

Notes for Applicants

Insight awards research programme

10 May 2017

A Health Foundation call for innovative research on the use of national clinical audits and patient registries to improve the quality of UK health care

NOTE: All applications to the Insight awards research programme have to be submitted through our online application portal **AIMS.health.org.uk**. We advise all potential applicants to familiarise themselves AS EARLY AS POSSIBLE with the application process.

The **deadline for applications is 12:00 on 25 July 2017.**

The Health Foundation
Tel 020 7257 8000
www.health.org.uk

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About the Health Foundation

The Health Foundation is an independent charity committed to bringing about better health and health care for people in the UK.

Our aim is a healthier population, supported by high quality health care that can be equitably accessed. We learn what works to make people's lives healthier and improve the health care system. From giving grants to those working at the front line to carrying out research and policy analysis, we shine a light on how to make successful change happen.

We make links between the knowledge we gain from working with those delivering health and health care and our research and analysis. Our aspiration is to create a virtuous circle, using what we know works on the ground to inform effective policymaking and vice versa.

We believe good health and health care are key to a flourishing society. Through sharing what we learn, collaborating with others and building people's skills and knowledge, we aim to make a difference and contribute to a healthier population.

Further details about the organisation can be found at www.health.org.uk.

1 The Insight awards research programme

1.1 Overview

Our research grants support leading research teams to produce knowledge and evidence on what works to improve the quality, accessibility, organisation and sustainability of health services in the UK.

The Health Foundation's £1.6 million Insight awards research programme is a researcher-led open call for proposals designed to support original research to improve health care quality in the UK.

The current call forms part of our portfolio of work to explore elements that might contribute towards learning health care systems. Elements include: the digitisation and analysis of data and information to support learning and improvement; harnessing the energy of people and connecting and engaging different communities; and creating a context conducive to collaborative learning and improvement. It is the former of these – the digitisation and analysis of data and information to support learning and improvement – that forms the focus of the current awards programme.

1.2 Remit of this call

This call is concerned with research to advance the collection and use of data – **specifically within national clinical audits (NCAs) and patient registries** – as a mechanism for improving health care quality in the UK. The call aims to fund research which either:

- expands the involvement of patients in the design and collection of clinical audit and registry data, specifically the collection and use of patient reported outcomes
- demonstrates the value of linking clinical audit and registry data to other data, such as routine NHS encounter and cost data, to improve the value of health care, or
- explores variation in metrics of clinical quality, to determine priorities for improvement and inform the work of trust boards, commissioners and policymakers.

We are particularly interested in research related to the above areas which seeks to address one or more of the following:

- supports the digitisation or analysis of data and information, in ways with potential to contribute towards learning and improvement within health care
- develops enhanced approaches to the collation, linkage, analysis and use of data
- strengthens the alignment between data analysis and decision-making processes or improvement efforts
- contributes to the evidence base of what can be done to improve quality.

This document sets out the detailed process for the award of the 2017 Insight awards research programme grants and invites appropriately qualified organisations to submit a full proposal.

Applicants should read this Notes for Applicants document, as well as the FAQs document and any guidance notes in the online application form in full before submitting their application.

2 The current context

National clinical audits guide improvement in patient outcomes by systematically measuring the delivery of care; giving health care providers information on how their care and services compare to accepted standards; and, providing comparison to similar providers and organisations.^[1] There are over 60 NCAs in the UK, mainly commissioned by national health services, or funded through mechanisms including subscriptions.

There also exist a large number of clinical registries both in the UK and internationally. These are databases detailing care provided for their client groups, the incidence and outcome of specific conditions and procedures, and organisational responses and treatments provided for specific conditions. Although not traditionally used to measure performance against standards, these registries often gather information on the clinical outcomes of patients, and form sources for auditⁱ as well as research into the causes of variation in outcomes and other research projects.^[1] Collectively, national audits and registries cover a wide range of medical, surgical and mental health conditions, including cardiac care, diabetes, stroke, falls and fractures, and dementia.

A national 'audit of audits' in 2014 concluded that audits can be powerful tools leading to improvements in quality of care.^[2] They facilitate public reporting, retrospective and prospective research, professional development, and service improvement. They also reveal variations in practices, processes and outcomes and identify targets for improvement.^[3]

Compared with other routine data (eg Hospital Episode Statistics (HES) data), clinical audits and registries contain rich information on processes of clinical care and outcomes, and benefit from a high level of clinical engagement^[4], with data collection extending into front line services. Several national audits and registries have reported improvements in patients' care since their introduction, including improvements in the management of cardiovascular disease,^[5-7] stroke,^[8] and cancer,^[9] and joint replacement.^[10,11] Nevertheless, national audits and registries are yet to realise their full potential.^[3] The acquisition of data is resource intensive at both trust and audit provider level^[12] and, due to analysis and reporting, feedback of data to participating centres often lags behind actual care.^[3]

