

**TBI SURVIVOR...****Becky Branscum***By Kimberly Paetzold, Editor*

**B**ecky Branscum came to Rainbow in December of 1998, almost nine years after her motor vehicle accident in January of 1990. She was seriously injured and initially treated at St. Vincent Hospital in Toledo. The accident had left her with a motor neuron disturbance (*neurological muscle damage*) and a frontal parietal skull fracture on her right side. Becky lived in several residential locations after her hospital discharge. Initially, she weaned from her tracheotomy tube, but because of chronic reoccurring pneumonia, she readmitted to U of M Hospital where a tracheotomy tube was reinserted.

The rehabilitation process since Becky's admission to Rainbow almost eight years ago has yielded steady improvements. The Rainbow treatment team combined with residential staff, worked hard to help Becky recuperate. Following are some highlights of her therapy gains in various therapeutic disciplines.

**Improved Respiratory Status**

When Becky first came to Rainbow she was quite sick. According to Monique Kurkowski, Respiratory Therapist, Admissions Coordinator, "*Becky's biggest challenge has been her tracheostomy tube, which has caused constant tissue growth resulting in airway obstructions.*" Another problem for Becky is immobility. Due to lack of proper movement for so many years, secretions built up and pooled in her lungs causing chronic pneumonia. Non-injured individuals have seven layers of

closure to prevent aspiration, but Becky's body cannot coordinate these efforts because she has cranial nerve dysfunction. Her muscles do not move quick enough to close her airway, so aspiration results.

Rainbow's interdisciplinary treatment team made it their primary focus to improve Becky's quality of life. It did not take long before there was marked improvement in her respiratory system and cognitive functioning. In 2005, Becky was a candidate for the Lindeman procedure (surgery), which is a laryngotracheal separation that prevents aspiration by physically separating the lower respiratory tract from the upper respiratory and digestive tracts. During the surgery, Becky's surgeons also eliminated the need for a tracheostomy tube by constructing a permanent stoma.

The results of this surgery have been wonderful. Becky has decreased her work of breathing, making her more comfortable. She is working on eating one meal orally each day. Even when she's not motivated to attend therapy, she always has energy and interest in eating. The amount of her secretions has reduced, and the reoccurring

pneumonia has not been a major health issue.

**Improved Communications**

Initially Becky worked with a DynaVox and found that she was having difficulty with the size of the screen. Her treatment team recommended a ChatBox Assistive Communication Device. At first, the ChatBox was unsuccessful, but therapists



**Above:** Becky Branscum—November, 2006.



**Above:** Becky Branscum with a tracheostomy tube in 2003—prior to the Lindeman procedure (surgery).

continued to work with Becky, and she now uses it with a series of switches called the pow pad. Becky has three of these located on a wooden tray that sits on her table. She is able to activate up to three of the switches and four different pages on the ChatBox, giving Becky the ability to communicate with her staff. Overall, her accuracy rate is 75%—the best documented results since her accident.

Becky has also increased her ability to use yes and no communication. She uses thumbs up or a head nod for yes, and thumbs down or head shake for no. Combining this with the ChatBox, Becky has more options for communication and can easily draw attention to herself.

### **Occupational & Physical Therapy Gains**

From an Occupational Therapist's standpoint, Becky was not in good shape when she came to Rainbow. According to Becky's Admissions Coordinator, Monique Kurkowski, "When I went to the hospital to evaluate Becky, I was surprised to see the severity of her contractures." Her occupational therapist, Kathy Grace recalls, "I think her case manager was afraid we were going to be unrealistic with our active therapy goals, but when we started Becky's treatment, our goal was to help her posture."

Becky had aggressive osteoporosis due to hormonal disturbances from the injury and from non-weight bearing for several years. She had not been sitting in a proper wheelchair, which resulted in bad posture (*thoracic curvature*), causing her to



lean forward.

When the Rainbow Treatment Team received permission to employ active therapy, a lot of work had to be done regarding her positioning. Her head rested deep into her chest, her left knee was contracted beyond 90 degrees of flexion, and she was unable to stand. In addition,

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Becky's left elbow was seriously contracted. To solve this problem, therapists serial cast Becky's arm out, with good results. Later they were able to put a semi-dynamic elbow brace on her arm. However, it took a long time to work the contracture out of Becky's knee because of her serious osteoporosis. With the fear of being too aggressive, Kathy Grace (OT) spoke with Becky's family in a team meeting about the risks involved in rehabilitating her knee. Together with the treatment team, they decided that the gains outweighed the risks and proceeded with aggressive therapy. Slowly the contracture of Becky's left knee was worked out, and she is now at 0 degrees. She is able to stand at the tilt table with amazing extension.

As part of Becky's physical therapy, her surgeon requires she stand three times a week. This can be a challenge for her treatment team; her positioning on the tilt table has to be perfect. It takes quite a bit of time for two professionals to get her standing, and the procedure requires a high level of concentration. Any wrong moves

could result in a fracture, and they need to constantly monitor her breathing. Standing exercises were recommended for Becky to build bone density and to normalize abnormal muscle tone. Additionally, standing is necessary physiologically for lungs and other organs. It can help skin integrity, the digestive system and respiration.

### **Becky Today**

Becky has endured and never stops fighting. She enjoys looking at attractive young men, likes being around people and really enjoys her food. Becky loves attending concerts, and her favorite music is country. Her disposition is happy, and even though she may never fully recuperate from her injuries, proper care and active therapy has greatly improved Becky's quality of life. According to Lisha Clevenger, the Medical Program Director at Rainbow, "I think Becky feels better. Her respiratory status is now comfortable; before she was always fighting. She feels better, so she's more alert and able to participate. She's had a really great team of therapists who worked together and it helped her immensely. It has been a slow and long process to work out many of her problems, but it's been successful."

Throughout Becky's rehabilitation process, residential staff diligently watched over her and reported any concerns they observed. Aside from all of her basic care and positioning requirements, her assigned house staff attend to little things that help build self worth, such as matching her outfits right down to her socks and making sure she has plenty of social interaction. This attention to detail makes a big difference in Becky's life. It provides not only a warm and caring environment, but gives Becky a sense of dignity and belonging. ♦