

KENNY *Independent*

Sister Kenny® Rehabilitation Institute is the leading rehabilitation provider in the region. The Institute provides rehabilitation services at five Allina hospitals — Abbott Northwestern in Minneapolis, United in St. Paul, Unity in Fridley, Mercy in Coon Rapids and Buffalo Hospital in Buffalo — and outpatient care at community-based Sister Kenny Sports & Physical Therapy Centers.

The 44th International Art Show by Artists with Disabilities will run April 19 through May 18 at Sister Kenny Rehabilitation Institute at Abbott Northwestern Hospital. The show is one of only a handful of judged art shows in the country for artists with a physical or cognitive impairment. More than 300 pieces of art will be on display and cover the media of graphic, photography, watercolor, mixed media, sculpture, and oils and acrylics. A grand opening for the show will be held on April 19 from 5-8 p.m. on the second floor of the Sister Kenny Building. The event is free and includes a chance to meet many of the artists. To be added to the mailing list or to receive more information about this year's event, call 612-863-4466 or send an e-mail to sisterkenny@allina.com.

Sister Kenny Rehabilitation Institute's annual conference "New Directions in Physical Medicine and Rehabilitation" will be held on Friday, June 1 from 8 a.m. to 4 p.m. at Allina Commons (located in the Midtown Exchange Building on Lake Street and just east of Chicago Avenue) in Minneapolis. Case managers, social workers, therapists, nurse practitioners, physician assistants, QRCs and discharge planners are welcome to attend. For more information, send an e-mail to Linda.Kelley@allina.com or call 612-863-5495.

Therapeutic recreation: helping patients renew interests, enhance lifestyle

When a person suffers a spinal cord injury, brain injury or stroke, he or she faces the challenge of regaining as much function as possible. But recovery from such conditions goes beyond physical function and often involves family members and friends in addition to the patient.

Therapeutic recreation specialists are rehabilitation professionals who use a variety of activities to promote independence and enhance physical, cognitive, emotional and social functioning among patients with disabilities.

Many ways to address therapy goals

According to Susan Hagel, a certified therapeutic recreation specialist at Sister Kenny Rehabilitation Institute, "Many therapeutic recreation goals are similar to physical therapy or occupational therapy goals, but we use leisure activities and recreation to address them."

For example, an activity like playing cards helps a patient recovering from a brain injury in several ways: viewing the whole table develops visual scanning skills, taking turns helps with impulsivity, and learning the game rules and keeping score improves memory and cognitive skills. "What might appear to be a simple card game can address six or seven therapeutic goals," said Hagel.

Therapeutic recreation specialists use a variety of tools, including aquatic therapy, horticultural therapy, pet therapy, structured group activities, various sports and more. These tools give patients many ways to work on key therapy goals, including walking, strengthening, transferring and improving range of motion. They also allow therapists to adapt therapy to patients' lifestyles and interests.

continued on page 2



Therapeutic recreation *continued from front cover*

Applying new skills to the real world

One of the most important tools used in therapeutic recreation is the therapeutic outing. It might involve going to a mall, dining at a restaurant or other activities.

The outings help patients apply their new skills to the real world, said Hagel. “It might be learning what it’s like to use a wheelchair, walker or a cane in different environments or learning to deal with people’s reactions. We do have physical goals, but there are also emotional goals.

“Sometimes patients, especially if they are just beginning to adapt to their injury, are reluctant to go on an outing,” said Hagel. “But once they go, they often thank me because

they’ve learned so much about themselves in the process. It helps their self confidence and their emotional adjustment to the injury.”

Helping families adjust

Families also benefit from therapeutic recreation. They often accompany the patient on outings and begin learning how they will need to adapt.

“We help family members prepare for discharge and the lifestyle change that accompanies a more serious injury or stroke,” said Hagel. Therapists work with the family to ensure that the patient has opportunities to participate in a variety of activities at home or in the community.

“Our message to patients and families is that there are many activities that they can continue to enjoy — the venue or the way they participate may change, but they should know there are many options,” said Susan Hagel, a certified therapeutic recreation specialist



Garden brings rehabilitation outdoors

A new garden funded by the Sister Kenny Foundation will open this spring, offering patients an inviting, outdoor setting for rehabilitation, relaxation and personal renewal. The Sister Kenny Garden, located at United Hospital, will help with a variety of rehabilitation needs.

