

Self-turning for pressure injury prevention

Harriet M. Gammon ^a✉, Cherie B. Shelton ^a✉, Christine Siegert ^a✉, Creista Dawson ^a✉,
Emily Sexton ^b✉, Charlotte Burmeister ^c✉, Gwen Gnam ^d✉, Aamir Siddiqui ^a✉

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Highlights

- There is a lack of evidence-based support for self repositioning and mobilization.
- Patients can be educated regarding pressure reduction during the hospital stay.
- Technology can be safely and reliably applied to the question of self-repositioning.
- Our prospective study confirms patients can actively participate in pressure injury prevention.

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.

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 begin 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 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.

Section snippets

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. All absences off the unit for diagnostic testing or procedures had to be documented. Patients were excluded from the study if their procedures required more than 2h of laying ...

Results

Recorded images of 101 ST patients were reviewed in 4-h intervals. One evaluator viewed 610 4-h intervals or 2440h of recordings. In all, 84% of the patients had recordings of 24h or less assessed and 16% had 32 or more hours of recordings evaluated. Only 2 patients with 24h or less of recordings had a 4-h interval with no movement.

None of the patients assessed during this period developed a HAPU. Patient characteristics are displayed in Table 1. The majority of the patients was male (58%), ...

Discussion

The focus on reducing and eliminating hospital-acquired conditions is resource and personnel intensive. It is attractive to think that certain subgroups can be instructed on a program of self-monitoring and expected to comply. Our study confirms that patients deemed ST by hospital criteria could be expected to comply. That means resources and efforts can be focused on high-risk patients.

At our facility, patients with a Braden score of 18 or below are considered at risk for pressure ulcers [7]. ...

Conclusions

This study shows that patients deemed mobile and instructed on the benefits of repositioning do so regularly. Good mobility can be protective against HAPUs. Technology can be used to evaluate patient mobility and monitor patient compliance.

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Conflicts of interest

None declared. ...
