

REHABILITATION

The Road Back



HOME OF SIDNEY KIMMEL MEDICAL COLLEGE



Welcome to Jefferson Health's Department of Rehabilitation Medicine

In December 2016 I joined the faculty of Jefferson's (Philadelphia University + Thomas Jefferson University) Department of Rehabilitation Medicine as its new Chair and simultaneously took on the role of Senior Vice President of Post-Acute and Rehabilitation Services of Jefferson Health.

Stepping into my office that first day, I remembered the giants of rehabilitation medicine who have led this department, and the numerous esteemed graduates of the residency program who continue to lead rehabilitation departments around the country and contribute to the scientific knowledge that has moved this discipline forward. I also remembered the past therapists, nurses, psychologists, case managers, social workers, and physicians of Jefferson Health who improved the lives of patients around the world every day through their work, and our current staff who do so now.

The purpose of this newsletter is to bring you stories of Jefferson faculty, staff and patient accomplishments. Rest assured, we will continue to build on the heritage of this department and institution to educate tomorrow's leaders in rehabilitation, to promote research to find the cures for various disabilities and their medical complications, and to improve the way rehabilitation care is provided in the future, ensuring all rehabilitation patients will benefit from the work done here every day.

I am honored to call Jefferson my home, and to join the history of this illustrious family of caregivers.

With warm regards,

A handwritten signature in blue ink that reads "Steve Williams, MD". The signature is fluid and cursive.

Steve Williams, MD
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Telehealth Highly Effective in Hospital and at Home for Jefferson Health Rehab Patients and Families



For more than two years, Jefferson Health's JeffConnect® telehealth service has been connecting patients and their family members with Jefferson Health doctors — anytime, anywhere — through cell phones, tablets or computers with webcams. Through telehealth, Jefferson Health physicians can deliver face-to-face care and consultation to patients and their

loved ones at locations outside of the hospital and usually in the comfort of home.

Like other areas within the hospital, Thomas Jefferson University Hospital's Comprehensive Acute Rehabilitation Unit (CARU) began using telehealth already established in 2015 for Virtual Rounds, when hospital care teams, including physicians, therapists, nurses and case management, visit with patients at bedside. Virtual Rounds allow family members unable to be onsite to observe and ask the care team questions about the care being provided and plans pertinent to discharge.

"Virtual Rounds have made our team more transparent," says Kristofer Feeko, DO, Medical Director of the Comprehensive Acute Rehabilitation Unit. "They enable us to better disseminate vital information more conveniently to family members who may serve as caregivers for their loved ones at home and prepare them for the patient discharge process.

"Virtual Rounds also provide an easy segue to post-discharge telehealth appointments."

Care from the Comfort of Home

Early in 2016, the CARU began using telehealth for follow-up visits with patients beginning, optimally, five to seven days following discharge. The logic behind the decision was that many patients, having been treated for joint replacement, orthopedic trauma, cancer, neurological disorder, amputation, stroke, transplant or spinal cord injury, were likely to have mobility issues. Given Jefferson Health's catchment area, many of our patients live at a distance and therefore are recuperating at a location fairly remote from main campus.

"From the comfort and convenience of home," explains Dr. Feeko, "telehealth provides patients and families access to the Jefferson Health Rehab Physician who directly cared for them and was responsible for managing the discharge process. This doctor best knows the nuances of the case and can most effectively address present and potential issues."

Prior to their discharge, patients are informed about the telehealth option and offered an appointment. The names and contact information of those patients who accept are forwarded to a Jefferson Health telehealth coordinator, who ensures that all issues related to connectivity with the patient are optimal. Patients are usually seen once or twice via telehealth to bridge the gap until their first office visit.

Comprehensive Telehealth Visits

Dr. Feeko says that a typical telehealth visit covers:

- General questions regarding how the patient is feeling
- Assessment of the home environment for rehabilitation purposes, in order to optimize safety
- Attainment of and compliance with medications
- Review of follow-up medical care with physicians who referred the patients to the Thomas Jefferson University Hospital CARU or who were involved with recent, relevant procedures
- Confirmation of initiation of home care services, including physical or speech pathology, as well as occupational therapy and nursing care
- A brief examination of the patient, including their mobility, functional capabilities and troubleshooting of any equipment, such as braces, they may be using

"We find that telehealth appointments are particularly helpful to post-concussive patients," says Dr. Feeko. "They often require many visits to follow-up effectively on symptoms management and control. But they're often dealing with headache, nausea, double vision and dizziness. Follow-up care from the comfort of home can reduce symptoms and improve their quality of life."

