Improving Ophthalmic Photographic Diabetic Review (OPDR)

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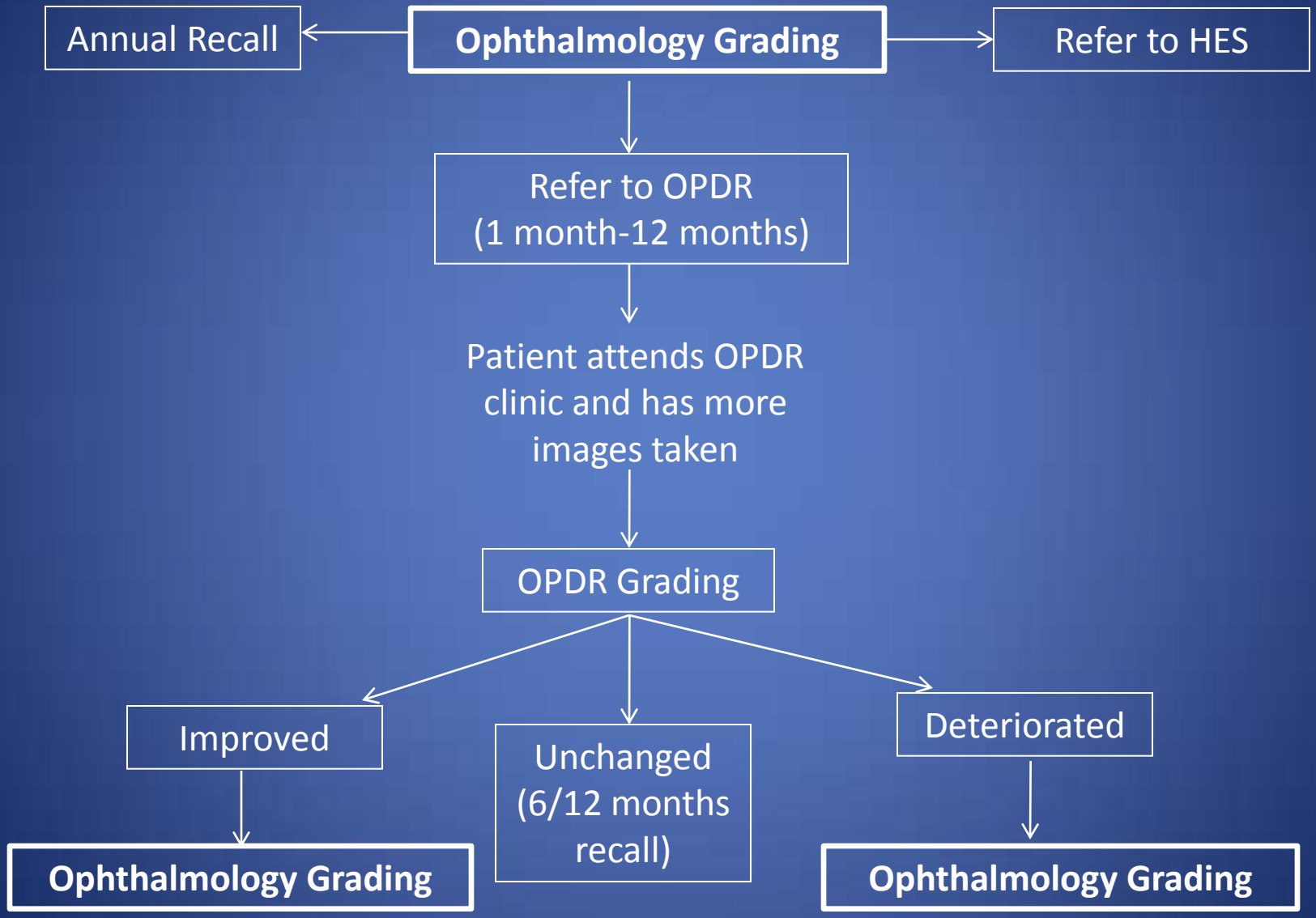
The OPDR pathway



The History

- Established in 2005 as anticipating 9,000 extra referrals to HES within year 1 of scheme.

