

Should we photograph eyes with perception of light (PL) and no perception of light (NPL) during diabetic eye screening?

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Purpose

In the English NHS Diabetic Eye Screening Programme (DESP) there are no guidelines as to whether retinal photographs should be taken for eyes with NPL vision.

The purpose of the audit is to determine whether there is any value in taking images of eyes with NPL or PL in retinal screening.

Methods

Screening results and demographics of patients who attended screening in and around Birmingham (BSBCDESP) over a six month period for those with PL (n = 99) and a 12 month period for NPL (n = 308) were analysed.

Other data collected were reason for PL/NPL vision, whether retinal photographs of the PL/NPL eye were taken and the assessability of images, the presence of any diabetic retinopathy (DR) and patient outcome. Vision of the subsequent screen was also looked at to determine variances in visual acuity (VA) testing.

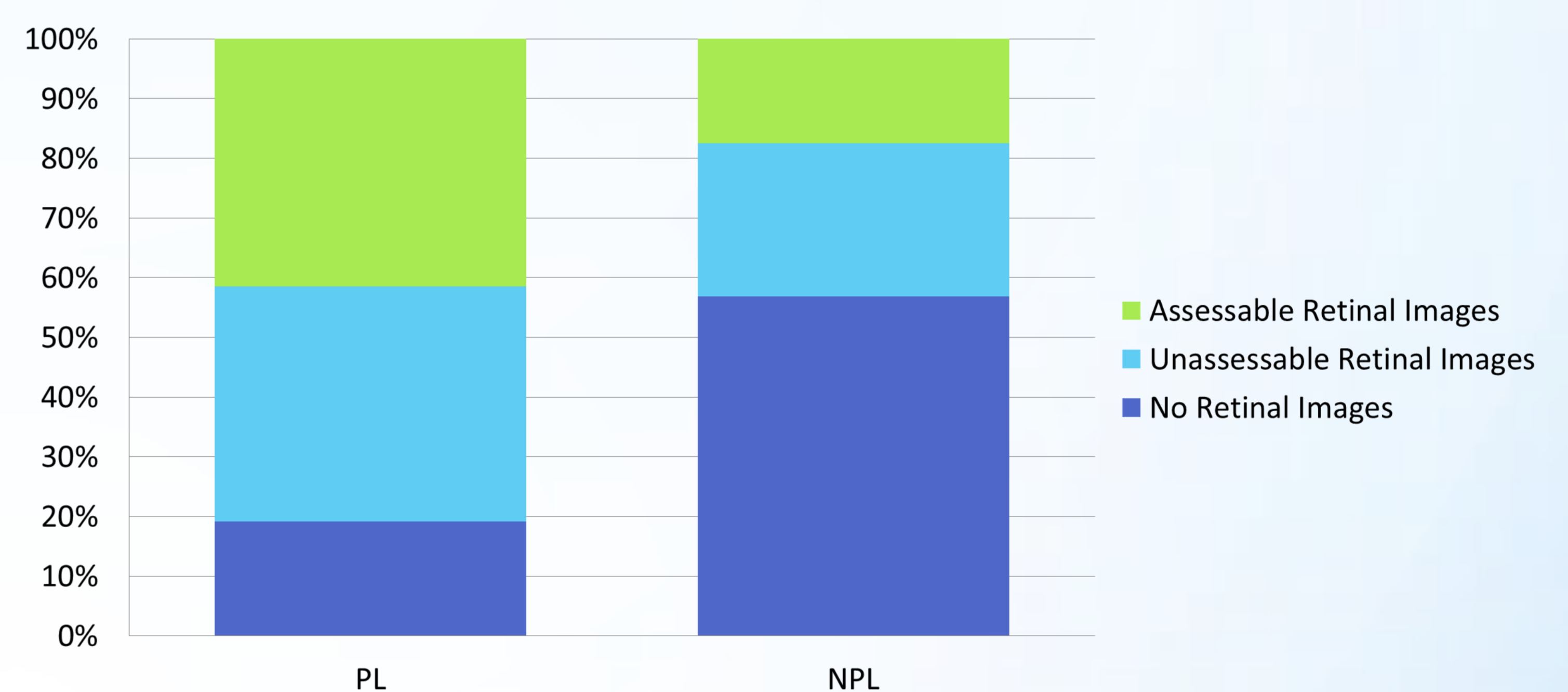
Results

	PL N = 99	NPL N = 308
Sex		
Male	46 (46%)	188 (61%)
Female	53 (54%)	120 (39%)
Mean age	69 years (37-94)	72 years (20-96)
Ethnicity		
Asian	16 (16%)	78 (25%)
Black	2 (2%)	30 (10%)
Caucasian	68 (69%)	198 (64%)
Chinese	0	2 (1%)
Unknown	13 (13%)	0
Affected eye		
Right	56 (57%)	154 (50%)
Left	43 (43%)	154 (50%)

