

## Turning programs hinder a good night's sleep

By Jeri Lundgren, BSN, RN, PHN, CWS, CWCN

**W**e've all experienced how a bad night's sleep can affect our mood and ability to function the next day. Now imagine you're a patient who has a pressure ulcer, most likely secondary to a declining disease state, and you're being awakened and manipulated every 2 hours or in some cases hourly. How is your body supposed to recover without adequate sleep?

Studies have found that it's critical for nursing-home residents to achieve two cycles of 3.5 to 4 hours of uninterrupted sleep for psychological and physical healing. Overall, a good night's sleep can enhance daily function, alertness, and cognitive and physical abilities, and can even reduce the risk of falls. So how can we provide quality care and promote pressure-ulcer healing if we disturb patients every 2 hours?

### Good news

Good news comes in the form of studies by Bergstrom and colleagues (2013) and Defloor and colleagues (2005) showing that with the appropriate support surface (high-density foam or viscoelastic mattresses), patients can be turned at 4-hour intervals without increasing the risk of pressure-ulcer development. (See *About support surfaces*.) One ongoing study, which began in October 2011, includes 24 nursing homes in Minnesota. The facilities use pressure redistribution mattresses, appropriate



overnight incontinent products, and technology to monitor residents' movements.

Empira, a group of older adult service providers in Minnesota collaborating to integrate clinical excellence and best practices across the care continuum, is conducting the study. According to Sue Ann Guilderman, director of education for Empira, as of February 2014, none of the participating nursing homes had experienced an increase in pressure-ulcer development secondary to allowing the residents to sleep uninterrupted for 4 hours. (One surprising finding is that residents who were thought to be dependent on others for turning are making subtle movements while they sleep.)

### Looking to the future

Research is demonstrating that with the provision of the appropriate support surface and incontinence products, patients can be allowed to get the sleep they need to heal and enhance quality of life. Now the question is how a regulatory environment that holds facilities to established standards will interpret and enforce these results. Ideally, if clinicians can show that the turning interval was based on assessment and implementation of appropriate interventions, regulatory agencies will

## About support surfaces

The National Pressure Ulcer Advisory Panel developed “**Terms and Definitions Related to Support Surfaces.**” This document includes a definition of *support surface*, followed by definitions of physical concepts related to support surfaces, components of support surfaces (see below, reprinted with permission), and features of support surfaces.

Term	Definition
<b>Air</b>	A low-density fluid with minimal resistance to flow
<b>Cell/bladder</b>	A means of encapsulating a support medium
<b>Viscoelastic foam</b>	A type of porous polymer material that conforms in proportion to the applied weight. The air exits and enters the foam cells slowly, which allows the material to respond slower than a standard elastic foam (memory foam).
<b>Elastic foam</b>	A type of porous polymer material that conforms in proportion to the applied weight. Air enters and exits the foam cells more rapidly, due to greater density (non-memory).
<b>Closed-cell foam</b>	A non-permeable structure in which there is a barrier between cells, preventing gases or liquids from passing through the foam
<b>Open-cell foam</b>	A permeable structure in which there is no barrier between cells and gases or liquids can pass through the foam
<b>Gel</b>	A semisolid system consisting of a network of solid aggregates, colloidal dispersions, or polymers that may exhibit elastic properties; can range from a hard gel to a soft gel
<b>Pad</b>	A cushion-like mass of soft material used for comfort, protection, or positioning
<b>Viscous fluid</b>	A fluid with a relatively high resistance to flow of the fluid
<b>Elastomer</b>	Any material that can be repeatedly stretched to at least twice its original length; upon release, the stretch will return to approximately its original length
<b>Solid</b>	A substance that does not flow perceptibly under stress. Under ordinary conditions, retains its size and shape.
<b>Water</b>	A moderate-density fluid with moderate resistance to flow

likely support this evidence-based practice, even though the length of time for turning differs from traditional practice. ■

### Selected references

Bergstrom N, Horn, SD, Rapp MP, et al. Turning for ulcer reduction: a multisite randomized clinical trial in nursing homes. *J Am Geriatr Soc.* 2013 Oct; 61(10):1705-13.

Defloor T, De Bacquer D, Grypdonck MH. The effect of various combinations of turning and pressure reducing devices on the incidence of pressure ulcers. *Int J Nurs Stud.* 2005 Jan;42(1):37-46.

Eyers I, Young E, Luff R, Arber S. Striking the balance: night care versus the facilitation of good sleep. *Br J Nurs.* 2012 Mar 8-21;21(5):303-7.

Kamel N, Gammack J. Insomnia and the elderly: cause, approach, and treatment. *Am J Med.* 2006 Jun;119(6):463-69.

Sanford JT, Townsend-Roccichelli J, VandeWaa E. Managing sleep disorders in the elderly. *Nurse Pract.* 2010 May;35(5):30-7.

Jeri Lundgren is vice president of clinical consulting at Joerns in Charlotte, North Carolina. She has been specializing in wound prevention and management since 1990.