Expanding Access to Physical Therapy: What is the Current State of Telehealth for Physical Therapists?

This article is based on a presentation by Chris Peterson, PT, DPT, Telerehabilitation Program Director, Hartford Healthcare Rehabilitation Network, at the 2016 FSBPT Annual Meeting.

This session covered how the incorporation of telerehabilitation technologies in physical therapy practice improves patient access and quality of care. The session emphasized general policy updates, educational resources, patient safety considerations, billing and coding updates, and emerging practice examples featuring practical lessons learned.

The presentation made ample use of audience polling. Of those who attended the session, 26% were in private practice, 22% worked in a hospital/healthcare system, 19% worked in the educational field, 17% worked for the government/DoD, and 17% described themselves as other.

Telehealth as a tool or system

Telehealth is not a separate medical specialty; it is a delivery tool or system. Services provided via telehealth technology may be synchronous or asynchronous in nature. Synchronous telehealth happens in real time using technology such as live videos. Asynchronous is not in real time and uses applications to deliver services in more of a "store and forward" method. A patient accessing a home exercise program via a patient portal is an example of asynchronous delivery of physical therapy via telehealth technologies.

The current use of telehealth

Although growing rapidly, telehealth is still not mainstream in medicine. When polled, only 38% of the audience knew of any providers or doctors that use telehealth. When members of the audience were asked what modes of telehealth with which they had interacted, 72% said synchronous and 28% said asynchronous. On the question of whether or not their institution was using telehealth in any medical area, 25% of the audience responded their institution was using it for teleconsulting, 17% are using it for direct care via videoconferencing, and 58% were not using it at all. On the question of whether or not the audience has used telehealth as a patient, 84% said no and only 16% said yes. The poll underlines the newness of the technology and the barriers to instituting it. When asked if the audience incorporates a phone or tablet in digital healthcare delivery, only 43% responded in the affirmative. On the question of if anyone in the audience was using clinical data from wearable devices, only 24% responded that they were. Of the 24% who answered yes, only 24% of them integrated the data from the devices directly into their electronic

medical records (EHR).

Not only is telehealth expanding in volume of use, it is also expanding into multiple treatment settings and geographic areas. Historically, telehealth was used in a rural setting as a means to improve access in underserved areas. Initially, since the smartphones and other technology common today weren't even developed, everything happened mostly clinic-to-clinic using the hub-and-spoke model. The spoke was the patient location, which is now referred to as the originating site, while the hub was the provider location, now referred to as the distant site.

The U.S. Department of Veterans Affairs (VA) has been using telehealth in the areas of orthopedics, cardiac care, and neurology, among others. The telehealth stories from a 2014 VA Telehealth Fact Sheet are not rehabilitation-specific, however, the stories show an improvement in the price of consultations and a vast reduction in readmissions, all while maintaining a good satisfaction rate.

There are some telehealth stories beyond the VA. Brooks Rehabilitation in Florida is doing some early work with telerehab. Much of the work there has been grant-funded. Hartford Healthcare Rehabilitation Network in Connecticut and Infinity Rehab in the Northwest also are doing some telerehab work.

The Technology
The advancement in technology and the options for telehealth delivery is growing exponentially. Currently we have options for validated treatment and validated assessment, vastly improved internet infrastructure, a significant increase in consumer access to technology, and an increase in telehealth use in other medical specialties. Regulatory boards are responding to the change in the landscape by evaluating ways to improve licensure portability, which often affects the ability to deliver telehealth services.

It's one thing to have the technology. It's another to deliver the technology in a way that is appropriate, ethical, cost efficient, and gets a good clinical result. Dr. Trevor Russell and his team at Queensland University are credited with doing a lot of the groundwork on telehealth. The first thing they consider is: does the technology deliver as promised? Next, they evaluate the diagnostic accuracy, followed by the clinical applications — does it work with a specific kind of patient? After collecting that information, they can look at cost and its effect on a whole population or society.

Even with the development of improved technology to allow services to be delivered in a safe and effective manner, there has been limited adoption by patients and clinicians. Telehealth promises a potential for cost savings, however at this point perhaps the biggest barrier to wide-scale use is a lack of a clear revenue source.

Challenge of Payment
The audience poll underscores the challenge and the barriers to receiving payment for services delivered via telehealth technology. Eighty-nine percent of the audience polled responded that they are not reimbursed for PT services provided via telehealth. Only 5% are using telehealth to deliver PT services in an Accountable Care Organization (ACO) or other model justified by cost savings.

Medicare payment policies often influence payment policies in the healthcare marketplace.

