

Interventions to support changes in diet and physical activity in people with high cardiovascular risk

Introduction

The aim of the HTA programme is to ensure that high quality research information on the effectiveness, costs and broader impact of health technologies is produced in the most efficient way for those who use, manage, provide care in or develop policy for the NHS. Topics for research are identified and prioritised to meet the needs of the NHS. Health technology assessment forms a substantial portfolio of work within the National Institute for Health Research and each year about fifty new studies are commissioned to help answer questions of direct importance to the NHS. The studies include both primary research and evidence synthesis.

Question

What is the effectiveness and cost-effectiveness of individual motivational interviewing compared to group interventions and normal care for supporting changes in diet and physical activity in people with high cardiovascular risk?

- 1 Technology:** Individual motivational interviewing compared to group interventions to support long term behaviour change.
- 2 Patient group:** Individuals with high cardiovascular risk as identified from NHS Health Checks programme – ‘high cardiovascular risk’ defined as 20% or higher over next ten years.
- 3 Setting:** To be deliverable within the NHS.
- 4 Control or comparator treatment:** Advice from GP / normal care for individual risk factor management.
- 5 Design:** Primary research is required in the form of a three arm randomised controlled trial comparing a) advice / GP, b) 1:1 motivational interviewing, c) group intervention (specified and manualised). The intensity of the intervention and additional techniques to encourage maintenance of behaviour change should be justified by the researchers. Process evaluation is required to determine effectiveness of component parts of the intervention and to assess the fidelity of the intervention.
- 6 Important outcomes:** Change in diet, weight and objective measures of increase in physical activity to an appropriate and healthy level; cost per QALY.
- 7 Minimum duration of follow-up:** Two years.

Background to commissioning brief:

The effectiveness and (to a lesser extent) cost-effectiveness of lifestyle changes combining diet and physical activity are strong. However, the evidence for one particular mode of intervention (group or individual) over the other is not established. Motivational interviewing is a leading form of intervention for supporting behaviour change. It has a wide network of trainers, established, quality assessment processes, and is increasingly being used by a range of healthcare professionals. There is substantial potential for motivational interviewing to provide a solution for delivering the changes in diet and physical activity required for high cardiovascular risk patients. Group formats offer a high potential to reduce intervention delivery costs (by a factor of 6 to 15) and self-guided formats may be even cheaper.

The NHS Health Checks programme in England (currently in its pilot phase) aims to screen 2-3 million people per year, and will identify around 0.5 to 1 million people per year with either newly diagnosed hypertension, obesity, impaired glucose regulation (IGR), or 10-year cardiovascular risk score $\geq 20\%$.

Weight loss of 2-3Kg is associated with a relative reduction in cardiovascular risk of 10-15%. Evidence from epidemiological data suggests that a difference in walking activity of 40 minutes per week is associated with around a 10% relative reduction in the risk of developing cardio

vascular disease (CVD) Research is therefore required to determine the effectiveness and cost effectiveness of individual motivational interviewing compared to group interventions or normal care to support such behaviour change.

Notes to Applicants

The NIHR Health Technology Assessment programme is funded by the NIHR, with contributions from the CSO in Scotland and WORD in Wales. Researchers from Northern Ireland should contact NETSCC to discuss their eligibility to apply.

For many of the questions posed by the HTA programme, a randomised controlled trial is likely to be the most appropriate method of providing an answer. However, there may be practical or ethical reasons why this might not be possible. Applicants proposing other research methods are invited to justify these choices.

Applicants are asked to:

1. Follow the Medical Research Council's Good Clinical Practice guidelines (<http://www.mrc.ac.uk/Utilities/Documentrecord/index.htm?d=MRC002416>) 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.
2. Note that trials involving medicinal products must comply with "The Medicines for Human Use (Clinical Trials) Regulations 2004". In the case of such trials, 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 reserve 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. The DH/MRC website (<http://www.ct-toolkit.ac.uk/>) also contains the latest information about Clinical Trials regulations and a helpful FAQ page.

Research networks

The HTA programme expects, where appropriate, that applicants will work with the relevant research network.

