

STROKE - BRIEF

An introduction to SBRI

SBRI competitions are open to all companies and designed to stimulate new technology either as a standalone solution or underpinning a service solution for specific public sector needs. Small Business Research Initiative (SBRI) is a mechanism which enables public sector bodies to connect with innovative ideas and technology businesses to provide innovative solutions to specific Public Sector challenges and needs.

The Public sector is able to find innovative solutions by reaching out to companies from different sectors including small and emerging businesses. New technical solutions are created through accelerated technology development, whilst risk is reduced through a phased development programme. SBRI also provides business with a transparent competitive and a reliable source of early-stage funding.

The SBRI scheme is particularly suited to small and medium-sized business, as the contracts are of, relatively, small value and operate on short timescales. Developments are 100% funded and focused on specific identified needs, increasing the chance of exploitation. Suppliers for each project will be selected by an open competition process and retain the intellectual property generated from the project, with certain rights of use retained by the contracting Department. This is an excellent opportunity to establish an early customer for a new technology and to fund its development.

SUMMARY

NHS South East Coast

NHS South East Coast is the regional headquarters of the NHS in Kent, Surrey and Sussex. It is the name given to the strategic health authority working on behalf of patients and communities in this region. Our core aim is to ensure that the people living and working in Kent, Surrey and Sussex have access to high quality, safe, effective and personal healthcare; and to maintain and improve the health of the population, reducing unacceptable health inequalities across the region. Our region includes a number of cities and large towns as well a significant rural community.

Strategic health authorities (there are ten across the country) have three main roles:

- To lead and set the strategic direction for the local NHS
- To develop and support local NHS organisations – ensuring they are fit for purpose and have the right people working in the right way at the right time in the right place
- To performance manage and hold the local NHS to account for delivering on promises to local people.

NHS South East Coast also has a duty to innovate (and to spread that innovation across our region) and we champion quality and innovation in all that we do.

NHS South East Coast covers a geographical area of 3,600 square miles and a residential population of some 4.2 million. We manage a budget of approximately £6.5 billion in conjunction with 25 local NHS organisations. NHS South East Coast leads the health system for Kent, Surrey and Sussex, working closely with commissioners, providers, local government and increasingly with industry through our new relationship with the South East Health Technology Alliance (SEHTA).

As a high priority for the region, the key overarching outcome of this SBRI will be focused on using technology to improve the identification of Atrial Fibrillation in the general population and the identification of Atrial Fibrillation in people with existing illness.

NATIONAL EMPHASIS ON STROKE.

The national Stroke Strategy was published in 2007. The strategy has a number of strands which concentrate on the prevention, early recognition and treatment of stroke. The publication of this strategy acknowledges the national importance given to the prevention and treatment of stroke.

BACKGROUND AND CHALLENGE

About stroke

Strokes are a blood clot or bleed in the brain which can cause lasting damage, affecting mobility, thinking, sight or communication. Stroke has a major impact on individual lives and on the nation's health and economy.

Stroke is the UK's third biggest killer. Many people who live after having a stroke are left with paralysis, speech and mobility difficulties. The aftermath of stroke can lead to many negative social consequences such as loss of income, home and relationship break up. The Stroke Association Reports that 11% of patients who have had stroke are admitted to residential care on discharge from hospital.

Stroke happens worldwide. According to the World Health Organisation, 15 million people suffer stroke each year. Of these 5 million die and 5 million people are permanently disabled.

Medical and technological advances over the last generation have transformed our understanding of the brain, given us the ability to see what happens when someone has a stroke, and developed new treatment possibilities for restoring blood flow and improving brain function. We know too that time is critical – the faster someone reaches expert help, the greater their chances of making a full recovery.

These medical and technological advances present tremendous opportunities for saving lives and reducing disability. Morally, these advances demand that we treat stroke as a major challenge to the NHS and to Social Care. Many people who have had a stroke say that the full impact only hits them when they leave hospital and attempt to get back to normal. We know that for months, or even years after a stroke, there may be a need for specialised therapeutic help – for example to regain mobility or speech – and that enabling people to take part in work, leisure and education improves well being, combats depression and aids recovery.

Stroke, like other vascular diseases such as heart disease, is often preventable. Atrial Fibrillation (AF) is a major cause of stroke. AF causes a fast and erratic heartbeat. It is common, mainly occurring in older people and increases with age. Many people with AF have no symptoms, particularly if their heart rate is not very fast. Current testing for AF involves the use of electrocardiogram (ECG), sometimes required to be undertaken over a 24 hour period; some AF can be detected by taking a persons pulse. Once detected, AF can be treated with very good results and the risk of having a stroke greatly reduced. Identification and management of atrial fibrillation in the general population is key theme in the preventative element of the stroke strategy. The prescribing and monitoring of Warfarin is highly effective in the prevention of stroke, reducing the risk by up to 64%.

The National Audit Office reported on the national stroke strategy in January 2010 and made specific reference to the prevention of stroke:

‘The best way of reducing the human and economic costs of stroke is through prevention. Stroke prevention continues to present a challenge.... Guidance suggests that appropriate treatment of all people with Atrial Fibrillation would prevent around 4,500 strokes, and 3,000 deaths per year’.

Ensuring the correct type and levels of support for people who have had a stroke remains a key challenge for the NHS and Social Care.

‘Individuals who have had a stroke and their relatives need to receive good-quality, appropriate, tailored and flexible rehabilitation; this will affect long-term recovery and reduce long-term disability. Stroke is a condition that can improve over many years, so people need both to focus on rehabilitation, to help them improve and recover, and support, to help them manage the disabling factors caused by stroke that may continue in the long term’.

(National Stroke Strategy 2007)

Facts and figures

- 110,000 people in England have a stroke each year
- Stroke is the third largest cause of death in England; 11% of deaths are caused by stroke
- Stroke accounts for a major part of the gap in life expectancy between the most deprived areas of England and the population as a whole
- Around 900,000 people are living in England who have had a stroke
- 300,000 people in England are living with moderate to severe disability as a result of stroke
- 25% of strokes occur in people under 65 years of age
- The estimated cost of stroke to the NHS is at least £3 billion annually
- The wider economic cost is estimated at £7 billion each year; £2.5 billion of informal care costs (e.g. the costs of home nursing borne by carers) and £1.8 billion in income lost to productivity and disability
- Without preventative action, there is likely to be an increase in strokes as the population ages

Scope

The desired outcomes of the proposed technology development must cover the following areas:-

- **Identifying people with AF in the general population**
- **Enabling remote monitoring and treatment of AF**
- **Supporting rehabilitation and recovery for people following stroke**
- **Have sufficient flexibility to be used in general community settings**
- **Provide information and or intervention which may lead to a reduction in strokes**

REFERENCES

'National Stroke Strategy (2007)' - www.dh.gov.uk/publications

'National Institute for Health and Clinical Excellence (NICE) reference guide – Atrial fibrillation' - www.nice.org.uk

'Progress in improving stroke care (2010)' National Audit Office - www.nao.uk

APPLICATION PROCESS

Directions on how to enter this competition can be found in the Invitation to Tender (SBRI_NHS_50_001_ITT).

More information on this and other competitions may be obtained at www.innovateuk.org/SBRI