

Bergstrom, Nancy PhD, RN, FAAN

Preventing Pressure Ulcers: A Multi-site RCT in Nursing Facilities

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Abstract: The purpose of this multi-site, randomized, controlled trial is to determine the optimal frequency of repositioning nursing facility residents with mobility limitations who are at moderate and high risk for pressure ulcer development who are cared for on high density foam mattresses for the purpose of preventing pressure ulcers. Pressure ulcers result primarily from pressure over a bony prominence that occludes blood flow to tissues. Traditionally, soft surfaces over mattress and repositioning individuals every 2 hours to relieve pressure have been the gold standard of care to prevent ulcers. Recent improvements in support surfaces may reduce the need for 2-hour repositioning.

The specific aims of this study are to determine if: 1) there is a significant difference in the incidence of pressure ulcers among: a) moderate risk (Braden Scale Score, 13-14) residents randomly assigned to be repositioned every 2-, compared with every 3- or 4- hours; or b) high risk (Braden Scale Score, 10-12) residents who are turned every 2- compared with every 3-hours; 2) mobility (spontaneous or assisted) measured by actigraphy is a significant covariate with repositioning frequency in the incidence of pressure ulcers and 3) resident characteristics and resident influencing factors are significant covariates of repositioning schedules on pressure ulcer incidence We will use a 2 X 2 or 3 experimental design in which participants who are at two levels of risk (moderate or high) for pressure ulcer development will be randomly assigned to one of 3 repositioning schedules every 2-hours (the current standard of care), contrasted with 3- or 4- hours carried out for 3 weeks. Actigraphs worn for one Monday - Friday period will determine if mobility is a significant covariate. Residents (900) who are over 65 years, able to give consent or have a surrogate who can give consent and are at moderate or high risk for pressure ulcers will be invited to participate. Nursing facilities (3) were selected because of their ability to follow a research protocol during a national collaborative project and/or participated successfully in pilot testing. Participants will be randomly assigned to a repositioning schedule that will be carried out by a Certified Nursing Assistant who will document time of each repositioning. Data will be monitored by the investigators daily. With the exception of the repositioning intervention, participants will receive the same preventive care as all residents. The primary outcome of this study, pressure ulcers (yes/no) will be documented by a nurse assessor who will be masked to the repositioning timing. Data analysis and management will be performed by ISIS.