Innovation in the total management of type 2 diabetes:

Improving diabetic retinopathy (DR) screening and monitoring in rural and remote communities

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Background

• ~848,000 Australian adults with type 2 diabetes, most cared for in general practice and primary health care settings.¹
• Diabetic retinopathy (DR) is the leading cause of preventable blindness in Australians under the age of 60.
• NHMRC DR screening guidelines recommend that all Australians with diabetes undergo at least biennial screening.²
• <50% of Australians with diabetes receive appropriate screening.³
• Only 20% of Aboriginal and Torres Strait Islander people with diabetes had an eye examination in the last 12 months.⁴
• Up to 50% of people with proliferative DR, who do not receive timely treatment, will become legally blind within 5 years.⁵
A trial and an evaluation of DR screening in general practice and primary health care

- **Trial** - 5 intervention general practices total – 3 rural trialled DR screening over 3 years and compared with 3 matched practices carrying out routine care.
- GPs in the intervention practices were provided with a camera and accredited training to undertake the review of retinal images.
- Photography and screening was conducted onsite in each intervention practice.
- Ophthalmic support was provided by ‘buddy ophthalmologists’ via videoconference, teleconference and/or email.

- **Evaluation** - a rural and remote outreach DR screening model with visiting ophthalmology services and a local GP reviewing retinal images.
- Clinical (screening) data and the experiences of patients, GPs, practice nurses, Aboriginal Health Workers and other stakeholders were collected to assess outcomes.
Summary of screening outcomes

Appropriate recorded screening evidence was 99% in intervention versus 33% in the matched practices undertaking routine care during the 3 year study period\(^7\)

Appropriate follow-up (≤ 12 months, as per the NHMRC Guidelines) of mild-moderate DR was 100% in intervention practices versus a range of 0 - 53% in practices undertaking routine care during the 3 year study period\(^7\)

DR was detected in 24.3% of rural outreach screening episodes and referred to ophthalmologist\(^4\)

The rural remote outreach DR screening model increased DR screening rates in the regional area from 16 to 66% and improved local service coordination over the 3 year study period\(^4\)
Summary of qualitative results

Highly acceptable to **patients** and **health professionals**
- Equitable
- Locally appropriate
- Multi-disciplinary
- Sustainable

**Participating GPs and health professionals valued:** positive links with buddy ophthalmologists; use of cameras to detect other pathology/conditions (e.g. hypertension); increased opportunities to use images for patient education & developing relationships with local optometry services where possible

**Patients / community valued:** decreased need for travel and a ‘one stop shop’ of diabetes management in practice
Opportunities – successful implementation of DR screening models

Online DR practice module - an overview of the new DR MBS item numbers: 12325 and 12326 requirements for a safe and effective DR service, including:

- the necessary practice infrastructure, including choice of camera
- information for health professionals to maximise quality images using a non-mydriatic camera
- online training for GPs to be confident in the accurate interpretation of retinal images and appropriate referral
- a self-test to benchmark screening accuracy
- strategies to develop a process for DR screening which suits your practice / service and community

Framework to guide the successful implementation of DR screening model in practice and use of MBS item numbers – under review, AFP (2017)
Further information …


References


