From Chair to Bed

The surface on which the client sleeps at night is just as critical as the surface on which the client sits during the day, industry professionals agree.

By Andria Segedy

Spotting a skin problem or identifying skin at risk during a seating evaluation might mean there's more to the solution than just a new seating system, say rehabilitation professionals and manufacturers who spoke with *TeamRehab Report.* Therapists should also consider the surface on which the client sleeps.

Beds and the support surfaces of mattresses and overlays run the spectrum from powered low air-loss systems to portable convoluted foam. To determine what is right for the client, therapists need to find answers to some basic questions. Although funding is always an issue, medical necessity should drive the choice of what is prescribed.

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-Mark Sullivan

A therapist's job goes beyond meeting the client's seating needs, says Chris Dunn, product manager for support surfaces, Span-America, Greenville, S.C. "Pressure ulcers can occur on the patient's ear, so they need to be aware of all the potential sites at risk," he explains. "All therapists should get copies of prevention and treatment guidelines published by the Agency for Health Care Policy and Research." (See *Resources.)*

The AHCPR has established standards generally followed by the wound care industry to prevent and treat pressure ulcers. This includes pressure relief below capillary occlusion of 32 mm of mercury. However, some manufacturers note that pressure relief is more than one measurement.

ROHO and Crown believe the 32 mm of mercury is a misunderstood benchmark. "We look at a system that conforms to a patient and gives uniform pressures across the patient's body," instead of focusing only on the fact that his products pressure map out under the 32 mm of mercury, says Steve Sauerwein, vice president of marketing, Crown Therapeutics, which distributes ROHO Inc. products. Both companies are based in Belleville, Ill. "We go for low pressure, evenly distributed across the patient's body."

Continuity from bed to wheelchair is important, he continues. "If a patient spends most of his time in bed, [therapists] try to get him up in a chair. Whatever the setting [e.g., home, nursing home, hospital], maintenance of skin is an issue."

Therapists acknowledge that they do observe and respond to skin problems, looking at the client's overall environment. "If we see a problem caused from positioning in the bed, we can refer [clients] to our nursing department," says Bob Ghent, M.P.T., coordinator, seating and positioning clinic at Good Samaritan Hospital, Puyallup, Wash. "I've recommended [bed] products to clients who have questions."

"Especially when it's a sacral sore, I'll ask about the mattress," notes Barbara Levy, P.T., seating and mobility clinic, Thorns Rehabilitation, Asheville, NC. "I need to know how much time they are in the chair and when they first noticed the sore. Was it the chair or the bed that might have caused it? If they've been in an acute care facility, it's usually from a standard bed mattress," she explains. "Our technicians can contact suppliers and work on getting an appropriate interface for the bed. Our technicians are go-betweens with the suppliers and work with insurance companies. Then we have to make sure the seating isn't interfering with the healing."

"It's a simple matter of looking at what [clients] do on a 24-hour basis instead of activities of daily living," says Mark Sullivan, marketing manager, therapeutic support surfaces, Invacare, Elyria, Ohio. 'Therapists should look at the sleep surfaces."

The home, nursing home and hospital market for support surfaces is about $700 million, from the supplier's side delivering to all three markets, Sullivan says. Home care is about $2.5 million and nursing homes about $200 million. The hospital side is a significant portion because acute care products are more expensive, he explains.

Invacare's low air-loss products have recently been through a 50-patient study at the Cleveland Clinic. "The difference is a case study vs. a clinical study," he says, stressing that clinical study is more telling than the results on a one-patient case study.

The ideal support surface, he continues, should address six environmental factors: pressure, friction, shear, heat,

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moisture and immobilization. "We turn approximately every 11 to 15 minutes in our sleep," Sullivan says. "If you have someone who is totally immobile and lying on a firm surface, you're in trouble."

It's a misconception, he says, that if you put someone on a good support system, theydon't need to be turned. "They need to be turned a minimum of every two hours," he says, adding that Invacare's beds and support surfaces address those six environmental factors.

The bed from ProBed Medical Technologies, Abbotsford, British Columbia, Canada, can be programmed to turn and stop anywhere between 1 and 30 degrees and remain at that degree for any period of time, notes Stephen Plummer, director of sales and marketing. This factor alone can save $55,000 (CN) a year by replacing nighttime care needed to turn a patient, he says.