In 2014 the National Information Board (NIB) published a Framework for Action to transform outcomes of health and care for patients and the public by transforming the use of data and technology.^[13] The framework sets out a series of proposals, one of which is to give care professionals and carers access to all the data, information and knowledge they need – real-time digital information on a person's health and care by 2020 for all NHS-funded services, and comprehensive data on the outcomes and value of services to support improvement and sustainability (Personalised Health and Care 2020: a framework for action; page 6).^[13] This has been accompanied in the NHS in England by the creation of global digital exemplars: NHS care providers 'delivering care, efficiently, through the world-class use of digital technology and information flows, both within and beyond their organisation boundary.'^[14]

These, and other initiatives across the UK, present the ideal environment in which to expand the use of NCAs and registries as a mechanism for improving quality of care, not least in

ⁱ The Healthcare Quality Improvement Partnership (HQIP), who commission the national clinical audit programme on behalf of NHS England, state that all registries are technically a form of audit, but in practice only those where the register is used to drive quality improvements should be classified as audits.^[1]

support of the growing ambition to develop learning health systems across health and social care. A learning health system is defined by the Institute of Medicine as one in which 'science, informatics, incentives, and culture are aligned for continuous improvement and innovation, with best practices seamlessly embedded in the delivery process and new knowledge captured as an integral by-product of the delivery experience.'^[15] In such a system, data (including patient outcomes) are continuously monitored and available in real time to both clinicians and patients.^[3] In turn, enhanced approaches to the collation, linkage, research, analysis and use of data support a greater alignment between analysis and decision-making processes to improve care.

One consideration when developing such a system is the fact that in many health care systems the information infrastructure is well developed to gather data from the clinician during the encounter (eg, their observation from the patient) and from the wider care team (eg, results of diagnostic tests). However, patients are rarely asked to supply information about their health outcomes in ways that can be codified and stored in a systematic measure. For most patients, there is no systematic way of communicating what happens outside of the clinical encounter, including symptoms, response to treatment, and the priorities of patients and their families,^[16] despite the potential value of this information for both health and health care.^[3,17] While there are examples of systems and services that combine patient generated data with clinically generated data,^[18,19] these still tend to be pockets of best practice rather than routine practice. Therefore, there is potential to collect richer information on patient reported outcomes, where this could contribute towards improved patient care.

Using patient reported data to support care

The importance of combining outcomes defined by patients living with a health condition with those defined by a non-patient population is becoming increasingly evident. Studies show that clinician assessment generally results in an underestimation of specific symptoms compared to the severity and its impact on quality of life reported by the patient.^[20] This has resulted in a move towards active partnerships between patients, clinicians and health scientists to improve health and health care services,^[21] and the greater involvement of patients in the identification of important outcomes.^[22]

Patient reported outcome measures (PROMs) are self-completed questionnaires that assess patients' health, health-related quality of life (HRQoL) and other health-related constructs.^[23] PROMs have traditionally been used to describe the burden of disease and to establish the comparative effectiveness of different treatments, but are being increasingly used in modern health care to assess the quality of services provided. Since 2009, PROMs have been routinely captured for all National Health Services (NHS) funded hip and knee replacements, groin hernia repairs and varicose vein surgeries in England. Outcomes are compared at a hospital-level and reported publicly to promote quality improvements.^[24] PROMs are also in use across a variety of other conditions and settings,^[25-30] although wide-scale routine use remains largely limited to the national PROMs programme.

Many policymakers now recognise that patient reported outcomes provide an essential perspective on the quality of health services^[31] and it has been suggested that PROMs have the potential to transform how health care is organised, by assisting clinicians to provide better and more patient centred care; assessing and comparing the quality of providers; and providing data for evaluating practices and policies.^[32] At the individual patient level, PROMs feedback can improve the detection of patient problems, support clinical decision-making about treatment through ongoing monitoring and empower patients to become more involved in their care.^[33] Whilst feedback at an aggregate provider level can stimulate professionals to consider their performance in comparison to their peers, empower purchasers and patients to select providers on the basis of performance, and facilitate reward mechanisms such as payment by performance.^[34] Although PROMs may not be

suitable in all clinical settings. A study of emergency physicians' perspectives on PROMS found that they were unsure about the value and actionability of such data given the episodic nature of their work.^[35]

