Diagnostic tests and test technologies call for research proposals

Introduction

The NIHR Health Technology Assessment programme funds research to assess the effectiveness of technologies[1] within the NHS. In this researcher-led work-stream grants are available for primary research and evidence synthesis on topics proposed by the researchers within the broad area of diagnostic tests and test technologies. This call has a single closing date and all the outline proposals will be assessed together.

Remit of this Call

Technologies to be investigated
This call will consider research which evaluates tests used for the diagnosis, staging, grading, monitoring, prediction or the prognosis of disease or ill health. This call will consider research in all fields of diagnosis including, but not limited to, history and examination, diagnostic imaging, laboratory based diagnostic tests of all types and near patient or point of care tests. Questionnaires or other diagnostic instruments are also eligible.

The focus of this call includes i) studies of the impact of tests on patient outcomes and diagnostic and management decisions (clinical utility) and ii) studies that investigate diagnostic accuracy (clinical validity). Studies should make comparisons between new and existing test technologies.

This call will not consider proposals for studies of analytical performance or proposals that encompass entire screening programmes, although it will accept proposals for research into specific diagnostic elements of screening programmes.

Proposals should clearly identify the role of the test being evaluated, including its position in a diagnostic pathway, whether it is being used in addition to or as replacement for an existing test or pathway, and whether its use is for diagnosis, staging, prediction or monitoring, etc. Proposals should justify the choice of any reference standards used in the study.

Study designs
The programme does not restrict the study designs it will consider, but they must be the most suitable to answer the specific HTA research question. Applicants should justify their design and all studies should be adequately powered, and the results should be relevant across the UK population.

Pilot and feasibility studies are eligible. In such cases, the applicants must describe a clear route from such preliminary work to a definitive study (which would itself be eligible for the HTA Programme). An outline of the planned definitive study must be provided and will form part of the consideration of the pilot or feasibility proposal. A suggestion for a pilot or feasibility study can also be submitted within a proposal for a definitive study where this is justified. Researchers should also consider other sources of funding for pilot and feasibility studies, especially where these are not so immediately linked to large definitive studies, such as the Research for Patient Benefit programme (http://www.nihr-ccf.org.uk/site/programmes/rfpb/default.cfm).

Evidence synthesis projects are also eligible. These should investigate clinical and cost-effectiveness. They are likely to include one or more systematic reviews and economic analysis, but other well designed studies are eligible. Researchers can also apply to the Research for Patient Benefit programme for evidence synthesis

[1] *Health Technology is an internationally recognised term that covers any method used to promote health, prevent and treat disease and improve rehabilitation or long-term care. The HTA programme undertakes research for the benefit of patients and the NHS. For this call diagnostic tests and test technologies are not confined to laboratory based tests but to all modalities and technologies used to diagnose, stage, assess, monitor, predict or prognosticate disease or ill health.*

studies. Researchers should justify why the HTA programme is the most appropriate to fund this study, rather than other programmes.

Proposals for involving methodological development as part of an evaluation are welcome. There are many areas where the methods for undertaking studies within the area of diagnostics are poorly developed.

Criteria for assessment of proposals

Applications to this Diagnostic tests and test technologies call will be assessed in two stages through a specially convened board. Outline proposals will be initially checked for eligibility and then undergo a competitive assessment for:

a. the need for the specific research evidence in the NHS
b. the scientific rigour of the research.

Need for evidence

Outline proposals will be examined for NHS need, using the following criteria.

1. *The importance of the health problem to patients and the NHS*. Applicants should describe the burden (frequency and severity) of the health problem in the population and the potential benefit from the technology.
2. *The relevance of study outcomes to patients and the NHS, and the relevance of participants to the case mix treated in the NHS.* Clinically important outcomes that matter to patients and that measure health gain should be used. These will usually be long-term. Widely accepted surrogate markers may be used if they are strongly linked to health outcomes. For primary research, participants should reflect the mix of patients likely to be seen in normal clinical practice.
3. *Justification of proposed research with reference to the current evidence base*. The importance of the research question to the NHS should be explained. Researchers should describe the current level of uncertainty and how their research will reduce it. This should include an account of the existing evidence, and any relevant research being undertaken in the HTA programme and elsewhere. The applicants should consider evidence in related technologies, diseases or patient groups when justifying their proposal. A systematic review should normally have been undertaken before a trial is considered.
4. *The technology assessment is relevant to the NHS.* There should be an adequate description of the technology and its possible effectiveness range. It must be one that is used in the NHS, or could be adopted into the NHS following the study. The study should usually assess cost-effectiveness in the NHS or justify this omission.

Scientific rigour

The Board uses the following criteria.