Research done by Sunrise Medical's Joems

RESOURCES

The National Pressure Ulcer Advisory Panel has a research monograph- *Pressure Ulcer Research: Etiology, Assessment and Early intervention.* It answers questions regarding prevention, detection and early treatment of pressure ulcers. Contact NPUAP, SUNY at Buffalo, Beck Hall, 3435 Main St., Buffalo, NY 14215;716/881-3558.

The Agency for Health Care Policy and Research has several publications to help identify and prevent pressure ulcers in adults and to treat pressure ulcers.

- **Pressure Ulcers in Adults.** Describes pressure ulcers, sites, risk of formation, prevention and care.

- **Pressure Ulcers in Adults: Prediction and Prevention: Quick Reference Guide for Clinicians.** Number 3. 15 pages. (AHCPR 92-0050)

- **Preventing Pressure Ulcers: A Patient's Guide.** 11 pages. (AHCPR 92-0048)

- **Pressue Ulcer Treatment: A** comprehensive program for treating adults with pressure ulcers, with focus on patient assessment, tissue-load management, ulcer care, management of bacterial colonization and infection, operative repair in selected patients, and education and quality improvement, It includes information on assessing the patient's nutritional status and selecting irrigation devices, cleansing solutions and support surfaces.

- **Pressure Ulcer Treatment: Quick Reference Guide for Clinicians.** Number 15.27 pages. (AHCPR 95-0653)

- **Treating Pressure Sores: Consumer Guide. 25** pages. (AHCPR 95-0654)

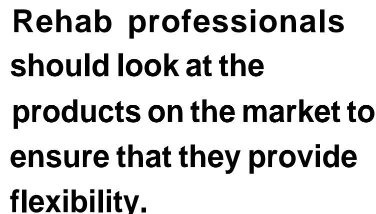
Spanish language consumer guides are also available. Contact AHCPR, Publications Clearinghouse, P.O. Box 8547, Silver Spring, MD 20907-8547;

and SunTec bed divisions, Stevens Point, Wis., shows that physical and occupational therapists want beds that are lower to the floor, according to Ken Cover, product manager. This allows the patient easier transfer in and out of the bed. Five years ago, he explains, beds were 16 inches from floor to mattress support surface. Now, that height varies from 12.5 to 14 inches.

In addition, Sunrise Medical’s BioClinic produces a full line of mattresses and overlays from alternating pressure to convoluted foam. This complements the Joerns and SunTec businesses, he says.

Rehab professionals should take a close look at the products on the market to ensure that they provide flexibility; are made from quality materials; are designed to protect the patient; and work for the caregiver, clinician and patient, according to Ole Olson, chief operating officer, Plexus Medical, San Dimas, Calif. Plexus was started by former BioClinic employees, says Olson, a former medical equipment supplier.

“Make sure the product’s materials will do what the manufacturer says they will do,” Olson says. In addition, clinicians should assess every patient based on individual need, he adds. “Sixty-thousand people die each year from complications of pressure ulcers-more than die from car accidents,” Olson says. Why? Because we don’t do what is necessary. We need to prevent. Pressure ulcers don’t occur from the skin down; they occur from the bone up. By the time (pressure ulcers) are seen, they are very serious.”



-Ole Olson

Deciding which support-surface product is best for a particular client can be a challenge, according to Jim Price, director of wound care strategic marketing and new product development, Hill-Rom, Charleston, SC. To help tberapists with this decision, his company developed algorithms based on their own and industry risk assessments that match a client’s needs with the features of various products, he explains.

It’s also important that sales staff work with therapists in looking at the whole patient condition, he adds. Following the client’s condition and visiting him or her on a routine basis is important to making sure support surface is meeting that client’s needs.

Another area of concern is the bariatric, or obese, patient’s needs, notes Susan Bittel, marketing director, Wheelchairs of Kansas, Ellis, Kan. “Our company manufactures products exclusively for these patients,” she says. “Other disabilities associated with obesity include stroke, spinal cord injury and amputation. [Bariatric patients] might be larger and need a heavy-duty bed or, because of a combination of their weight and a spouse’s weight, will want the capacity of our 1,000-pound rehab bed.

“Because of the size of the patients, we have made our beds versatile in height,” she adds, witb a deck height of 13 to 30 inches. “If they have to turn the patient, a wider bed is needed,” she says, noting that its widest bed is 60 inches.