

## Rural connections, possibilities through telepractice

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### Introduction

Telepractice is fast emerging as a relevant response to meeting the therapy needs of families in rural and regional areas. After a pilot project in regional New South Wales in 2002, the Royal Institute for Deaf and Blind Children (RIDBC) established a national educational telepractice program, RIDBC Teleschool, in 2007. To date, this service has supported 500 families. In recent years, RIDBC has expanded its use of telepractice to include audiological support through telepractice. This paper will outline how, with the effective use of telepractice, it has been possible to overcome geographical barriers in order to provide a client-centred high quality service model that enables consistency and continuity of access to specialist services throughout Australia which is tailored to meet the needs of individual families. A case study will highlight how the service delivery model of telepractice has been used to successfully support the individual needs of a family in regional Australia, from diagnosis of hearing loss to cochlear implantation and ongoing habilitation and support from a multidisciplinary team of specialists.

### Service delivery

RIDBC provides educational services, audiological management, assessment and therapy supports to children with hearing and/or vision loss and their families throughout Australia. In metropolitan areas, individual and group early intervention services are delivered 'in-person' through home-based or centre-based sessions. Families in regional and remote areas are able to access similar early intervention services through home-based or centre-based telepractice sessions using videoconferencing technology.

RIDBC Teleschool provides services to children from birth through to 18, who live in regional and remote parts of Australia. Access to a highly qualified multidisciplinary team that includes audiologists, psychologists, occupational therapists, teachers and speech and language therapists, is provided to the clients without geography being a barrier. Families accessing the RIDBC Teleschool service are allocated a Consultant that matches the needs of their child. This Consultant, whom would be a Speech and Language Therapist, Teacher of the Deaf or Vision Impairment, provides a family centred individualised session via videoconference on a weekly basis. For additional support and assessments, other allied health professionals, listed above, are also able to connect with the family through telepractice. Families in regional and remote areas are able to rely on a continuity of service with various professionals without the obstacle of travel through Telepractice.<sup>1</sup>

RIDBC continually explores ways to improve services to families in regional and remote Australia, which has resulted in using multi-point videoconference connections for a variety of purposes. Opportunities for families to link with one another using the multi-point connection functions on the videoconference technology have been met with great enthusiasm. This aspect of the service delivery ensures that families are well supported not only from professionals but from a community that is often spread across the country. Parent education sessions are also delivered through the multi-point function, to ensure families have access to educational and health information to support their child.

### Technology

Technology allows practitioners to overcome the challenges associated with distance, isolation and lack of services by providing families with therapy and audiology on-demand, whenever and wherever services are needed. RIDBC has installed many videoconference units into individual family homes, to enable the families to connect in for their intervention sessions from homes. Other families attend a local health clinic, school, TAFE, hospital or community centre that has videoconference equipment to connect to RIDBC Teleschool for their service.

RIDBC uses high quality videoconference equipment to deliver these remote services. The consultant is able to operate both the far and near end cameras, with the ability to zoom and pan with the camera and create preset camera angles that can be used throughout the session. They also use a

range of videoconferencing equipment, including a high quality document camera, to enhance the service delivery.<sup>2</sup> The Polycom™ equipment that RIDBC utilises provides functions to allow multiple sites to connect in simultaneously.

As part of continuing habilitation of a Cochlear Implant, programming of the device to a client's individual needs is essential; this is referred to as Mapping. SCIC Cochlear Implant Program, an RIDBC Service provides access to mapping appointments remotely. Real time interaction is enabled by synchronous technologies<sup>1</sup>, which is essential for Remote Mapping, also known as Teleaudiology. The client's Cochlear Implant is connected to their own computer, the audiologist is then able to take control of the client's computer using remote access software and programs the Cochlear Implant through the Internet.<sup>3</sup> The Audiologist is able to observe the clients responses to the mapping and discuss the process with the client and their family via the videoconferencing technology.

### Case study

William\* was diagnosed with a dual sensory impairment, a profound hearing loss and vision loss, in addition to Cerebral Palsy. William lives in a regional town, over four hours by road from a regional city and nine hours from a capital city. William and his family require the support from a variety of allied health and medical professionals.

Geography can often be a barrier to families' abilities to access the appropriate support they require. When William was 8 months of age, the family enrolled in RIDBC Teleschool to be able to access weekly therapy sessions from professionals with expertise in vision and hearing impairment. William was allocated two RIDBC Teleschool consultants due to his diverse needs: a Speech and Language Pathologist and an Orthoptist. RIDBC Teleschool installed videoconference technology in the family's home; to ensure high quality access to sessions is possible. William's family also access services of a physiotherapist, occupational therapist and early intervention teachers from the Department of Education and the state Disability Service, when they visit William's town. On occasions, these professionals have attended the RIDBC Teleschool sessions with the family, to develop their skills in how to support the development of William's language, communication and functional vision and ensure a strong multi-disciplinary team approach. Conducting the sessions in the family home has also allowed the family to invite extended family and close friends to the RIDBC Teleschool sessions, to ensure they too gain the knowledge and skills required to support William in his development.

William and his family attended a three day RIDBC Teleschool residential program for children with vision impairment and additional disabilities, at RIDBC in Sydney. This program provided the family with access to a variety of professionals and meeting other families in a similar situation. Telepractice has allowed opportunities for continued connections to be maintained for William's family. The ability to use the videoconference technology to conduct multipoint connections has allowed William's family to connect with their RIDBC Teleschool consultant and a family they met during the program in Sydney. Also, if the needs arises, the family is aware that they can videoconference with the psychologist they met in Sydney.

William received his first Cochlear Implant at the age of 14 months and the second Cochlear Implant at two years of age. Initially, William's family were travelling to their capital city to attend mapping sessions with their Audiologist. Since receiving the second Cochlear Implant, the family has begun to access remote mapping with an Audiologist through the SCIC Cochlear Implant Program, an RIDBC Service. The family connects with their Audiologist and RIDBC Teleschool Speech and Language Pathologist through the videoconference equipment to meet William's audiological needs.

William's families experience with RIDBC services highlight the possibilities of accessing essential allied health services through telepractice.

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\* name changed

## Conclusion

This paper has highlighted the possibilities that telepractice provides RIDBC clients with access to high quality professional personal to deliver a variety of services without location being a barrier. It is important to note that Internet that has the infrastructure to support the audio and visual capacity requirements of telepractice is essential for delivery of a high quality service. It is also necessary that professionals using telepractice technologies are adequately trained and supported to deliver services remotely through technology.

## Reference

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## Presenter

**Rachel Brindal**, BEd (Special Education—Hearing), MICD, is a senior consultant with the Royal Institute for Deaf and Blind Children (RIDBC) Teleschool. Rachel began her career as a teacher of the deaf in regional Queensland before working in the Pacific Islands developing deaf education practices in Tonga and Samoa. In 2009, Rachel joined the RIDBC Teleschool team based in Sydney, where she began supporting children with hearing loss and their families in regional and remote parts of Australia via telepractice. In 2012, she relocated to Darwin to establish RIDBC's first permanent site outside of NSW. Rachel and her colleagues at RIDBC Darwin are now providing services to families in the Top End through a blended service model; a combination of telepractice and in person sessions. These services include therapy, habilitation and a cochlear implantation program. Rachel is passionate about breaking down the geographical barriers by using technology to provide a client-centred high quality service model.