

Ophthalmology Diabetic Eye Screening Triage Clinics

A Healthcare Science Practitioner (HSP)–delivered Service

Guy Roberts, Charlotte Mallanaphy, David Clark, Nihal Kenawy

Aintree **NHS** University Hospital

NHS Foundation Trust

Background

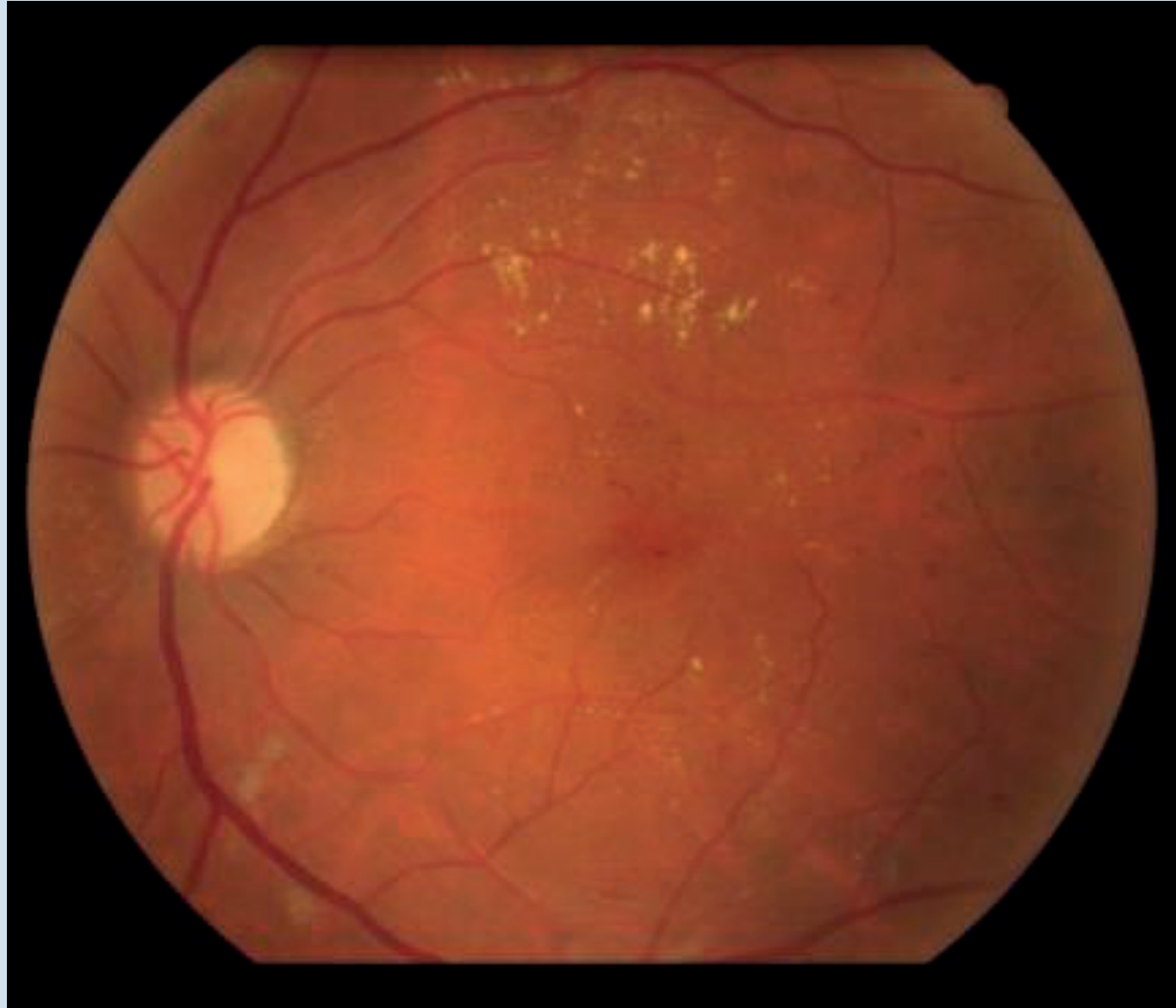
A large number of patients with diabetic maculopathy are being referred from Diabetic Eye Screening into hospital eye service (HES) based upon surrogate markers. These patients traditionally attend medical retina hospital clinics and are reviewed by clinicians. However, comprise an increasing workload in ophthalmic secondary care.

