

General Practice of the Future

SBRI Healthcare NHS England competition for development contracts

September 2016



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 26th September 2016. The deadline for applications is 1200hrs on 24th November 2016.

Introduction

According to Simon Stevens, Chief Executive, NHS England, "There is arguably no more important job in modern Britain than that of the family doctor". Indeed, general practice in the UK is often admired by other healthcare systems around the world and has been referred to as 'The jewel in crown of the NHS'ⁱ and the 'Foundation on which the NHS is built'ⁱⁱ, however, as with the rest of the NHS, it is struggling to cope under increasing pressures of demand and funding cuts and much has been written and planned about the action that must be taken to ensure, not only its survival, but that it thrives in the future.

In 2015 the Five Year Forward View, published by NHS England, made the case for a 'new deal' for general practice, as part of its vision for an NHS better able to prevent and manage ill health closer to people's homes, and keep them out of hospital wherever possibleⁱⁱⁱ. This involves increased investment in primary care to reverse the decline in the share of the NHS budget going into general practice^{iv} and tackling the problem of recruitment and retention of GPs and the option for practices to become multi-specialty care providers (MCPs).

Demand for GP services, is at the highest it has ever been; a study by the Kings Fund in 2016 states that the number of face-to-face consultations increased by 13% between 2010-15, however the number of GPs and other healthcare professionals within primary care fell during the same period, as did the level of funding for general practiceⁱ. As more and more facets of care are pushed out of hospitals to general practice, this demand looks likely to continue to increase and therefore, the importance of general practice to the NHS cannot be underestimated. It's failure to cope with the pressures facing it will affect us all; patients and the wider NHS, as a recent BMJ article warns "if general practice fails, the whole NHS fails"^v.

In response to the many challenges that have been detailed in key policy documents, such as 'General Practice Forward View' published by NHS England in April 2016, SBRI Healthcare is focusing this call on primary care.

The Categories

The theme of the current competition is 'General Practice of the future' and within this topic three categories have been identified via review of key policy documents. The call has been developed by identifying cross-cutting themes from the work of national bodies (NHS England, Royal College of General Practitioners, Primary Care Workforce Commission), then testing thus taking lead from challenges identified at a national level in conjunction with consultation with primary care clinicians and other key stakeholders working at the forefront of general practice, they are outlined in detail in the sections below.

Applicants are expected to respond to a category whilst being mindful of the broader system. Whilst this competition is aimed at the primary care sector, solutions do not need to be strictly limited to surgery boundaries if they can demonstrate that they can deliver benefits to the primary care sector.

Companies applying under this theme are also asked to consider:

- How will you ensure that your technology is affordable to the NHS both immediately and throughout the life of the product? What health economics evidence will the NHS require before the technology can be adopted?
- How will you ensure that the technology will be acceptable to patients (and their families) and to healthcare workers?
- How will the proposed solution impact on the clinical care pathway, and how will the care pathway need to be changed in order to deliver system-wide benefits?

Category 1: General Practice Workload and Demand Management

According to a 2015 BMA survey, workload was identified as the biggest issue of concern to GPs and their staff^{vi}. GP consultation rates have increase by about 12.4% between 2008 and 2014, whilst telephone consultation rates have doubled. The mean duration of a GP appointment has increased from 8.65 to 9.22 minutes, with overall clinical workload increasing by 16% during this time. These figures only include clinical workload, but the time spent on indirect activities and professional duties has more than likely also increased^{vii}.

This increased workload, coupled with a shortage in GPs and practice staff, has led to general practice reaching saturation point and because an estimated 90% of all patient interactions are with primary care services, a small change in general practice can have a significant impact on the rest of the healthcare system.

A recent report produced by the Primary Care Foundation and NHS Alliance says "The strength of British general practice is its personal response to a dedicated patient list; its weakness is its failure to develop consistent systems that free up time and resources to devote to improving care for patients."^{viii}.

The GP Forward View emphasises the relationship between workload and morale "A common reason for poor morale is the daily struggle with growing workload. Much of this is generated by a fragmented system, over which practices feel they have little influence. Our first and foremost pressing priority must be to alleviate this wasteful burden, which takes away from direct patient care. We know we cannot work any harder, so we have to find ways to work differently. A key requirement for wider system change is the urgent need to identify and eliminate needless workload"^{ix}.

