Improving outcomes for patients with Cardiovascular Disease

SBRI Healthcare NHS England competition for development contracts

September 2013

GM AHSN GREATER MANCHESTER ACADEMIC HEALTH SCIENCE NETWORK

North West Coast Academic Health Science Network

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 (AHSNs) 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 who will ultimately be capable of supplying the NHS with the resulting product or service on a commercial basis. 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.

This competition theme, led by North West Coast AHSN and Greater Manchester AHSN, focusses on the challenges in improving diagnosis, management and prevention of cardiovascular disease. Of interest and importance to this theme is the recognition and consideration of co-morbidities associated with diagnosis of a long term condition, in conjunction with supporting personalised care planning for treating not only directly but also non-directly related conditions affecting those patients.

The competition opens on 16th September 2013. The deadline for applications is 1200hrs on 31st October 2013.

Background

Cardiovascular disease (CVD) affects the lives of millions of people and is one of the largest causes of death and disability in the UK. Huge improvements have been made in the prevention and treatment of CVD over the last decade, with a 40% reduction in under 75 mortality rates between 2001 and 2010. Over the same period, the difference in under 75 mortality rates between the most and least deprived areas in England has narrowed.

Despite these improvements, comparisons with other countries show that England could still do better in improving CVD mortality rates – as demonstrated by a recent Lancet article on the *Global Burden of Disease Study*, which concludes that "Further progress in premature mortality from several major causes, such as cardiovascular diseases, will probably require improved public health, prevention, early intervention, and treatment activities"[1].

With an ageing population and the current levels of obesity and diabetes, unless there are improvements in prevention, past gains will not be sustained. England could also do better in terms of other outcomes, particularly the quality of life for patients living with CVD.

[1] UK health performance: findings of the Global Burden of Disease Study 2010, The Lancet, vol 381, issue 9871 (2013): 997-1020

The NHS Outcomes Framework 2013-14 includes specific targets for reducing the under 75 mortality rate from CVD, and a specific strategy on CVD outcomes was published in March 2013[2]. This strategy, published by the Department of Health, provides advice to local authority and NHS commissioners and providers about actions to improve CVD outcomes. It sets out outcomes for people with or at risk of cardiovascular disease (CVD) in line with the NHS and public health outcomes frameworks.

In summary, the strategy recommends:

- Reducing premature mortality rates for CVD by improving prevention, diagnosis and treatment, bringing all services up to the standards of the best
- Managing CVD as a single family of diseases and develop a standardised template for community and hospital care
- Supporting better identification of families or individuals at high risk of CVD and improve its management in primary care
- Improving intelligence, monitoring and research into CVD and publish comparative data on the quality of care provided for patients with CVD.

It identifies 10 specific actions to improve outcomes, based on tackling the following nine themes in cardiovascular health:

1. Management of CVD as a single family of diseases
2. Improve prevention and risk management
3. Improving and enhancing case finding in primary care
4. Better identification of very high risk families/individuals
5. Better early management and secondary prevention in the community
6. Improve acute care
7. Improve care for patients living with CVD
8. Improve end of life care for patients with CVD
9. Improve intelligence, monitoring and research and support commissioning

Challenge

The key challenges for which application of new tools and technologies are sought encompass three themes; managing CVD as a family of disease, improving case finding and identification of high risk individuals, and better early management and secondary prevention in the community.

1. Manage CVD as a single family of diseases:

CVD is a common condition which can present in different ways in different people. In practice, CVD represents a family of diseases and conditions linked by common risk factors. These diseases include coronary heart disease, stroke, hypertension, hypercholesterolemia, diabetes, chronic kidney disease, peripheral arterial disease and vascular dementia.

Many people who have one CVD condition commonly suffer from another and yet opportunities to identify and manage these are often missed. Patients often receive care from multiple different teams in a

[2] Cardiovascular Disease Outcomes Strategy, Department of Health, 2013

disjointed way. This results in uncoordinated care, multiple different hospital visits and, in some cases, confusing or contradictory information. This happens both in hospitals and in the community.

A more co-ordinated and integrated approach is needed for assessment, treatment and care to improve outcomes, including patient experience and patient safety[2]. Tools are required which promote use of integrated care pathways and transcend different levels of care.

2. Improving and enhancing case finding in primary care and better identification of very high risk families/individuals:

The NHS Health Check covers about 15 million adults between the ages of 40 and 74, but there is still a considerable number of people at risk of CVD who need to be assessed and managed.