Despite the potential for PROMs to enhance understanding of patient outcomes they have not, to date, been widely incorporated into NCA or registry datasets in a UK setting. In comparison, over 85 per cent of national quality registers in Sweden include some form of patient reported outcome or experience measure; although there is considerable variation in the application of the tools.^[36] Across the different types of registries (elective surgery, chronic disease, acute disease) there are numerous examples of how patient reported data have been used to improve health care quality, including enhancing shared decision-making; supporting clinical decisions and treatment guidelines; improving the precision of indications for surgery; monitoring complications post hospital-discharge; and improving patient information.^[36]

Several barriers have been identified to the routine implementation of PROMs in national clinical audits and registries and many of these will need to be addressed in order to increase coverage in a UK setting. These include recognising the importance of PROMs data and agreeing that, with all the other data they collect, registries provide a suitable platform for the collection of patient reported data,^[37] reducing the time and cost burden of collecting, analysing, and presenting PROMs data,^[38] supporting the interpretation of PROMs data, and ensuring the 'value add' of PROMs is fully understood.^[25]

The rapid acceleration in electronic data capture and analytic techniques,^[39] and novel approaches to providing feedback to use of audit data,^[12,40] offers the potential to address many (although not all) of these issues. The expense traditionally incurred using a paper-based methodology to collect PROMs can be significantly reduced through use of a largely electronic and/or internet-based PROMs system.^[41] Electronic capture of data through online systems also allows PROMs to be submitted at a time that is convenient and relevant to the patient thereby increasing patient retention and reporting;^[41] although this increased flexibility may limit standardised reporting of data. It is important to also note that electronic reporting may inadvertently exclude certain patient groups less inclined to use technology. Older age and deprivation are associated with lower computer/internet use^[42] and a recent feasibility study of an electronic PROMs system showed that younger and more affluent patients were more likely to use an electronic system than older and less affluent patients.^[43] Finally, to be most informative, PROMs should be linked and analysed with patients' diagnostic and treatment information,^[41] and the integration of electronic PROMs data also affords the potential to efficiently and reliably link patient reported outcomes to clinical and treatment data.

Electronic capture of patient reported outcomes has been demonstrated in the UK^[19,41,44–47] and internationally.^[36,48,49] Importantly, PROMs have been successfully integrated into patient registries^[36,43,48] and the ability to transfer patient reported data in real time is now a reality.^[18,19] There are also examples of embedding PROMs within e-health systems and linking the interpretation of change scores to 'traffic lights', to clinical vignettes and decision trees.^[22] However, the limited adoption into routine care of direct patient feedback from outside of the clinical setting may be to the detriment of patient care. NCAs and patient registries provide a readily available means of collecting patient reported data, but they remain underutilised. Research is therefore needed to support the wider adoption of patient reported outcomes into NCAs and patient registries.

Using audit and registry data to evidence the cost of care

In addition to supporting direct care, NCA and registry data has an important role in providing evidence on the cost of care and supporting health care planning and commissioning of services. For example, the National Institute for Health and Care

Excellence (NICE) require the use of the Quality-Adjusted Life Years (QALYs) as an endpoint in economic evaluations.^[50] NCAs and registries therefore provide an ideal platform for the collection and linkage of routine patient reported data with clinical and financial data, an essential prerequisite for large-scale economic evaluations.^[51]

The potential of NCA and registry data as a secondary use dataset (ie all uses that are not direct care) is recognised in workstream 2.2 of the NIB Framework for Action, which provides a roadmap for comprehensive data on the quality, efficiency, and equity of health and care services for secondary uses, and makes specific reference to enhancing existing secondary information and improving data linkages involving NCAs.^[52]

Linking NCA and registry data to routinely collected administrative data is widely reported in the published literature, although there is considerable variation in reported use across NCAs and registries.^[53] Reasons for linking data between datasets include to enable comparisons across treatment typology, demographics or geography; to examine the feasibility of database accuracy; or to track changes in outcomes over time, such as mortality. Linking audit and registry data with routinely collected administrative data for the purposes of examining cost of care or for cost minimisation remains, however, relatively uncommon in the UK.^[53]

Evidence on the cost of care should be one of the main pillars supporting policymakers in achieving the best value for money and realising an efficient allocation of resources across different services and pathways.^[54] However, for many conditions, including cancer care, the lack of information from large databases on the cost of care accessed by patients over a sufficiently long period is a significant limitation. Where it does exist, evidence is often based on a limited number of patients or is based on predictive pathways of care.^[54]

In addition, the collection of patient-level cost data traditionally has been a resource intensive exercise, often using data obtained via local sources. Moreover, HES data have often been used to identify resource use. A limitation with this approach is that HES data are primarily recorded for the purposes of administering the health service and do not capture information such as disease severity or stage of the disease at diagnosis.

