EVIDENCE SYNTHESIS ON SCREENING FOR TYPE 2 DIABETES

Introduction

The aim of the HTA programme is to ensure that high quality research information on the costs, effectiveness and broader impact of health technologies is produced in the most efficient way for those who use, manage and work in the NHS. Health technology assessment forms the largest portfolio of work in the NHS Research and Development Programme and each year about forty new studies are commissioned to help answer questions of direct importance to the NHS. The studies include primary and secondary research and cost about £10 million a year. Questions are identified and prioritised to meet the needs of the NHS and its patients.

Overview

Screening for diabetes is not currently NHS policy but the UK National Screening Committee (NSC) is to review this during 2005. Since the Diabetes National Service Framework was published in 2001, and the DH/MRC research review in 2002 [1], further research has been published.

This commissioning brief is for an evidence synthesis that will ensure that the NSC can draw on the most up to date evidence in its policy review. **Delivery of a draft final report must be made by 17 June 2005.**

1. ***Patient group*:** people at high risk of having type 2 diabetes. The report should identify sub-groups, defined clinically or by high-risk scores, in whom screening is most likely to do more good than harm.
2. ***Intervention*:** different screening tests, distinguishing in particular random and fasting blood glucose. Appropriate screening interval and ways of improving uptake in ethnic minorities and socially disadvantaged should be considered.
3. ***Comparator*:** normal care
4. ***Outcomes*:** detection of diabetes: reduction in risk of diabetic complications, especially cardiovascular events; reduction in risk of death
5. ***Methods:***
   - The literature review should identify, appraise and synthesise relevant studies/reviews on screening for Type 2 diabetes published in the five years 1999-2004
   - 'Relevance' should be defined in terms of methodological rigour and applicability to the UK health and health service context. It should not for instance be defined in terms of published studies.
   - The evidence synthesis should assess the evidence found against the UK NSC criteria for national screening programmes.[3]
5. ***Costs:*** Resource implications of different screening strategies as reported in recent research.
7. ***Other issues:***
   - the successful applicant will be expected to liaise with relevant people at the NSC and the DH Screening team, including Dr Muir Gray Dr Jennie Carpenter and Dr Sue Roberts.
   - The evidence synthesis will need to take account of the changing policy context, including the NSF and the Diabetic , Heart Disease and Stroke Prevention Project pilots http://www.nelh.nhs.uk/screening/diabetesproject/home.htm
8. ***Outputs:***
   The output of this work will include a report for possible publication in the HTA monograph series.

Background

The DH/MRC review concluded that:

- There is no definitive evidence that whole population screening for Type 2 diabetes would produce benefits for individuals or society by reducing long term morbidity or mortality. The Research Advisory Committee (RAC) believes that no single study could be undertaken which would produce the comprehensive evidence needed to appraise whole population screening against the Wilson-Jungner criteria. The RAC therefore recommends that the set of research questions around screening for diabetes in high risk groups should be identified and defined, and that discrete, focused research studies should be developed to address each question. These studies should be designed with the intention that their results are to be combined and used for mathematical modelling as a basis for developing future public health strategy.
- Screening for diabetes should be seen in the wider context of cardiovascular disease as there is substantial overlap between those at high risk of Type 2 diabetes and those at high risk of developing coronary heart disease. Common risk factors include a family history of disease, obesity, age and ethnicity. Pragmatically, screening for both diseases in high risk groups might be combined. The NSF for Coronary Heart Disease proposes a future strategy targeted at high risk individuals and incorporating a test for diabetes to be carried out in primary care. The utility of this strategy as a means of detecting Type 2 diabetes needs to be considered within the recommendations of the RAC.

The last evaluation against NSC criteria was 'Wareham NJ, Griffin SJ. Should we screen for type 2 diabetes? Evaluation against National Screening Committee criteria'. BMJ 2001; 322: 986-988. The evidence on which this was based was published on the NSC website. [2]

Summary of research required

The evidence synthesis will systematically review the recent research on screening for type 2 diabetes to report on the effectiveness of screening in defined groups of patients, cost effectiveness studies that have been carried out and model the cost/QALY of such screening.

References

[1] http://www.publications.doh.gov.uk/nsf/diabetes/research/foreward.htm

[2] Evaluation of Type 2 Diabetes Mellitus Screening against the NSC Handbook Criteria

http://www.nsc.nhs.uk/pdfs/diabetesnsc2.pdf

[3] http://www.nsc.nhs.uk/pdfs/criteria.pdf

Making an application

If you wish to submit a proposal on this topic, complete the electronic application form and return it to the Pauline Swinburne, External Projects Manager at the National Coordinating Centre for Health Technology Assessment, Mailpoint 728, Boldrewood, University of Southampton, Southampton SO16 7PX by **21 February 2005.**

Guidance on applications

Methods

Applicants should demonstrate knowledge of current research in the field and of systematic review methods and state how these would apply to the question posed. Valid and reliable methods should be proposed for identifying and selecting relevant material, assessing its quality and synthesising the results. Guidance on choice of appropriate methods is contained in NHS CRD Report 4 *Undertaking systematic reviews of research on effectiveness* (www.york.ac.uk/inst/crd/report4.htm). Where policy implications are considered, the emphasis should be on assessing the likely effects of a range of policy options open to decision makers rather than a judgement on any single strategy. Where epidemiological modelling or economic evaluation is required, the range of uncertainty associated with the results should be assessed. In the assessment of cost-effectiveness, further data collection may be required to estimate resource use and costs. If there is evidence that the ratio of costs and benefits may differ between readily identifiable groups, applicants are encouraged to state how they will identify these differences.

In evaluating diagnostic and imaging techniques, the emphasis of the HTA programme is to assess the effect on patient management and outcomes (particularly where changes in management can be shown to have patient benefits). Improvements in diagnostic accuracy, whilst relevant, are not the primary interest of this commissioned research programme. Applicants should justify where they consider improvements in diagnostic accuracy to be relevant to these objectives. Where there is poor evidence to link diagnostic improvements to patient benefits, part of the research may be to assess the effects of such changes on patient outcome.

Consumer involvement in research

The HTA programme recognises the increasing active involvement of consumers 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 consumers. Research teams wishing to involve consumers should include in their application: the aims of active involvement in this project; a description of the consumers (to be) involved; a description of the methods of involvement; a budget for consumer involvement. Applications that involve consumers will not, for that reason alone, be favoured over proposals that do not but it is hoped that the involvement of consumers will improve the quality of the application.

Updating

In order to inform decisions on whether and when to update the review, researchers will be expected to give some indication of how fast the evidence base is changing in the field concerned, based on the nature and volume of ongoing work known at the time the review is completed. Applicants should note that they will not be expected to carry out updating as part of the contract to complete the review.

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 communicate their work through peer-reviewed journals and may also be asked to support the NCCHTA 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. However, there is a pressing need within the NHS for the information and so the research would normally be expected to be completed as soon as possible – however it is for applicants to justify the duration and costs proposed.