Still, he adds, it's not for everybody. "If a patient is hard of hearing, severely cognitively impaired or without access to or able to use suitable hardware and software for telehealth communication, we would likely avoid suggesting telehealth. That isn't to say we wouldn't provide it if a caregiver requested the service, had suitable technology and agreed to be present with the patient during the appointment."

Catching On

Dr. Feeko senses that the skepticism telehealth first faced is gradually fading. "Some patients worry about how talking on a tablet using software like FaceTime will be effective," he admits. "However, most of the feedback that we've received is that they find it surprisingly helpful and effective. The major issue is how certain body systems can be examined. But with the help of a caregiver present with the patient, all parts of an examination can be done as easily with telehealth as it would be in the office. We can look at breathing patterns, level of distress, abdomen distension, edema in the legs, appearance of the skin and wounds. We can effectively demonstrate exercises, or teletherapy, to help with rehabilitation."

"With telehealth," concludes Dr. Feeko, "we are improving patient satisfaction as well as outcomes, and decreasing their risk of readmission to the hospital within the first 30 days of discharge - a critical period of time, where simple interventions can make a significant difference towards these outcomes. It is now viewed by patients and providers alike as a cost-effective measure for improving patients' health and safety while improving quality of life."

Inspiring, Relatable Volunteer Mentor to Rehabilitation Patients



On Wednesday afternoons, 58-year-old Bill Cawley makes his rounds on the Thomas Jefferson University Hospital Comprehensive Acute Rehabilitation Unit (CARU). Bill is an official Jefferson Health Volunteer Stroke Peer Mentor. To patients recovering from stroke and/or other conditions, he's an

inspiration.

"Each week, I meet with three to five patients who have been referred to me by Jefferson Health's interdisciplinary Rehab team," says Bill. "I always tell those I see for the first time, 'I was right here, just like you are, for a month, and I want to share with you some of my experiences. I know you're scared. But believe me, if you work hard, you'll get out of it what you put into it.'"

"The most important thing I say is, 'You can take one day off the first weekend that you don't have therapy to feel sorry for yourself, if you choose to do so. After that first day off you cannot afford to indulge in any negative energy. You have to keep focused on doing everything the doctors and therapists tell you to do and give it your best shot. You've got to stay motivated.'"

Bill's words often get through to patients when others' can't. "Patients often tell the staff, 'You don't know, you haven't been in my situation.' But I have been in their situation, I do know!"

A Positive Motivator

"Bill has shared with many patients a perspective that no one but a stroke survivor and former patient can attest to," confirms Katie McCoach, OTR/L, Program Manager, CARU. "He lends them an ear, tells them his story and encourages them to be positive on their new journey. For example, one patient, who not only had a stroke but was also an amputee, recently told me, 'I was ready to give up until I met with Bill and he put me on the right track.'"

"From the very start, Bill was not only determined to be an active participant in his rehabilitation care but also always encouraging others to take part in theirs," Katie recalls. "That's why, when he told me that he wanted to become a volunteer on the rehab unit, I enrolled him in our training program for stroke peer mentors. We've had other candidates but it really takes a very special individual to be able to deliver the right message to current patients on the rehab unit."

"Bring It On!"

Bill hadn't had any major health issues when he woke up one Sunday morning last year feeling nauseous, and with so little sense of balance down the left side of his body, he fell. He didn't know what was wrong, but he knew he needed to get an emergency room.

"My first thought," he recalls, "was not to call 911 because they would have probably sent an ambulance from another hospital. But I wanted to go to Jefferson, which has been an important place to my family ever since my father and uncle attended medical school there – my father, Thomas P. Cawley, MD, was in the class of 1953, and my uncle, Malvin J. Dougherty, MD, graduated in 1954. So I got a cab and went to Thomas Jefferson University Hospital's Emergency Room, which was just a few blocks away."

Diagnosed with a right pontine stroke, Bill spent a few days at Jefferson Hospital for Neuroscience. When it was time to decide where to go for inpatient rehabilitation, he decided on staying with Jefferson Health, even though he knew nothing about the CARU. There, for the next 26 days, he told physical therapist Christopher Cash and occupational therapist assistant Jeff Weest to "bring it on!"