Challenges

The main challenges identified in this category are focused around measuring and managing the demand for primary care services and finding ways of releasing of GPs' time so that it can be better spent on activities of direct benefit to patients. The "Making Time in General Practice" report outlined that approximately 27% of appointments could be avoided if there was more coordinated working between GPs and hospitals, wider use of primary care staff, better use of technology to streamline administrative burdens and wider system changes^x.

Our expert network has suggested that additional pressures on workload come from limitations of the information management during GP consultation, these include, but are not limited to; the way clinical observations are taken and recorded, opportunities in improving the triage process to ensure that patients who really need to a clinician see the right one at the right time, as well as also avoiding unnecessary GP appointments. Furthermore, there are inefficiencies around the processes for referral and discharge and with sharing patient data around different parts of the system.

In contrast to some other parts of the healthcare system, there is also limited use of intelligent systems within General Practice which are able to measure and forecast fluctuating demand. An ability to do this would enable improved workforce planning at the practice, regional and national level.

Whilst technology has huge potential to help address these issues, it is crucial that any new solutions can demonstrate genuine time savings and not inadvertently create additional workload pressures.

The following "what if's" are some examples of scenarios that have the potential to improve the management of workload within primary care, they are in no way prescriptive or limiting. Applicants should think as broadly as possible; the following scenarios are intended as examples only:

What if technology could enable GP practices to improve demand management and release GP time to provide more or longer consultations?

What if technology could estimate future demand and integrate it with the rota system?

What if there were viable alternatives to F2F GP consultations?
e.g. remote, email

What if technology could enable primary care professionals to work together more efficiently with other parts of the system?

What if technology could help GP practices and locum staff 'matchmake' themselves?

What if technology could support more innovative working by non-GP staff?
e.g. technology fit for use by all

What if technology could enable easier sharing of patient records across the care system to improve efficiency of working?
e.g. following discharge from hospital

Category 2: General Practice redesign – Diagnostics & Earlier Triage

Getting the right diagnosis at the right time, as early as possible, is critical for improvements in patient care and enhancements in efficiency for the NHS. Diagnosis often begins with the history given by the patient, and the physical examination and observations carried out by the clinician. These clinical skills are complemented and supplemented by a range of diagnostic testing services delivered by a range of specialists outside of the primary care setting, including pathologists, geneticists, radiologists and healthcare scientists.

Diagnostic testing is an integral part of the healthcare system, providing essential information to enable providers and patients to make the right clinical decisions. Indeed, some 75% of clinical decisions are based on a diagnostic test and the demand for quicker, more accurate diagnosis is rising at a rate of ten percent per year^{xi}. From the patient's perspective, early detection and diagnosis can prevent unnecessary pain and suffering, from the providers' stance it can reduce the scale and cost of treatment.

The role of the GP is critical to the effectiveness of a generic diagnostic pathway; with the majority of people first presenting – and seeking diagnosis - in the GP consulting room. The majority of GP diagnostic tests are accessed by sending the patients' blood or other tissue to a pathology lab or referring the patient to a medical consultant in a hospital out patient clinical for e.g. imaging and/or endoscopy tests. In 2012 there were around 332 million GP consultations^{xii} and over 11 million referrals to secondary care for diagnosis and elective care, triggering an annual spend of more than £15 billion. The total number of GP referrals for diagnosis continues to increase year on year and is an important NHS cost-driver^{xiii}.

Challenges

National strategies to improve mortality from a range of conditions mean that diagnostic capabilities across many diseases are advancing every year. The opportunity to improve early detection, and therefore improved health outcomes, continues to grow as technology develops.

The challenges in primary care diagnostics are different to those in a pathology or central service facility. Primary care requirements are focused around the consultation – where results and actions will need to be delivered in a short (<20 minute) time frame.

