



Funding opportunity

Transforming prediction and early diagnosis in the community

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| Opportunity status: | Closed |
| Funders: | Engineering and Physical Sciences Research Council (EPSRC) |
| Funding type: | Grant |
| Total fund: | £10,000,000 |
| Maximum award: | £2,500,000 |
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| Closing date: | 29 May 2024 4:00pm UK time |

Last updated: 12 April 2024 - [see all updates](#)

Apply for funding to develop novel tools and technologies for patient-specific prediction, early and accurate diagnosis of physical and mental health conditions for use in the community.

Projects should engage relevant partners to ensure the research is co-created and co-delivered. Projects should contribute to tackling health inequalities and embed equitable, diverse, and inclusive patient and public involvement and engagement (PPIE).

The full economic cost (FEC) of your project can be up to £2.5 million. EPSRC will fund 80% of the FEC (up to £2 million).

Projects can be up to 36 months.

Who can apply

Before applying for funding, check the [Eligibility of your organisation](#).

EPSRC standard eligibility rules apply. For full details, visit [EPSRC's eligibility page](#).

UK Research and Innovation (UKRI) has introduced new role types for funding opportunities being run on the new UKRI Funding Service.

For full details, visit [Eligibility as an individual](#).

Under the [UKRI and Research Council of Norway Money Follows Cooperation agreement](#) a project co-lead (international) (previously co-investigator) can be based in a Norwegian institution.

Resubmissions

We will not accept uninvited resubmissions of projects that have been submitted to UKRI or any other funder.

Find out more about [EPSRC's resubmissions policy](#).

Equality, diversity and inclusion

We are committed to achieving equality of opportunity for all funding applicants. We encourage applications from a diverse range of researchers.

We support people to work in a way that suits their personal circumstances. This includes:

- career breaks
- support for people with caring responsibilities
- flexible working
- alternative working patterns

Find out more about [equality, diversity and inclusion at UKRI](#).

What we're looking for

Scope

We are seeking high quality multidisciplinary proposals for engineering and physical sciences research that focus on developing novel tools and technologies for accurate, patient-specific predication and early diagnosis of mental and physical health conditions for use in the community. To maximise the likelihood of longer-term impact, projects should ensure the people expected to benefit from the research inform the research questions and the project.

Prediction and earlier diagnosis of physical and mental health conditions can have significant benefits and lead to better outcomes from a patient perspective. Earlier and accurate diagnosis can mean an increased range of treatment options that are more effective, can help people make better informed decisions about their health, and overall can help improve quality of life.

One of the key priorities outlined in the [NHS Long Term Plan](#) is shifting more care out of hospitals and into the community. The focus of this funding opportunity is geared towards the development of new technologies that enable prediction and early diagnosis of health conditions in accessible community settings. For example, these tools and technologies could be used in GP surgeries, pharmacies, community diagnostic hubs, mobile units, or home environments.

Transforming prediction and early diagnosis is a key challenge area identified in the [EPSRC health technologies strategy](#).

Research projects should address one or more of the following priority areas:

- new approaches for prediction and early diagnosis of disease for use in primary care and community settings
- self-management tools to enable individuals to track their own health and inform diagnostic decisions (for example, monitoring technologies that will make it easier for patients to interact with healthcare professionals and provide updates on their medical conditions)
- tools for earlier and more reliable diagnosis of mental health conditions

Reducing health inequalities and public and patient involvement and engagement (PPIE)

Reducing health inequalities is a key area of the [UK Research and Innovation \(UKRI\) Health, Ageing and Wellbeing strategic theme](#) and a cross cutting theme of EPSRC's health technologies strategy. All projects should address how their research will help tackle health inequalities.

This funding opportunity uses the term health inequalities to include varying definitions and interpretations of inequality and inequity, including the unfair and avoidable differences in health across different population groups. Read more:

- [NHS England – What are health inequalities?](#)
- [The King's Fund – Health inequalities](#)

■ [Health Equity in England: The Marmot Review 10 Years On](#)

While life expectancy continues to improve for the most affluent 10% of the UK population, it has either stalled or fallen for the most deprived 10%.

All projects should consider health equity in their research and embed equitable, diverse, and inclusive patient and public involvement and engagement (PPIE).