GPs and other primary care staff need to identify at risk patients and identify CVD and related conditions such as hypertension, atrial fibrillation (AF), heart failure, chronic kidney disease (CKD), diabetes etc. Many are already doing so, partly opportunistically and partly through the use of various tools to help identify patients at high risk, but this needs to become routine practice and new tools developed. Information needs to be provided that allows comparisons of expected prevalence at GP practice level with reported prevalence[2].

In addition to the above conditions (CVD; hypertension, AF, heart failure etc), tools to assist primary care staff in symptom checking and appropriate referral of patients presenting with the following symptoms is desirable:

- transient loss of consciousness (blackouts);
- palpitations; and
- non-specific chest pain.

Identifying individuals and families at very high risk of CVD, in particular those with inherited cardiac conditions such as Familial Hypercholesterolemia (FH) and some causes of sudden cardiac death, also needs to improve. Despite National Institute for Health and Clinical Excellence (NICE) guidelines, only 15% of the estimated 100,000 cases of FH in England have been diagnosed. All family members of younger people dying suddenly from a presumed cardiac death should be given the option to be tested but many are not[2], tools to improve diagnosis of high risk individuals are sought.

New tools need to take account of the time and resource pressures in healthcare and solutions should enable more effective use of resources. Also important when considering enabling technologies (for example genomic medicine or telemedicine) is to reduce the cost of the technologies so that they are suitable for mainstream use in primary and secondary care.

3. Better early management and secondary prevention in the community:

Despite there being incentives in the Quality and Outcomes Framework (QOF) and often clear evidence based guidelines (e.g. from NICE), people who have been diagnosed with or at risk of a CVD are not always optimally managed in primary care.

For example, people who have atrial fibrillation are not always appropriately anti-coagulated, those with diabetes do not always receive the nine key processes of care, and people with hypertension often do not have this adequately managed – so this increases their risk of CVD.

Patients who would best benefit from life prolonging and enhancing devices such as Implantable Cardioverter Defibrillators (ICDs) and Cardiac Resynchronization Therapy (CRT) are also not always identified early enough.

People with or at risk of CVD are not always adequately supported to improve their lifestyles. More needs to be done to improve their management, including rehabilitation and exercise, in order to improve mortality rates, quality of life, patient experience and patient safety[2].

Tools are also required to provide support for patients with or at risk of cardiovascular disease to manage their own condition. Improved disease management, particularly self-management, and monitoring of patients with a diagnosed cardiovascular condition (e.g. heart failure) is important to reduce readmission to hospital.

Scope

Primary care is a focus for this call, but improved identification or management of CVD involving any healthcare setting (community, ambulance, hospital) is eligible for consideration.

Key policy documents

Cardiovascular Disease Outcomes Strategy: This Department of Health Strategy published in March 2013 provides advice to local authority and NHS commissioners and providers about actions to improve cardiovascular disease outcomes. It sets out outcomes for people with or at risk of cardiovascular disease (CVD) in line with the NHS and Public Health Outcomes Frameworks and identifies 10 main actions to improve outcomes.

(www.improvement.nhs.uk/CVDStrategy.aspx)

NHS Outcomes Framework: First published in December 2010 the framework offers an opportunity to understand what an NHS focussed on outcomes means for individuals, organisations and health economies. An update was published in November 2012.

(https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/213055/121109-NHS-Outcomes-Framework-2013-14.pdf)

Innovation Health and Wealth, published by the Department of Health in December 2011 which sets out a delivery agenda for spreading innovation at pace and scale throughout the NHS. Updated in December 2012 - **Creating Change: innovation, health and wealth one year on**

(www.gov.uk/government/publications/creating-change-innovation-health-and-wealth-one-year-on)

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 in 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 Phase 1 feasibility contracts placed will be for a maximum of 6 months and up to £100,000 (inc. VAT) per project. It is envisaged that a competition for Phase 2 Development contracts will be run during 2014.

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.

Briefing events for businesses interested in finding out more about the competition will be held on the 24th September (Nottingham), the 30th of September (London) and the 2nd of October (North West). Please check the website for confirmation of venues and to register attendance.

Please complete your forms using the online application process and submit them by 1200hrs on the 31st October 2013.

Key dates

Competition launch	16th September 2013
Briefing events	24th & 30th Sept, 2nd Oct 2013
Deadline for applications	1200hrs 31st October 2013
Assessment	November 2013
Contracts awarded	February 2014

More information

For more information on this competition, visit:

www.sbrihealthcare.co.uk

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For more information about the SBRI programme, visit:

www.innovateuk.org/SBRI