

Lions Outback Vision Diabetic Retinopathy Screening Project– A Review

Sinead Denny¹, A/Prof Angus Turner¹

1-Lions Outback Vision, Lions Eye Institute, Western Australia

Purpose

Previous research has shown that engagement of a regional Diabetic Eye Health Coordinator has resulted in increases in coverage provided by the Diabetic Retinopathy Screening Program in the Kimberley region of Western Australia¹. Yet, despite this increase, there remain significant barriers with screening.

Our aim is to determine if having a statewide Diabetic Eye Health Coordinator contributes to an increase in the quantity and quality of referrals as well as coverage and integration of retinal screening into primary health services.

Methods

The current role of a statewide Diabetic Eye Health Coordinator allowed integration with other programs including visiting Ophthalmology and Optometry that facilitated multiple visits in 19 sites across Western Australia with retinal cameras. Images were sent to Lions Outback Vision via multiple channels including on-site training clinics, mobile DRS camera screening clinics and GP clinics.

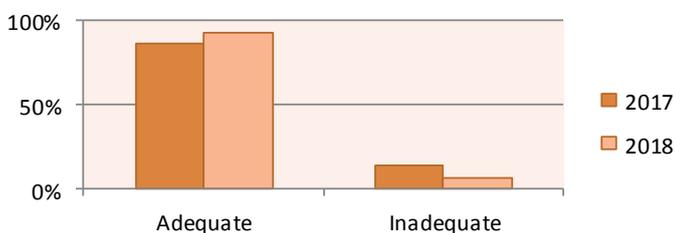
Results

Our research shows the total number of image referrals for retinal screening at 687 in 2017 over 14 sites and 695 in 2018 over 16 sites². Additionally there were 11 sites in 2017, and 9 sites in 2018 with retinal cameras and no photos sent to LOV for grading.

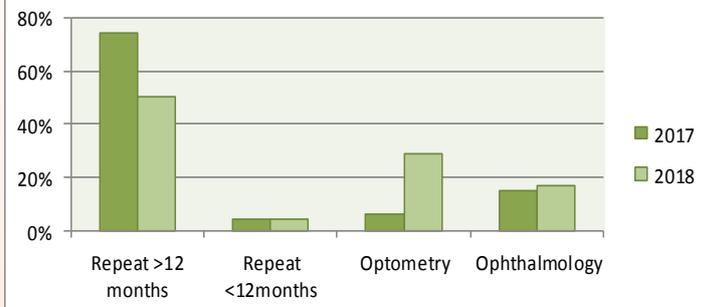
From 2017 to 2018 there was found to be an increase in the adequacy of the images being sent for grading, from 86% in 2017 to 93% in 2018.

Looking at the referral outcomes from the images sent for grading, referrals to Optometry increased from 6% in 2017 to 29% in 2018. Referrals to Ophthalmology also increased from 15% in 2017 to 17% in 2018.

Percentage of images of adequate quality for grading 2017-2018

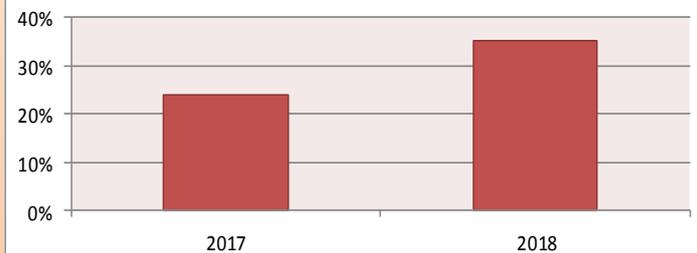


Percentage of referral outcome 2017-2018



From the percentage of images that were adequate for grading, there was found to be an increase in the prevalence of diabetic retinopathy from 24% in 2017 to 35% in 2018.

Diabetic Retinopathy prevalence as percentage of images adequate for grading 2017-2018



Conclusion

To conclude, our research shows that employing a state-wide Diabetic Eye Health Coordinator, has increased quality of images and therefore increased detection of diabetic retinopathy and subsequent referrals to Lions Outback Vision.

This could be attributed to simplified grading protocols, improving health systems and upgrading of resources that are available to health workers to improve eye health awareness and training.

Although the total number of images graded remained stable from 2017-2018, ongoing support is needed to prevent sites becoming inactive in screening.

References:

- 1) Turner, V. M. a. A. (2017). Coordination of diabetic retinopathy screening in the Kimberley region of Western Australia. *The Australian Journal of Rural Health*, 25, 110-115.
- 2) Lions Outback Vision (2018). Western Australia Diabetic Retinopathy Screening Education and Support Service Project 2017-2018. 1-4 Quarterly Report 2017-2018