



Is Telepractice an Effective Solution for Increased Demand and Shrinking Budgets

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There is a growing body of evidence that telepractice is equally as effective as in-person therapy for a variety of interventions (Iacono, Dissanayake, Trembath, Hurdy, Erickson, & Spong, 2016; (McCullough, 2001; Baharav & Reiser, 2010; Heitzman-Powell, Buzhardt, Rusinko & Miller, 2013; Vismara, McCormick, Young, Nadhan, & Monlux, 2013; Ingersoll & Berger, 2015; Wainer & Ingersoll, 2015). Currently it's offered to school districts and in private practice for individual or small group pediatric and adult therapy. However, just as we have seen a shift to parent coaching in early intervention in person, a similar trend has started for providing family-focused services online.

Since the beginning of the 21st century, researchers have been studying the effectiveness of teletherapy with some version of parent engagement (McCullough, 2001; Baharav et al, 2010; Heitzman-Powell et al, 2013; Vismara et al, 2013; Ingersoll et al, 2015; Wainer et al, 2015).

As early as 2001, McCullough's study used a simple survey design in which both parents and therapists reported perceived improvement in preschoolers' language skills following telepractice therapy. While this can't be considered empirical research and the results are not definitive, it is interesting that both parents and clinicians indicated that increases in receptive, expressive vocabulary and vocal imitation skills were greater during the telepractice phase of the study than during the previous two months of traditional therapy (McCullough, 2001). Other researchers have continued to focus on teletherapy with children, particularly those with autism, and with good reason.

“Telepractice is the application of telecommunications technology to the delivery of speech language pathology and audiology professional services at a distance by linking clinician to client or clinician to clinician for assessment, intervention, and/or consultation” (ASHA, 2018).

Autism is on the rise

The number of children diagnosed with an autism spectrum disorder (ASD) has been on a steady climb in recent years. According to the Centers for Disease Control (CDC) “[t]he global prevalence of autism has increased twentyfold to thirtyfold since the earliest epidemiologic studies were conducted in the late 1960s and early 1970s. At that time, prevalence estimates from European studies were one in 2,500 children in the population”. (Moran, Casey,

Rutledge, T. F. et al, 2014). According to the World Health Organization (WHO), as of April 2017, one in 160 children around the world has an ASD (World Health Organization, 2017).

The CDC itself has been monitoring prevalence in the United States since 2000. In 2002, one in 150 American children aged 8 were diagnosed with an ASD. By 2014, their most recent data set, the prevalence had increased to one in 59 American children aged 8 (Baio, Wiggins, Christensen et al, 2018).

Since at least 2003, studies have shown that provider care must be innovated for underserved populations — those in rural locations, with low incomes, and/or in ethnic minorities – and telepractice is often recommended to meet those needs (Merwin, Hinton, Dembling, & Stern, 2003). Children in underserved populations have suffered detrimental effects on their development. (Mandell, Novak, & Zubritsky, 2005).

Challenges in meeting a growing need

The increase in ASD diagnoses is leading to challenges with meeting the growing demand for services. These include constraints for travel, cost of services, and the number of available therapists. In countries that have mandated timelines in which to begin services, like the United States, these difficulties can have legal ramifications as well. When surveyed, many early intervention providers in the United States reported they would need to modify their service model to remedy provider shortages (Wise, Little, Holliman, Wise & Wang, 2010)

This problem is not limited to the United States but is a concern around the world. In fact, in 2014, the WHO adopted a resolution supported by over 60 countries that aimed at “strengthen[ing] national capacities to address ASD and other developmental disorders” (World Health Organization, 2017). One objective in particular looks specifically at the development of “...scalable strategies for the assessment and treatment of ASD and other developmental disorders” (“Autism spectrum disorders”, 2017).

To that end, several researchers have been focusing on telepractice with children with ASD, trialing a variety of delivery models:

- parent-mediated intervention through self-study or therapist assistance (Ingersoll et al, 2015)
- one-to-one therapy-based parent coaching model (Baharav et al, 2010; Wainer et al, 2015)
- one-to-one ABA therapy (Heitzman-Powell, Buzhardt, Rusinko & Miller, 2013)
- group caregiver training course with web-based teaching modules and live video conferencing (Vismara et al, 2013).

The researchers of all programs reported that the parents found the online modality effective, and objective data showed improvements in clinical goals.

