

## Scanning confocal ophthalmoscopy for diabetic eye screening

### Introduction

The aim of the HTA Programme is to ensure that high quality research information on the effectiveness, costs and broader impact of health technology 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.

### Research Question:

***What is the potential role for scanning confocal ophthalmoscopy in diabetic eye screening?  
How does it affect the detection of retinopathy and would its use be cost-effective?***

- 1. Technology:** Scanning confocal ophthalmoscopy (SCO) technologies as a primary screening test. If applicants wish to include more than one technology this should be fully justified.
- 2. Patient group:** People eligible for diabetic eye screening in the UK.
- 3. Setting:** UK Diabetic Retinopathy Screening services.
- 4. Comparator:** Two-field mydriatic digital photography and grading as used in the English Diabetic Eye Screening programme. (*Applicants may propose additional comparators, e.g. as defined in the ETDRS or the protocols used in the Scottish Diabetic Retinopathy Screening programme.*)
- 5. Study design:** A multicentre cross-sectional study to compare the use of scanning confocal ophthalmoscopy technologies with current screening practice. Applicants should explain how they will manage the issue should SCO perform better than the reference standard. The study should be of sufficient size to provide definitive findings and assess inter-grader agreement for the tests. A model should be used to explore the potential effects on clinical management and referral decisions and model the likely effect on cost effectiveness in diabetic retinopathy screening programmes.
- 6. Important outcomes:** Diagnostic accuracy for: sight threatening diabetic retinopathy; for any retinopathy (including screen positive by severity±ungradeable); diagnostic accuracy for different retinal abnormalities, e.g. microaneurysms; cost effectiveness.  
**Other outputs:** Impact on the Diabetic Eye Screening / Diabetic Retinopathy Screening programmes; effect on clinical management decisions; comparison of time taken for review of images.

**Rationale:**

*The prevalence of diabetes in the UK continues to increase and amongst other things, complications of diabetes can lead to sight loss. The NHS Diabetic Eye Screening Programme was established to systematically screen anyone over the age of 12 with type 1 or type 2 diabetes for signs of retinopathy each year.*

*Depending on the severity of any abnormalities found, patients are referred to specialist ophthalmic care for further assessment and treatment as required.*

*The screening programme in England uses two-field digital photography of the retina and requires mydriatic dilatation of the pupil. Programmes in Wales and Northern Ireland are broadly similar. In Scotland different eye screening protocols are used.*

*Scanning confocal ophthalmoscopy technologies are of interest to the NHS screening programmes. It is an imaging technology, which does not routinely require pupil dilatation and different machines can operate in a number of different modes: narrow, normal, wide field or ultra wide field. How well it performs in a screening programme and how these compare to existing digital photography has not yet been adequately assessed.*

**Making an application**

If you wish to submit a Stage 1 application against this topic, the on-line application form can be found along with the details for this brief at [www.nihr.ac.uk/funding-and-support/current-funding-opportunities/](http://www.nihr.ac.uk/funding-and-support/current-funding-opportunities/). The HTA Programme can be selected using the filters and the application should be submitted on-line no later than 1pm on the **31<sup>st</sup> July 2019**. Applications will be considered by the HTA Funding Committee at its meeting in **September 2019**.

The guidance notes for this call can be found at: [www.nihr.ac.uk/hta\\_st1\\_guidancenotes](http://www.nihr.ac.uk/hta_st1_guidancenotes). The supporting information can be found at: [www.nihr.ac.uk/hta\\_supportinfo](http://www.nihr.ac.uk/hta_supportinfo).

**IMPORTANT:** For Stage 1 applications, if shortlisted, investigators will be given a minimum of **eight weeks to submit a Stage 2 proposal**. The Stage 2 proposal will be considered at the Funding Committee in **January 2020**.

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

**Should you have any queries please contact us:**

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