University of Birmingham scientists devise unique stroke assessment tool

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Scientists at the University of Birmingham have devised a unique screening instrument that provides a 'one-stop' brain function profile of patients who have suffered stroke or other neurological damage.

The **Birmingham Cognitive Screen (BCoS) (http://www.bcos.bham.ac.uk/)** can offer a visual snapshot of the cognitive abilities and deficits of an individual which can then be used to guide clinical decision making.

Following brain damage, including stroke, head injury, carbon monoxide poisoning and degenerative change, people can experience a range of cognitive problems as well as difficulty with physical movement. Cognitive problems strongly influence a patient's ability to recover but patients are not routinely screened to detect them.

The first test of its kind, BCoS has been designed by a team of brain experts co-ordinated by Research Fellow Dr Wai-Ling Bickerton (also a chartered psychologist and occupational therapist) at the University of Birmingham in collaboration with Professors Glyn Humphreys and Jane Riddoch at Oxford University and Dana Samson at Louvain University.

Comprising a user-friendly manual, a test book, a CD containing Auditory Attention Test stimuli, a supply of examiner and examinee booklets and a zip-up pouch of test objects, the test takes 45-60 minutes and is carried out by trained health professionals and covers a range of cognitive abilities, including attention, executive function, spatial awareness, speech and language processing, action planning and control, memory, and number processing.

'Through research outcomes supported by the **Stroke Association (http://www.stroke.org.uk/)**, BCoS has already been used to successfully assess more than 1,000 stroke survivors in the West Midlands,' explains Dr Bickerton. 'BcoS has been validated against "standard" neuropsychological tests and assessed against measures of cognition and activities of everyday living for patients in the chronic stage.

'The test has been designed to be highly inclusive and, as such, is an optimal tool for most stroke survivors regardless of the cognitive effects of stroke,' she says. 'It is also applicable to individuals with brain injury or dementia.

With the support of Research and Innovation Services and the Business Engagement Team at the University (including a £15,000 first prize from its **Enterprising Birmingham Competition (/partners/business-services/news/items/BusinessPlanCompetitionAnnouncefinalists.aspx)**), as well as the UnLtd HEFCE Social Enterprise Catalyst Award, BCoS has been commercially developed to the point that it is now licensed for publication to Psychology Press.

Dr Bickerton has started to offer training to health professionals to encourage skilled adoption of the tool. Efforts are underway to find resources for a new social enterprise company that can further develop this training capability and increase uptake of the tool both nationally and internationally to improve cognitive care by rehabilitation professionals.

Notes to editors

BCoS was created by a team including Dr Wai-Ling Bickerton, Professor Glyn W Humphreys (now at the University of Oxford), Dana Samson, a cognitive neuropsychologist and M. Jane Riddoch.

Dr Wai-Ling Bickerton is available for interview. Please contact the press office to arrange.

The BCoS is published by Psychology Press.

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