To ensure we support high quality research where research outcomes can benefit users, have maximum impact in the health sector, and tackle health inequalities, we are looking for clear evidence of genuine co-creation, co-delivery, and embedded engagement with patients, people with lived experience, and health professionals from the outset and throughout the research and innovation process. We are looking for engagement with people from different and diverse backgrounds, including those from deprived, under-served, or underrepresented populations. Diverse and creative routes should be taken to engage relevant partners.

Proposals will be required to provide a 'health inequalities and PPIE' plan as part of their outline submission.

Funding opportunity objectives

Proposals should address the following objectives:

- deliver high quality engineering and physical sciences research (up to proof-of-concept) addressing one or more of the priority areas highlighted in the 'What we are looking for' section
- deliver tools and technologies that address a clear unmet health need and demonstrate how the research will provide added value and impact in the healthcare system
- deliver tools and technologies for use in the community
- deliver multidisciplinary projects utilising expertise across disciplines that could cover multiple research areas including for example novel sensors, medical imaging, and artificial intelligence
- engagement with relevant partners and diverse users of research, patients, people with lived experience and health professionals to ensure research is co-created and co-delivered
- consider health equity in the research and embed equitable, diverse, and inclusive PPIE in projects

For more information on the background of this funding opportunity, go to the 'Additional information' section.

Duration

The duration of this award is up to 36 months.

Funding available

The full economic cost (FEC) of your project can be up to £2.5 million.

EPSRC will fund 80% of the FEC. Our contribution may be up to £2 million.

What we will fund

We will fund:

- equipment (up to £400,000)

All equipment should be fully justified and essential to the mission of the investment. Quotes for equipment do not need to be included in your application, but please retain quotes for equipment costing more than £138,000 as we may ask for these at post-panel stage before releasing funds.

What we will not fund

We will not fund the following:

- proposals must lie primarily within the remit of EPSRC and be within the scope of this funding opportunity. Any proposals that we deem out of remit or out of scope may be rejected without reference to peer review
- while we do not fund clinical trials, that is studies that involve large numbers of animals or patients, costs may be requested for proof of concept (PoC) studies where initial data from a small number of tests is being gathered to validate and inform the continual development of the technology developed as part of the project. Read about [PoC studies in healthcare](#).

International collaboration

If your application includes international applicants, project partners or collaborators, visit [UKRI's trusted research and innovation](#) for more information on effective international collaboration.

Find out about getting [funding for international collaboration](#).

How to apply

Expression of interest

To help EPSRC plan for this funding opportunity, you are requested to submit an expression of interest by 2 May 2024 at 4:00pm UK time. This will not be assessed.

Information you provide in the expression of interest stage can change prior to submission of the outline proposal.

Complete your [expression of interest](#).

Outline application

We are running this funding opportunity on the new UK Research and Innovation (UKRI) Funding Service. You cannot apply on the Joint Electronic Submissions (Je-S) system.

The project lead is responsible for completing the application process on the Funding Service, but we expect all team members and project partners to contribute to the application.

Only the lead research organisation can submit an application to UKRI.

To apply

Select 'Start application' near the beginning of this Funding finder page.

1. Confirm you are the project lead.
2. Sign in or create a Funding Service account. To create an account, select your organisation, verify your email address, and set a password. If your organisation is not listed, email support@funding-service.ukri.org. Please allow at least 10 working days for your organisation to be added to the Funding Service.
3. Answer questions directly in the text boxes. You can save your answers and come back to complete them or work offline and return to copy and paste your answers. If we need you to upload a document, follow the upload instructions in the Funding Service. All questions and assessment criteria are listed in the How to apply section on this Funding finder page.
4. Allow enough time to check your application in 'read-only' view before sending to your research office.
5. Send the completed application to your research office for checking. They will return it to you if it needs editing.
6. Your research office will submit the completed and checked application to UKRI.

Where indicated, you can also demonstrate elements of your responses in visual form if relevant. You should:

- use images sparingly and only to convey important information that cannot easily be put into words
- insert each new image onto a new line
- provide a descriptive legend for each image immediately underneath it (this counts towards your word limit)

- ensure files are smaller than 5MB and in JPEG, JPG, JPE, JFI, JIF, JFIF, PNG, GIF, BMP or WEBP format

Watch our [research office webinars about the new Funding Service](#).

For more guidance on the Funding Service, see:

- [how applicants use the Funding Service](#)
- [how research offices use the Funding Service](#)
- [how reviewers use the Funding Service](#)

Deadline

EPSRC must receive your application by 29 May 2024 at 4:00pm UK time.

