Dr. Moise’s Medical Update

The SCI Rehab Project

The SCI Rehab Project is a large research study that was recently published in The Journal of Spinal Cord Medicine. Data was collected from multiple spinal cord rehabilitation specialty hospitals, specifically looking at the type of and amount of nursing, psychology and social services patients received, as well as the amount and type of physical therapy, occupational therapy, speech therapy and recreational therapy services patient’s received. The data was analyzed to determine which types of and quantities of various services were associated with improved outcomes at discharge from the rehab hospital, and a year after the spinal cord injury. Multiple articles were published from this data, filling up an entire journal publication, and I have summarized these articles, below.

Nursing:
Greater patient active participation in nursing activities was associated with better outcomes. This means that when nurses had patients actively assist with their care, rather than passively doing the task for the patient, the patients ended up making greater functional gains in their rehab hospital stay. More time spent by nurses in coordination with other members of the rehab care team, consultants and specialists during the patient’s rehab hospitalization was associated with long term improved outcomes at one year post discharge—specifically higher life satisfaction scores on patient surveys at the one year anniversary.

When nurses spent more time providing psychosocial support to their patients, those patients had higher mobility scores 1 year post discharge, and also a greater likelihood of working or being in school at that time. The conclusion was that rehab nurses working with people with spinal cord injury should promote active patient participation during all aspects of care.

Psychology:
When psychologists spent more time with the patient focused on psycho-educational activities, the patients had better functional outcomes, were more likely to discharge to home and remain at home a year later (rather than ending up at a nursing facility or other care facility), and had fewer pressure ulcers during the year after hospital discharge. Psycho-educational activities included the following topics: goal setting, substance use/abuse, wellness and life style modification, relationship issues, sexuality after injury, problem solving and decision-making skills, self-advocacy, assertiveness and pain management.

On the other hand, when psychologists spent more time focusing on processing emotions, this was associated with poorer function at discharge and at 1 year post discharge, less physical independence and community mobility, lower life satisfaction survey scores, and the presence of more pressure sores at the 1 year anniversary. Psychotherapy

Continued on page 2
topics in this category included desensitization to negative stigma of being in a wheelchair, emotional adjustment, circumstances associated with the injury, family coping, building rapport, pain management, locus of control issues and facilitating peer mentoring. The conclusion was that psychologic services focusing on remediating deficits and negative emotions were associated with negative outcomes, while services intended to foster adjustment and growth tend to be associated with favorable outcomes.

Social Services and Case Management:
The data analyzed showed that more sessions dedicated to discharge planning for a home discharge setting and dedicated to financial planning were associated positively with being more likely to discharge to home. On the other hand, more sessions focused on planning for discharge to a location other than home (nursing facility, for example) had negative associations with societal participation outcomes for level of social integration, being employed, residing at home and mobility scores, at the 1 year injury anniversary.

Therapeutic Recreation:
A larger amount of rec therapy interventions such as exposure to community settings and leisure activities during the patient’s inpatient rehab stay was correlated with improved outcomes at rehab discharge and at the 1-year anniversary. These improved outcomes at rehab discharge included FIM scores and discharge to home vs. other settings. The improved outcomes at the 1 year anniversary included FIM scores, being employed at a job or being in school, residing at home, societal participation, having less re-hospitalization and less pressure sores after discharge. In addition, more time spent with community and leisure rec therapy activity during inpatient rehab was associated with more participation in the same type of activities at the 1-year anniversary. The conclusion was that more time spent in recreation therapy community and leisure activities during inpatient rehab is associated with a return to a more productive and healthy life after the spinal cord injury.

Occupational Therapy:
For patients with motor complete paraplegia, the data showed that more time spent with OT on clothing management and toilet hygiene skills was a strong predictor of higher scores in lower body self care skills at the time of discharge from the rehab hospital. For patients with motor complete low tetraplegia (C6, 7, 8), more time spent working with OT on lower body dressing, manual wheelchair mobility training and bathing training was associated with higher functional independence scores for lower body self care skills at the time of hospital discharge. Active patient participation during OT sessions was predictive of discharge functional independence outcomes. Increased amount of group OT sessions (less 1-on-1 self care training) resulted in lower discharge level of independence with self care skills.

Physical Therapy:
For patients with motor complete low tetraplegia (C6, 7,8), higher independence scores for wheelchair transfers at hospital discharge was strongly associated with having spent more time with PT working on manual wheelchair skills. Males had higher levels of functional independence at discharge than females, and this was not dependent on the type of physical therapy provided. Patients with higher levels of incompleteness of their spinal cord injuries (ASIA impairment score of C or D vs. A and B) was highly predictive of the level of independence with mobility skills at the time of discharge, no matter what type of PT was done.

