a critical care unit of Phyathai3 Hospital, receiving standard care with the use of memory foam according to intensive care unit guidelines. The case group comprised 80 critically ill patients receiving standard care and with the use of the Never Pressure Injury (NPI) innovation mattress. The patients who were over 20 years old and showed scores of less than 18 on the Risk Assessment Pressure Ulcer Scale - ICU and stayed in ICU for more than 24 hours were selected for the study. The patients’ skin was assessed for the occurrence of pressure injury once a day for five consecutive days or until the patients were discharged from ICU. The sample comprised 160 patients with ages ranging from 30-102 (mean = 70.1 years), and the Body Mass Index ranged from 13.69- 49.01 (mean = 24.63). The case and the control group were not different in their sex, age, Body Mass Index, Pressure Ulcer Risk Scores, and length of ICU stay. Twenty-two patients (27.5%) in the control group had pressure injuries, while no pressure injury was found in the case group.

Keywords : pressure injury, never pressure injury, innovation mattress, critically ill patients, prevent pressure injury

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