

# The Advent of a Physical Therapy Telehealth Practice during Covid-19 Pandemic

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Telehealth is here to stay, and its use is rapidly expanding among healthcare providers in the United States and within the Department of Veterans Affairs (VA). Covid-19 has drastically altered the healthcare landscape, enabling the switch from face-to-face patient encounters to telehealth encounters. The American Physical Therapy Association has supported the use of telehealth for physical therapy (PT) services to help with the growing cost of healthcare services, the accessibility of health services, and the potential healthcare workforce shortages [1]. Multiple studies have reported effective outcomes and cost containment in delivering physical therapy and rehabilitation services through telehealth [2-4]. Since the pandemic, it has been even more crucial that healthcare services move to telehealth whenever possible to help prevent the spread of infection. Telehealth visits utilize information technologies and communication networks to deliver healthcare and education and may include telephone or video patient encounters.

The Department of Veterans Affairs (VA) medical centers had implemented the use of various forms of synchronous videoconferencing, including Clinical Video Telehealth (CVT) and VA Veteran Connect (VVC). CVT is where a patient is seen in the clinic and is connected by video to another facility, and VVC works through the patient's desktop, laptop, tablet, or smartphone to connect to a provider at the VA or when working from home. Though telehealth is not new to the VA, physical therapists have not embraced it on a large-scale because physical therapy has always been considered a hands-on profession. PT evaluations consist of manual muscle tests, palpation, and passive range of motion (PROM). Treatments may involve myofascial release, manipulations, passive range of motion stretches, therapeutic massage, and other modalities that required the patient to come to the clinic for face to face sessions. On a smaller scale, CVT has been used by some PTs successfully for several years [5], but VVC is a more recent technology implemented in 2017 [6].

The VA had issued guidance on telework flexibilities in response to coronavirus on March 12, 2020, that encouraged healthcare professionals to maximize telework and increase patient care through telehealth services.

The remote Key West Community Based Outpatient Clinic (CBOC) in the state of Florida offers a wide range of services in a small, 12 employee facility comprised of 2 primary care, nursing, psychiatry, social work, homeless outreach, physical medicine and rehabilitation (PMR), medical support assistants and a telehealth clerk that is responsible for numerous telehealth clinics. PMR is staffed with two full-time physical therapists and one full-time physical therapist assistant (PTA). During normal operations, the PMR clinic has 120 patient slots per week. The department embraced the transition to telehealth early on in the pandemic, switching over to 100% telehealth treatments on April 1, 2020.

In order to switch to telehealth, all in-person patient appointments were canceled and re-scheduled for telehealth to allow therapists to work from home. Patients were trained on the use of VVC. The department staff completed education on VVC use, mandated courses

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on patient care and privacy using VVC, and telework packet materials to obtain permission to begin working from home. Since the transition was quick, authorization was given to bring home equipment such as identification card readers, keyboards, and cameras, enabling therapists to work from home.

The PMR department of Key West CBOC has successfully treated 100% of all patients referred for therapy via telehealth. Those patients referred for equipment and training were seen in-person curbside in a designated outdoor parking area. It was surprising to learn that even our most complicated patients were successfully treated via telehealth. Patients with diagnoses such as status post (s/p) rotator cuff repairs, s/p hip replacements, s/p ankle fractures with ORIF, s/p knee lateral trochlear cartilage repair with allograft, s/p Achilles tendon ruptures, s/p cervical discectomies, and fusions, significant rotator cuff unrepaired tears and shoulder adhesive capsulitis.

One complicated case with a successful outcome is described here; Patient is a 75-year-old male, status post right total knee arthroplasty explantation and revision at the Miami VA Medical Center on July 30, 2020, with complications of a pulmonary embolism requiring anticoagulant therapy. He was started on Heparin then switched to Apixaban prior to discharge from the hospital.

**History of Present Illness:** The original right medial unicompartmental knee replacement was performed at Little Rock VA Medical Center on April 22, 2009. On February 6, 2020, the patient had right medial unicompartmental knee arthroplasty septic loosening that led to the removal of components and use of antibiotic spacer placement on July 30, 2020. Patient received inpatient physical therapy, was discharged to home on August 6, 2020, and was evaluated by Key West outpatient physical therapy on August 7, 2020.

**Past Medical History:** cardiac arrhythmia, aortic valve regurgitation, anemia, hypertension, prostate cancer, gastroesophageal reflux disease, and past recent smoker-quit July 2020. His Initial assessment indicated:

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**Pain Rating:**

Current: 3/10

At best: 3/10

At worst: 8-9/10 wakes him up at night

Pain Location: Right knee

- Prior Level of function: Ambulated without assistive device with a limp, active with swimming, and biking.
- Visual Inspection/Structure/Posture: (R) knee moderately swollen, incision site intact with sutures. Inferior suture site has some dried blood.
- Range of Motion: AROM (R) knee 10-40 degrees knee. PROM 10-59 degrees.
- Strength: Able to perform leg raise in supine 5 reps., Sidelying hip abd. 5 reps.
- Accessory Motion: Limited quad mobility noted with quadricep setting
- Gait: Able to ambulate with gross antalgic gait deviations due to pain, using the cane improperly. Instructed on utilizing straight cane (proper height adjusted) with minimal gait deviations.

The patient was treated with range of motion (ROM) and strengthening exercises. He was instructed in a home exercise program. A passive range of motion machine called EZ Stretch from Full Range Rehab was ordered for the patient to use in his home. The patient was sent a transcutaneous electrical nerve stimulator (TENS) unit to use for pain control. Though he started with a very limited active range of motion (AROM), he quickly gained motion, mobility, and strength through consistent and rigorous physical therapy, all through the telehealth visits. In one month of PT, he increased from 10-40 degrees to 5-115 degrees of AROM in the right knee. He was able to ambulate without an assistive device, but he still had difficulty with prolonged standing due to persistent pain and swelling of the knee. By September 2020, his swelling was reduced, and the pain was significantly lower on a 0-10 pain scale at 0-3/10, even with prolonged standing. By October 2020, the patient was able to return to his previous level of function without pain.

The above case highlights just one successful telehealth case treated by the Key West PMR. Since then, the department started a slow transition back to Face to Face (F2F) appointments at 12 slots per week on September 14, 2020, and then increased to 25 slots per week on November 1, 2020. The VA has made it clear that telehealth is here to stay and will be utilized in various capacities such as pandemics, natural disasters, veterans who are home or bed-bound, and remote rural veterans. Although we cannot predict what the future holds, we know that our PMR department will be able to transition to 100% telehealth successfully at any time as needed in the future.

### Competing Interests

The author declare that there is no competing interests regarding the publication of this article.

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