Who gets referred?

- 80% referrals to HES due to M1

- On clinical examination approximately <10% had macula oedema requiring laser at 1st visit

Benefits

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- Of 207 referrals due to DR 114 (55%) seen in OPDR

  -40% returned to AR

  -50% continued in OPDR

  -10% referred to DEC

2007 L.Quant, P.Dodson.

Who should be referred to OPDR?

- Early signs of maculopathy
- Other clinical indications decided by the ophthalmology grader (not for R2)
- Re-photographing patients who have inadequate screening/ visual history
- Patients who have been discharged from HES but still require monitoring

Special Groups

- Pre-conception Patients
- Ante-natal patients
- Any other cohort of patients with an anticipated rapid 3% drop in HbA1C

VA 6/9

After OPDR

DISCHARGED TO AR	REMAIN IN OPDR	REFERRED TO HES
Regression of DR	No real changes to DR	Where DR/ VA deteriorates and may require treatment
DR deemed as 'stable'		
Patients who DNA twice		

- To discharge to AR or to refer to HES should be the decision of the ophthalmology grader only

Impact on Clinical Care

2 months data from BBC Scheme July & August 2010,
P.Dodson, L.Quant, H.King

	East Birmingham
Screens	1845
Ophthalmology Grading	303 (16%)
Referrals Required	173
(DEC) Urgent DR	13 (8%)
(DEC) M1 & R2	24 (14%)
Remaining in OPDR	29 (17%)
OPDR due to HMA & VA ≥6/12	17 (10%)
OPDR due to exudation	38 (21%)
Unassessable	40 (23%)
Non-DR referrals	12 (7%)

31% of new referrals were referred to OPDR rather than HES

Down side of OPDR

- No medical assessment of patients with early changes.
- Educated guess-work as to who has Macula Oedema and who doesn't
- Grader has risk of clicking 'no-change'
- Expense of IT involved

Antenatal OPDR

- Following the 1st antenatal clinic appointment
- Normal screen at 28 weeks
- Abnormal screen at 16-20 weeks

-Any signs of STDR - urgent referral to HES

Any other patients with radical improvement of glycaemic control.

Audit results-Ante-natal OPDR

Over 33 months 187 pregnant patients were screened and audited.

- 18 (10%) referred at 1st screen
- 23 (12%) DNA'ed follow up appointment and didn't attend again

The remaining 146 (78%) were screened digitally following protocol to completion of pregnancy.

- 94 (64%) did not develop DR at any stage

Combining with OCT

- Since 2008 we have used Zeiss Stratus OCT in combination all OPDR patients referred due to maculopathy
- Precision when defining if a patient is referrable
- Comparison of images and scans

Combining with OCT

Results

- **M1 (HMA + VA ≥6/12):**

  N=49 only 16% thickening on OCT (only 6% true DR)

