

## Chapter 43

# Telehealth Technology and Pediatric Feeding Disorders

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### ABSTRACT

*Ongoing advances in technology have provided a platform to extend the accessibility of services for children with developmental disabilities across locations, languages and the socioeconomic continuum. Teletherapy, the use of video-conferencing technology to deliver therapy services, is changing the face of healthcare by providing face-to-face interactions among specialists, parents and children. The current literature has demonstrated success in utilizing teletherapy as a modality for speech-language intervention and for social-behavioral management, while research on feeding therapy remains scarce. The current chapter discusses the prevalence of feeding disorders among infants, toddlers and children with developmental disorders. Using evidence from the current literature, a rationale for the utilization of teletherapy as a means of feeding therapy is presented.*

### INTRODUCTION

Video-conferencing technology (i.e. Skype <sup>TM</sup>, Google Hangouts <sup>TM</sup>, etc.) emerged for personal recreational use in face-to-face correspondence with family and friends, but soon this powerful tool was introduced into the workplace, due to its communicative effectiveness. This technology has given us the power to communicate visually and audibly from worldwide locations. With the power of the internet and video conferencing technology, we no longer have the barrier of distance when communicating with clients or associates in the workplace or with distant friends and family. As technology advances and the potential uses for videoconferencing are discovered, the use of this tool grows and expands opportunities for all who utilize it.

In addition to traditional workplace and at-home usage of video conferencing technology, the medical field has swiftly taken notice of its serviceable nature and has been increasingly utilizing this technol-

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ogy. With the medical field taking advantage of this tool to better serve their patients, other health and behavior-related fields have experimented with video conferencing technology due to its potential to be a powerful tool for providing individualized and diagnosis-specific therapy services. As a low-cost and accessible option, teletherapy is now a viable source for speech-language, psychological, behavioral and feeding therapies.

Historically, teletherapy has been used more regularly in the treatment of acute medical cases. However, recent developments in technology have made teletherapy systems more economical and user-friendly. Due to these improvements, there has been a significant increase in the number of teletherapy programs catering to non-acute cases within the past decade (McCullough, 2001). The present chapter will discuss the current and potential uses of video conferencing technology as a viable means of treatment for children with developmental disabilities focusing on its usage for feeding and swallowing disorders.

## **BACKGROUND**

Children with developmental disabilities such as Down syndrome, cleft lip and/or palate, autism spectrum disorder, central nervous system disorders (e.g. cerebral palsy, meningitis, etc.), Pierre Robin Sequence (PRS), Williams Syndrome, Prader Willi Syndrome, Rett Syndrome, and weak musculature of the face and neck, commonly experience feeding and swallowing disorders (American Speech-Language-Hearing Association, 2014; Cooper-Brown et al., 2008). Feeding disorders encompass a broad range of eating activities that may or may not be accompanied by difficulty with swallowing food and liquid. Feeding disorders may be characterized by food behavior, rigid food preferences, less than optimal growth and failure to master self-feeding skills expected for developmental levels. The incidence of feeding disorders is estimated to be 25-40% in typically developing children and up to 80% for children with developmental disabilities (Arvedson, 2008). In addition, children with delayed speech and motor milestones have an increased risk for feeding difficulties (Hutchinson, 1999).

Treatment of feeding and swallowing disorders that are found in cases of genetic and developmental disabilities often require a multidisciplinary effort by a team of specialists including, but not limited to, speech-language pathologists, occupational therapists, and medical specialists such as gastroenterologists, cardiologists, geneticists, pediatricians, endocrinologists, psychologists, and nutritionists. Due to the range of professionals who treat children with feeding and swallowing difficulties, there is a broad spectrum of treatment and diagnostic options to be explored (Cooper-Brown et al., 2008).

In current practice, there is not a widely accepted classification system for childhood feeding disorders in place. However, it should be noted that the DSM-V (Diagnostic and Statistical Manual of Mental Disorders) defines a feeding disorder using several heterogeneous diagnostic criteria including: 1.) Failure to eat adequately, 2.) Absence of another condition that interferes with feeding, 3.) Absence of a mental disorder or lack of food, 4.) Onset of problems with feeding must occur before age three, and lastly, 5.) Avoidance of food due to sensory characteristics such as texture, color, and/or temperature (Kenney et. al., 2013; Williams et. al., 2009).

Due to the complex nature of feeding disorders, the professionals who specialize in child feeding therapy and their facilities are, unfortunately, not readily accessible to the growing number of children presenting with feeding difficulties. However, technology used for video-conferencing has become readily available and a staple in most homes across the country and abroad. Utilizing this technology to provide services has the potential to provide comprehensive care while saving time and money.

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