Unlocking the brain after stroke

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University of Queensland research is set to unlock the regions of the brain central to successful language treatment following a stroke.

Speech pathologist Dr David Copland, from UQ's Centre for Clinical Research, hopes to launch the first large-scale study of its type in the world.

"This knowledge can improve treatment by increasing understanding of which treatment types work best for particular individuals and so maximising recovery for patients," Dr Copland said.

"Usually speech-language therapy is conducted treating the brain like a 'black box' we conduct the therapy, but we don't consider the brain function in the patient or the parts of the brain typically involved in the therapy.

"This is because we don't really know the brain mechanisms underlying successful treatment and recovery," he said.

"The brain somehow achieves this amazing feat, where someone can suffer a significant brain injury and lose the ability to speak or understand language and then amazingly the brain manages to recover a significant amount of language, both spontaneously and with the help of therapy. A range of different language treatments are available, but it is still not clear which treatment should be used for a particular individual."

Dr Copland also aims to further his collaboration with UQ neuroimaging

experts Dr Katie McMahon and Dr Greig de Zubicaray. Along with his team of researchers in UQ's Language Neuroscience Laboratory, they will look directly at what area of the brain is critical for different language treatments to be successful.

Australians suffer from around 50,000 strokes each year, with language impairment (aphasia), common in those that require rehabilitation. A year after their stroke, up to 60 percent of people with aphasia continue to have difficulties with communication.

Recruitment of volunteers for the new study will begin soon.

Provided by UQ