“The stone paths allow patients to practice walking on an uneven surface, and there are a variety of activities associated with gardening that help with strength, coordination, sequencing, problem-solving and other therapeutic goals,” said Trevor Carlson, a physical therapist at Sister Kenny Rehabilitation Institute at United.

Research assesses novel approaches to preventing injuries, loss of function

Exercise is a well-established therapy to help patients recover from injuries or improve function that has been impaired by neuromuscular conditions.

Now it is being studied as a way to prevent injuries and loss of function. Research conducted by Marie-Christine Leisz, DO, a physiatrist with Sister Kenny Rehabilitation Associates, is assessing whether specific exercises can prevent injuries in runners. “We’ve found that a lot of problems that runners have stem from asymmetry in the hips and from previous injuries that were never properly rehabilitated.” Leisz’s research involves screening “well” runners and prescribing exercises designed to prevent common injuries.

Leisz is also exploring a collaborative research project with Becky Farley, PT, PhD, from the University of Arizona’s physiology department, to examine whether prescribed movements and exercises can help Parkinson’s disease patients delay the onset of problems like a slow, shuffling gait and a weakened voice. “It involves having patients concentrate on incorporating ‘big’ movement or motion into exercise. It can include using a bigger range of motion when walking, or using a bigger voice when talking.” Preliminary results have been promising and Leisz hopes to expand the study to include Parkinson’s patients at Sister Kenny Rehabilitation Institute.

Swallowing disorders require specialized approach

Warning signs of dysphagia

- Coughing, choking or throat-clearing while eating
- Voice changes, such as a weaker or wet-sounding voice
- Resistance to eating, especially in elderly or weak patients unable to verbalize their needs
- Slurred speech
- Pain or discomfort while eating

For more information about swallowing disorders or to refer a patient to the Dysphagia Program, call Sister Kenny Rehabilitation Institute's Speech-Language Pathology Department at United Hospital at 651-241-8290.

Fruit cocktail and graham crackers may not sound like a memorable dining experience — unless you are John Reis. Unable to eat anything by mouth for six months, Reis savored each bite of this simple fare after a fluoroscopic swallow study showed he could safely eat again.

The impromptu meal also marked his recovery from a heart attack and emergency surgery — complicated by dysphagia, the inability to swallow. Reis explained that his throat was injured when he was intubated in his local hospital's emergency room. A breathing tube helped keep him alive for transport and heart surgery at United Hospital. Imaging studies during a later swallow study showed that Reis has bone spurs on his neck vertebrae that could have complicated the intubation.

Complex process

Although we rarely think about swallowing, it is a complex process involving the lips, tongue, saliva, teeth, mouth, soft palate, throat and esophagus. Dysphagia can result from neurological problems, such as stroke, spinal cord injuries and brain injuries; traumatic injury to the neck and throat area; cancer; and generalized weakness associated with aging or serious illness.

"The key challenge in helping people with dysphagia is to ensure that they receive adequate nutrition and hydration while minimizing the risk of aspiration," said Mary Beth Ferguson, a Sister Kenny Rehabilitation Institute speech pathologist at United Hospital. Aspiration — getting food or liquids in the airway — can cause choking, pneumonia and other respiratory problems.

To provide nutrition and breathing support until the throat and airway improved, Reis required a feeding tube and a tracheotomy. Ferguson began working with Reis while he was still in intensive care. She conducted video fluoroscopic swallowing studies that evaluated how food moved through the throat. These studies identified which areas of the mouth and throat were not functioning correctly and were used to plan treatment and track his progress.

Reis had several significant problems — his tongue was weak and his throat muscles were unable to move properly so the airway would be protected during swallowing. A combination of time and exercises prescribed by Ferguson helped him regain function in his tongue and throat. He was discharged from the hospital seven weeks after his heart attack and continued working with a speech pathologist who came to his home three times a week, while returning to United to see Ferguson for follow-up swallow studies.

Applying best practice to dysphagia treatment

Sister Kenny Rehabilitation Institute recently completed a study of best practices in dysphagia treatment. A team led by Ferguson prepared training packets for all Sister Kenny speech pathologists that summarized their findings and made recommendations on treatment.