"I was determined that if Chris told me to do 10 repetitions, I'd do 11 or 12. It was hard but I fought through it. They used neurostimulation on me like it was going out of style, to 'rewire' my brain. They also gave me homework, in the form of rubber bands and a ball, to help further help me regain feeling and function."

Moving Forward with Hope

Once discharged, Bill went through a couple of weeks of home care before beginning eight months of weekly three-hour visits at JeffFit Outpatient Rehabilitation on South 9th Street, under the care of Kimberly Heckert, MD. In addition to continuing his intense physical and occupational therapy regimen, Dr. Heckert provided Bill with corticosteroid injections for adhesive capsulitis, or frozen shoulder. Those injections and physical therapy not only eased his pain but helped to restore a bit more movement in his left side. Eventually, Bill plateaued at 30 percent restored usage.

Despite his determination and the "remarkable" care he received at Jefferson Health, Bill found his inpatient rehabilitation at CARU to be "a tremendously difficult time and a life-changing experience." New physical limitations meant unwelcome adjustments to his lifestyle, such as the end of his successful sales career.

Nevertheless, Bill is tremendously grateful for the progress he's made with the help of Jefferson Health's CARU staff as well as his own drive and determination. He decided that he wanted to give something back. Now, in addition to his weekly rounds as a Stroke Peer Mentor, Bill leads Jefferson Health's monthly Stroke Support Group, which meets on the first Wednesday of the month on the CARU, and has just started working with Jefferson's Health Mentor Program to help trainees learn effective, relatable ways to communicate with and reassure patients.

"This is the most satisfying thing I've ever done," sums up Bill. "I was a Catholic school kid. One of my teachers, Father Bill Atkinson, OSA, was paralyzed from the neck down, yet he always claimed that he never had a bad day. I keep him in mind and move forward with hope."

Rehab Staff News

Rehabilitation Staff Presentations/Publications:

- **Cathy Farnan Kennedy, MSN, CRNP, CRRN, ONC**, presented at the International Spinal Cord Injury Society (ISCIS) conference in Dublin, Ireland, 10/23-10/27, 2017.
- **Amanda Morina, PT, DPT, NCS, ATP**, and **Tracy Ransom, PsyD**, served as secondary authors in 6 different chapters in the book, *Osteoporosis Rehabilitation, A Practical Approach*, by Dr. Christina Oleson.
- **Gabriela Charles, MS, OTR/L, Kathleen Connolly, MS, OTR/L, Alan Cook, MS, OTR/L, Megan Drollinger, MOT, OTR/L**, presented a poster at the American Occupational Therapy Association National Conference, March, 2017, Phila, PA. Title: "Evidence in Action: Impact of Early Occupational Therapy Intervention in the Complex Stroke Patient."
- **Tracy Ransom, PsyD**, presented "Psychologist Prescribing Rights: The Latest on Legislation and Training" at the Pennsylvania Psychological Association Conference, Harrisburg, PA, June, 16, 2017.
- **Jenny Rixon, PT**, and **Haleh Houtan, PT**, received IRB approval regarding PT use of functional outcome measures in collaboration with Jefferson faculty and students. The students will present the information via a poster at Combined Section Meeting in February 2018.
- **Tiffany Prince, PT, DPT, OCS** and **Erica Rao, PT**, presented on Hip and Knee OA differential diagnosis at Mini Combined Section Meeting for the Pennsylvania Physical Therapy Association sponsored at Jefferson.
- **Luke Smith, PT**, presented "Hemophilia and PT Implications" at the South Eastern District Pennsylvania Physical Therapy Association Meeting.
- **Kelly Salmon MA, CCC- SLP, BCS-S, CLT-LANA** is working on a research project with IRB approval on the functional swallow-related outcomes following transoral robotic surgery for the base of the tongue carcinoma.
- **Jessica Shank, PT**, presented a poster at Combined Section Meeting for the American Physical Therapy Association: "Department Integration of Community Hospital with a Large Urban Teaching Hospital: A Case Report."
- **Nicole Dugan, PT, DPT, CLT-LANA** presented at Pennsylvania Physical Therapy Association Mini Combined Section Meeting: "Visceral Mobilization: Treating the Back from the Front."
- **Kara Maharay, MS CCC/SLP-L, BCS-S** and **Kelly Salmon, MA, CCC-SLP, BCS-S, CLT-LANA** presented: "Implementing a FEES Program (FEES 101)" & "A Collaborative Approach to Implementing a Validated Swallow Screening in Acute Stroke Patients."