Aintree University Hospital Medical Retina service in conjunction with North Mersey Diabetic Eye Screening created a **Healthcare Science Practitioner delivered clinical model** to triage patients entering ophthalmology against a number of criteria to allow hospital eye service monitoring while reducing clinical impact in consultant streams in a safe manner.

Diabetic Eye Screening refer for maculopathy using the following Nationally recognised surrogate markers:

- Any exudate within one DD of the centre of the fovea,
- A group of exudates of a defined area within the macula,
- Micro aneurysm or haemorrhages within one DD of the centre of the fovea with best corrected V/A of 6/12 worse.

These markers necessitate further investigations at HES to establish extent of pathology and provide treatment if necessary.

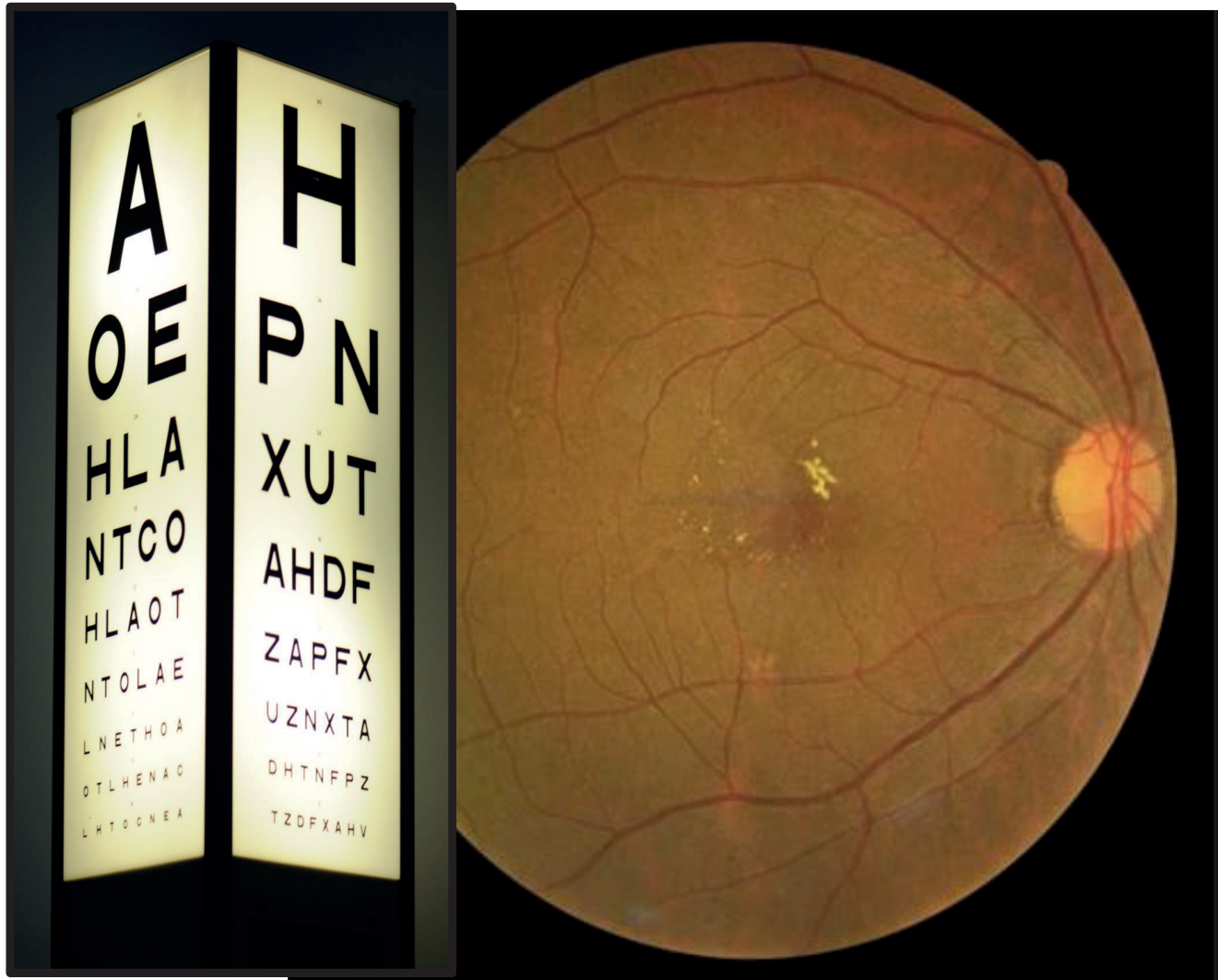