- **M1 (exudation):**

  N=135 22% showed thickening on OCT

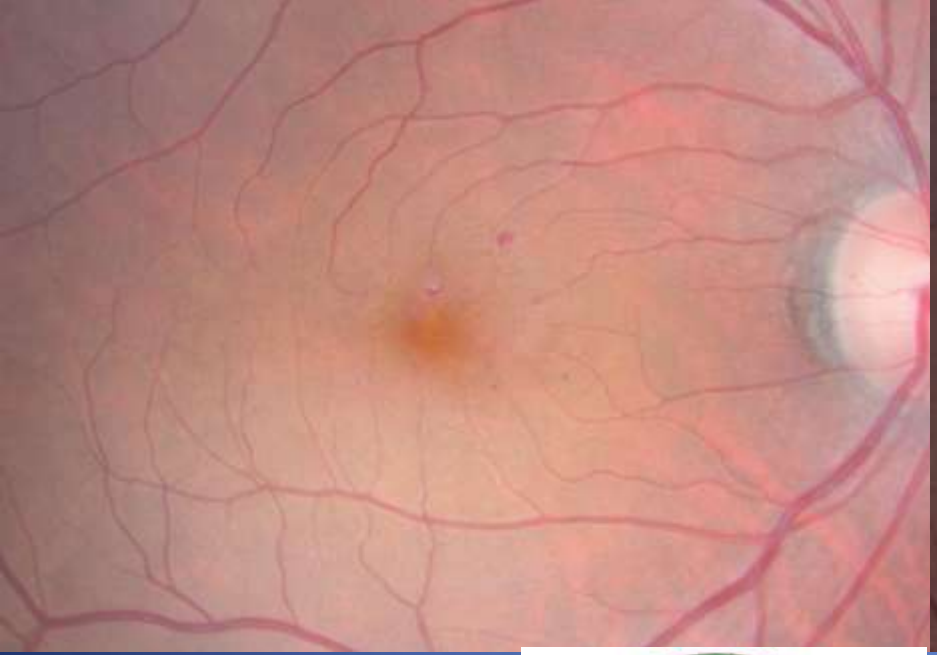
  (77% 1DD, 23% 2DD)