By comparison, clinical audits and registries contain rich information on processes of clinical care and outcomes; although they do not typically include encounter data or cost data. Audits and registries have been used in the past to examine cost of care, although cost and utilisation data are often aggregated,^[53] which may affect the accuracy of estimates and limit the scope for analysis,^[54] or, as with registries in many Scandinavian countries, data are collected as part of the registry itself.^[53] Directly linking audit and registry data with routinely collected data, such as NHS reference costs, therefore offers the opportunity to readily generate robust population-based, patient-level data, which can be used to more accurately estimate cost of care at a whole population and more granular level.

The application of these methods has been used to determine the cost of cancer care in England,^[51,54] suggesting that early diagnosis and cancer prevention has scope for achieving large cost savings for the health system,^[54] and also to explore the cost of care for patients on renal replacement therapy, reinforcing the economic advantage of transplantation over dialysis for the health service.^[55] Internationally, the SEER-Medicare database has highlighted the potential of population-based, patient-level data in investigating a wide range of topics on the cost of care and in producing evidence to inform policymakers.^[54] However, the lack of information from large UK datasets is a significant limitation and research is required to develop patient-level linkage of NCA and registry data with cost data in a UK setting.

Using audit and registry data to reduce warranted variation

Targeting unwarranted variation is also a key objective for health care services as a means of improving the quality and equity of access to care.^[56] Whilst variation in health care is acceptable, and in some cases even desirable, unwarranted variation can be harmful for patients, their families and carers, and the health services that support them.ⁱⁱ A review of operational productivity in NHS providers led by Lord Carter estimated that unwarranted variation is worth £5 billion in terms of efficiency opportunity^[57], and variations in cardiac services in England alone are estimated to cost the NHS £184 million.^[58] A national review of adult elective orthopaedic services in England, which included data from the National Joint Registry, identified significant variation in practice around the country at the practitioner, provider and commissioner level. The report suggested that by optimising the service, including addressing unwarranted variation in practice, significant improvements in quality and subsequent savings (in the order of £2 billion over the next five years) were achievable.^[59]

NCA and registry data have been used to investigate variations in diagnostic pathways, processes of care, treatment rates and health outcomes, as well as track improvements in patient care across a wide variety of conditions.^[56,58,60–69] These data have enabled providers to consider their performance in comparison to their peers, empower purchasers and patients to select providers on the basis of performance, and facilitate reward mechanisms such as payment by performance.

Encouragingly, many NCAs and registries have shown temporal improvements in treatment and outcomes, but variation continues to exist across geographies, providers and patient groups, even after controlling for potential confounders. Variation has also been shown in care quality across the week and between day and night.^[61] Often it is not possible to provide a definitive reason for unwarranted variations, but studies have shown that better medical record keeping is associated with lower mortality.^[70,71] Access to diagnostics, treatment and specialists,^[63,64] and variation in the use of evidence-based best practice^[72] have also been suggested as possible reasons for differences in treatment and outcomes. Other studies have, however, shown that only a small proportion of hospital variation is due to hospital-level features.^[64] Investigating variations in adherence to recommended care among providers can inform decision makers about the nature and drivers of variations in quality and highlight the best opportunities for improvement.^[64] Indeed, the national review of adult elective orthopaedic services in England suggested that variations in practice could be reduced by engaging clinicians to utilise national data and clear guidance on best practice, referencing national registries where they exist and are validated, and by commissioners incentivising providers to ensure best practice is being pursued.^[59] More research is therefore needed to better understand how differently performing providers use audit data and best practice guidelines to improve the quality of their services and the way in which commissioners use this information to support change.

To be most effective as a tool to provide assurance to health care providers and the commissioners of service about the quality of their services, and to enable people to respond to feedback and evidence based recommendations, it is necessary to provide contemporary feedback, ideally with a comparison of contemporary national or other aggregate performance.^[62] The method in which data are presented is also important, with some forms of presentation believed to oversimplify findings and hide potentially important information.^[73]

ⁱⁱ Taken from What do we mean by ‘variation’ and when is it ‘unwarranted’? – Professor Matthew Cripps. *NHS RightCare*. <https://www.england.nhs.uk/rightcare/2017/01/04/matthew-cripps-3/>

Until recently, technical challenges have limited the availability of contemporary feedback from NCAs and registries; however the landscape is changing. In England the Sentinel Stroke National Audit Programme (SSNAP) has recently developed a suite of reporting outputs at national, regional, commissioning, and provider level. The data are available in a variety of formats, including colour-coded performance tables, maps, graphs and clinical commentary.^[74] HQIP is running a National Clinical Audit Benchmarking project, providing a visual snapshot of individual Trust audit data set against individual national benchmarks. Scheduled to go live in July 2017, the portal currently contains the results of five national audits and one registry: Intensive care audit; Bowel cancer audit; Hip fracture audit; Lung cancer audit; Oesophago-gastric cancer audit; and Vascular registry.