1. *Scientific quality of the proposal.* The proposal should be carefully designed to ensure good internal and external validity.

2. *Demonstration of the necessary skill mix, experience, project management and infrastructure for success.* High quality proposals need a multi-disciplinary team. The HTA programme expects research teams to have an appropriate mix of skilled people, such as partnerships between research clinicians and methodologists. For clinical trials, applicants are encouraged to include input from an accredited clinical trials unit, or one with equivalent experience and should plan to engage an experienced trial manager. A commitment to team working is important and a collaborative approach between institutions is welcome.

3. *Explanation and justification for estimated recruitment rates in primary research.* Studies should achieve their aims, including recruiting the necessary participants. In the case of clinical trials sample sizes are likely to be large. Researchers should demonstrate that they can recruit the necessary number of

participants. The HTA programme welcomes studies based in settings with a track record of successful recruitment.

4. *Ethical, legal and social implications of the research proposed have been considered.*

5. *Reasonable costs.* The HTA programme includes 'value for money' in its assessment. The resources requested should be reasonable to answer the specific research question.

Successful outline proposals
Applicants who are successful at the first board late May 09 will be asked to develop their outline proposals into full proposals for the second board meeting late Nov 09.

Research networks
The HTA programme expects, where appropriate, that applicants will work with a relevant research network http://www.ukcrn.org.uk/index/networks.html.

Public involvement
The HTA programme recognises the increasing active involvement of members of the public in research and would like to support research projects appropriately. The HTA programme encourages applicants to consider *how* the scientific quality, feasibility or practicality of their proposal *might* be improved by involving members of the public. Research teams wishing to involve members of the public should include in their application:

- The aims of active involvement in this project; a description of the members of the public (to be) involved.
- A description of the methods of involvement.
- An appropriate budget.

Applications which involve members of the public will not for that reason alone, be favoured over proposals which do not, but it is hoped that the involvement of members of the public will improve the quality of the application.

INVOLVE **(***http://www.invo.org.uk/***)** is a key organisation for promoting public involvement in research, in order to improve the way that research is prioritised, commissioned, undertaken, communicated and used. Researchers should use the INVOLVE web site for further details on involving the public in research.

Governance and regulation
Applicants are asked to consult the following documents and follow them as appropriate:

- Medical Research Council's Good Clinical Practice guidelines (http://www.mrc.ac.uk/pdf-ctg.pdf) when planning how studies, particularly RCTs, will be supervised. Further advice specific to each topic will be given by the HTA programme at full proposal and contract stages.
- Department of Health's Research Governance Framework for Health and Social Care http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4108962
- Department of Health/Medical Research Council Clinical Tool Kit http://www.ct-toolkit.ac.uk/

Note that trials or studies involving medicinal products must comply with The Medicines for Human Use (Clinical Trials) Regulations 2006 and the amendment to the regulations. In these cases, the DH expects the employing institution of the chief investigator to be nominated as the sponsor. Other institutions may wish to take on this responsibility or agree co-sponsorship with the employing institution. The DH is prepared to accept the nomination of multiple sponsors. Applicants who are asked to submit a full proposal will need to obtain confirmation of a sponsor(s) to complete their application. The DH reserves the right to withdraw from funding the project if they are not satisfied with the arrangements put in place to conduct the trial. The MHRA (info@mhra.gsi.gov.uk, http://www.mhra.gov.uk) can provide guidance as to whether your trial would be covered by the regulations.

Timescale
There are no fixed limits on the duration of projects or funding. However, by implication there is a pressing need within the NHS for the information and so the research would be expected to be completed within a reasonable time. For examples of diagnostic studies that have been funded by the HTA programme please visit our website. (http://www.hta.ac.uk/project/htapubs.asp)

Making an application
If you wish to submit an outline proposal in response to this call, complete the electronic application form available on the HTA website from the 1st December, 2008. Outline applications should be submitted by **1300 hours** on Wednesday 25th February 2009**.**

Applicants will also be asked to specify any competing interests at this point.

If you have queries or problems preparing your proposal please use our troubleshooting section (http://www.hta.ac.uk/funding/troubleshooting) which provides general advice and guidance based on previous queries we have received and for more specific queries to the HTA Diagnostic tests and test technologies call (http://www.hta.ac.uk/funding/troubleshooting/DiagnosticTestsAndTestTechnologies).

Lead applicants will be notified if outline proposals are short listed by the board in late May 09 and will be given a minimum of eight weeks to prepare a full proposal for consideration at a second board meeting in late November 09.

Outline proposals received after 1300 hours on Wednesday 25th February 2009 will not be considered.

If you have any questions please contact:
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