Rehabilitation Physician Staff Presentations/Publications:

- **Steven R. Williams, MD**: Stillman MD1, Barber J, Burns S, **Williams S**, Hoffman JM. Complications of Spinal Cord Injury Over the First Year After Discharge from Inpatient Rehabilitation. Arch Phys Med Rehabil. 2017 Jan 20. pii: S0003-9993(17)30013-8. doi: 10.1016/j.apmr.2016.12.011.
- **Steven R. Williams, MD**: Stillman, MD, Williams, SR. On Primary Care and Spinal Cord Injury. J Spinal Cord Med. 2017 Jan 23;1. doi: 10.1080/10790268.2016.1273569.
- **Steven R. Williams, MD**: Stillman MD, Williams S, Graves D. Problematic Methodology (letter). Spinal Cord Ser Cases. 2016;2:16028.
- **Steven R. Williams, MD**: Stillman M, Bertocci G, Smalley C, Williams S, Frost KL. Health Care Utilization and Associated Barriers Experienced by Wheelchair Users: A Pilot Study.
- **Gude, T**. Delayed Presentation of CSF Leak During Concussion Management. Case Report-Presented at the American Academy of Physical Medicine and Rehabilitation in Denver, CO (October 2017)
- **Michael Mallow, MD**, February 7, 2017 "Developing PM&R Entrustable Professional Activities" – 2017 Association of Academic Physiatrists Annual Meeting, Residency and Fellowship Program Directors Workshop, Las Vegas, NV. February 10, 2017 "Development of a participatory inpatient rehabilitation administration curriculum" – 2017 Association of Academic Physiatrists Annual Meeting, Program for Academic Leadership, Las Vegas, NV.
- **Michael Mallow, MD, Mallow M**, Baer H, Moroz A, Nguyen VQC. Entrustable Professional Activities For Residency Training in Physical Medicine and Rehabilitation. [published online March 17, 2017] *Am J Phys Med Rehabil*. doi:10.1097/PHM.0000000000000741
- **Ralph Marino, MD**, Petrin Z, Oleson C, **Marino M**. Leg Paralysis after Epidural Steroid Injection in a Patient with AV Dural Fistula. Poster presented at AAP Annual Meeting 2017, Las Vegas, NV.
- **Ralph Marino, MD, Marino RJ**, Schmidt-Read M, Kirshblum S, Dyson-Hudson T, Tansey K, Morse L, Graves D. Reliability a.d agreement of standard and potential alternative sacral sparing items at 1 month post-injury. Accepted for poster presentation at ISCoS Annual Scientific Meeting 2017, Dublin, Ireland.

Rehabilitation Medicine Staff Awards and Recognitions:

- **Kristofer Feeko, MD**, 2016 Model Teaching Award for Resident Teaching, Department of Rehabilitation, Sidney Kimmel Medical College.
- **Joe McCoy, PT**, obtained Neurology Clinical Specialist and **Luke Smith, PT**, obtained Ortho Clinical Specialist from American Physical Therapy Association.
- **Cardiac and Pulmonary Rehabilitation at Jefferson's Methodist Hospital** received Recertification of Cardiac Rehabilitation and new certification for Pulmonary Rehabilitation from the American Association of Cardiovascular and Pulmonary Rehabilitation.
- **Amanda Morina, PT, DPT, NCS**, became certified as an Assistive Technology Professional (ATP).
- **Amanda Morina, PT, DPT, NCS, ATP**, received the James B. Erdmann Award for Excellence in Interprofessional Education and Collaborative Practice. June, 2017.
- **Tracy Ransom, PsyD**, was awarded The American Psychological Foundation's (APF) Walter Katkovsky Scholarship, May, 2017. This scholarship assists early career postdoctoral licensed psychologists in obtaining training in psychopharmacology.

Rehab Medicine Professional Activities Sponsorships:

Model Systems Leadership Forum Meeting, October 11-14, 2017

Thomas Jefferson University Hospital and Magee Rehabilitation hosted the 2017 Model Systems Spinal Cord Injury Therapy Leadership Forum. TJUH and Magee comprise the Regional SCI Center of the Delaware Valley Model System, which is one of 14 Model Systems throughout the US/Canada.