Pictured: fundal image of left eye showing multiple exudates and would meet the criteria for M1 referral.

Eye Screening Triage Clinic Process

Patients are booked onto the Eye Screening Triage clinic as per the request of the eye screening programme or if the patient is referred as R1M1 without additional clinical information / referral detail. At clinic the following assessment and testing takes place along with review by HSPs:

- VA (Snellen)
- OCT scan (LogMar Vision in fluid visible)
- Dilation
- Colour Imaging
- SLB Review (Ophthalmic Technician)



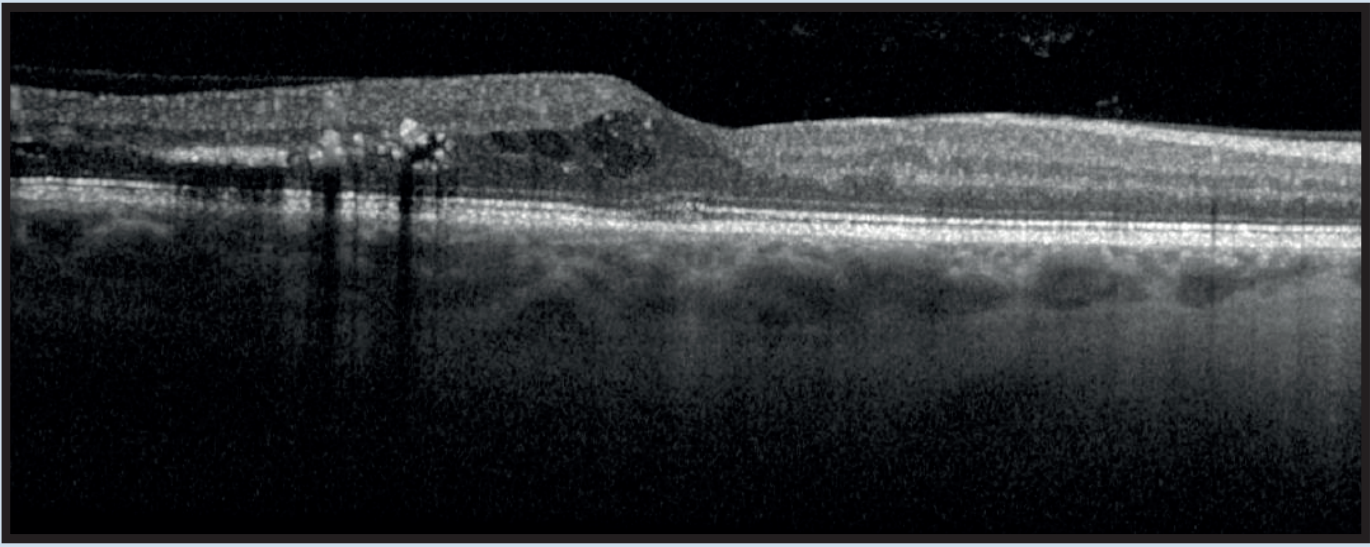
Pictured: Snellen visual acuity testing and an example of colour fundal imaging.

OCT Review

OCT imaging is captured and then reviewed against the following criteria in conjunction with assessment of vision and colour image review to determine the patients next outcome.