At this time, the Centers for Medicare & Medicaid Services does not recognize PT, OT, and speech as approved telehealth providers. Currently, Medicare Fee for Service has some limitations on live video. It will pay only in rural counties, which is 20% of beneficiaries. Originating sites are limited and cannot be a home. Rehab therapists are excluded and only specific procedures are covered. Store and forward is also barred. On a positive note, the new Medicare knee/hip bundle covers all beneficiaries and all originating sites; however, the bad news is that PT and OT services are still not covered in this bundle.

There are some programs that have looked at alternate means of funding. Some U.S. pilot programs have been set up with individual contracts with payers and others that are cash-based.

In 2015, the American Telemedicine Association (ATA) submitted a request for new codes to the Centers for Medicare & Medicaid Services (CMS). The ATA asked the leaders of its Telerehab SIG if it wanted to include codes for submission, and if so, to provide some justification for them. The SIG went through the literature and attached the literature to the appropriate codes. The two with the most evidence were PT codes, therapeutic outcomes and diagnostic accuracy. There have been a number of assessments validated over telerehab.

The optimal goal at the federal level would be to obtain full telehealth authority of Medicare Advantage plans and ACOs. At the state level, telehealth must be addressed through statutes, regulations, and regulatory board statements. There is a shift in the payment paradigm as far as risk is concerned, shifting the risk from the payer to the provider. Telehealth may be one of the tools to help mitigate that.

Research
The steps to research success are:
1. Technical efficacy — does the technology work
2. Diagnostic accuracy — is this valid with the intended diagnosis
3. Therapeutic outcomes — can we produce quality outcomes
4. Societal efficacy — sustainability and impact to society.

In a non-scientific, practical literature review in PubMed, 447 articles were returned with the search term "telerehabilitation," 298 were returned with the search terms "telerehabilitation" and "mobile," and 14 with "telerehabilitation," "physical therapy," and "speech rehabilitation."

If you use the search terms "telehealth" and "physical therapy," 604 articles are returned, compared to 142 returned with the search terms "telehealth" and "OT" and 74 returned for "telehealth" and "speech-language pathology."

Of the PT research articles, 113 looked at cost, 167 looked at clinical, and 96 investigated satisfaction. Likewise, the literature review shows an increased emphasis looking at mobile technology in telehealth as smartphones continue to play a greater role in society.

The key research takeaways are first, more data is needed. The data needs to be focused on when is this right, and for whom. It is not a replacement for how care is provided traditionally. Other key takeaways are that PT assessments and interventions have been validated via telerehab, that clinical trials have created some directive data, and that early

stage systematic reviews have been published.

Operational Research & Case Study
Although not the only area where applicable, technology allows for operational research in ways that haven't been available before. Hartford HealthCare was used as a case study on how technology could help provide care across the entire continuum a healthcare system provides. Jefferson House, a skilled nursing facility of Hartford Hospital, provided the grant for the study. Jefferson House worked in collaboration with Hartford Healthcare's Bone and Joint Institute, Rehabilitation Network, and HealthCare at Home.

The Coordinated Care Post-Acute Care Model looked at using telehealth, but only at the appropriate patient handoffs. Pre-surgical and acute care are the baseline outcomes. There is a telehealth handoff from acute care to sub-acute care, and a telerehab handoff from sub-acute care to home care. It helps the providers communicate better with the patient and exposes the patient to the provider they will see as they transition from the hospital to the nursing home.

Before implementing the model, the institution took stock of what it needed to do from a regulatory perspective. Talks were held with regulators and the insurance carrier and it created a risk assessment grid of everything that could go wrong, the likeliness each risk could occur, and the strategy to mitigate the risk. The team worked with the legal department to vet the vendors and draw up contracts. A lot of the issues centered on privacy and security and who owned the data. The Institutional Review Board also needed to be brought up to speed. The risk of falls is one of the factors seen as a barrier to Telerehab. There haven't been any yet in this study, but it is something they diligently guard against. The hospital's insurance carrier had no issue with the change.

The telerehabilitation study was launched in four phases. The first phase was the cost assessment and training. Phase 2 consisted of testing the technology and developing the consultation model. The hospital is now in Phase 3, where the direct care model is being created using data collection and analysis. Connectivity, satisfaction of the provider, and satisfaction of the clinician are among the issues being analyzed. Phase 4 will include dissemination of the model.