The Spinal Cord Injury Model Systems are funded by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR). The Spinal Cord Injury Model Systems are called "model systems" because they are national leaders in comprehensive and interdisciplinary SCI-related care from injury to community re-entry (MSKTC, 2017).

Using Simulation to Educate Therapists and Improve Patient Outcomes



“Simulation has been used in medical education since the early 1970s in the United States,” says Steve R. Williams, MD, Chair and Professor, Department of Physical Medicine and Rehabilitation (PM&R). Most studies focus on the effectiveness and use of human simulation in entry level and graduate training programs for future healthcare professionals, but there is less information available pertaining to the education of practicing clinicians. Jefferson Health has combined resources to offer clinicians an interactive learning environment with the use of high-fidelity human simulation that provides

a goal-directed, active learning experience in which practitioners can reflect upon and assess the way in which teams work together.

High-fidelity human simulation, which involves use of a computerized manikin to mimic real-life patient symptoms and physiological responses, offers the opportunity for participants to refine discipline-specific skills, engage in clinical reasoning and improve critical communication in a simulated emergent situation. Involving multiple disciplines in the simulation also allows for opportunities to improve team-focused interventions, as they would occur in an actual healthcare setting. Three different multidisciplinary scenarios were developed with clinicians that practice on Thomas Jefferson University Hospital’s Comprehensive Acute Rehabilitation Unit, based on the demographics and diagnoses representative of the inpatient rehab population. Thirty-five practicing clinicians, including occupational, physical and speech therapists, nurses, support staff, and PM&R residents comprising the interdisciplinary team on an inpatient rehabilitation unit volunteered to participate.

Methodology

Amanda Morina, Neurologic PT Clinical Specialist, along with her fellow facilitators, Brian Wolfram, Cardiopulmonary PT Clinical Specialist, and Cathy Kennedy, Nurse Clinical Specialist, had previously attended a comprehensive, interactive human simulation workshop to develop skills for all aspects of simulation learning – including formulating learning objectives, developing a scenario that facilitates critical thinking and team problem-solving, assessing outcomes, and effective debriefing strategies to cultivate personal and team reflections about the exercise.

Applying what the facilitators had learned, they devised three unique case scenarios – an evolving neurological event, a spinal cord injury, and complications post Left Ventricular Assist Device – and each exercise took place in the Dr. Robert and Dorothy Rector Clinical Skills & Simulation Center, a state-of-the-art facility located in the Dorrance Hamilton Building, in the heart of Jefferson Health’s campus in Center City Philadelphia.

They allotted one hour for each simulation, including pre-briefing and debriefing. The facilitators collaborated with one of the Rector Center’s Simulation Program Coordinators to set up the room and manikin used for the simulation, and were instructed how to operate the computer software to represent the manikin’s responses to the intervention and interaction with the clinicians.

In each simulation experience, the scenario started in a rehabilitation gym setting with the rehab therapists and aides present for the first responder role. As this group requested assistance, the facilitators staged the timing of alternate clinicians’ entrance to allow each participant adequate time to demonstrate skills expected during each phase of the emergent situation. The facilitators staged their times based on average response times in a real clinical setting.

Results

To assess the effectiveness of this simulation lab experience, the facilitators employed two outcome measures. The Jefferson Teamwork Observation Guide was used to evaluate interdisciplinary team communication and the interaction among team members in responding to the simulation. The facilitators also created a Likert scale questionnaire to gauge the participants’ confidence in their technical and interpersonal skills required during this simulation, and to identify opportunities for additional educational support. “The simulation yielded results similar to those existing in the literature regarding the ideology of practicing physically and emotionally challenging clinical skills in a low-risk environment,” reports Amanda Morina. In addition to the professional growth of the individual clinicians and, collectively, the rehabilitation team, the ultimate benefit is to progress patient care and generate optimal patient outcomes.

Going Forward

“In Jefferson’s new College of Rehabilitation Sciences opening in July 2018, we plan to increase our use of simulation and other innovative technologies such as virtual reality, altered reality and 3D imaging to create new paradigms for educating our students,” says Dr. Williams. “Their use will possibly allow shorter clinical rotations and increased time for co-curricular educational experiences in such disciplines as population health, translational research, integrative therapies and the intersection of therapies and design that will position our students to take a leading role in moving health care forward.” Further use of technology and human simulation with trained clinicians can be used to facilitate life-long learning, and allow for further collaboration between the academic and clinical settings within Jefferson for the sharing of knowledge, mentorship, and experiential learning.

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