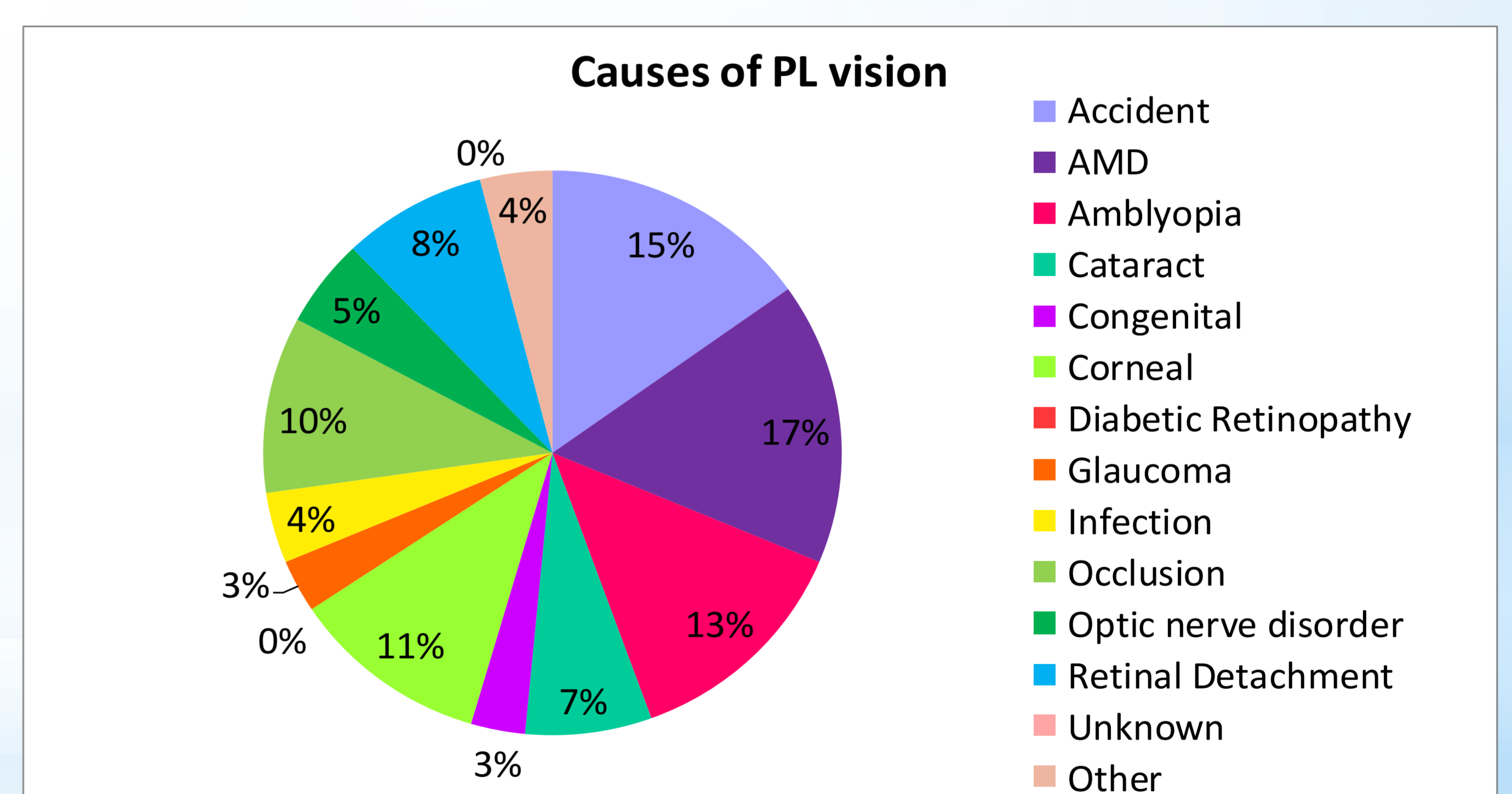
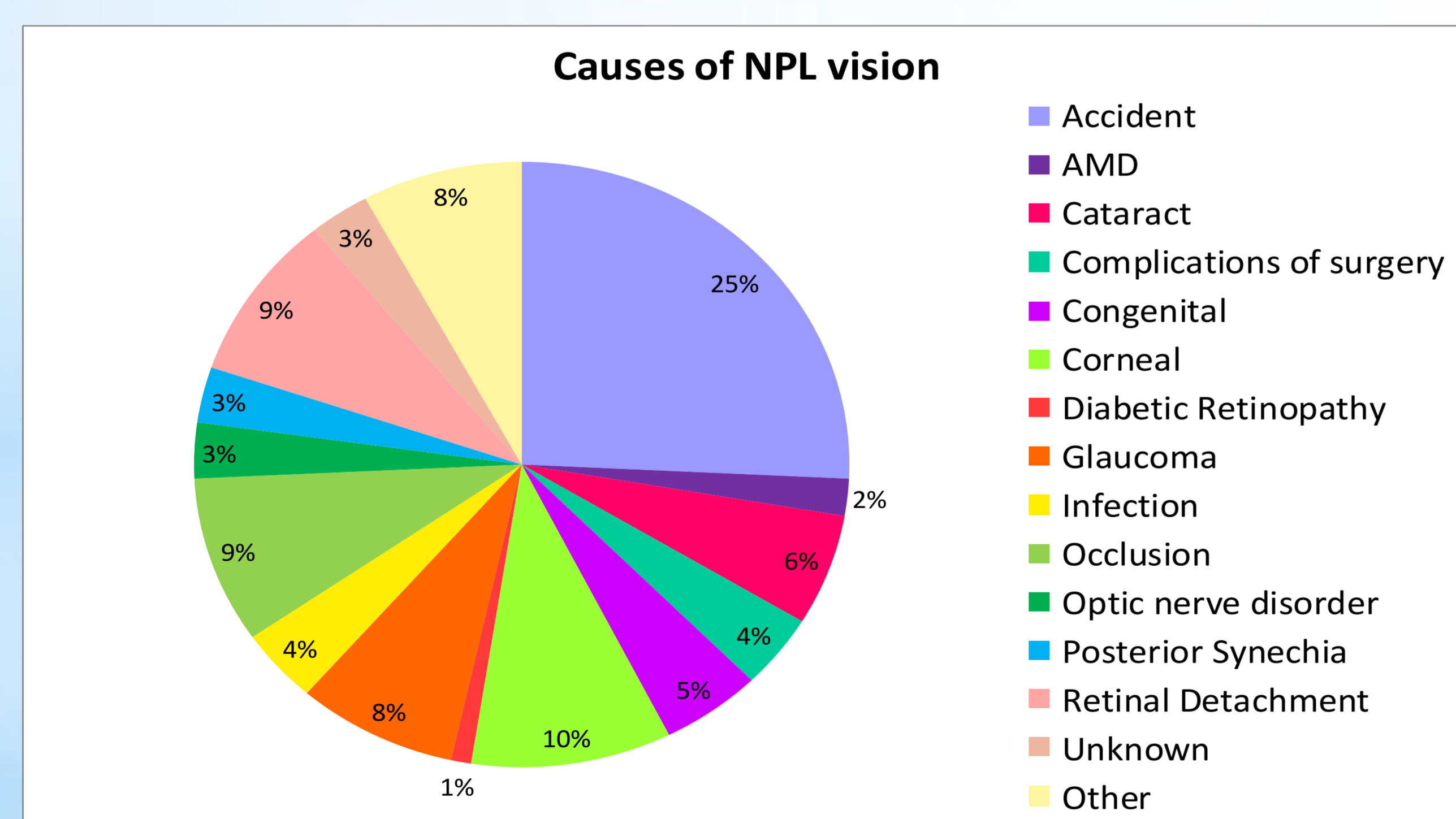
Conclusions:

- This data suggests that there may be no value in photographing NPL and PL eyes during screening. Only a minority of NPL eyes were assessable and no significant DR requiring ophthalmic intervention was found.
- Other eye conditions may be discovered but this is not the main purpose of diabetic eye screening.
- Accuracy of VA measurement during screening also needs to be considered.

Percentage of patients with no retinal images or retinal images that were unassessable or assessable in the PL or NPL Eye



Demographics of PL and NPL patients



Referable DR

PL Group

- 2 (2%) referred for maculopathy (false positives after examination by an ophthalmologist).
- 2 (2%) had wet age-related macular degeneration and was referred urgently.

NPL Group

- 1 (0.5%) stable treated DR being monitored under digital surveillance.

- In total 11% had a minor improvement in VA at next screen. Most of which improved to PL, count fingers (CF) or hand movements (HM).
- One patient in each group had a large increase in VA (6/6 and 6/9) due to having cataract extraction.