



## Brain injury healthcare – impacting the care pathway from prevention to rehabilitation

SBRI Healthcare NHS England competition for development contracts

October 2014

## Summary

A new national Small Business Research Initiative (SBRI) Healthcare competition is being launched by NHS England in partnership with the Academic Health Science Networks (AHSN's) to find innovative new products and services. The projects will be selected primarily on their potential value to the health service and on the improved outcomes delivered for patients.

The competition is open to single companies or organisations from the private, public and third sectors, including charities. The competition will run in two phases:

- Phase 1 is intended to show the technical feasibility of the proposed concept. The development contracts placed will be for a maximum of 6 months and up to £100,000 (inc. VAT) per project
- Phase 2 contracts are intended to develop and evaluate prototypes or demonstration units from the more promising technologies in Phase 1. Only those projects that have completed Phase 1 successfully will be eligible for Phase 2.

Developments will be 100% funded and suppliers for each project will be selected by an open competition process and retain the intellectual property rights (IPR) generated from the project, with certain rights of use retained by the NHS.

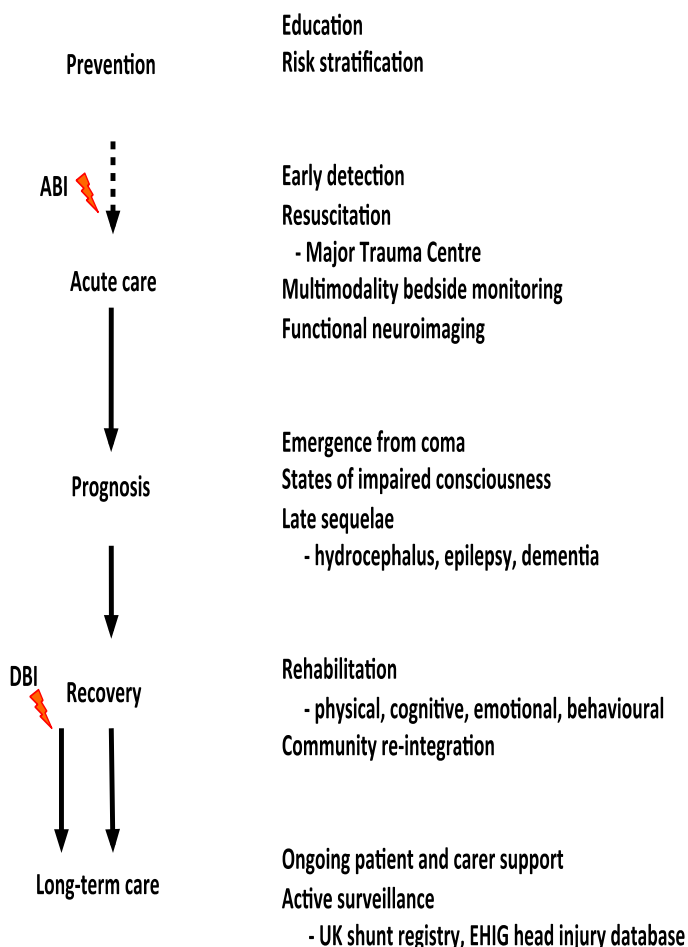
The competition opens on 20<sup>th</sup> October 2014. The deadline for applications is 1200hrs on 09<sup>th</sup> December 2014.

## Background

Acute brain injury represents a large number of injuries including subarachnoid haemorrhage, intracranial bleeds, brain tumours and traumatic brain injury in all age groups.

The Brain Injury Healthcare Technology Co-operative (HTC) has employed a holistic approach to identifying and facilitating innovation; hence the following themes allow flexibility to focus on evidence-based areas of unmet needs, both clinically and from a patient perspective:

- Prevention
- Risk Stratification
- Neurodevelopmental disorders
- Acute care
- Multi-Modality Bedside Monitoring
- Intracranial Pressure Monitoring
- Functional Neuroimaging
- Cognition
- Neuro-oncology
- Neurorehabilitation



- Stem Cells and Spinal Cord Injury
- Medical Devices Development
- Clinical Informatics

In addition to its holistic approach, the Brain Injury HTC operates a collaborative approach with a focus on building consortiums of representative stakeholders. The inclusive approach facilitates appropriate engagement from the outset.

## Challenges

The Brain Injury HTC is proposing four major challenge areas although applications in relation to other aspects of the brain injury pathway will also be considered.