There are, of course, many point of care (POC) diagnostic technologies already available and in development, however, feedback from GPs suggest many of these are not a good fit with the primary care setting and requirements of a busy and over stretched GP service, for a number of reasons:

- Equipment and consumables may be too large, not portable enough and difficult to store in a space restricted setting
- Use of the device may require specialist skills or lengthy and/or complex training, but many GP practices may want to involve some non-GP staff in providing a diagnostic service
- Use of more diagnostic testing in primary care may radically change the way GP services and care are delivered, this may be a difficult transition
- New diagnostic technologies can be slow to be adopted in the NHS and may be more so in primary care
- The initial cost and whole life cost (associated with consumables, servicing, training etc) may be prohibitive for many GP practices to afford
- Results may not be robust/reliable enough to confidently diagnose and triage patients without still relying heavily on referral to specialists in acute care for confirmation of diagnosis
- It may be difficult/impossible to easily and securely share results with specialists outside of the GP practice for a second opinion, and link results to a patients record for visibility by all involved in their care

The following “what if’s” are some examples of scenarios that have the potential to improve diagnostics within primary care, they are in no way prescriptive or limiting. Applicants should think as broadly as possible; the following scenarios are intended as examples only:

What if a wide range of diagnostic tests could be undertaken and results be delivered directly to patients during a primary care consultation?

What if there could be earlier diagnosis of a wide range of diseases by primary care?

What if diagnostic technology was designed for use in primary care?

What if diagnostic tests in primary care could be accurate, robust and reliable?

What if test results could be shared with specialists in the acute setting quickly and securely?

What if test results from primary care could be easily linked to a patient's record and visible to all care providers?

What if testing could be undertaken by a range of primary care (non-GP) staff?

What if the equipment was suitable for a GP practice environment e.g. small and portable?

What if the technology could ease the adoption of a new way of delivering GP services?

What if there was a single 'GP desktop lab' that would be maintained by the company, and was easy to use within a 10 min consultation

Category 3: General Practice redesign – Self-care

We have an ageing population with increasing complexity of long-term conditions placing huge strain on our NHS. Peoples' first port of call on their health and care journey is usually their GP, but general practices across England are at breaking point. Telephone triage and other initiatives have been tried in various practices to relieve the burden being felt by general practitioners, but some GPs feel this adds work and can compromise patient experience.

The issue of self-care is high on the agendas of several national health and care organisations including NHS England, The Royal College of General Practitioners and the Primary Care Workforce Commission, who acknowledge that making better use of technology, and educating people to care for themselves are two of the biggest stumbling blocks.

We need to enable and inspire patients to care for themselves in partnership with their general practitioner. We need industry to develop products that can make this dream a reality.

Challenges

In this technological age there is huge amounts of information available online for patients to consult regarding their own health. Despite this resource it seems to add to the burden being felt by general practitioners. How do we signpost people to the best resources, such as the NHS website or patients.co.uk, or to the best technologies available on the market, to enable peoples' first google to yield useful information that becomes a better enabler of self-care?

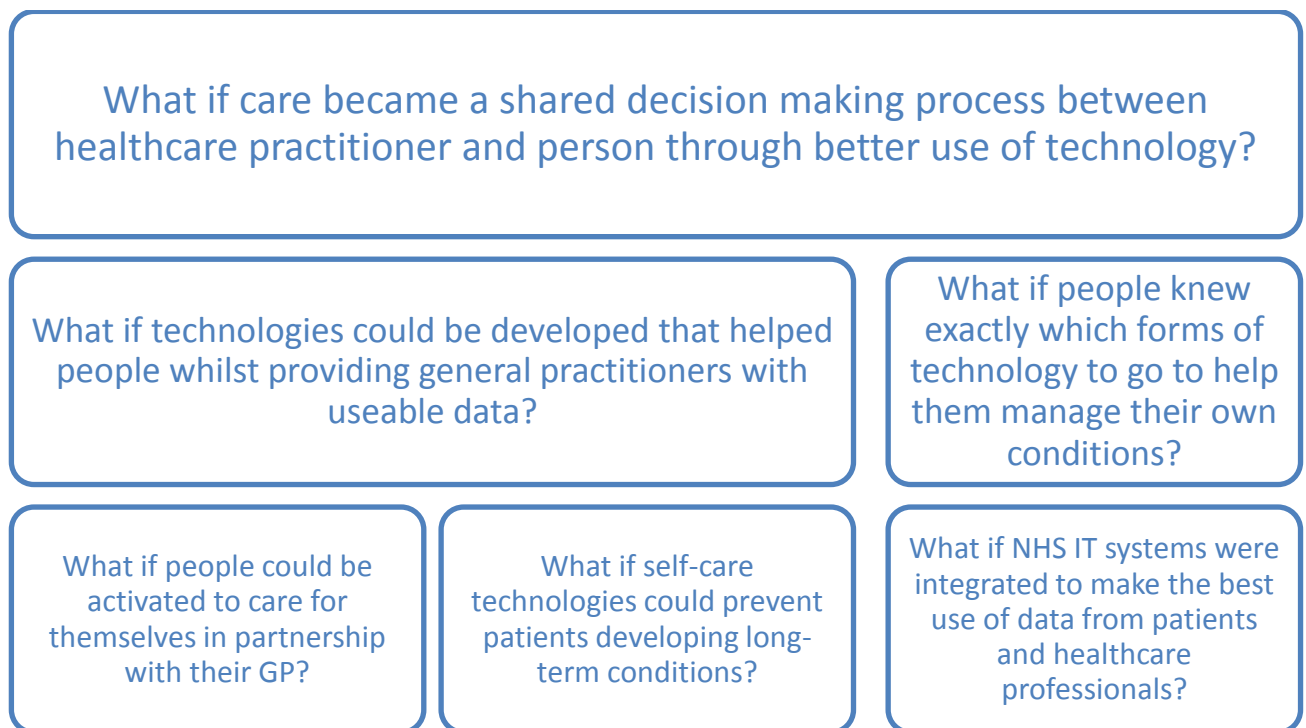
Health and care apps are everywhere and available at the touch of a screen on our smartphones. People often download apps to support their health and care without considering how useful they are. General practitioners do not have the time to understand which ones are most suitable people to assist people with self-care and do not need additional data that fails to help make decisions about peoples' care. How can technology be