OCT positive maculopathy is considered present if:

- a) SRF or diffuse retinal thickening or intra-retinal cystoid spaces associated with a change in ILM or foveal contour.
- b) Cystoid spaces associated with drop in VA to less than or equal to 6/12 or large area >1DA of fluid the edge of which is within 1DD from central fovea.
- c) CMT >300 microns.

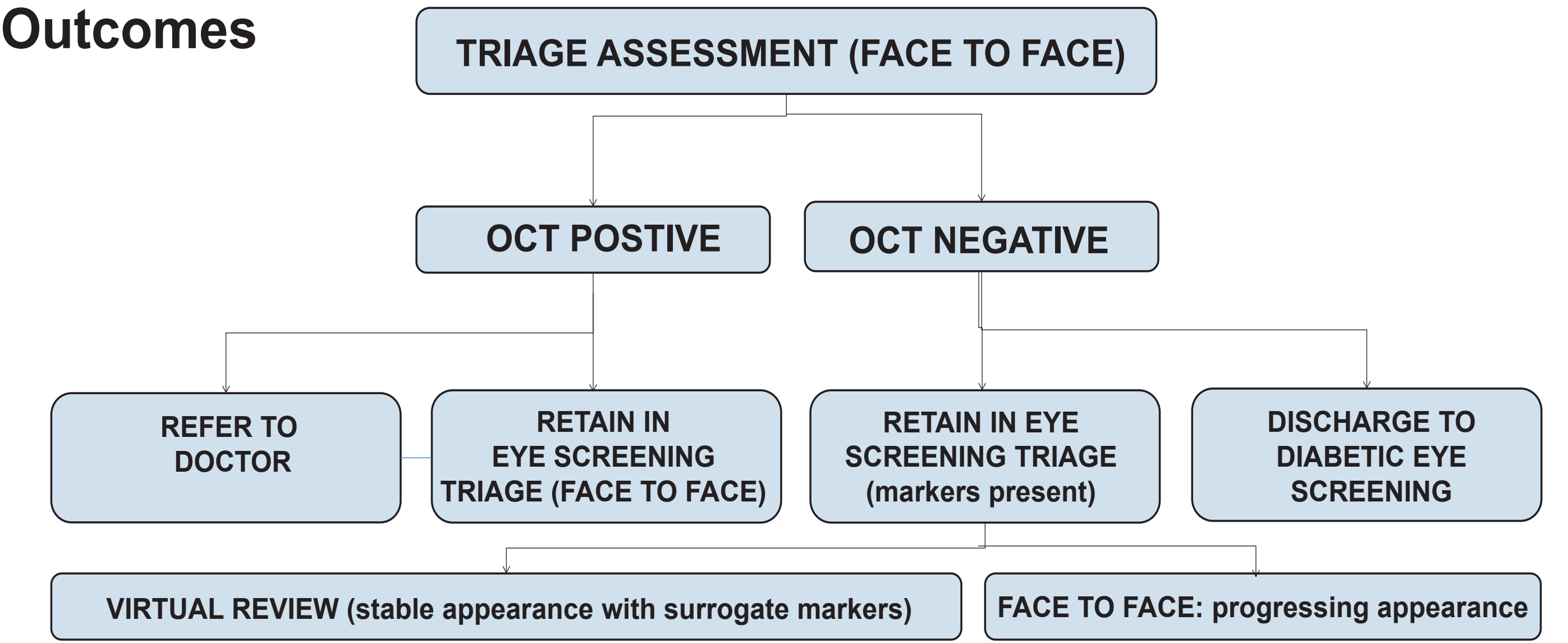


Pictured OCT: showing exudate and fluid pockets within the retina.

OCT Negative if:

- a) SRF or IRF but no change in contour of ILM and CMT < 300 microns.
- b) VA >6/12.
- c) No large area of leakage >1DA within 1DD of fovea.

