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Self-turning for pressure injury prevention

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ABSTRACT

The study objective was to determine if hospitalized patients who are designated as self-turn would reposition themselves appropriately in the acute care setting. This was a prospective case series in a general practice unit of an 800-bed urban tertiary care hospital. Patients were instructed on the importance of mobility for pressure ulcer prevention and subsequently monitored on a continuous bedside pressure mapping device. Primary outcomes included intervals of inactivity and pressure ulcer incidence. During the 3-month study interval, only 2 patients had a documented 4-h interval without measurable repositioning. None of the 101 consecutive patients enrolled in the study developed pressure ulcers. General practice unit patients that are given proper instruction and designated as self-turn can reliably be considered low-risk for hospital acquired pressure ulcers. Based on our prospective study, patients designated as self-turn do reposition themselves.

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1. Introduction

Prevention rather than treatment of hospital-acquired pressure ulcers (HAPUs) has become the priority of United States hospitals since Medicare no longer pays for stage III or IV HAPUs [1,2]. Pressure ulcers are one of the most costly hospital-acquired conditions, resulting in \$11 billion per year in direct and indirect costs [3,4]. The incidence varies with higher rates noted in intensive care units [5,6]. The Braden Scale is used to identify patients at risk for a HAPU [7]. Most facilities consider a rating below 12 high risk but will being close monitoring at 18, moderate risk.

The National Pressure Ulcer Advisory Panel identified 6 evidence-based practices for pressure ulcer prevention: risk assessment, patient repositioning, managing moisture and incontinence, monitoring nutrition, modern support surfaces and continual education about evidence-based practices [8]. This paper focuses on repositioning in a specific population of inpatients labeled as

http://dx.doi.org/10.1016/j.wndm.2016.02.005 2213-9095/© 2016 Elsevier GmbH. All rights reserved. self-turn, which is defined as someone who needs minimal to no assistance with the activities of daily living, such as feeding, bathing or dressing themselves [9]. A person's ability or inability to perform activities of daily living is often used as a measurement of their functional status.

For patients that are in bed for the majority of the day, using a tool such as the continuous bedside pressure mapping device to assist health care workers to off-load potential high-pressure areas has been shown to be effective in preventing pressure ulcers [10]. The continuous bedside pressure mapping device (M.A.P.TM System, Wellsense USA Inc., Nashville, TN) is a computerized sensor system that identifies a patient's pressure distribution, displays a real-time color image of the pressure distribution and records the image (Fig. 1). This allows staff to reposition patients effectively with visual feedback to off-load pressure areas. In this study, this same tool was adapted to record the images to determine if patients designated as self-turn do indeed reposition themselves effectively to prevent pressure ulcers.

2. Materials and methods

From September to December 2014, 153 patients were enrolled in the study based on the inclusion criteria. Patients had to be able to move easily in bed without assistance and understand the patient teaching and instructions provided by the nursing staff. Patients had to be on the same bed during the entire hospital stay.







Abbreviations: HAPU, hospital-acquired pressure ulcers; ST, self-turn.

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Fig. 1. Continuous bedside pressure monitor imaging. (A) Patient in the lateral decubitus position. Red imaging in the greater trochanter area coincides with the highest-pressure reading after 2 h. (B) Same position in (A) after patient was asked to reposition supine. (For interpretation of the references to color in figure legend, the reader is referred to the web version of the article.)

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