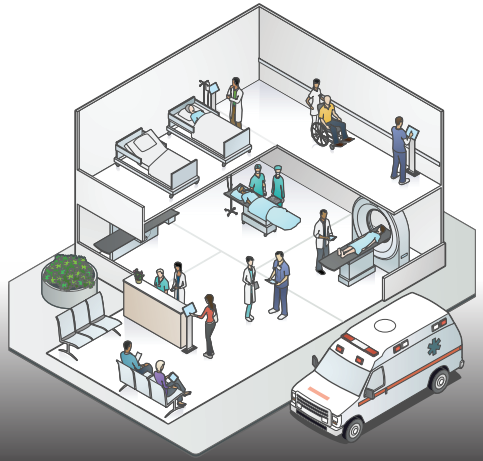
The NIHR CLAHRC for the South West Peninsula

CLAHRC BITE

A bite-sized summary of a piece of research supported by Peninsula CLAHRC

June 2012
BITE 02

Operational Research Seeks Benefit for Stroke Victims



"The sooner patients receive treatment, the greater their chance of survival, which means they are more likely to make a full recovery. We aim to deliver the right care in the right place at the right time, and this initiative will undoubtedly help us to achieve this in our ongoing quest to save lives."

James Wenman, Clinical Development Manager, South Western Ambulance Service NHS Foundation Trust (SWASFT)

» Who is this relevant to?

Those with responsibility for stroke services, emergency departments and ambulance services

» Background

The study investigates the process of emergency treatment after acute stroke from a blocked artery in the brain. The early administration of the clot-busting drug Alteplase can greatly improve recovery: up to four and a half hours from the onset of a stroke, but in that time the patient needs to call an ambulance, get to hospital, have a brain scan, and be assessed by specialists before receiving the treatment.

We are analysing the whole process from identification, to transport to hospital and treatment. This includes paramedics, the emergency department team, triage nurses, the acute stroke team and the radiology department.

» On-going work

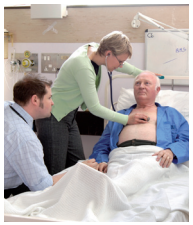
- We have created computer simulations that explore different ways in which people who have suffered a stroke are managed between arriving at hospital and receiving clot-busting disability-saving treatment
- Simulations consider the number and level of healthcare professionals involved with each case, the time of day or night, and how busy the different hospital departments involved in this pathway are
- The simulations allow us to calculate the benefit, measured in terms of patients free of disability from their stroke, from alterations to the emergency pathway for stroke

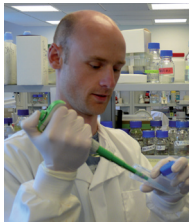
» Outcomes so far

- Analysis of over 1400 episodes of care has identified bottlenecks, leading to steps to speed up the process of emergency care
- Ambulance paramedics contact stroke specialists about suspected stroke patients en route to hospital, and patients admitted to the emergency department with suspected stroke are now referred directly to the acute stroke team by senior triage nurses
- Early warning of the arrival of a patient with stroke, and speeding up the time to clot-busting treatment will increase the number of patients who get this effective treatment and reduce the disability suffered by victims of stroke
- The project, initially conducted at the Royal Devon & Exeter Hospital, is now being rolled out to the other acute hospitals in Devon and Cornwall in collaboration with the Peninsula Heart & Stroke Network

"Using the simulation has enabled us to identify and unblock the bottlenecks in getting the treatment to patients much more quickly than we could in the past. What used to takes us months or even years of trial and error can be accomplished in an afternoon using the simulation."

Dr Martin James, Lead Clinician for Stroke at the Royal Devon & Exeter Hospital





What is Peninsula CLAHRC?

The CLAHRC (Collaboration for Leadership in Applied Health Research and Care) for the South West Peninsula is a partnership between the University of Exeter, Plymouth University and the NHS in the South West.

We are funded by NIHR (the National Institute for Health Research) with a mission to undertake high-quality applied health research focused on the needs of patients and a requirement to improve health services locally and further afield.

Website

www.clahrc-peninsula.nihr.ac.uk

For further project information, please visit:

www.clahrc-peninsula.nihr.ac.uk/project/27-stroke-rtpa---penchord.php

The research is supported by the National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care based in the South West Peninsula (PenCLAHRC). The views expressed are those of the author and not necessarily those of the NHS, the NIHR or the Department of Health.