Because a variety of factors affect swallowing, Ferguson said there is no universal treatment that is effective for all patients. "Diagnostic studies that provide a clear understanding of the patient's physiology and muscle function are critical. Dysphagia patients also require individualized treatment plans that may include changes in posture, swallowing maneuvers, exercises, sensory stimulation and diet."

Ferguson said it is important for people at risk for dysphagia and their caregivers to recognize its symptoms (see warning signs, to the left). "One of the myths about dysphagia is that if you are not coughing or choking you are not aspirating. In reality, about 40 percent of people who have swallowing problems have no cough, or what we call silent aspiration."

While Reis must continue to be careful when eating certain foods, he feels that is a small price to pay for his recovery. "Initially, they really didn't expect me to survive. I'm just thankful for the excellent people I had working with me all that time and for my family, who never left my side."

Kenny Independent is a publication of Sister Kenny® Rehabilitation Institute, part of Allina Hospital & Clinics. Allina, the Allina logo and Sister Kenny are registered trademarks of Allina Health System.

Visit www.sisterkennyinstitute.com for more information.

Sister Kenny Foundation: *supporting innovative programs and technology*

This issue of the *Kenny Independent* highlights several programs that were made possible with funding from the Sister Kenny Foundation, including the Sister Kenny Garden at United Hospital and the Lokomat® Treadmill Training System at Abbott Northwestern Hospital. These are just two examples of how the Sister Kenny Foundation helps Sister Kenny Rehabilitation Institute maintain its position as a leader and innovator in rehabilitation medicine.

The Sister Kenny Foundation also recently funded:

- an assessment of patient and partner rehabilitation experiences in addressing sexual dysfunction after stroke
- IREX virtual reality system for pediatric patients at Kenny Kids™ Rehabilitation Program
- Sister Kenny Golf Program for Golfers with Disabilities Program
- Kenny Library and Education Center
- pressure mapping system to evaluate wheelchair seating and educate patients on preventing and treating pressure sores
- specialist certification scholarships for physical therapists
- self-care habit training for recent stroke survivors.

For more information about the Sister Kenny Foundation, call 612-863-4145 or visit www.sisterkennyinstitute.com/skfoundation.

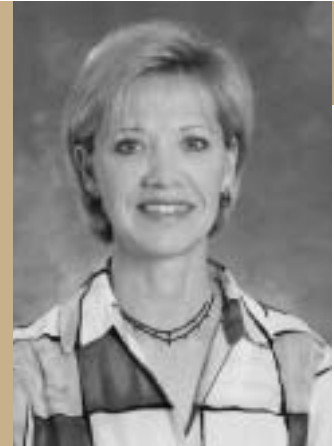
Lori Knutson named new executive director of Sister Kenny Rehabilitation Institute

Lori Knutson was recently appointed the new executive director of Sister Kenny Rehabilitation Institute. A physical medicine and rehabilitation nurse who started at the Institute in 1984, Knutson has most recently served as director of Abbott Northwestern Hospital's Institute for Health & Healing.

"Lori has extensive leadership experience and is truly gifted in her ability to form partnerships with patients, physicians, board members, donors, academic leaders and members of the community," said Mark

Mishek, president of United Hospital and executive sponsor of Sister Kenny Rehabilitation Institute. "She is a skilled innovator, with a clear focus on accountability, collaboration and successful program development."

"I am thrilled to be back working with the many skilled and talented physicians, therapists, nurses and staff at Sister Kenny," said Knutson. "I look forward to continuing the Institute's tradition of excellence and making lives work for the thousands of patients who are treated at Sister Kenny each year."



Sister Kenny Spine Center — Woodbury offers expanded services

A recent expansion at the Sister Kenny Spine Center — Woodbury allows for onsite physician consultation as well as space for additional MedX spine strengthening equipment.

Assessments and consultations are provided by:

- Mark Rotty, MD, who is board certified by the American Academy of Family Practice and is specially trained in intensive spine strengthening using the MedX lumbar extension and cervical extension machines.
- Carol J. Showalter, MD, who is board certified in physical medicine and rehabilitation, has special

certification in electrodiagnostic medicine (EMG) and specializes in neuromuscular diseases and injuries, and stroke rehabilitation.

