

Short Communication

Video visits and access to care in pediatric rehabilitation therapies in the time of a pandemic

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Abstract. Telemedicine has emerged as a vital tool for continuing to provide therapy to children with disabilities throughout the course of the COVID-19 pandemic. While video visits have certain advantages, such as the ability to see the children in their home, they also have potential drawbacks, as some exam maneuvers and objective measurement tools cannot be performed virtually. The increased utilization of telemedicine also raises questions about access to care. Video visits can remove the transportation and time barriers that some families face. However, they raise new barriers, such as a requirement for home internet access and insurance coverage, that may negatively impact access to care for certain patients. Moving forward, a combination of clinic and video visits in pediatric rehabilitation may be the best way to harness the advantages of both modalities while minimizing their disadvantages. Our article discusses issues relating to rehabilitation therapy delivered via virtual visits, but further study is needed to examine whether video visits achieve similar outcomes to clinic visits.

Keywords: Teletherapy, video visits, disabilities, pediatrics, access to care, pandemic, COVID-19

1. Introduction

With the introduction of stay-at-home orders across the country in response to the coronavirus pandemic, there has been a large paradigm shift in the delivery of routine medical care. Health systems have been required to rapidly adapt to the sudden, unprecedented need for increased telehealth capabilities to continue to provide clinical care [1]. This shift has impacted care for many patient populations, particularly children with disabilities, who often require regular therapy and physician visits. Previous research into the efficacy of telemedicine compared to routine, in-person therapy is lacking in this population. In a systematic review, Zhou and Parmanto found eleven case and cohort studies discussing the use of telehealth to provide therapy

to children and adults with disabilities in remote and underserved areas [2]. They found no randomized control trials, or studies that directly compared telehealth to in-person evaluation and treatment. Their analysis was limited by small sample sizes, with 7 of the studies having sample sizes ≤ 10 .

As the effects of the COVID-19 pandemic on routine medical care begin to be understood, further research into the clinical utility of telehealth is needed. In this article, we will discuss the benefits and challenges of using video visits as a modality of delivering physical and occupational therapy to children with disabilities, as well as the effects this has on the equitable access to care for this patient population.

2. Advantages and disadvantages of video visits

Video visits present different challenges and potential benefits from in-person clinic visits. One of the most apparent benefits of this modality of therapy is that it

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can increase access to rehabilitation care, especially for those living in rural areas, or for those who have difficulties with transportation. For those with significant time burdens, whether due to busy parental work schedules, numerous other medical appointments, or other reasons, video visits present an attractive option because they do not require added travel time or time spent in a waiting room. Similarly, for children who are less mobile or require extensive adaptive equipment, the added time and effort to travel to a clinic visit may be removed when they participate in therapy at home. However, for some families, telehealth may present new technological barriers to care. This will be further discussed later in the paper.

When video visits are a feasible option, therapy in the home environment can come with significant advantages. The benefits of home-based therapies are best studied in early intervention services for children from birth to three years. Home-based services are a foundational component of early intervention because “the child’s natural environment is often described as the most developmentally appropriate learning environment for children with developmental delays” [3]. The therapist is able to see the child in their home environment where they are most comfortable. Some children may be more willing to cooperate in a familiar setting with only family present. Observing the child in a more comfortable setting aids the therapist in personalizing the therapeutic regimen. The therapist can see what the family has access to, can more specifically tailor treatments to their environment, and help the family problem solve ways to perform particular exercises or movement patterns at home. Home-based intervention services are not well studied in older children; however, it can be surmised that the same benefits would be applicable. Although video visits are not the same as in-home therapy, they present some similar advantages. Behl et al. found teletherapy to be noninferior to in-person early intervention services for infants and toddlers who were deaf or hard of hearing [4].

Video visits require greater parental engagement than in-person therapy sessions. The parent may be called upon to assist in performing hands-on maneuvers that the therapist is unable to perform. This may lead to better parental understanding of the goals and methods of therapy. However, relying on the parents for hands-on therapy also presents certain challenges.

Talking parents through specific motoric directions may be relatively straightforward for return visits with families who are very familiar with their child’s condition. New patients with parents who have not been pre-

viously engaged in therapy, or those who do not have a high health literacy may find this a significant challenge of virtual therapy that may affect the outcomes for these children.