Making an application

If you wish to submit an outline proposal on this topic, complete the on-line application form at <http://www.hta.ac.uk/funding/standardcalls/index.shtml> and submit it on line by **30th September 2010**. Applications will be considered by the HTA Commissioning Board at its meeting in January 2011. For outline applications, if shortlisted, investigators will be given a minimum of eight weeks to submit a full proposal.

Applications received electronically after 1300 hours on the due date will not be considered.

Please see GUIDANCE ON APPLICATIONS overleaf.

Guidance on applications

Required expertise

HTA is a multidisciplinary enterprise. It needs to draw on the expertise and knowledge of clinicians and of those trained in health service research methodologies such as health economics, medical statistics, study design and qualitative approaches. The HTA programme expects teams proposing randomised controlled trials to include input from an accredited clinical trials unit, or one with equivalent experience. Applicants are also expected to engage a qualified Trial Manager for appropriate projects. A commitment to team working must be shown and applicants may wish to consider a collaborative approach between several institutions.

Public involvement in research

The HTA programme recognises the benefit of 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 *could* be improved by involving members of the public. Examples of how this has been done for health technology assessment projects can be found at <http://www.hta.ac.uk/PPIguidance/>. 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; and an appropriate budget. Applications that involve members of the public will not, for that reason alone, be favoured over proposals that do not but it is hoped that the involvement of members of the public will improve the quality of the application.

Outcomes

Wherever possible, the results of HTA should provide information about the effectiveness and cost-effectiveness of care provided in its usual clinical setting and for the diverse subjects who would be eligible for the interventions under study. The endpoints of interest will in most cases include disease specific measures, health related quality of life and costs (directly and indirectly related to patient management). Wherever possible, these measurements should be made by individuals who are unaware of the treatment allocation of the subjects they are assessing. We encourage applicants to involve users of health care in the preparation of their proposal, for instance in selecting patient-oriented outcomes. A period of follow up should be undertaken which is sufficient to ensure that a wider range of effects are identified other than those which are evident immediately after treatment. These factors should guide applicants in their choice of subjects, settings and measurements made.

Sample size

A formal estimate should be made of the number of subjects required to show important differences in the chosen primary outcome measure. Justification of this estimate will be expected in the application.

Communication

Communication of the results of research to decision makers in the NHS is central to the HTA Programme. Successful applicants will be required to submit a single final report for publication by the HTA programme. They are also required to seek peer-reviewed publication of their results elsewhere and may also be asked to support NETSCC, HTA in further efforts to ensure that results are readily available to all relevant parties in the NHS. Where findings demonstrate continuing uncertainty, these should be highlighted as areas for further research.

Timescale

There are no fixed limits on the duration of projects or funding and proposals should be tailored to fully address the problem (including long-term follow-up if necessary). Applicants should consider however that there is a pressing need within the NHS for this research, and so the duration of the research needs to be timely.

Feasibility and Pilot studies

We expect that when pilot or feasibility studies are proposed by applicants, or specified in commissioning briefs, a clear route to the substantive study will be described. This applies whether

the brief or proposal describes just the preliminary study or both together. Whether preliminary and main studies are funded together or separately may be decided on practical grounds.

Feasibility Studies are pieces of research done before a main study. They are used to estimate important parameters that are needed to design the main study. Feasibility studies for randomised controlled trials may not themselves be randomised. Crucially, feasibility studies do not evaluate the outcome of interest; that is left to the main study. If a feasibility study is a small randomised controlled trial, it need not have a primary outcome and the usual sort of power calculation is not normally undertaken. Instead the sample size should be adequate to estimate the critical parameters (e.g. recruitment rate) to the necessary degree of precision.

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. It is focused on the processes of the main study, for example to ensure recruitment, randomisation, treatment, and follow-up assessments all run smoothly. It will therefore resemble the main study in many respects. In some cases this will be the first phase of the substantive study and data from the pilot phase may contribute to the final analysis; this can be referred to as an internal pilot. Or at the end of the pilot study the data may be analysed and set aside, a so-called external pilot.

For a full definition of the terms 'feasibility study' and 'pilot study' visit the NETSCC website glossary page <http://www.netscc.ac.uk/glossary/>