The Sister Kenny Spine Centers in Woodbury and Edina offer specialized treatment for patients with acute and chronic low back or neck pain. Treatment may include spine physical therapy, intensive spine strengthening using MedX equipment, injection therapies and complementary therapies to manage pain, and personalized education on maintaining a healthy neck and back.



For more information about the Sister Kenny Spine Center, call 1-800-827-8313 or visit www.sisterkennyinstitute.com.

Lokomat®: state-of-the-art technology to restore walking function

Patients who can benefit the most from early gait therapy — those with significant disability due to stroke, brain injury or spinal cord injury — now have a new therapy tool to hasten and improve their ability to walk.

Lokomat® is a robot-assisted treadmill that supports a patient in an upright position while moving the legs through a normal walking pattern — even if a patient is unable to move his or her legs independently. Sensors and other technology monitor the patient's gait pattern, measure changes in strength, range of motion and endurance over time, and allow the patient to gradually increase physical effort while ensuring safety.

With funding from the Sister Kenny Foundation, the technology was installed earlier this year at Sister Kenny Rehabilitation Institute at Abbott Northwestern. Lokomat is available at only 26 facilities in the nation.

“We know that the best way to restore walking function is to get the patient up and walking as early as possible in their rehabilitation,” said Brian LeLoup, a Sister Kenny Rehabilitation Institute physical therapist at Abbott Northwestern Hospital.

“In patients with brain injury and stroke, the involved side of the body responds to moving in the normal pattern of walking even if the patient does not have the strength to move his legs. In those with a spinal cord injury, the therapy generates reflexes that allow input from the leg to move up the spinal cord.”

LeLoup noted that technology like Lokomat also has implications for rehabilitation following stem cell therapy for spinal cord injuries. Stem cell therapy is not offered at Sister Kenny Rehabilitation Institute, “but we know that once stem cells are injected into the spinal cord, intense, specific activity like what is possible with the Lokomat is needed to teach the cells to function in the desired way,” said LeLoup.

While similar treadmill technology has been in use for several years, the robotic assistance of Lokomat means patients with more severe injuries can benefit from gait therapy sooner in their recovery.



“But Lokomat is not only for those who are just starting their rehabilitation,” said LeLoup. “Patients can benefit from the intensive training that Lokomat provides even years after their injury.”

“Lokomat is not only for those who are just starting their rehabilitation,” said LeLoup. “Patients can benefit from the intensive training that Lokomat provides even years after their injury.”

For more information on Lokomat, visit www.sisterkennyinstitute.com

Clinician profile: Marie-Christine Leisz, DO



For Marie-Christine Leisz, DO, an interest in physical medicine and rehabilitation began with sharing office space. At the time, Leisz was employed in a post-college job involving orthopaedic research. With little space available in the orthopaedics area, she was given office space in the physical medicine and rehabilitation department.

“I decided I really liked the non-operative approach of physical medicine and rehabilitation, as opposed to the surgical emphasis in orthopaedics,” said Leisz.

Leisz received her osteopathic medicine degree at Michigan State University and completed a residency in physical medicine and rehabilitation at the University of Minnesota. She joined the Institute’s physician group, Sister Kenny Rehabilitation Associates, in 2006.

She specializes in sports injury prevention and rehabilitation, movement disorders such as Parkinson’s disease, lymphedema and amputee care.

One of the things that Leisz enjoys most about her medical specialty is that “we can make a huge difference with a small intervention. For example, an assistive device like a walker can help someone with balance problems maintain their independence by preventing falls.”

Leisz is on staff at Sister Kenny Rehabilitation Institute at United Hospital in St. Paul.

Read more about Leisz and her research interests on page 2.

For more information on Sister Kenny Rehabilitation Associates, visit www.sisterkennyinstitute.com.

NON PROFIT ORG
U.S. POSTAGE
PAID
MINNEAPOLIS, MN
PERMIT NO. 3462

Sister Kenny Rehabilitation Institute
Allina Health System
800 East 28th Street
Minneapolis, MN 55407

Allina Hospitals & Clinics
SISTER KENNY
REHABILITATION
INSTITUTE

