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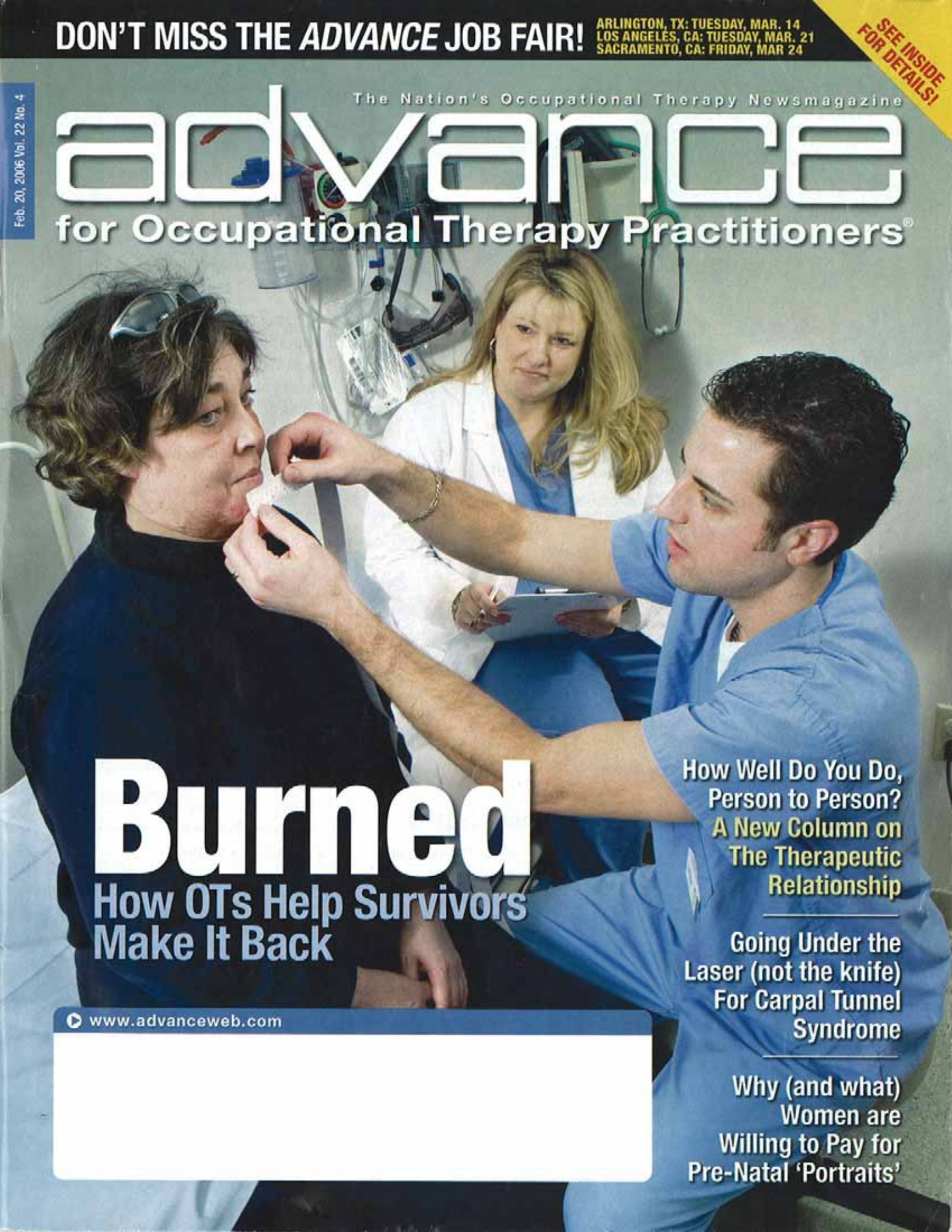

