Diabetic retinopathy screening in general practice—can it be done?

Deborah Askew[1], **Philip Schluter**[2], **Claire Jackson**[1], **Geoff Spurling**[1], **Craig Kennedy**[3]

[1]Discipline of General Practice, University of Queensland, [2]School of Public Health and Psychosocial Studies, AUT University, [3]StateWide Telehealth Services, Queensland Health

Background

Diabetic retinopathy (DR) is the leading cause of blindness in adults, but early detection and appropriate treatment can prevent nearly all severe vision loss and blindness. However, only about 50% of people with diabetes access appropriate screening. We aimed to determine the feasibility of primary care based DR screening using non-mydriatic cameras.

Data gathered and methods used

Patients with diabetes were recruited from two primary care clinics. Single photographs were taken of each retina by specially trained practice nurses and assessed by accredited GPs. Photos were read by two independent ophthalmologists masked to the GPs assessment. GPs' accuracy in determining the interpretability of the photographs and diagnosing DR and maculopathy were assessed, using the ophthalmogists as the reference standard. Semi-structured interviews explored GPs' attitudes to primary care based DR screening.

Results and conclusions

Two GPs and 114 patients participated. Ophthalmologists deemed 39% of photographs interpretable—GPs were less likely to consider photos uninterpretable. GPs' DR diagnostic sensitivity and specificity was 87% and 95% respectively. They were very positive about general practice based DR screening, considering it enhanced their ability to provide comprehensive care.

General practice based DR screening is feasible and has the potential to increase patients' access to appropriate screening by incorporating it into the diabetes annual cycle of care. Additionally, identification of patients with DR will enable GPs to limit referrals to those patients who actually require specialist ophthalmic review, thereby making better use of the limited resources of ophthalmology outpatient services.