You will not be able to apply after this time.

Make sure you are aware of and follow any internal institutional deadlines.

Following the submission of your application to the funding opportunity, your application cannot be changed, and applications will not be returned for amendment. If your application does not follow the guidance, it may be rejected. If an application is withdrawn prior to peer review or office rejected due to substantive errors in the application, it cannot be resubmitted to the opportunity.

Personal data

Processing personal data

EPSRC, as part of UKRI, will need to collect some personal information to manage your funding service account and the registration of your funding applications.

We will handle personal data in line with UK data protection legislation and manage it securely. For more information, including how to exercise your rights, read our [privacy notice](#).

Publication of outcomes

EPSRC, as part of UKRI, will publish the outcomes of this funding opportunity at a [Tableau tool web page](#).

If your application is successful, we will publish some personal information on the [UKRI Gateway to Research](#).

Summary

Word limit: 550

In plain English, provide a summary we can use to identify the most suitable experts to assess your application.

We may make this summary publicly available on external-facing websites, so make it suitable for a variety of readers, for example:

- opinion-formers
- policymakers
- the public
- the wider research community

Guidance for writing a summary

Clearly describe your proposed work in terms of:

- context
- the challenge the project addresses
- aims and objectives
- potential applications and benefits

Core team

List the key members of your team and assign them roles from the following:

- project lead (PL)
- project co-lead (UK) (PcL)
- project co-lead (international) (PcL (I))
- researcher co-lead (RcL)
- specialist
- grant manager
- professional enabling staff
- research and innovation associate
- technician
- visiting researcher

Only list one individual as project lead.

Find out more about [UKRI's core team roles in funding applications](#).

Application questions

Fit to opportunity

Create a document that includes your responses to all criteria. The document should not be more than six sides of A4, comprising four pages for Fit to opportunity and two pages for the reducing health inequalities and PPIE plan.

This document should be single spaced in paper in 11-point Arial (or equivalent sans serif font) with margins of at least 2cm. You may include images, graphs, tables.

For the file name, use the unique Funding Service number the system gives you when you create an application, followed by the words 'Fit to Opportunity'.

Save this document as a single PDF file, no bigger than 8MB. Unless specifically requested, do not include any sensitive data within the attachment.

If the attachment does not meet these requirements, the application will be rejected.

The Funding Service will provide document upload details when you apply.

How well does the research fit the opportunity?

What the assessors are looking for in your response

For the Fit to opportunity, explain:

- how your proposed work is aligned to the objectives of this funding opportunity
- which of the priority areas outlined in the funding opportunity your proposed work will address
- how the project will address a clear unmet health need and provide added value and impact in the healthcare system
- how the anticipated technology or tool is accessible and suitable for benefit and use in the community
- how the proposed team is multidisciplinary and has the breadth and requisite balance of skills and expertise to cover the proposed work

For the reducing health inequalities and PPIE plan section (two pages) we expect you to describe:

- how you have considered health equity in your research
- how you will engage with users of the research, health professionals and patients or those with lived experience in the project
- how co-creation, co-delivery and embedded engagement with partners will be undertaken
- how equitable, diverse, and inclusive PPIE will be embedded in the project

References

Word limit: 1,000

List the references you have used to support your application.

What the assessors are looking for in your response

Include all references in this section, not in the rest of the application questions.

You should not include any other information in this section.

We advise you not to include hyperlinks, as assessors are not obliged to access the information they lead to or consider it in their assessment of your application.

If linking to web resources, to maintain the information's integrity, include persistent identifiers (such as digital object identifiers) where possible.

You must not include links to web resources to extend your application.

Project partners

Add details about any project partners' contributions. If there are no project partners, you can indicate this on the Funding Service. Please note that, at outline stage, this information is only indicative. We do not expect the information supplied to be complete, and changes at the full stage to both the partner organisations named, and their contributions, is permitted.

A project partner is a collaborating organisation who will have an integral role in the proposed research. This may include direct (cash) or indirect (in-kind) contributions such as expertise, staff time or use of facilities.

Add the following project partner details:

- the organisation name and address (searchable via a drop-down list or enter the organisation's details manually, as applicable)
- the project partner contact name and email address
- the type of contribution (direct or in-direct) and its monetary value

If a detail is entered incorrectly and you have saved the entry, remove the specific project partner record and re-add it with the correct information.