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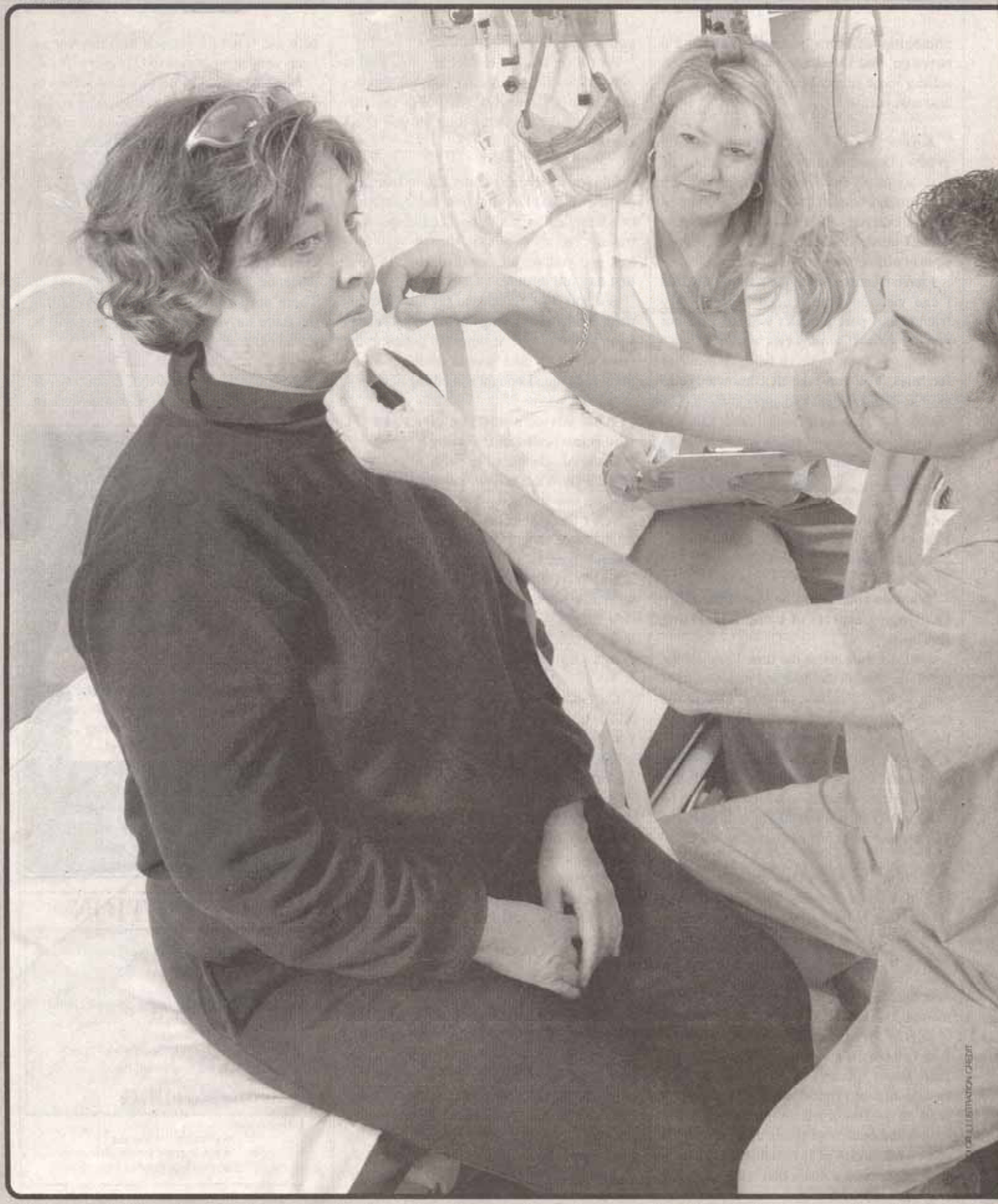

# Burned

## OTs at Lehigh Valley Hospital's burn center help survivors make it all the way back

By Jessica LaGrossa

Burn patients have often literally been "to hell and back." Their recovery is a day-to-day process made easier only by the efforts of their recovery team. A multidisciplinary approach to care is most beneficial to a burn patient's struggle to get back to life, and the rehab staff can be key in that trek.

Occupational therapists such as Ryan Vetter, MS, OTR/L, from the burn center of Lehigh Valley Hospital, headquartered in Allentown, PA, work closely with physical therapy in maintaining and regaining function and strength during burn patients' most acute stages of recovery. During the sub-acute phase of treatment, Vetter and the OT staff concentrate their efforts on helping patients restore their functional skills.

Vetter, who has now been at Lehigh for nearly five years, chose to join the team because of the center's respect for OT. "The burn unit especially recognizes OT and understands the difference between us and PT," he told *ADVANCE*. "We are respected by the physicians...and play a big role in burn care."

### Acute Care

Vetter explained that burn patients need OT from the most acute stages to the time those patients are "completely healed," which can be 12 to 18 months post injury. His co-worker, Lisa LePage, OTR/L, who has been on the team for nearly four years, added that OT begins "immediately," focusing on positioning and splinting.

"In the most acute phase, we work on positioning to avoid contractures," said LePage, adding that OT focuses on upper extremities while PT focuses on lower extremities. "Scar management is a huge issue with burn patients because it is going to lead up to inhibiting or enhancing function when they are in a sub-acute phase."

Vetter further explained that OT's role during acute care is to assess bio-mechanics. "We look at prevention of range-of-motion loss and strength loss," he told *ADVANCE*.

During the early acute phase, the OT staff concentrates on passive ROM. As the patients wake from necessity-induced comas, Vetter and the OT staff move to more active ROM and strengthening.

And in order to understand what areas of the body are clear for movement, the occupational therapists are present for all upper-extremity dressing changes. To ensure that OT is there, the nursing staff calls and/or pages the appropriate therapist as soon as the patient's wounds are open to air.