Speech Therapy:
This portion of the research study was less clear cut. Not surprisingly, patients with combined head injury and spinal cord injury deficits who had cognitive impairments on admission had a higher amount of time spent in speech therapy and were more likely to be abnormal on cognitive functional assessments at the time of discharge. More time in speech therapy sessions correlated with lower cognitive scores at discharge. These patients also showed the greatest amount of cognitive functional improvement during their rehab hospitalizations. Future research is needed specifically for those with dual brain and spinal cord diagnoses to determine which types of speech therapy tasks are associated with improved outcomes.
Neuromuscular Therapy

St. Luke’s certified, interdisciplinary team of therapists with specialized training in neuromuscular and musculoskeletal rehabilitation provide a full range of one-on-one therapy in a personal and friendly environment to help improve patient functionality and independence.

Outpatient services may include:
- Physical therapy
- Occupational therapy
- Speech therapy
- Aquatic therapy
- Driving evaluations
- Swallowing evaluations
- Psychological services
- Neuropsychological evaluations
- Pelvic floor rehabilitation
- Vestibular rehabilitation
- Lymphedema
- Post breast cancer therapy

Treatment programs are designed for neuromuscular patients including those with the following diagnoses:
- Stroke
- Brain injury
- Brain tumors
- Multiple sclerosis
- Parkinson’s disease and other movement disorders
- ALS (Lou Gehrig’s Disease)
- Balance and vestibular disorders
- Spinal cord injury
- Post-polio syndrome
- Other neuromuscular diseases

St. Luke’s Outpatient Therapists

Aimee, MS, PT, ATRIC, 12 years — Aimee is a physical therapist and specializes in treating clients with neurological diagnoses including spinal cord injuries, stroke, brain injuries, and other neurological disorders. Aimee has received additional certification in aquatic therapy.

Ryan, OTR/L, 6 years — Ryan specializes in deficits related to traumatic brain injury and (CVA) stroke, in addition to self-care, home management, upper body strengthening and coordination.

Nancy, OT/OTR/L, 25 years — Nancy is an occupational therapist specializes in treating patients with neurological disorders and is known for her creative and functional therapy approach. She also has specialized training in lymphedema therapy and driving evaluations.

Lynn, MS, PT, 18 years — Lynn is a physical therapist who specializes in patients with head injuries, stroke and other neurological events.

Laura, PTA, 3.5 years — Laura is a physical therapy assistant and enjoys working with patients in neuromuscular therapy.

Hilary, PT, DPT, 7 years — Hilary specializes in treatment of neurological disorders with functional mobility training and balance issues.

April, PTA, 8 years — April is a physical therapy assistant and has a special interest in treating patients with neurologic involvement and aquatic therapy.

Patty, OT/L, CHT, 30 years — Patty is an occupational therapist experienced with musculoskeletal and neurological injuries. She is a Certified Hand Therapist with extensive hand therapy experience.

Left to right: Aimee, Ryan, Nancy, Lynn, Laura, Hilary, April. Not pictured: Patty.
St Luke’s Upgraded AT Lab

St Luke’s therapists, along with RESNA certified Assistive Technology Professionals, utilize state-of-the-art technology and equipment to increase the capabilities of our patients with disabilities.

St. Luke’s Assistive Technology Lab was recently upgraded with a new look and new technology.

This lab is utilized by patients who are admitted to the hospital and is also available through our outpatient therapy department by appointment with a doctor’s referral. If you are interested in working with one of our Assistive Technology Professionals, or for more information, please contact us at (509) 473-6869.

The St. Luke’s Assistive Technology Lab upgrades were made possible thanks to gifts to the INHS Foundation and grant money. To support upgrades and programs like this, please visit www.inhs.info/foundation or call (509) 473-6099 to make a gift.

AT Lab Updates:

1. 55 inch flatscreen LED smart TV – large screen to be utilized for patient education and training purposes with DVD’s or computer-based software with use of HDMI connection to Ipad, laptop computer, or desktop computers. Excellent option for individual’s with low vision, and for class/group sessions for spinal cord education with our patient’s with paraplegia and quadriplegia.

2. iPads with smart covers – these iPads are equipped with applications for augmentative communication, cognitive rehabilitation, and an environmental control system that will work in our independent living apartment.

3. All in one touchscreen computer – excellent option for individuals with limited arm and hand function. Allows use of computer functions and applications with one hand touch of the computer screen. Larger screen is important for those individuals with low vision.

4. Web Cams – allow for use of Skype as an option to communicate with friends and family.

5. Latest voice to text software (Dragon Naturally Speaking) - for composing text using your voice (voice dictation). This will benefit individuals with limited or no use of their hands.

6. WiVik 3 software to allow on screen keyboard – software that will allow for point and click functions, dwell selection, switch based scanning, word prediction and voice output.

7. Voice activated phones – to give patients better access to call their families and loved ones while they are in the hospital.