Furthermore, while there are many aspects of hands-on therapy that can be accomplished by a therapist verbally guiding the family through the exercises, there may be a ceiling of what can be accomplished without the therapist being able to physically assess the child’s current state. While an experienced therapist may be able to think outside the box and find ways to accomplish a number of therapy goals via video visits, there are certain aspects of therapy that are simply not possible virtually. Although a significant amount of information can be gained by observing the patient, certain aspects of the physical exam are impossible to evaluate virtually. For example, active range of motion can be readily visualized. However, it is very difficult, if not impossible, to gain an understanding of a patient’s passive range of motion or strength because the clinician cannot evaluate how accurately the parents are assessing this ability.

The ability to assess these features can be important when measuring patient outcomes. At this time, commonly used standardized assessment tools that objectively quantify responses to therapy are based on in-person visits. Their utility of assessment for video visits has yet to be determined. Some tests, such as grip strength or sensory testing, may not be applicable to virtual care, as they require hands-on assessment by the clinician. Without these tools, it is unclear how this current transition to virtual therapy will affect ultimate outcomes. Further study, including adaptation of these objective measures, is required to understand the efficacy of video visits in therapy.

3. Ethics and access to care

Particularly during this time of social distancing, telemedicine provides a very useful tool in broadly increasing access to therapy in a setting which would otherwise be impossible. As we begin to look forward to the time when in-person clinics might become feasible again, it is important to consider the ways in which telemedicine affects equitable access to care.

Equitable access to care is an important concept to consider from a clinical bioethics perspective, falling under the concept of justice, defined as the fair distribution of benefits, risks, and costs [5]. As it pertains to clinical care, justice encompasses the principle that ac-

cess to care is not restricted to specific groups, and that there are not undue barriers that particular groups face. Not only is this important to fulfill the concept of fairness, equitable access to care is important to consider because unequal access may cause some patients to have worsened outcomes not due to the medical severity of their condition, but rather due to the social, financial, or other barriers they face.

As mentioned previously, video visits do eliminate certain barriers to care that occur with in-person clinic visits. Video visits are also associated with lower costs, particularly lower travel costs for families [6].

However, video visits may also present unique certain barriers to care. Video visits require that families have a secure home internet connection, and a smartphone, computer, or tablet. For the majority of patients, internet connectivity and device ownership are not impediments. However, these factors are issues for a considerable minority of patients. As of 2019, 81% of US adults owned a smartphone [7] and approximately 73% of them had home internet access [8]. Those who do not have home internet access were more likely to be minorities, older adults, rural residents, and those with lower levels of education and/or income. For these groups, who are often disadvantaged in the medical system, video visits may not be accessible.

When moving healthcare digitally, another factor to weigh is the patient or parent's technological savviness. The technological components of the visit may present a significant barrier for parents who are less comfortable with technology. Video visits may be more successful if there are two caregivers present: one to manage the device, and the other to handle the child who is dependent on their help for therapy, whether due to age or ability. For households that do not have two caregivers present, the video visit may be less successful.

Finally, the major factor that determines access to video visits and affects nearly all patients is insurance coverage. As of March 2020, Medicare began temporarily covering virtual visits, and some private insurances and state Medicaid systems have since followed suit [9]. Others have not. For insurance policies that have begun to cover telehealth, it is unclear whether coverage will continue once the immediate threat of the pandemic has diminished. If video visits are to become a part of routine rehabilitation care, then they need to be covered by insurance so they do not become limited to those who can afford to pay out of pocket.

Although insufficient insurance coverage and technological barriers may restrict access to care with video visits, these visits reduce other financial and logistical

barriers. When it is possible for regular clinic visits to resume, video visits may serve as useful adjuncts to increase overall access to care.

4. Conclusion

While the coronavirus pandemic continues to be a threat, conducting therapy through video visits is certainly superior to no therapy. In this time of social isolation, continued contact with the therapist can be a meaningful way to help families of children with disabilities remain connected. Other advantages of video visits include: increasing access to care, working with the child in their home environment, and allowing families to be more directly engaged in therapy. Disadvantages of video visits include the reliance on parents to perform critical parts of therapy, and the inability of the therapist to perform hands-on assessments. At this time, it is unclear how video visits compare directly to clinic visits. Objective assessment tools need to be developed to help us understand outcomes.

In this increasingly digital age, video visits are most likely here to stay. They may not ever replace in-person visits, but combination of these two modalities may provide the best of both worlds: periodic hands-on assessments during clinic visits, and observation of the child in their home environment. Further incorporation of video visits into mainstream practice may lead to increased accessibility of rehabilitation medicine so long as there is sufficient insurance coverage. However, further study is needed to determine the role of video visits in routine care.

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Conflict of interest

The authors have no conflict of interest to report.

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