developed that can add real value to the health and care package provided by the person's general practitioner?

People move between different parts of the health and care system for their treatment yet the NHS's ability to provide an integrated package of care, that enables the person to take responsibility is still lacking. How can we develop self-care solutions that enable healthcare practitioners from across the NHS to share decision making with the person and support care in a coordinated way?

Interoperability, or an IT system's ability to talk to another system and/or piece of software, is a well-recognized challenge in the NHS, particularly around general practice. How can we develop new technologies that can communicate with existing systems being used in general practice and potentially acute care and other services to streamline the care pathway?

The following "what if's" are some examples of scenarios that have the potential to improve the use of self-care within GP services, they are in no way prescriptive or limiting. Applicants should think as broadly as possible; the following scenarios are intended as examples only:



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 portal which can be accessed through the website www.sbrihealthcare.co.uk.

Briefing events for businesses interested in finding out more about these competitions will be held on the 25th October in Cambridge and 27th October in Bristol. Please check the [SBRI Healthcare Website](#) for confirmation of dates and venues, information on how to register and details of the challenges that will be presented at each event.

Please complete your application using the online portal and submit all relevant forms by 1200hrs on the 24th November 2016.

Key dates

Competition launch	26 th September 2016
Briefing events	25 th October 2016 - Cambridge 27 th October 2016 - Bristol
Deadline for applications	24 th November 2016
Assessment	November 2016/December 2016
Contracts awarded	End of February 2017
Feedback provided by	February 2017

More information

For more information on this competition, visit:

www.sbrihealthcare.co.uk

For any enquiries e-mail:

sbrienquiries@hee.co.uk

For more information about the SBRI programme, visit:

www.innovateuk.org/SBRI

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- ⁱ Understanding pressures in general practice, The King's Fund, 2016
- ⁱⁱ The 2022 GP – A vision for general practice in the future of the NHS, Royal College of General Practitioners, 2013
- ⁱⁱⁱ A Blueprint for Building the New Deal for General Practice in England, Royal College of General Practitioners, 2015
- ^{iv} <http://www.kingsfund.org.uk/blog/2015/06/new-deal-general-practice-doing-things-differently-not-just-more-same>
- ^v Tackling the crisis in general practice, BMJ 2016: 352:i942
- ^{vi} P26 <https://www.england.nhs.uk/wp-content/uploads/2016/04/gpfv.pdf>
- ^{vii} <http://www.ncbi.nlm.nih.gov/pubmed/27059888>
- ^{viii} p8 <http://www.nhsalliance.org/wp-content/uploads/2015/10/Making-Time-in-General-Practice-FULL-REPORT-01-10-15.pdf>
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