On Referral (1st appointment) -27% lasered

-10% discharged

-13% DNA

-50% monitored

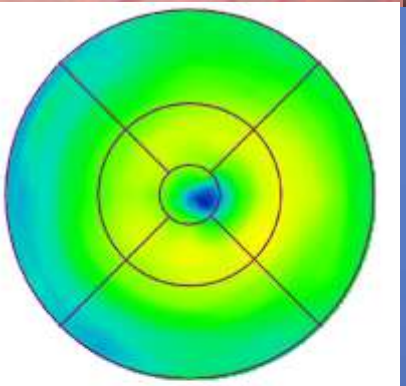


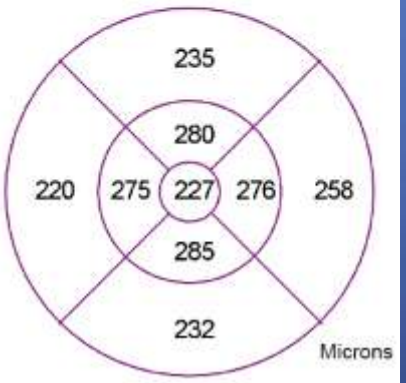
17/06/09

VA 6/9 ph

R1M1

OPDR 6 months





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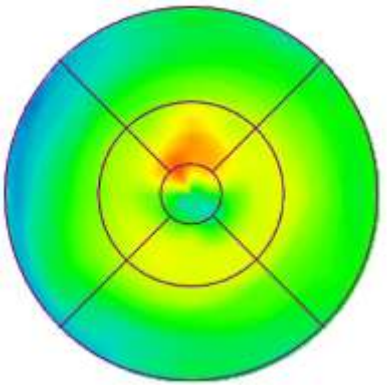
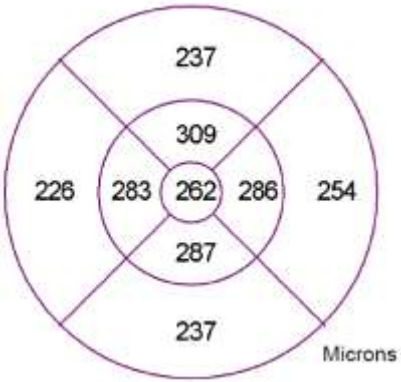
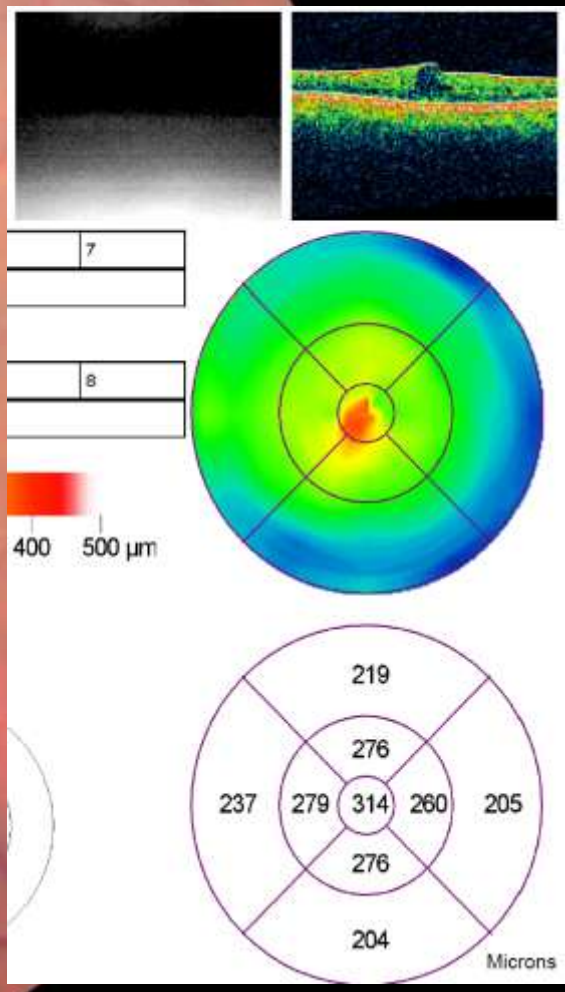
R1M1

Refer to HES







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Clinical Significance

- Macula photographic grade v OCT oedema
  Sensitivity 28%

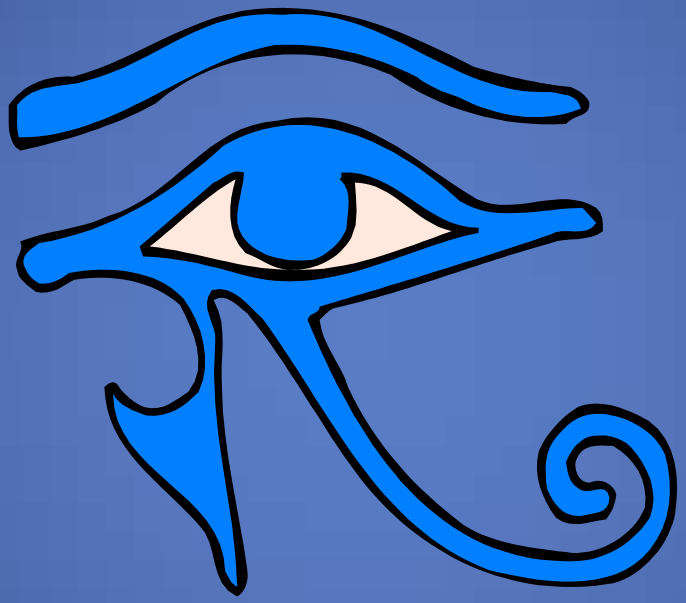
- 84% patients with HMA + VA≥6/12 went back to AR.

- 78% patients with exudation within 1 or 2DD could continue within OPDR safely.

Conclusion

- OPDR is an excellent way to monitor patients who are referrable by definition- but have a small chance of having STDR.
- OPDR can be utilised for high-risk groups.
- OPDR combined with OCT gives more precise decision on whether to refer patient to HES

Thank you for listening!!



- Special thank you to H.Wharton and P.Dodson for support

Referral criteria for OCT stratus

- 1. Central foveal thickness >250µm
- 2. Other area >300µm
- 3. Abnormal retinal appearance on the fundus photograph
- 4. OCT thickening corresponds to retinal abnormalities (localised/diffuse)
- 5. Hotspot (OCT cross-section) & asymmetric
- 6. Definite red or white seen on the OCT thickness map