

Study identifies barriers and enablers of diabetic retinopathy screening

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A new study, conducted as part of a NIHR-funded project on diabetic retinopathy screening, has identified important barriers, and enablers, associated with screening attendance.

Led by researchers at City, University of London in collaboration with eight other universities, the study findings could be used to design interventions to increase screening attendance, helping to improve early diagnosis of the leading cause of vision loss amongst working-age adults in the Western world.

The four key recommendations based on the findings are: (1) to reduce inconvenience to people with diabetes; (2) to increase awareness of the importance of screening; (3) to increase a sense of comfort and support; and (4) to improve message content.

The findings are important, as despite evidence supporting the effectiveness of [diabetic retinopathy](#) screening (DRS) in reducing the risk of sight loss, attendance for screening is still consistently below recommended levels. In the UK, 20% of those offered screening do not attend, and as a result, the findings could help increase attendance for particular ethnic and social groups with low attendance rates. The research is published in the journal *Diabetic Medicine*.

Diabetic [retinopathy](#) is caused by high blood sugar levels damaging the small blood vessels at the back of the eye (retina). Screening for diabetic retinopathy to detect and treat early signs can prevent sight loss, but the

success of these interventions is dependent on early detection and timely referral for treatment.

The duration of diabetes is the strongest predictor for the development and progression of retinopathy, but it usually takes several years for diabetic retinopathy to reach a stage where it could threaten sight. However, within 20 years of diagnosis, nearly all patients with type 1 diabetes and more than 60 per cent of patients with type 2 have retinopathy.

It has been estimated that globally approximately 93 million individuals may have some form of diabetic retinopathy, with 28 million suffering from the sight-threatening end points of the disease. This also as a significant economic cost associated with the condition.

To identify the barriers and enablers associated with screening – in particular those most likely influence attendance—the researchers carried out a systematic review of the literature, and coded each of the 69 studies found into six different domains representing categories of theoretical barriers/enablers proposed to mediate behaviour change.

The combined content and framework analysis identified six Theoretical Domains Framework domains as the most influential factors in screening attendance: (1) environmental context and resources; (2) social influences; (3) knowledge; (4) memory, attention and decision processes; (5) beliefs about consequences; and (6) emotions.

The authors suggest that interventions that target these domains may be more likely to increase screening attendance.

A recent output from the same project showed that interventions that specifically targeting patients, healthcare professionals or the health system resulted in a 12 per cent overall increase in retinopathy screening

attendance compared to usual care and that they also were good value for money.

Speaking about the study, Professor John Lawrenson, lead author of the Cochrane review and a Professor of Clinical Visual Science at City, University of London, said:

"Our new study has identified a number of common barriers, and also enablers, that affect screening for diabetic retinopathy. Based on our research, we suggest that number of recommendations, such as increase awareness of the importance of screening and also improved message content, which could be used to inform interventions which ultimately could improve overall screening attendance and ensure that people with the condition get the treatment and support as early as possible.

"Combined with other findings from our recent NIHR project, which found that interventions aimed at patients, healthcare professionals and healthcare system were effective at improving overall [screening](#) attendance by 12 per cent, we hope that this will lead to policy changes which will ultimately help patients avoid diabetic retinopathy, and prevent what is globally the leading cause of vision loss amongst working-age adults in the Western world."

Provided by City University London

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