More broadly, NHS Improvement has developed the Getting It Right First Time (GIRFT) programme, designed to improve clinical quality and efficiency within the NHS by supporting clinicians to reduce unwarranted variations in care.^[75] Based on the national review of orthopaedic services^[59] and then expanded to a further 10 medical specialities, the GIRFT methodology and process has now been extended to a total of over 30 medical and clinical specialities.^[75] NHS England has also developed the NHS RightCare programme to help local health economies give better value for patients, the public and taxpayers;^[76] while My NHS displays information on participation in NCAs taken from Quality Accounts. These programmes make differing use of routine audit and registry data, but they demonstrate the potential of NCA and registry data to support commissioning by providing feedback on the quality of health care services.

Despite the aforementioned initiatives, there remains limited evidence about how providers and those who commission their services respond to feedback to improve the quality of their services. To address this gap in knowledge, the NHS National Institute for Health Research (NIHR) Health Services & Delivery Research (HS&DR) programme has commissioned research to improve the outputs of NCAs to support organisations to improve the quality of care and clinical outcomes.^{[12] iii}

In addition, it is generally accepted that whilst public reporting and benchmarking of performance can be beneficial, it also has limitations. Public reporting places additional pressure on providers, particularly poor performers, to respond, and whilst this can have a positive impact, studies have found that poor performing hospitals may experience lowered morale and respond by focusing on what is measured to the exclusion of other aspects of care.^[33] In addition, being an outlier does not necessarily mean that a provider is delivering poor care. The measures used to report performance often focus on a particular aspect of care and can be a fairly crude measure of quality. Missing data, poor data quality and inadequate case-mix are also concerns when measuring performance. Gale and colleagues,^[72] who reported that missing data was associated with 30-day mortality in acute myocardial infarction, suggested that one reason for the findings could be that for patients who die it is simply harder to locate their medical records and consequently clinical data are less likely to be submitted on time.^[72] This highlights the need to ensure that not only are robust techniques used in the collection, analysis and reporting of data on quality of care using national audits and registries, but also the importance of ensuring that individuals who use the data understand the limitations of the data and the potential causes of unwarranted variation in quality.

ⁱⁱⁱ We would therefore consider this topic outside of scope for funding provided by the Insight awards research programme.

Finally, the landscape of health and social care is evolving, particularly in England. The traditional model of collecting and reporting audit and registry data at a provider or condition-specific level may no longer adequately reflect the delivery of services in a placed-based health system. Research is therefore needed to support providers and commissioners of services to make best use of NCA and registry data to identify unwarranted variation in the quality of care across emerging health economies.

3 Our priority areas

We have identified **three priority areas** for this grant programme under the topic of using national clinical audits and patient registries to improve the quality of care in the UK. Our three priority areas are:

- **Engaging patients in outcome measurement: expanding patients’ involvement in the design and collection of clinical audit data, specifically the collection and use of patient reported outcomes.** This theme focuses on a greater engagement of service users in the design and collection of patient reported outcomes as a tool to support clinical decision making and self-management, and as a mechanism for evaluating quality of care.
- **Linking data: demonstrating the value of linked data to improve the value of health care.** This theme will support work which links data on clinical effectiveness and outcome measures with datasets containing data reporting costs or other measures of efficiency and value. The aim of this theme is to demonstrate the benefit of data linkage to improve the value of patient care.
- **Reducing variation: using national clinical audits and registries to explore variation in metrics of clinical quality to support priorities for improvement.** This theme explores how national clinical audits and registries can be used to help service leaders, commissioners and policy makers better understand variations in quality of care across the system, and how they can make greater use of audit data and registry data in their decision-making and commissioning processes.

We recognise that although the three priority areas are distinct, they are intrinsically linked, and we acknowledge that research proposals may seek to address more than one area. Applicants will be asked as part of the application process to identify which area their research will be predominantly addressing.

More detail on each priority area is given in the table below:

