

Dash to help - new app to improve stroke treatment

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An app which helps people who have had a stroke make a decision about whether to have treatment is being trialled in UK hospitals. Experts at Newcastle University and Hospitals who developed the app say that every minute counts and we need to help patients and their families make the best decision, rapidly, at a difficult time. Credit: Newcastle University

The Newcastle team who helped develop the FAST system to identify a stroke are now piloting an app to ensure the best treatment for stroke patients.

Having developed the FAST acronym – face, arms, speech and time – which has been seen on TV ads, the University and NHS team are now trying out an app to help people who have had a stroke and their medical team work out which course of treatment is most suitable for them.

Its potential benefits have caught the attention of the national NHS after the team were nominated by a public vote as one of the top 50 uses of technology. The app will be demonstrated to the Secretary of State for Health, Andrew Lansley, at the Maps and Apps Showcase in London (on Weds 22nd Feb).

From the moment people suffer a stroke medics only have a four and a half hour window to treat them with clot busting drugs – and this means doctors, nurses, the patient and their families need to have a clear idea of the treatment options so they can make a considered but rapid decision.

An iPad app, called DASH II, is being trialled in Newcastle and North Tyneside hospitals to help weigh up the risks and benefits of different treatments for people who have had an ischaemic stroke, caused by a blood clot on the brain. The development of the DASH II app has been funded by a National Institute for Health Research (NIHR) Programme Grant.

Newcastle University's Professor Gary Ford who is a stroke specialist at the Royal Victoria Infirmary, part of the Newcastle NHS Hospitals Foundation Trust, said "Every minute counts. We know that the earlier we give clot busting drugs after stroke the more likely the patient will make a full recovery and return home. There is a small risk of bleeding with the drugs and it is important we support patients to make the best decision for them about whether to have treatment.

"Patients and their families are often very distressed immediately after a stroke and we need to do anything we can to help them make the best decision about their treatment at such a difficult time."

People who have had a stroke in the brain caused by a blood clot can be offered a blood thinning drug treatment known as a thrombolysis. However, the effectiveness of the treatment depends on several factors

including the age, weight, severity of stroke and blood pressure of the patient and it carries a risk of a bleed in the site of the clot which could worsen the stroke or cause death.

When this information is put into the app it provides a visual interpretation of the risks and benefits for the patient which are displayed as a coloured pictograph, bar chart or flow diagram which helps the medical team explain the predicted likelihood of recovery, moderate or severe disability, or death with or without thrombolysis.

Professor Richard Thomson, professor of Epidemiology and Public Health at Newcastle University's Institute of Health and Society, an expert on involving patients in decisions, said: "Patients and their families helped us to develop how we present the outcomes of [treatment](#) and have told us that they feel it helps explain the options to enable them to come to a decision. We are also hearing that it provides medical teams with more information, quickly, and aids their discussions in explaining the benefits and risks clearly to patients and their families."

A suite of applications for desktop, online, smart phone and iPad have been designed and developed created by Newcastle University researchers Dr Darren Flynn, Dr Peter McMeekin and Daniel Nesbitt and are being tested by the RVI stroke team in Newcastle and teams at North Tyneside General Hospital and Wansbeck General Hospital.

DASH II (Development and Assessment of Services for Hyperacute stroke) is one objective of a five year NIHR- Programme Grant for Applied Research, with the overall aim of optimising [stroke](#) care and improving patient outcomes. The programme involves Newcastle upon Tyne Hospitals NHS Foundation Trust in collaboration with Newcastle University and Northumbria Healthcare NHS Foundation Trust.

Provided by Newcastle University

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