

## 18/86 Precision Medicine

### Summary

A call for research proposals in the field of precision medicine for the prevention, treatment, monitoring and management of patients and their outcomes as well as the delivery and implementation of precision medicine in healthcare services. The call aims to support robustly designed studies with the potential to make a step-change in improving outcomes for patients, the public and health and social care services.

For the purposes of this call, precision medicine (sometimes referred to as personalised or stratified medicine) is defined as targeting the right treatments to the right patients at the right time. Precision medicine can be targeted to individuals based on genetic, biomarker, environmental or lifestyle factors.

Research in any disease area that represents a considerable burden of disease within the United Kingdom is eligible for consideration. While applications within cancer that are solely biomarker driven evaluations of treatments would be considered within the remit of this call they are likely to be given a lower priority than other conditions given the need to complement rather than duplicate funding activities undertaken by other major UK research funders. Applications would be welcomed in all areas of precision medicine and are not limited to those that use genomics. Applications that involve the stratification of patients in the stepping down of care and therefore make better use of NHS resources are also welcome.

### Deadline for proposals:

There will be two deadlines for stage 1 applications, 6 November 2018 and 19 March 2019. Applicants can choose the call deadline which allows them to fully build their team and develop their research proposal.

For support developing applications, applicants are also encouraged to contact their local NIHR Research Design Service (RDS) or equivalent in the first instance.

### Supporting information

Precision medicine is a move away from a 'one size fits all' approach to the treatment and care of patients with a particular condition, to one which uses new approaches to better improve patients' health and targets therapies to achieve the best outcomes in the prevention and management of a disease in patients and the general population. The concept of precision medicine is not new, many areas of medicine have involved consideration of a patient's family history, past medical history and linking individual symptoms to inform an individualised diagnosis and treatment. But advances in technology, new methodological approaches to analyse big health data and the availability of tools to improve health and disease management are allowing a precision medicine approach become embedded into mainstream healthcare.

In 2016 NHS England published its stance on precision medicine through the document [‘Improving outcomes through personalised medicine. Working at the cutting edge of science to improve patient lives’](#). The document outlines ways in which personalised medicine can become embedded in mainstream NHS healthcare.

The [2016 annual report of the Chief Medical Officer for England](#), focuses on genomics and the potential genomics has to impact on prevention, health protection and patient outcomes, including the role of precision and personalised medicine.

The NHS in Wales has recently launched a £6.8 genomics and precision medicine strategy, which includes ensuring patients get quicker success to genetic tests and developing more precise and personalised treatment for a range of disease on the basis of clinical need.

## **Participating Programme Remits**

### **The EME Programme:**

Applications to the EME Programme may test the efficacy of the use of precision medicine interventions for the prevention, diagnosis or treatment of conditions.

EME is willing to receive applications for both diagnostic tests to aid in patient grouping as well as treatments whose effects are targeted at specific disease pathways. The grouping of patients may be undertaken using any diagnostic test or technique that identifies patients with similar treatment responses, prognoses or mechanisms of disease to determine the patients’ treatment pathway. Applications should examine the efficacy of interventions, and may explore the mechanisms underlying possible efficacy.

Applications may investigate novel or repurposed interventions and technologies, but studies of incremental or minor improvements to existing technologies or the discovery of new biomarkers are not within the remit of the EME Programme.

### **HS&DR Programme:**

The HS&DR Programme funds research to produce evidence on the quality, accessibility and organisation of health and social care services. Robust mixed methods studies are invited for the following topics with a focus on organisation and delivery of services, costs, quality and patient experience. Issues of particular interest include the economic implications of delivering precision medicine services routinely, the practical issues of embedding genomic and molecular testing into NHS services, acceptability to patients and access to services, including the effect of precision medicine on equalities, service delivery and settings.

### **HTA Programme:**

The HTA Programme funds research about the clinical and cost effectiveness and broader impact of healthcare treatments and tests where there is evidence to show that the technology is effective. Applications should evaluate the effectiveness of precision medicine interventions for the prevention, diagnosis or treatment of conditions. The Programme is willing to receive applications aimed at evaluating a test and treatment combination or stand-alone evaluating of a diagnostic test which could be used to group patients into categories on which their future treatment would be based.

**How to apply:**

Research proposals must be within the remit of at least one participating NIHR Programme. The Programmes involved in this call are:

- [Efficacy and Mechanism Evaluation \(EME\)](#)
- [Health Services and Delivery Research \(HS&DR\)](#)
- [Health Technology Assessment \(HTA\)](#)

Applicants should note that:

- Applications which span the remit of one or more of the participating NIHR Programmes will be welcomed. In these cases the application should be submitted to the Programme within whose remit the major part of the work lies.
- Applicants should justify the importance of their proposed research and its potential impact on patient care.
- Applicants should clearly state how their proposed research addresses an explicit evidence gap and how the research adds value to the existing [NIHR research portfolio](#)
- Patient and public involvement should be included within the application and study design.
- Precision medicine is an ongoing area of interest for the NIHR and following this opportunity, the NIHR research programmes would still be interested in receiving applications in this area to their researcher-led workstreams.

**Contact Information**

Applicants who require further guidance may wish to send a short summary (maximum 1 A4 page) of their research proposal, in a structured format including rationale, research question, proposed methodology and outcome/evaluation methods to the following address: [eme@nhr.ac.uk](mailto:eme@nhr.ac.uk)