<p>Engaging patients in outcome measurement</p> <p>Expanding patients’ involvement in the design and collection of clinical audit data, specifically the collection and use of patient reported outcomes.</p>	<p>We are interested in research that expands the role of the service user in the design and collection of clinical audit data. In particular, we are interested in the collection of structured information on patient reported outcomes, potentially from outside of the traditional clinical setting, which can be used to support clinical decision making and improve self-management.</p> <p>Research in this area might seek to:</p> <ul style="list-style-type: none"> • identify the characteristics of audit and registry providers effective in engaging service users in the design and operation of audits
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	<ul style="list-style-type: none"> • expand the use of PROMs in NCAs and registries across underserved patient groups and clinical areas, by identifying the barriers to current usage and developing enabling strategies • develop novel methods for the collection and reporting of patient generated data to allow measurement of changes in health status • explore issues of interoperability across systems to enable patient reported data to be collected once, and linked to clinical data, for multiple purposes.
<p>Linking data</p> <p>Accelerating the use of linked data to improve the value of health care.</p>	<p>In this theme we are interested in research that seeks to combine information on clinical effectiveness of care and efficiency, thus informing efforts to remove waste from care processes while improving other dimensions of quality.</p> <p>Research in this area might seek to:</p> <ul style="list-style-type: none"> • explore novel methods for collecting and linking audit, administrative and clinical data for the purposes of analysing the relationship between clinical quality and cost of care • evaluate costing methodologies using NCA and registry data in comparison with other currently used techniques • assess the impact of different pathways of care on quality, cost and resource allocation • examine the impact of the diffusion of new technologies and improvements in the markers of quality on the costs of care.
<p>Reducing variation</p> <p>Using national clinical audits and registries to explore variation in metrics of clinical quality to support priorities for improvement.</p>	<p>As well as supporting improvements in quality, national clinical audits have a role to play in providing assurance to health care providers and the commissioners of services about the quality of their services. In this theme we are interested in research that uses audit and registry data to identify unwarranted variation in the quality of care and helps service leaders and</p>

	<p>commissioners better integrate audit data into their commissioning processes.</p> <p>Research in this area might seek to:</p> <ul style="list-style-type: none"> • study variations in the equity, access and timeliness of service provision across providers and the impact on outcomes of care • study variation in markers of quality across the week and time of day • explore how decision makers at differently performing providers and in differently performing areas use audit data, including PROMs, to improve quality of care • measure the impact of policy and best practice guidelines on changes in quality over time and across providers • examine variation in the cost of care and explore the impact of variation in medical practice on cost • develop strategies and interventions to reduce unwarranted variation and ensure that priorities and service provision are aligned across health care systems.
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4 Relevant work within the Health Foundation and other research funders

Studies funded under this call should produce outputs of practical use to health care organisations and the commissioners and providers of NCAs and patient registries. Research funded under this call should complement, rather than duplicate, the work of the Health Foundation and the activities of other funders in this area.

Health Foundation supported work that complements this call includes projects from the previous round of our **Insight award programme** and our **Scaling Up Improvement awards**, and our biennial **Efficiency Research Programme**. Round six of our Innovating for Improvement award programme (now closed) focused on analysis of existing data for new insights, using new sources of data, and presenting data in new and innovative ways to guide care. In June 2017 we are launching our Advancing Applied Analytics programme, providing funding to improve analytical capability in support of better health and care services.

In the external environment, the NIHR HS&DR programme has recently funded **two projects**^{iv} in response to their commissioned call on improving the outputs of NCAs to support organisation to improve the quality of care and clinical outcomes.[12]

5 Types of funding

The programme comprises two awards streams:

- **Small-scale awards:** projects funded under this stream have a maximum budget of £100,000 and a maximum duration of 18 months.
- **Large-scale awards:** projects funded under this stream have a budget in the range of £300,000 to £400,000, with a maximum duration of 36 months.

5.1 Small-scale awards

These awards are designed to support innovative research either conducted at a smaller scale (eg a single site), or where the research is particularly novel.

Small-scale awards can be used for standalone projects, or to support the value of a larger study by, for example, maximising the chances of success of a larger study, increasing the knowledge that might be gained through the study, or by making the study more efficient.

Projects eligible for funding under this stream include standalone research studies, and feasibility or pilot studies. In line with the NIHR definition, we define feasibility studies as pieces of research done before a main study and used to estimate important parameters that are needed to design the main study. Pilot studies are a version of the main study that is run in miniature to test whether the components of the main study can all work together.

To be eligible for the small-scale awards, you should demonstrate that you have identified a genuine need for the research and how the findings will expand knowledge in the field. We are particularly keen to receive funding applications for research that has the potential to be developed into a substantive study at the end of the project.

The small-scale awards are most relevant where the knowledge base is less well developed and research could make a significant contribution to expanding the knowledge and development of a particular clinical area, patient group, or pathway, served by a NCA or registry. This might include research to prove the feasibility of the remote capture of a novel outcome measure, or testing the suitability of a linked dataset at a local level, which might later form part of a large-scale linkage study.

5.2 Large-scale awards

For the large-scale awards we are interested in innovative and ambitious research with the potential to support transformational change in the use of audit and registry data to improve quality of care. As such, applications for grants are expected to be interdisciplinary, including multiple conceptually linked areas of work and a range of methodologies.