For audit purposes, UKRI requires formal collaboration agreements to be put in place if an award is made.

Outline Costs

Provide the approximate total values in GBP (£) for the expected Directly Incurred, Directly Allocated, Indirect costs and Exceptions.

Guidance can be found [here](#).

You should record costs on the outline application as accurately as possible. We do not expect any quotations at this stage, but the overall cost of applications submitted in the full application stage should be within 10% of the cost proposed at this stage.

How we will assess your application

Assessment process

We will assess your application using the following process.

In the event of this funding opportunity being substantially oversubscribed as to be unmanageable, EPSRC reserve the right to modify the assessment process.

This will be a two-stage assessment process and this outline funding opportunity is stage one.

Stage one: Outline stage

At stage one, we are looking for outline applications that are a good fit for the funding opportunity. You should seek to address the objectives as set out in the scope detailed in 'What we're looking for' section.

Any outline proposals EPSRC consider to be outside the scope of the funding opportunity, or not primarily within the remit of EPSRC, will be rejected prior to assessment, without recourse to an expert panel.

Panel

Outline proposals that meet the scope will be assessed by an outline panel in accordance with the assessment criteria. We will invite a panel of experts to review your outline application against the specified criteria for this funding opportunity outline stage. The expert panel will determine a rank, which will be used to determine which submissions to take forward to full stage applications.

At outline stage, the panels and EPSRC will take into account the portfolio and subject matter diversity of applications received when deciding which applicants to invite to submit full applications.

Stage two: Full application stage

Applicants who are successful at outline stage (stage one) will be invited to submit full proposals in stage two.

Peer review

We will invite experts to review your application independently, against the specified criteria for this funding opportunity.

You will not be able to nominate reviewers for applications on the new UK Research and Innovation (UKRI) Funding Service. Research councils will continue to select expert reviewers.

We are monitoring the requirement for applicant nominated reviewers as we review policies and processes as part of the continued development of the new Funding Service.

Panel

Following peer review, we will invite a panel of peers to use the evidence provided by reviewers and your applicant response to assess the quality of your application and rank it alongside other applications after which the panel will make a funding recommendation.

EPSRC will make the final funding decision. Funding decisions will be taken across the whole portfolio at the point of funding, to ensure a balanced portfolio, which delivers against the comprehensive aims of the funding opportunity.

Feedback

No feedback will be provided at the outline stage to unsuccessful applicants unless specifically requested by the panel. Where appropriate, the outline panel will provide feedback to successful applicants including on their 'Reducing health inequalities and PPIE' plan.

Principles of assessment

We support the [San Francisco declaration on research assessment](#) and recognise the relationship between research assessment and research integrity.

Find out about the [UKRI principles of assessment and decision making](#).

Stage one: Outline assessment criteria

Section: Fit to opportunity

Have the applicants:

- demonstrated how the project will address a clear unmet health need and address one or more of the priority areas described in the scope:
 - tools for prediction and early diagnosis of disease for use in primary care and community settings
 - self-management tools to enable individuals to track their own health and inform diagnostic decisions (for example, monitoring technologies that will make it easier for patients to interact with healthcare professionals and provide updates on their medical conditions)
 - tools for earlier and more reliable diagnosis of mental health conditions
- demonstrated how the anticipated technology or tool is beneficial and suitable for use in an accessible community setting

- demonstrated members of team are multidisciplinary and have appropriate expertise and skills to deliver the project
- demonstrated how the project will engage with relevant partners to ensure the research is co-created and co-delivered with users
- demonstrated how the project has considered health equity in the research and how equitable, diverse, and inclusive PPIE will be embedded in the project

Stage two: Full application assessment criteria

The criteria we will assess your full application against are:

- Vision
- Approach
- Applicant and team capability to deliver
- Reducing health inequalities and PPIE
- Ethics and responsible research and innovation (RRI)
- Resources and costs

Find details of assessment questions and criteria under the 'Application questions' heading in the 'How to apply' section.

Contact details

Get help with your application

If you have a question and the answers aren't provided on this page

Important note: The helpdesk is committed to helping users of the UK Research and Innovation (UKRI) Funding Service as effectively and as quickly as possible. In order to manage cases at peak volume times, the helpdesk will triage and prioritise those queries with an imminent opportunity deadline or a technical issue. Enquiries raised where information is available on the Funding Finder opportunity page and should be understood early in the application process (for example, regarding eligibility, content or remit of a funding opportunity) will not constitute a priority case and will be addressed as soon as possible.