A study on Acceptability and Cost Comparison

With the growing number of therapies being delivered online, a recent study looked at the following two aspects of telepractice for families of children with autism:

- parent satisfaction
- cost comparison between in-person delivery models – in clinic and in home – and the telepractice model.

(Little et al, 2018)

The participants

18 families enrolled in the study. All children were:

- diagnosed with ASD
- aged between 2 years, 2 months and 6 years, 9 months
- from primarily English-speaking homes
- enrolled in early intervention or an early childhood program (e.g. day care)

The method

Therapists provided 12 weekly one-hour occupational therapy sessions following the parent coaching model developed by Shelden and Rush (Rush & Shelden 2011). They use a routines-based interview to review the previous week, to discuss goals, to explore strategies to meet the goals, to create a joint plan with the family for how they would carry out the joint plan in their daily activities throughout the week, to check in on child performance the following week, and to explore ways to generalize skills.

Families completed between 8 and 12 sessions, with some sessions missed due to illness, vacation, or scheduling conflicts.

Therapy was conducted on the Zoom meeting platform “which provides a secure online platform, offers end-to-end encryption, and meets Health Insurance Portability and Accountability Act [HIPAA] compliance requirements.” (Little et al, 2018).

Using a within-sample pre-post design, 17 families reported on acceptability of service and 18 reported on cost-comparison analysis.

Benefits

1. Reduction in cost and mileage

Comparison between models:

Service delivery model	Average cost per session	Annual total cost per family	Average percentage of lost family income	Annual total for a clinician to serve 30 families
Outpatient clinic	\$138.63	\$6,099.72	11.18%	\$182,991.60
In-home	\$142.64	\$7,014.56	5.13%	\$210,436.80
Telepractice	\$54.02	\$2,376.88	2.56%	\$71,306.40

*All costs are displayed in US Dollars

Mean travel time was reduced to zero from an average of 65.56 minutes and parents were able to eliminate or reduce their time off from work since they were able to choose their participation location. This also decreased the amount of lost wages parents incurred with in-home and outpatient models. Neither families nor providers had to pay for gas or car depreciation costs. Finally, the average mileage -- 59.26 miles between the home and clinic -- was eliminated for all. It's clear to see that the telepractice model greatly reduced the cost to both the families and the providers.

2. Acceptability

In order to determine acceptability of the telepractice model and the parent coaching intervention model, the researchers used a Likert scale of 1 to 6 to with 1 being “highly agree” and 6 being “highly disagree”. A total of 14 questions were used and the mean response for each question ranged between 1.00 and 1.35, indicating high levels of satisfaction. A written feedback section was included in the questionnaire that allowed more specific feedback. Parents reported they enjoyed the convenience of being at home, and the therapist's ability to truly observe their child's natural environment. (Little et al, 2018).

One additional benefit mentioned in the study was that telepractice prevented the therapist from taking over the activity since it necessitates the parent interacting with her child and the therapist acting as a coach, thereby meeting best practices for early intervention. (Little et al, 2018).

Little and her colleagues derived similar results as other studies with regards to high levels of parent satisfaction. Furthermore, this study clearly showed how much telepractice reduces costs to both families and clinicians as we strive to meet the ever-growing demand of providing services to a growing population of children with ASD.

Hanen and Telepractice

In light of the research on the effectiveness of telepractice and requests from Hanen members and parents, we recognize the importance of offering our programs through telepractice. The research by Little and her colleagues followed occupational therapists, but the parent coaching strategies and online delivery model are highly applicable to our programs. In fact, we are currently piloting our third *It Takes Two to Talk* (ITTT) online in preparation for its full-scale launch. We will keep you fully informed and will provide training to those of you eager to offer your own online ITTT to your families. And we have plans for *More Than Words* and other programs to follow. We hope that many of you will find this model helpful and that you will join us in this exciting new endeavour!

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About The Hanen Centre

Founded in 1975, The Hanen Centre is a Canadian not-for-profit charitable organization with a global reach. Its mission is to provide parents, caregivers, early childhood educators and speech-language pathologists with the knowledge and training they need to help young children develop the best possible language, social and literacy skills. This includes children who have or are at risk for language delays, those with developmental challenges such as autism, and those who are developing typically.

For more information, please visit www.hanen.org.

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