Specifically, applications to this stream should be substantive studies that seek to:

^{iv} HS&DR Board – Decisions from the 25th and 26th January 2017 meeting.
<http://www.nihr.ac.uk/about-us/documents/board-and-panel-documents/hsdr/HSDR-Public-Outcomes-Jan17.pdf>

- address an issue of significant importance for the quality of health care in the UK linked to one of the three themes, with the cost in line with the significance of the problem to be investigated
- synergise with the broader efforts to establish the data infrastructure required for a learning health care system
- develop learning across more than one site and/or location
- have the potential for learning to be applied to other conditions or situations outside the immediate area of research.

We will favour projects that can demonstrate strong collaborative approaches and when considering applications to fund – where relevant to the overarching theme and appropriate to the project aims – we will prioritise those that engage digitally mature providers. As such, we ask that applicants include in their proposal an indication of the digital maturity of health care partners on the project. Providers in England could include details of their Digital Maturity Assessment scores. Providers in Scotland, Wales and Northern Ireland could use the most appropriate metric or a narrative summary to provide details of the extent to which their services are supported by the effective use of digital technology.

6 Criteria and eligibility

In this call, we aim to develop knowledge which supports the innovative use of audit and registry data to improve health care quality, focused on person-centredness, efficiency and equity of access. Research projects should be based on an analysis of gaps in current knowledge in the field, especially gaps important to patients and system leaders.

For both the small and large-scale award streams we are keen to support multi-disciplinary research that includes expertise in outcomes based research, health informatics, and health care planning and commissioning to explore the ways that NCAs and registries can address the challenge of improving quality in support of a learning health care system. The research supported through this programme is intended to provide powerful lessons and blueprints for change, which we hope will have a wide-ranging impact on the thinking, planning and implementation of NCAs and registries to support health care services in the UK.

6.1 Who can apply

The programme is an open award programme, available to suitably qualified and experienced research teams based in the UK.

We anticipate the lead applicant will be a university or similar group with suitable research expertise, but it is our expectation that the applicants to each theme will comprise multidisciplinary teams including audit providers and, where appropriate, the providers, managers and commissioners of health care services.

Project teams will need to demonstrate that they have strong research and analytical skills relevant to the project; adequate systems of information and/or research governance; and experience in project management and delivery. Teams will also need to demonstrate strong clinical engagement. We will also want to see evidence that the team has a thorough understanding of the data requirements for the project, particularly where datasets are required from a third party.

6.2 Selection criteria

When selecting proposals to fund, we will look for evidence of the following:

- A clearly defined gap in the knowledge that the research is seeking to address.
- Strength of case that the research will support the development and use of national clinical audits and patient registries as a mechanism for improving health care quality in the UK (either as part of a developmental study, or as part of a larger transformative programme).
- A practical and innovative application of robust and appropriate methodology.
- A thorough understanding of the data requirements for the project, including a proactive approach to implementing appropriate information governance and data security arrangements.
- Usefulness and generalisability of anticipated findings across services, settings and systems (in particular for the large-scale awards).
- Appropriate project management approach, including risk management and quality assurance.
- Value for money.
- Relevant experience and expertise of the research team, and strength of partnerships/collaborations and clinical leadership.

Where applicable, we ask that you also provide details of the current coverage, reach and reporting of the audit/registry data included in the study. For consistency, we ask that you report against the [inclusion criteria for NHS England's Quality Accounts list for 2017/18](#),^[77] even if the audit is not part of the Quality Accounts. If you are unable to provide details, or it is not applicable, please indicate why in your proposal.

We do not require the audit to be part of the Quality Accounts list and we will accept proposals that work with any NCA or registry based in the UK. Details on the coverage, reach and reporting of the audit/registry data will be used as an indication of 'maturity'. It is not a primary selection criterion, but we will favour proposals that are working with audits and registries that demonstrate robust data collection and reporting, particularly for large-scale awards.

6.3 What we will and will not fund

The Insight awards programme **will** support:

- primary research (secondary research is permissible in support of the study, but it should form a minor component of the project. We expect applicants to have identified a clearly defined gap in the knowledge prior to submitting an application)
- study designs using quantitative or qualitative research methods, and we are keen to encourage studies which include a mixed methods design if appropriate
- the development of research methods and analytical techniques, as long as it is in support of a clearly defined research study and produces outputs of practical use
- research which spans clinical conditions and settings, where there is a clearly defined benefit in collaborating across pathways and patient groups.

The programme **will not** support:

- research which does not address one of the three priority areas
- the cost of product or technology development as a sole purpose the project (we will fund improvements to services, processes and practices supported by IT solutions)

where there is a convincing case that the technology development is not the primary purpose)

- costs where the main element of the project is supporting professional and personal development to build analytical capability (in this case you may want to consider applying to our Advancing Applied Analytics programme, which opens in June 2017)
- the commission and set up of national clinical audits or registries not already in existence
- basic scientific or epidemiological research on the causes of disease, including biomedical or genomic research
- clinical or drug efficacy research, including clinical trials
- proposals which are solely or mainly service developments or needs assessments.

