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Opinion Article

It's Corona Calling: Time for Telerehabilitation!

Marcalee Alexander

University of Alabama School of Medicine, Department of PM&R, USA

Abstract

The Covid-19 pandemic has caused a disproportionate impact on people with disabilities and the elderly. Moreover, the pandemic can be likened to disasters caused by catastrophic weather events which will increase in the future in response to climate change. To forestall these threats, rehabilitation professionals must to come together internationally to prepare and proactively educate their peers and patients. This can be done through observance of such times as Day for Tomorrow. Moreover, rehabilitation professionals need to transition to greener forms of healthcare in order to assure that in the future we all sustain our abilities.

Keywords: Climate change, Covid-19, Disability, Sustain our abilities, Telerehabilitation

Covid-19 has enveloped the world; however, it has caused greater morbidity and mortality to the most vulnerable populations, including people with neurological disabilities, the elderly and their loved ones. This most recent worldwide disaster is in many ways similar to regional natural and weather-related disasters, such as floods, fires, hurricanes and earthquakes. Importantly, as a result of climate change, catastrophic weather events including hurricanes, severe rainstorms, polar vortices and extreme heat waves are becoming more frequent and severe. Therefore, it is critical that emergency preparedness efforts account for the needs of everyone, including the estimated one billion people around the world who live with self-disclosed disabilities.

Governments and the scientific community have taken steps to expand our level of preparedness by enhancing warning system messaging and making accessibility enhancements on our programs for persons with disabilities that have problems with access & functional needs. As society continues to respond to the weather events and other emergencies caused by climate change or pandemics, we must continue to prioritize the needs of people with disabilities. As the community that cares about the needs of persons with disabilities, we need to lead the way now by working together to ensure emergency preparedness and sustainability efforts put accessibility at the forefront. Moreover, professionals in rehabilitation must work together to raise awareness about the future impacts of climate change on the disability community.

Covid-19 has had many impacts on people around the world including, among other issues, the need to stay at home, avoid public gatherings, wear masks and gloves. These issues are more difficult for persons with disabilities who are the most vulnerable due to altered mobility, the need for assistance for self-care, the need for supplies such as catheters, the need for equipment such as wheelchairs and the need for physical help on a round the clock or daily basis. Additionally, family members and loved ones of persons with disabilities share this vulnerability. Currently, in the case of an outside caregiver, one must wonder whether they are practicing social distancing and wearing masks while at home and out of the environment of the person with disability and in the case of a live-in family caregiver, one must still be concerned about the need to leave the home. Catheters, wheelchairs and walkers provide challenges with respect to sterilization. Additionally, many people with disabilities reside in assisted living centers or nursing facilities and the recent increased mortality to Covid-19 around the world for residents of these facilities has been well documented.

While we are currently responding to these issues

Marcalee Alexander, MD is president of the US nonprofit Sustain Our Abilities for which she receives no remuneration.

Corresponding author: *Alexander Marcalee, MD, Clinical Professor University of Alabama School of Medicine, Department of PM&R, USA*

E-mail: *malexander@sustainourabilities.org*

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in relation to Covid-19, future disasters will also bring challenges that we will need to respond to. These will be similar, in the case of inability to obtain caregivers or supplies when there are floods, earthquakes and hurricanes or inability to leave the home in extreme heat or cold. On top of these, there will be other challenges such as the need to find housing if one is displaced, the loss of electricity or a lack of drinking water that the individual and their family will encounter and will need to address. All of these issues will result in increased morbidity and mortality and a decrease in quality of life for the person with the disability and their loved ones.

Rather than respond to disasters, it is important to be proactive and plan for the needs of persons with disabilities and their families in disasters. Research related to rehabilitation should be planned to address these concerns. It is imperative that rehabilitation professionals help people maintain their functional potential and abilities and sustain their quality of life, despite the additive effects of disability and disasters. Fortunately, there are many possible solutions with which technology can assist. However, these technologies require proper funding and societal support. Potential solutions include ensuring all communities have access to cellular coverage and internet, provision of cellular phones to persons with disabilities and ensuring persons with disabilities have access to renewable sources of energy and clean water.

