



# From iPad to Pod - Cutting the Wait in Dementia and Brain Health Assessment

***Computerised Cognitive Testing by Cambridge Cognition and IXICO Central to Memory Clinic and Brain Health Centre Pilot.***

**Healthcare Innovation Expo, London, 13<sup>th</sup> March 2013** – Cambridge Cognition, the leading British developer of neuropsychological tests, and IXICO, leading brain imaging specialist, are exhibiting at Healthcare Innovation Expo – 13/14 March at ExCel in London's Docklands. The event, which coincides with Brain Awareness Week 2013, will feature Cambridge Cognition and IXICO in two locations at the Expo – the Dementia Friendly GP Surgery and the Brain Health Centre of the Future, both in the Department of Health's centrepiece 'Dementia Village' exhibit.

## The Dementia Challenge

Fewer than half of the estimated 800,000 people living with dementia in the UK currently have a firm diagnosis. The Prime Minister's Dementia Challenge aims to see this rise to 80 per cent. The traditional path to diagnosing dementia is long and slow, often taking up to 18 months. But early diagnosis makes it possible for patients and families to access the care they need and start to plan for the future.

In responding to this challenge, Cambridge Cognition and IXICO will be showing the future of brain health assessment with a unique 'Diagnostic Pod' featuring the CANTAB-based state-of-the-art brain health assessment technologies.

The display illustrates how the technology will, in the future, enable doctors to more easily identify and tell apart the signs of brain health conditions such as Alzheimer's disease, cerebrovascular disease and other treatable causes of cognitive difficulty – by examining both the functioning and the structure of the brain in parallel.

Visitors can experience the principle of a personalised diagnostic approach while undergoing a simulation of four, small, indicative tests for cognitive impairment within the diagnostic booth; and see the technology behind a pioneering government-backed pilot which launches this month.

Centred on Cambridge Cognition's neuropsychological testing expertise and computerised analysis of MRI scan by leading brain imaging specialist IXICO, the new dementia assessment programme aims to drastically reduce the average waiting time for dementia diagnosis.

## Cutting the wait

The pilot initiative aims to cut the wait to just three months by Cambridge Cognition's innovative digital assessment tools in combination with other state-of-the-art technologies from IXICO, currently used primarily by leading scientists in the dementia research community, where people can access them quickly and easily. This will also accelerate access to the kind of evaluation, fast track referrals and greater access to care currently available in only regional centres of excellence.

The service to be piloted with 200 patients in south London and Sussex starts with a visit to the GP from a patient worried about their memory. Instead of the usual paper-and-pen-based test, they will be given an iPad and asked to carry out a 10-minute CANTABmobile™ test which indicates accurately whether a person needs a more thorough investigation for dementia.



# the brain health centre

## The Brain Health Centre

Those who do need further investigation will be referred to a Brain Health Centre – one based in a NHS Memory Clinic, and the other in a mobile community Brain Health unit- based service in Sussex. Here, patients will complete a more detailed CANTABmobile™ test, again on an iPad, and undergo an MRI scan to look at changes in their brain.

Rather than just being assessed using the judgement of an experienced Consultant as is currently the case, the MRI result will also be assessed by IXICO computer algorithms. These assess how much key regions of the brain are shrinking, taking into account age, gender and other factors that can influence changes in the brain and comparing that to 'normal' people of their age.

## Automated Results

The system produces a report, which combines these measurements from the brain scan with the memory and other tests to determine if the patient has dementia and if so, what type. This will be particularly useful for helping clinicians to recognise the extent to which a patient's problems are due to different causes such as Alzheimer's disease and vascular damage in the brain, which is often under-recognised. This will help clinicians be certain that the most effective treatment regime can be followed to prevent worsening of dementia symptoms and to decrease the risk of additional problems such as stroke.

With this diagnosis, patients and their GPs can start to plan for the future and access services, information and benefits, potentially adding months or years of independent living.

## Funding and efficiency

The £3.3m pilot has received £2.1m of government funding from the Biomedical Catalyst fund with the rest coming from Cambridge Cognition and IXICO. The project partners believe it can demonstrate significantly lower NHS and social care costs and increased time efficiency.