Outcomes



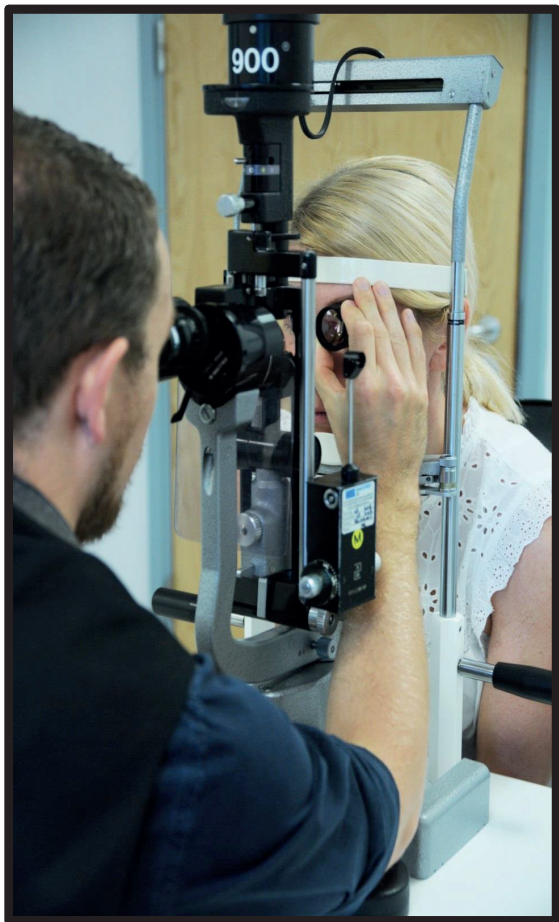
HES Eye Screening Triage Clinic set up

Training: Before working independently, selected HSPs, who are senior ophthalmic technicians with long standing and relevant experience in the medical retina field, underwent a supervised period of training on slit lamp examination and clinical electronic patient's record use under the Medical Retina Consultants until competence was achieved.

Once competent, screening patients meeting maculopathy referral criteria when referred to AUH are reviewed in the Eye Screening Triage clinics by the HSPs.

HSP streams/clinics run alongside Consultant to obtain immediate opinion if needed.

Pictured: SLB examination using Volk



HSP service review audit

We reviewed the outcomes of all patient sent to Eye Screening Triage, looking at final outcome to assess how much relief this provides to doctors clinics.

Review Period: August 2017 – January 2018

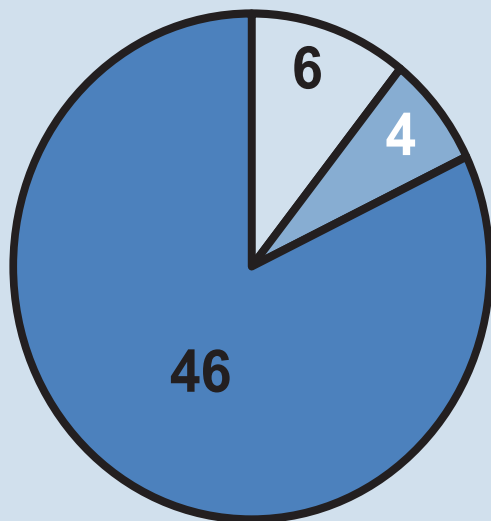
Clinical Activity: 1 clinic per week

Clinic Slots: 6 slots (3 new / 3 f/up)

Results

Over the audit period 56 clinical episodes where reviewed with the following outcomes:

Refer to Doctor (4 patients and 7%)
Retain in Eye Screening Triage Clinic (46 patients and 82%)
Discharge to Diabetic Eye Screening (6 patients and 11%)



Conclusions

Eye Screening Triage clinics provide a method of diagnostic assessment for diabetic eye screening maculopathy referrals without impacting on the consultants clinical stream. They provide:

- Extra clinical capacity.
- A new pathway to assess gradable eye screening maculopathy referrals.
- Skill development for experience ophthalmic technicians.

Next Steps

We aim is to expand the model to further increase capacity and maintain safe monitoring of patients including:

- Monitoring R2 patients referred from DES Digital Surveillance.
- Expanding the clinics from one to two.
- Increasing the capacity of the clinics as technicians become more experienced.
- Audit the virtual review assessment model for stable follow up patients.