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## Wii speeds up the rehab process

By Joe Miller, News & Observer of Raleigh

RALEIGH, N.C. — It took a car accident and the onset of Parkinson's disease, but 68-year-old Nathan Woodlief may finally have a chance at beating his grandson at video games. "He laughs at me," Woodlief says of the response his woeful

Junior may not be laughing, though, when Gramps returns from the hospital empowered by the device that nursed him back to health: the Nintendo Wii.

Wii? Oui

The video game that couldn't stay on store shelves at Christmas is fast earning a second life as a useful tool in helping victims of debilitating diseases and accidents get back on their feet.

"It's good for my hand-eye coordination," says Stephanie Mezynski, who has been using the Wii as part of her rehab to recover from a paralyzing episode with multiple sclerosis. "It works."

The Wii created a buzz late last year thanks to its magic wand. Hold the wand in your hand, go through the motions you would for a variety of sports bowling, tennis, baseball and golf, for instance — and an animated character on your TV screen carries through with your move. Got a slice in your real golf game? Your virtual Wii golfer will have one, too.

WakeMed began incorporating the Wii into its therapy program last month. "Patients become vested in it, and when they're vested it has a lot more meaning," says Karen Ambrose, a physical therapist at the hospital. "If you can get them to want to do it," she says of the often grueling process of physical rehabilitation, "they'll do it."

Getting rehab patients to buy in, say physical therapy practitioners, is most of the battle.

The first hospital thought to have used the Wii for rehab is the Glenrose Rehabilitation Hospital in Edmonton, Alberta, Canada. But that's not where WakeMed's Recreational Therapy Department heard about it. The idea came from the guy who delivers wheelchairs. He mentioned that he had a Wii and thought the movement aspect might translate well to rehab.

Hundreds of thousands of patients recovering from events including strokes (suffered by 700,00 Americans annually), heart attacks (1.1 million a year), sports injuries and car crashes endure some form of physical therapy.

Although the type of therapy prescribed varies depending upon the illness or injury, most therapies demand considerable effort from the patient. Often, patients are attempting to relearn simple, rote tasks — walking, for instance, or feeding oneself. Skills once taken for granted now seem impossible.

"People go into the hospital feeling bad about themselves and what they can't do," Ambrose says.

"You have to put them in a different mentality," says Kevin Poplawski, a physical therapist in the sports medicine/orthopedics department of UNC Hospitals in Chapel Hill.

That is what the Wii does.

Nathan Woodlief was an avid bowler before a car accident in June tore up his right kneecap. That was shortly after he had been diagnosed with a form of Parkinson's disease that affects the use of his left arm and leg. WakeMed physical therapist Elizabeth Penny recognized him as a prime candidate for the fledgling Wii therapy program.

Woodlief had the steely look of a Professional Bowling Association kingpin last week as he took aim on a 3-7-10 split on the 52-inch flat screen TV not 20 feet away. His left hand pressed against his walker, he brought the Wii wand back with his right, then with solid, if slow, form followed through, punching a button to let the ball go. On screen, it ambled down the lane, eventually taking out the 3 and 10 pins.

After a round of applause, Ambrose slipped into therapist mode: "I want a really strong throw from you, Mr. Woodlief."

This was Woodlief's third time on the virtual lanes. On his first day, Woodlief bowled seated in his wheelchair. The next day, he was propped on some mats in a semistanding position. Soon he was standing in his walker. Going from seated to standing in just four days showed good progress, Ambrose said. Though it may seem like fun and games, the Wii does what more traditional therapies attempt to accomplish, Penny says.

"In therapy, it allows patients to work on weight bearing and increasing coordination, increasing strength and stability, increasing fine and gross motor skills," she says. "Any of the games can be used to address problem solving, attention, short-term and long-term memory, decision making and scanning."

Fear that video games will damage these skills is among the very reasons some parents object to them.

WakeMed is at the forefront of what Rutgers University professor Grigore Burdea, an expert in high-tech rehab techniques, predicts will be common practice within five years. "It's very ingenious," Burdea recently told the Edmonton Journal. "This is pioneering work."

The increasing use of technology in rehab efforts isn't limited to video games.

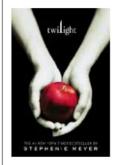
At the University of North Carolina, golfers hobbled by back and other injuries are getting a chance to play through with the BacktoGolf therapy program developed by a Pebble Beach, Calif., physician. With it, therapists analyze the biomechanics of a golfer's swing, examining flexibility, strength and posture. They compare the swing with a videotape of a pro golfer of similar stature, the pro presumably having near-perfect technique. Then, working with a golf instructor, they formulate a swing that's best for the patient.

"I've never had a golfer tell me the program lowered his score," says Poplawski, "but I have heard them say they can play without back pain."



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It's the Wii, though, that's therapy's current techno darling.

So far, Penny says, WakeMed has used the therapy for patients ages 7 to 75, with issues ranging from knee replacements and spinal cord and brain injuries, to stroke, cerebral palsy and Alzheimer's.

Where the Wii may prove most effective is when a patient is discharged and must continue rehab on his own.

"It is something they can use at home," says Penny of the device that sells for about \$250. "Patients can play with their families, even their grandkids."

That may explain the glint in Woodlief's eye when, between frames, he says, "I'm thinking very seriously about bringing one home."

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