The Alzheimer's Society is supporting the project by ensuring the needs of patients and their carers are fully considered and undertaking an initial impact assessment on the 200 patients assessed.

Dr Andrew Blackwell, Chief Scientific Officer, Cambridge Cognition, says: *"The digital healthcare platform we will use is scientifically innovative, in its combination of diagnostically relevant information from multiple domains to provide clinically-actionable information in a semi-automated way. It will demonstrate a new model for service provision, enabling the systematic collection of sophisticated data by non-specialist staff, the co-ordination of patient's results through GP surgeries, our mobile community centres and hospital memory clinics. Most importantly, this advanced information will be related to GPs and other health care professionals in a simple, useful way that will aid effective and rapid communication to patients and carers."*

Professor Derek Hill, CEO of IXICO Ltd, says: *"Every four seconds, someone around the world develops dementia - and even more than this develop milder memory problems. There is an urgent need for scalable, high quality ways of making a timely diagnosis, enabling patients and their carers to rapidly access the right treatments and support. Current interventions can extend independent life, but with many people in the UK currently receiving no diagnosis at all, they are denied this help. Our approach will provide cost effective, scalable, high quality information to underpin rapid diagnosis."*

National Clinical Director for Dementia, Professor Alistair Burns says: *"I am impressed by the Brain Health Centre project's real potential to contribute to making the UK a world leader in dementia care by helping to improve the diagnosis of people with dementia, a key ambition of the Prime Minister's Dementia Challenge. Combining innovative technologies gives added value which should help detect signs of dementia, which will be of benefit to patients and their carers."*

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## Notes to Editor

### About Cambridge Cognition

Cambridge Cognition is a world leading provider of computerised cognitive assessment products. The company's range of touch-screen CANTAB™ neuropsychological tests, highly validated in several hundred peer-review publications, are used by both academic scientists in their research, and clinical researchers in the pharmaceutical industry, to maximise knowledge of cognitive function. In addition, the company is committed to broadening the access to this technology and is developing clinical healthcare products under the CANTABmobile™ brand, which will improve the monitoring, management and maintenance of cognitive health and wellbeing. Using these assessments, clinicians can identify and stratify patients in order that patient referrals are accurate and efficient, enabling health and social care providers to deliver more effective advice, treatments and care – leading to better outcomes for patients and their families.

### About CANTABmobile™

CANTABmobile™ is a new assessment for memory aimed at GPs and physicians in hospitals that was launched by Cambridge Cognition in May 2012. It is medical software that is downloaded onto an iPad in the form of an App, and helps GPs to understand whether a patient has a clinically relevant memory problem comparing the test results to a stored database within the App of over 5000 patients. Currently available with over 20 languages, the product is being piloted within a variety of clinical and community settings within the NHS and deployed in a number of Clinical Commissioning Groups. For further information: [www.cantabmobile.com](http://www.cantabmobile.com)

### About IXICO

IXICO Ltd is a leading medical imaging company that provides software solutions and services to deliver imaging biomarkers in clinical trials, research studies and health care diagnostics.

IXICO's clinical trial technologies include its TrialWire™ electronic data transfer portal and its TrialTracker™ Image Management System. This technology optimises imaging trial workflows and ensures regulatory compliant image handling for clinical trials. It also provides a platform for imaging informatics and is deployed at major UK academic institutions. IXICO's quantitative brain image analysis platform quantifies brain atrophy for research purposes, and pending medical device approval, provides a decision support tool for the diagnosis of dementia within the EU. This technology can transform the diagnostic process in healthcare and enable health care providers to offer better care to patients and their families by identifying people at risk of developing disease and monitoring disease progression. IXICO is committed to developing solutions for the diagnosis of dementia and other neurological diseases as stand-alone tools and in combination with other technologies.

As a full service Imaging Contract Research Organisation (ICRO), IXICO offers comprehensive capabilities with global reach predominantly in the CNS, Oncology and Musculoskeletal fields and across all major imaging modalities. IXICO provides a variety of central assessments that can be used as imaging endpoints in clinical trials to assess subject eligibility and drug safety and efficacy, and has designed its systems to address the critical areas of imaging in clinical trials from data acquisition to image analysis and reporting.



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