A recent international initiative has resulted in the development of a YouTube channel, Sustain Our Abilities[1], that is specifically dedicated to educating people with disabilities around the world about health and wellness issues, allowing people with disabilities to share their stories online and bring attention to the concerns associated with disasters such as that brought now by Covid-19 and those that will be brought on in the future by climate change. Technology cannot, however, replace hands-on caregiving, thus persons with disabilities and their families must make certain that they are individually prepared with their own lists and supplies ready for disaster preparation. People with greater finances and social support may adapt better; however, as seen with Covid-19, we are all vulnerable. Nevertheless, we must make provisions to ascertain that in disaster situation economically-deprived individuals or individuals from minority groups are still included in adaptation plans and that we all work in community. One recommendation for a way to plan as a community is the concept of "Day for Tomorrow[2]", an annual event where communities could get to know each other by having an event related to preparedness. This year a virtual event included presentations from five continents on climate change and disability and next year, and in the future, the day will be celebrated on 22nd of October.

In addition to disasters, in the future we will experience changes such as forced migration because of climate change. Thus, we need to ensure that individuals with disabilities and rehabilitation professionals are included in this planning. In July 2019, the United Nations declared the issue of disability and climate change a human rights issue; and it is important that we all share our views in this arena. In conjunction with this declaration, physiatrists and other rehabilitation professionals need to become educated about climate change and sustainability and need to share this knowledge with their patients. This may include topics such as the benefits of a plant-based diet or the means to recycle equipment. One area where physiatrists can change their practices to become more patient friendly is to consider the use of telerehabilitation[3,4].

Telerehabilitation or telemedicine visits performed by a rehabilitation provider have been successfully utilized throughout the world for years and have become commonplace since the Covid-19 pandemic. While a telephone call could be considered the most basic of these visits and can be used if necessary, for purposes of this discussion we will consider video visits where the provider and the patient are able to see each other, often via a "smart" phone. From an infection standpoint, these visits are safe because there is no spread of disease. Moreover, telerehabilitation visits are convenient for patients because they do not need to spend time and funds to travel to a brief visit which may not require the clinician to have hands on the patient. Lastly, they are environmentally friendly as they decrease carbon dioxide emissions.

Telerehabilitation visits are especially useful for people with disabilities such as spinal cord injuries who have more difficulty with travel and preparation for physician or therapy visits. These may be cost-saving if the individual receiving care needs to pay for transportation and may be useful when trying to keep pressure off of a decubitus ulcer. Possible reasons for the use of telemedicine may include for weaning down of pain medicine, adjusting medications for spasticity or neuropathic pain, reevaluation of a decubitus or for reevaluation of how newly initiated medication regiments are working. Visits can be utilized to quickly triage a patient with a new problem and see if they require a face to face appointment. Telerehabilitation can also be used to evaluate the performance and efficacy of therapy. Evaluation of therapy performance has recently been demonstrated in a store and forward format with individuals sending video files of their progress to a therapist and adjustments to their program returned via store and forward[5]. This may be a solution in low income countries or for individuals with poor access to a wireless network. While speech therapy is probably the most well utilized form of telerehabilitation, psychological support, physiotherapy and occupational therapy have all been performed remotely. There is also an opportunity for physiatrists and other rehabilitation professionals to use teleconferencing for conferences between the acute care and rehabilitation hospital, for traditional inpatient team meetings and for meetings with home care therapists. Mobile applications can also be used for home visits[6,7].

Other possibilities for the use of telerehabilitation include use for research studies to evaluate patients and to check on their progress, for coaching of physician or nursing or therapy staff and for monitoring bladder and bowel care. Specialty services can also be provided, especially for such issues as monitoring control of glucose levels in individuals with diabetes, monitoring blood pressure in cases of hypertension and monitoring the status of other vital signs such as can be done via the measurement of pulse oximetry, heart rate and weight.

When performing a telerehabilitation video visit, from a provider and a patient standpoint it is important to know how to reach emergency services and to make sure the purpose of the visit is outlined in advance. The visit should also be conducted in private on a secure platform with proper access to medical information and people must be aware of their surroundings. For instance, in Europe, one needs to remember the number 1 1 2 in case of any incident during the treatment. One's appearance should also be considered along with conducting the visit in a timely fashion and informed consent about the possible risks and benefits is necessary.

Despite the potential benefits of telerehabilitation, licensure concerns, insurance coverage and legislative issues have historically made it difficult to adopt. Additionally, providers may not want to learn how to adapt their practices. Nevertheless, individuals with disabilities and chronic illness and the elderly can benefit from these services and appreciate the aspects of convenience and reduced travel time. Therefore, it is appropriate for physicians, therapists and other providers to learn about and effectively use telerehabilitation to all their patients.

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