

Speech disorders can be treated from a distance

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(PhysOrg.com) -- There should be no barriers to providing high-quality speech pathology services, according to University of Queensland PhD graduate Dr Anne Hill.

Completed through UQ's School of Health and Rehabilitation Sciences, Dr Hill's research found speech and language disorders could be validly and reliably assessed over the internet using a telerehabilitation application.

“Having worked clinically with people living with an acquired neurogenic communication disorder, I saw how frustrating it was for both the person with the communication disorder and the clinician if access to these services was restricted due to issues of caseload, distance or mobility issues,” she said.

“Telerehabilitation seems particularly well-suited to Australia, with our widely dispersed population and rural and remote communities.

“This form of service delivery may help alleviate some of the access problems experienced by those living in rural and remote areas, as well as the metropolitan population restricted by mobility issues.”

While Dr Hill was already won over by the potential benefits of telerehabilitation, she felt an academic investigation finding evidence of its success was important before introduction to the speech-language pathology profession.

Using a UQ-built telerehabilitation device, the study assessed 86 patients with various speech and language disorders, such as dysarthria, aphasia and apraxia of speech.

Each participant was also assessed using the traditional face-to-face method, allowing Dr Hill to gather comparative data and measure the validity and reliability of remote assessment.

“Two speech pathologists conducted simultaneous rating of the face-to-face and telerehabilitation assessment of the participants,” she said.

“One of the two speech pathologists was randomly assigned to lead the assessment, either in the telerehabilitation environment or the face-to-face environment, while the other speech pathologist became a silent scorer of the assessment in the alternative environment.

“This methodology allowed for the direct comparison between the telerehabilitation and face-to-face assessments, which is important in the development of evidence-based guidelines.

“Telerehabilitation has the potential to address the major issues of service delivery in future decades, such as resolving inequities in access to rehabilitation services and meeting the increased demand for services due to an expanding ageing population.

“Furthermore, telerehabilitation holds some promise for the further development of community-based chronic disease/disorder management protocols and providing cost-effective, functionally appropriate, high quality rehabilitation to all.

“The introduction of telerehabilitation to the profession of speech-language pathology unlocks an exciting new era of research which blends clinical and technological innovation to better understand and serve those

living with a communication disorder.

“Future research will be limited only by our imagination in applying evolving technology to rehabilitation.”

In March, Dr Hill begins a 12-month contract with the Scottish Centre for Telehealth, where she will conduct a needs analysis for the potential implementation of telerehabilitation services throughout Scotland.

Provided by UQ

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