Contact details

For help and advice on costings and writing your proposal please contact your research office in the first instance, allowing sufficient time for your organisation's submission process.

For questions related to this specific funding opportunity please contact healthcare@epsrc.ukri.org

Any queries regarding the system or the submission of applications through the Funding Service should be directed to the helpdesk.

Email: support@funding-service.ukri.org

Phone: 01793 547490

Our phone lines are open:

- Monday to Thursday 8:30am to 5:00pm
- Friday 8:30am to 4:30pm

To help us process queries quicker, we request that users highlight the council and opportunity name in the subject title of their email query, include the application reference number, and refrain from contacting more than one mailbox at a time.

Find information on [submitting an application](#).

Sensitive information

If you or a core team member need to tell us something you wish to remain confidential, please contact tfchangeepsrc@epsrc.ukri.org

Include in the subject line: [the funding opportunity title; sensitive information; your Funding Service application number].

Typical examples of confidential information include:

- individual is unavailable until a certain date (for example due to parental leave)
- declaration of interest
- additional information about eligibility to apply that would not be appropriately shared in the 'Applicant and team capability' section
- conflict of interest for UKRI to consider in reviewer or panel participant selection
- the application is an invited resubmission

For information about how UKRI handles personal data, read [UKRI's privacy notice](#).

Additional info

Webinar for potential applicants

We held a virtual webinar on 27 March, which provided more information about the funding opportunity and a chance to ask questions. The webinar included speaker perspectives on health inequalities and patient public involvement and engagement (PPIE).

[Watch the webinar recording on YouTube.](#)

[View the webinar transcript \(PDF, 246KB\)](#)

[View the webinar question and answer document \(PDF, 145KB\)](#)

Background

Transforming early prediction and diagnosis is a key challenge area in the [EPSRC health technologies strategy](#).

Early diagnosis, prompt detection of acute and chronic disease recurrence and treatment monitoring is among the key foundations of any healthcare system.

Addressing all aspects of health from physical, mental, and environmental, the Prediction and Diagnosis challenge focuses on the need for novel techniques that optimise patient-specific illness prediction, early and accurate diagnosis.

The aim includes reducing the incidence of disease, intervening before full symptoms develop, as well as reducing the impacts of multiple long-term illness and strengthening the ability to take exactly the right steps to combat disease at precisely the right time.

Scientific, mathematical, and other techniques, from biomarker identification, research into medical imaging and risk stratification to predictive modelling and real-time, evidence-based decision-making, will all play a role.

Research disruption due to COVID-19

We recognise that the COVID-19 pandemic has caused major interruptions and disruptions across our communities. We are committed to ensuring that individual applicants and their wider team, including partners and networks, are not penalised for any disruption to their career, such as:

- breaks and delays
- disruptive working patterns and conditions
- the loss of ongoing work
- role changes that may have been caused by the pandemic

Reviewers and panel members will be advised to consider the unequal impacts that COVID-19 related disruption might have had on the capability to deliver

and career development of those individuals included in the application. They will be asked to consider the capability of the applicant and their wider team to deliver the research they are proposing.

Where disruptions have occurred, you can highlight this within your application if you wish, but there is no requirement to detail the specific circumstances that caused the disruption.

Supporting links

[Equality Impact Assessment \(DOCX, 63.1KB\)](#)

Updates

12 April 2024

Webinar recording, transcript and question and answer document added in Additional info

Timeline

- 19 March 2024 9:00am**
Stage One (Outlines) opening date
- 19 March 2024 9:00am**
Expression of Interest opening date
- 27 March 2024 10:30am**
Webinar
- 2 May 2024 4:00pm**
Expression of Interest closing date
- 29 May 2024 4:00pm**
Stage One (Outlines) closing date
- Week commencing 22 July 2024**
Stage One (Outlines) expert panel meeting
- 13 August 2024**

Expected Stage Two (Full Proposals) opening date

22 October 2024

Expected Stage Two (Full Proposals) closing date

February 2025

Prioritisation panel

March 2025

Expected funding decision

Guidance on good research

[Good research resource hub](#)

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<https://www.ukri.org/opportunity/transforming-prediction-and-early-diagnosis-in-the-community>