8. Sip and Puff phones – provides an alternate option to the voice activated phones.

9. Voice activated bed control system - controls the call light system as well as TV and phone functions. This allows complete environmental control from the hospital bed by simply using your voice.

10. Adaptive switches and mouse options to allow individualized accessibility based on the specific disability.

11. Wireless keyboards and mouse – keyboards can now be easily placed on a patients lap or lap tray or mounted to the wheelchair.

12. Mounting devices – for mounting smart phones, tablets, and voice controllers to wheelchairs or beds.

13. Four fully electric desks, each with a computer station. This will allow for the desk to be adjusted based on the height of the patient’s wheelchair to allow for accessibility and ergonomics while using the computer station. More computer stations mean more patients and therapists can utilize the lab.

Assistive technology is a general term that includes assistive, adaptive and rehabilitative devices for people with disabilities. It also includes the process used in selecting, locating, and using them. Assistive technology promotes greater independence by enabling people to perform tasks that they were previously unable to accomplish, or had great difficulty accomplishing, by providing enhancements to, or changing methods of interacting with, the technology needed to accomplish such tasks.
FES Bike

Arms not getting you enough exercise?

Use your legs to exercise your heart and improve cardiovascular fitness with the Community Functional Electrical Stimulation (FES) Bike Program.

Contact St. Lukes Outpatient Therapy (509) 473-6869 for more information.

Prior to use, participant (with a caregiver) will be assessed and trained by a St. Luke’s physical therapist in 5-10 visits to perform independently.

Independent exercise sessions:
2-3 days per week
$35 dollars per month

Upcoming community recreation events:

**June 15 - Outdoor Recreation Experience at Bear Lake.** Varied outdoor activities including fishing, canoe/kayak, handcycling, and archery. BBQ social at noon, open to all interested in learning about outdoor recreation and a day of fun! No cost for participation/spectating. Registration required before June 5.

**July 13 & 14 - Skifest at Clear Lake.** Adaptive water skiing and water sports weekend. All inclusive, family/friends are welcome. Donations only and registration required as ski slots are limited.

Contact Candice Belcourt for more details about recreational events.

Belcoucm@st-lukes.org
879-8137

Support Group

SCI support group: meets every 4th Wed from 1 -2 p.m. Please check at St. Luke’s front desk for room as location changes on occasion. SCI support group facilitates an opportunity to interact and network with peers living with spinal cord related injuries and deficits. Family and friends are always welcome.

Wanted:

Connie Hilliard, Davenport, is looking to purchase a used Easy Stand or a Grand Stand standing frame. If you have one you would sell, her number is (509) 710-3085.
Benefits of Power Mobility

Are you having difficulty walking around your house, remaining in bed, or sitting in a chair all day due to pain or muscle fatigue caused by a medical condition? If this sounds like you or someone you know, power mobility might be a way to regain your independence, freedom, and mobility.

Most individuals who have mobility deficits experience pain when using their current mobility device. These devices, such as a cane, walker, and/or manual wheelchair have been known to cause repetitive strain injuries resulting in increased lethargy. Staying in bed or chair bound for extended periods of time can cause major health issues such as: respiratory decline, pressure sores, depression, or pain. Typically, issues like these have been known to diminish the quality of life or even worse, decrease life expectancy.

Power mobility has come a long way since its inception in the early 1900’s. The first models were basic roller chairs with motors attached and standard size seating. In today’s arena, powered mobility equipment is sleek, technologically sound, form fitting, and can replace loss of function. Newer models also come in rear-wheel drive where the motor and larger drive wheels are mounted in the “rear” of the chair, front-wheel drive, and the most popular mid-wheel drive.

The different types of drive configurations are used to meet the individuals’ environment where the chair will be utilized. For smaller living arrangements mid-wheel drive chairs offer tighter turning radiiuses, but front-wheel drive chairs climb over obstacles with ease.

Mobility equipment is a wonderful tool to help complete your (or your loved ones) mobility related activities of daily living. If you are interested in finding out more about this type of wheelchair or any other mobility needs you might have, please feel free to contact United Seating & Mobility at (877) 295-8950.

VISION STATEMENT
Be nationally recognized as the regional rehabilitation center of choice based upon reputation, quality outcomes and innovative care.

MISSION STATEMENT
Our mission is to be a resource for health and wellness in order to optimize the potential for a full and productive life. We serve individuals and their families requiring expertise in medical rehabilitation.

St. Luke’s Rehabilitation Institute seeks to provide value to those served by treating the whole person with regard to physical, intellectual, emotional, cultural, and spiritual needs in order to restore to their fullest potential the capacity for living. Excellence of care will take place in an atmosphere of compassion, reverence and integrity.

St. Luke’s is a division of Inland Northwest Health Services (INHS). INHS is a non-profit corporation in Spokane, Washington providing collaboration in health care services on behalf of the community and its member organizations Providence Health Care and Empire Health Foundation.