Hartford chose an iPad for its patients' synchronous equipment because the synchronous software solution it uses comes from the University of Queensland team, which recently released its product on the iTunes Store. The clinician uses a computer. The whole system, including a tripod, costs about $900. All the iPads include a cell service to avoid connectivity issues. In the future, patients may be able to use their own devices but for now must use Hartford's equipment. Patients are trained on the devices at the facility before being sent home with them.

About 25 patients were surveyed on technology satisfaction and returned a high satisfaction rating. The providers also were surveyed. While their satisfaction was high as well, it was lower than the patients', which is in keeping with the literature. When providers were questioned about acceptance, more than half disagreed with the statement that "most of my colleagues will welcome the fact that I use telemedicine." It's a cultural change and acceptance will not come right away.

The case study was an 85-year-old male who lives alone in an apartment with no Wi-Fi and

underwent his second total knee replacement. Originally, the study required the patient to transfer from the hospital to a skilled nursing facility before going home. The trend, however, is for patients to go directly home from the hospital. So while the skilled nursing facility is still offered, it is no longer a requirement of the study. In the case of this man, he was discharged from hospital to home and received telehealth rehab services.

The first telerehab session was designed for three weeks, with three 45-minute sessions a week of real-time, synchronous video with his therapist. The patient wore a Fitbit during the sessions and also had access to another app on his iPad that showed him what exercises to do, contained videos and still pictures, and allowed him to self-rate using a simple star system on how he felt about a particular exercise on a given day. He also rated his pain level each time. That information was logged into a dashboard that both he and the therapist could see. With the Fitbit, the therapist set some arbitrary low-end goals just to motivate the patient because the data does not yet exist on what is best. The patient can also securely text message the therapist.

Telerehab visits consisted of measuring knee flexion/extension in supine and sitting, stretching and strengthening exercises, balance training, gait training, and stair training. Patient safety, of course, is the first consideration and there may be instances where telerehab is not the best course of rehabilitation.

The patient in this case study performed his final measurements over Telerehab then followed up in the clinic for in-person measurements per the protocol. The study concluded with the patient and therapist submitting satisfaction surveys and measuring the patient on the lower extremity functional scale. The patient was very satisfied with his treatment and was referred to outpatient PT.

Policy & Education
Although not specific to telehealth, the Physical Therapy Licensure Compact (PTLC) isn't a telehealth-specific issue, but improving licensure portability will help alleviate the licensure issues that are expensive and time-consuming for inter-state providers.   Sixty percent of those in the audience said they practice in more than one state, but only with in-person services; 20% practice across state lines both in-person and via telehealth, and another 20% practice in more than one state exclusively through telehealth. The PTLC will require only one "home state" license and a Compact Privilege to practice in any other member state. The Compact Privilege is much faster to obtain than licensure in another state. States interested in becoming members of the PTLC should look if their state has adopted the physician or nurse compacts and use that to leverage the PTLC.

The Telerehabilitation special interest group of the American Telehealth Association (ATA) has created two subgroups on policy and education. The policy group promotes and supports state and federal advocacy efforts working with other associations about key policy issues. Many other health associations are actively promoting telehealth. It's important for PTs to be involved early in the game to help shape the policy. The policy group also created an OT/PT/SLP regulatory map resource and supports other professional associations with telehealth advocacy. Among other initiatives, the education group is updating the ATA's Blueprint for Telerehabilitation Guidelines, which were initially published in 2010. The Blueprint is best used in program development.

The Blueprint includes best practices in the areas of Administration, Clinical Guidelines,

Technical Guidelines, and Ethics. Administrative Best Practices covers the area of complying with federal and state regulations, documentation, privacy and security, communication, research, technology training for both patient and clinician, and quality improvement. Clinical Best Practices follow the National Clinical Practice Guidelines. In telehealth, validity is the biggest issue, so care needs to be taken to consult the literature to see what has already been done and build from there through informed decisions.

Technical Best Practices boils down to having an IT person who is aware of the guidelines at the state and federal level. One of the challenges is that technology is growing much faster than the regulations. Getting them in synch is one of the biggest hurdles. Ethical Best Practices revolves around the belief that patients should always have a choice. Practitioners need to be mindful of that choice and the patient's privacy and personal space, which isn't any different than in-person practice. Using telehealth has only minor ethical differences due to the technology, such as introducing yourself with a picture ID and licensure on the monitor, identifying anyone else who may be in the room with you, and informing the patient when a session is being recorded.

The SIG also publishes a newsletter, TR SIGnatures, which tells the stories of the emerging field, along with a series of webinars featuring guests from the profession, vendors, and ATA staff members. The ATA is also working on a Telerehabilitation Resource Guide, with resources that span the globe.

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