7 Governance, audience and dissemination approach

The audience for this research is broad and includes systems stewards, including the NCAPOP programme, the Royal Colleges, NHS England, NHS Improvement, NHS Scotland, and Health and Social Care in Northern Ireland. It also comprises clinical commissioners, NHS Trusts and Health Boards, the national clinical audit and research communities, and leaders at the front-line of care delivery. We expect research funded through this programme to be widely disseminated, especially through leading peer review journals and conferences. We would also encourage researchers to consider innovative methods of dissemination where appropriate.

We will be encouraging successful research teams to communicate the progress of their work from an early stage, and will be actively seeking to build linkages and share information where appropriate between the teams funded through this programme.

In line with Health Foundation policy, an advisory board will be established to support the stewardship of the Insight research awards programme. Awardees of large-scale grants will be expected to attend board meetings which will be held at least twice a year throughout the life of the programme. Management of small-scale grants will be fixed on an individual basis, but there is an expectation that award holders will attend at least one advisory group during the life of the project.

For all grants, each project team will be expected to establish an advisory group to guide delivery of the project against agreed milestones.

The formal outputs from each project will be an annual award report, an end of award report and a final research report. We would also expect award holders to publish their work in academic journals and to present their work at meetings and conferences. The Foundation has a policy of supporting Open Access publication fees for strategically relevant publications. These are decided on a case-by-case basis and therefore should not be part of the budget proposal. The Health Foundation will also support dissemination of the research findings, if appropriate.

8 The budget

The Health Foundation currently has £1.6 million allocated to fund our ambitions for the Insight awards research programme.

We anticipate funding up to three small-scale awards, with a maximum budget of £100,000 per project, over a period of 18 months. If the value of your project is substantially above £100,000, you should consider applying to the large-scale awards stream, if appropriate.

We anticipate funding three to four large-scale projects with budgets in the range of £300,000 to £400,000 over a period of 36 months.

You may submit an application to the large-scale awards stream below £300,000, but you should be able to justify how your project will support our objectives for this programme to make a significant contribution at that scale. In exceptional circumstances we may consider funding a research idea beyond our maximum of £400,000. You will, however, need to present an excellent case for this, based on the additional value and impact of the proposal.

Please note that as a charity we will fund only the full directly-incurred costs of the research. **We do not fund overheads.** Furthermore, the research will be supported as a charitable grant and as such is not liable for VAT.

9 Application and selection process

9.1 How to apply

Applicants must complete an **online research proposal application form available at [AIMS.health.org.uk](https://aims.health.org.uk)**. We would ask that you familiarise yourself with the online application portal at the earliest possible stage of your application as we may not be able to respond in a timely fashion to any technical queries as the deadline for applications nears. As such we strongly encourage early proposal submission to avoid any disappointment.

To assist in preparing your application, a list of responses to FAQs has been prepared and is available for download.

9.2 Information call

We will hold an **information call from 16:00 to 17:00 on Wednesday 24 May 2017**. The call will last an hour and you are able to submit questions in advance. If you would like to attend, please **register your interest to join the Insight 2017 information call**. Joining instructions and the exact time will be sent to you in advance of the call.

Information calls offer applicants the opportunity to hear more about the programme and ask questions to clarify understanding. Please note that we will not be able to answer specific technical questions about individual applications.

You are strongly encouraged to participate in the information call.

9.3 Key dates

The **deadline to submit proposals is 12:00, Tuesday 25 July 2017**. The online application portal will not accept proposals submitted after this time.

Longlisting of proposals will be completed by the week commencing 28 August 2017. Longlisted proposals will then be externally peer reviewed.

Shortlisting will be completed by the end of September 2017. Shortlisted proposals will be invited to attend an interview at our London offices.

Interviews for the small-scale awards will take place on Wednesday 18 October 2017. Interviews for the large-scale awards will take place on Thursday 19 October 2017. Please ensure that you are available for interview on these dates, as we are unable to offer applicants alternate interview dates.

If you have queries about the application process which have not been answered in our FAQs, please email InsightResearch@health.org.uk in the first instance. We will endeavour to reply within five working days and, if appropriate, will also update the FAQs document.

Activity	Date
Deadline for applications	12:00 on Tuesday 25 July 2017
Longlisting completed	w/c 28 August 2017
Peer review completed	end September 2017
Shortlisting complete and applicants informed of interview	w/c 9 October 2017
Interviews – small-scale awards	Wednesday 18 October 2017
Interviews – large-scale awards	Thursday 19 October 2017
Applicants to be informed of final decision	early November 2017

References

Please see Appendix A.