### 1. Primary Prevention

In 2011-12 there were more than 200,000 admissions to hospital with a head injury of which approximately 170,000 were non-superficial injuries. This figure has increased by 33.5% in the last decade. There are approximately 20,000 severe traumatic brain injuries per year in the UK. Men are twice as likely as women to sustain a traumatic brain injury this being most prevalent in the 15-24 year age group and in the over 80 year olds. The prevention of these injuries is a key element in enhancing public health and wellbeing.

**This challenge is for the development and introduction of technologies and devices that could reduce the risk of sustaining a traumatic brain injury or modify behaviours that lead to brain injury.**

### 2. Acute Monitoring and Treatment

The appropriate treatment of an acute brain injury is dependent on a number of key stages which include the pre-hospital admission phase, the initial triage phase and the subsequent intensive care and post intensive care treatment phases and on-going rehabilitation.

The HTC has identified areas of unmet need in relation to each of these areas and includes technologies to improve the pre-hospital phase through improved diagnostic/imaging tools as well as brain function preservation.

At the early phases **there is a need for technologies that aid the rapid triage of patients leading to early prognostic indicators.** This is aimed at the reduction of longer term impacts of the injury as well as defining the appropriate rehabilitation programme.

During the intensive treatment phase **there is a need for improved and integrated monitoring of brain function and response to therapies.** This is linked to improved treatment technologies especially in relation to intracranial pressure management.

### 3. Co-ordinated Care

For patients with brain injury there are often long term consequences including cognitive impairment, physical disability, as well as behavioural and personality changes. It is essential that these patients are treated holistically and that there is seamless access to the right professional advice and support over an extended period of time.

**This challenge is driven from the patient perspective and is focused primarily on the delivery of an integrated management service supported by tools which allow the patient to fully interact with the rehabilitation process and also which support the professionals in delivering effective and timely care.**

### 4. Technology for Independent Living

The consequences of a brain injury are often life long and there remain significant unmet needs in relation to supporting a return to - and sustaining - an independent lifestyle. **There are a number of key areas which are of interest including technologies to support long term rehabilitation in the home setting.** Such services will require appropriate assessment and monitoring facilities as well as technologies that support and promote physical activity, as well as address the prevention of emotional and cognitive problems after the acute brain injury.

## Application process

This competition is part of the Small Business Research Initiative (SBRI) programme which aims to bring novel solutions to Government departments' issues by engaging with innovative companies that would not be reached in other ways:

- It enables Government departments and public sector agencies to procure new technologies faster and with managed risk;
- It provides vital funding for a critical stage of technology development through demonstration and trial – especially for early-stage companies.

The SBRI scheme is particularly suited to small and medium-sized businesses, as the contracts are of relatively small value and operate on short timescales for Government departments.

It is an opportunity for new companies to engage a public sector customer pre-procurement. The intellectual property rights are retained by the company, with certain rights of use retained by the NHS and Department of Health.

The competition is designed to show the technical feasibility of the proposed concept, and the development contracts placed will be for a maximum of 6 months and up to £100,000 (incl. VAT) per project.

The application process is managed on behalf of NHS England by the Eastern Academic Health Science Network through its delivery agent Health Enterprise East. All applications should be made using the application forms which can be accessed through the website [www.sbrihealthcare.co.uk](http://www.sbrihealthcare.co.uk).

Briefing events for businesses interested in finding out more about the competition will be held on the 11<sup>th</sup> and 13<sup>th</sup> of November in London and Leeds respectively. Please check the website for confirmation of dates and venues, information on how to register and details of the categories that will be presented at each event.

Please complete your forms using the online application process and submit them by 1200hrs on the 09<sup>th</sup> December 2014.

## Key dates

Competition launch	20 October 2014
Briefing events	11 & 13 November
Deadline for applications	09 December 2014
Assessment	January / February 2015
Contracts awarded	March 2015
Feedback provided by	April 2015

## More information

For more information on this competition, visit:

[www.sbrihealthcare.co.uk](http://www.sbrihealthcare.co.uk)

For any enquiries e-mail:

[sbrienquiries@hee.co.uk](mailto:sbrienquiries@hee.co.uk)

For more information about the SBRI programme, visit:

[www.innovateuk.org/SBRI](http://www.innovateuk.org/SBRI)