"Being there helps us to see the wounds—where they are and what joints they cross—so that we know how the graft or skin substitute looks, and how well it is taking," explained Vetter. "It gives us a better idea of what joints we are allowed to move and what joints we should keep still to protect the grafts."

Also during dressing changes, Vetter and the rest of the OT staff address edema issues in their patients. "We look into Coban wrapping and tuba grip to make sure the edema is under control," he said. "We also like to get pressure on those burn areas for scar management."

> 'We fabricate custom splints for the patients to protect their grafts and to maintain their ROM.'
>
> —Ryan Vetter, MS, OTR/L

Splinting can be a challenge, said Vetter, especially when the doctors have certain joints that they don't want to move due to grafting. "So we fabricate custom splints for the patients to protect their grafts and to maintain their ROM," he told *ADVANCE*.

For example, LePage constructed a halo-style splint for Deborah Bibighaus, a patient who had suffered severe upper-extremity burns when her sweater caught fire while she was adding wood to a stove this winter.

"She was grafted in the cervical area in the anterior neck—right along the jaw line," LePage explained. "This grafting is tricky...it is susceptible to contractures, limiting ROM and function; any motion may have separated the graft from the surrounding tissue, so it was important to immobilize her initially." ▶

The splint made lateral rotation impossible for Bibighaus, which meant she couldn't flex or extend her neck and therefore couldn't compromise the integrity of the graft. She wore the device for two weeks, day and night.

Bibighaus has since been discharged from the inpatient unit, and continues with outpatient therapy for scar management and ROM of her neck. She currently wears a specialized pressure garment made by Hanger prosthetics.

### Sub-Acute Care

As patients progress and move into the sub-acute phase of recovery, Vetter and LePage begin to look at coping skills and strategies to maintain independence. "We keep in mind the basics—joint mobility, ROM and strength—while also working on functional tasks—dressing, bathing, grooming, etc," explained LePage.

And because patients are typically on bed rest for extended periods of time, LePage told *ADVANCE* that the individuals address most ADLs—such as brushing their teeth or washing their face—in a seated position.

When it is time to address functional goals, Vetter usually begins with the patients' ability to feed themselves. "It is something that they can do if they are still on bed rest." He said. "We work on maintaining the hand ROM and providing adaptive equipment as needed."

Common adaptive equipment includes built-up utensils for better grasp, as well as reachers, sock aides and dressing sticks for donning clothes. Leg lifters also help patients in and out of bed, added Vetter.



According to LePage, she and the OT staff must be careful not to overdo it with patients in the beginning. "Just sitting up in the initial treatment phase is taxing enough," she pointed out. "So we have to make sure that their blood pressure doesn't bottom out."

Patients are constantly hooked to blood pressure and heart-rate monitors. Progression of treatment depends solely on the individual patient. Many patients are ventilated and therefore can't communicate. "So we also have to watch for signs and signals [of how they are handling treatment]," said LePage.

During the later stages of recovery, which is often in outpatient rehab, OT provides pressure therapy in which patients are fitted for pressure garments and work on scar management so that scars won't be as noticeable. "The scars are very thick and don't move well, and cause ROM loss," said Vetter. "So it is important that we are involved with that stage of care as well."

### Emotional Care

"A large part of burn recovery has a psychosocial aspect," explained Vetter. "Patients are dealing with body disfigurement and functional losses; and with house fires, they may be dealing with the loss of loved ones, loss of their homes, etc.; that is why it is so important for OT to be involved."

While patients tend to focus on the losses, Vetter pointed out that OT "can help them to refocus on the things that they are making progress in and the things they are able to begin to do."

LePage agreed, adding, "We have to be their support and counsel along the way."

She reminds other burn unit therapists to remember that while you know what to expect from scars and mobility, the entire process is new to each patient. "Give them information," she instructs. "You are their support to say 'these are your options,' 'this is what will happen'; and always encourage them to do their best."

LePage explained that the road back to life after a burn injury is "a painful recovery," and that therapists must "have a good understanding of how it affects the patients emotionally.

"When they look in the mirror for the first time and see their appearance that may have changed due to scars, you have to help them deal with that."

And the emotion is never lost on the OTs either, added Vetter. "It is difficult not to become emotionally involved in a patient's injury and recovery, especially with the children."

But, as the saying goes, 'knowledge is power;' therefore, the burn team at Lehigh refers patients to the hospital's burn recovery center which helps patients by offering information on the recovery aftermath. "They can discuss what kind of plastic surgery is an option a year from now, when the scars are mature," said LePage.

She also stressed the significance of having established resources in the community to refer patients to for items such as wigs, prosthetics, make-up, etc. "Providing these resources initially gives patients an idea of what is ahead," LePage explained. "Knowing that there is someone out there to support them is important."

"It is difficult to put someone through pain, and initially that is what you have to do in burn care," LePage explained to *ADVANCE*. "But you have to go through the pain to gain function in the overall sense; you have to look ahead, beyond that." ■

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