


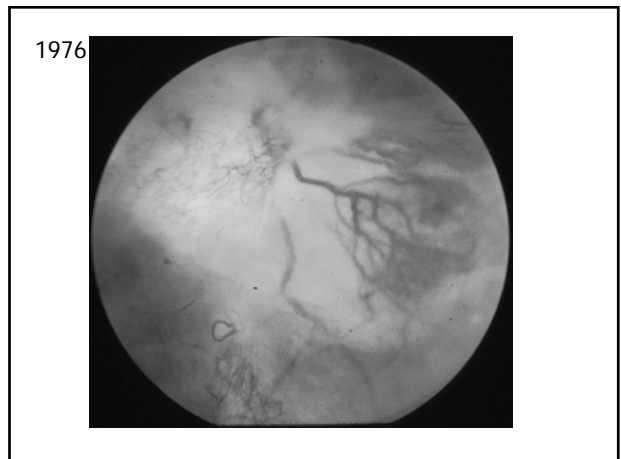

Diabetic Retinopathy Screening – Optometric Conference

Peter Scanlon – Screening in the Future



Screening in the future?

Dr Peter Scanlon
Cheltenham

WHAT WAS HAPPENING BEFORE THE NSF?


Eli Lilly Research 2000 Actual Situation

	Health Authorities	Eye Screening Programmes Identified (%)
England	90	34 (38%)
Scotland	13	5 (38%)
Wales	5	1 (20%)
N.Ireland	1	
Total	109	40 (37%)

10 of the total can be considered best practices (10 contacted and interviewed)

Clark JB, Grey RHB, Lim KKT, Burns-Cox CJ. Loss of vision before ophthalmic referral in blind and partially sighted diabetics in Bristol. *British Journal of Ophthalmology* 1994;**78**:741-744.

- 50% of the patients had no screening for retinopathy and were known to be diabetic;
- 25% were regularly screened for retinopathy (three-quarters by local opticians);
- 22% were newly diagnosed as diabetic at the time of hospital referral.



THE NSF

Diabetic Retinopathy Screening – Optometric Conference

Peter Scanlon – Screening in the Future

National Service Framework for Diabetes



- By 2006, a minimum of 80% of people with diabetes over the age of 12 to be offered screening for the early detection (and treatment if needed) of diabetic retinopathy as part of a systematic programme that meets national standards, rising to 100% coverage of those at risk of retinopathy by the end of 2007.

FUNDING



Capital Funding in England



- £5 million capital is available in 2003/04
- £9.6 million in 2004/05
- £12.4 million in 2005/06
- The money will be apportioned on a fair shares basis.
- The capital will be apportioned on a population basis and will go to the NHS body that will actually spend the capital.

Funding in the Local Development Plan



- Needs to include funding for screener/ graders and on-going administration costs of the programme
- New GP contract - payments to GP's depend on screening having taken place within 15 months

IS THE SCREENING METHODOLOGY PROVEN ?



Recommendations for Photographic Screening



- NSC recommendations - November 2001
- NICE - National Institute for Clinical Excellence Dec 2000 - Diabetic retinopathy: early management and screening. Review date Dec 2003
- Health Technology Board for Scotland - Organisation of services for diabetic retinopathy screening - consultation draft Nov 2001

Diabetic Retinopathy Screening – Optometric Conference

Peter Scanlon – Screening in the Future

Reduction of blindness by screening



- Backlund LB, Algvere PV, Rosenqvist U. **New Blindness in Diabetes Reduced by More Than One-Third in Stockholm County.** *Diabetic Medicine* 1997;**14**:732-740.

Diabet Med 2003;**20**(6):467-74.



For Referrable DR
Sensitivity of 87.8%
Specificity of 86.1%
Technical failure rate of 3.7%

- Two 45-degree field Mydriatic Photography

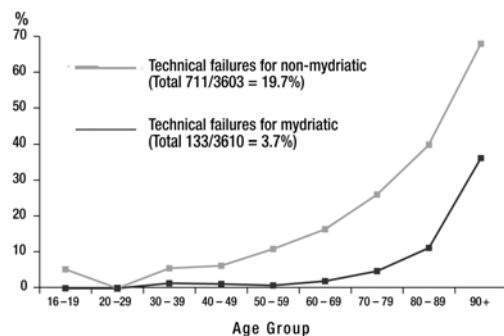
Diabet Med 2003;**20**(6):467-74



For Referable DR
Sensitivity of 86.0%
Specificity of 76.7%
Technical failure rate 19.7%

- One 45-degree field Non-Mydriatic Photography

RESULTS 4
Technical failures by age



Br J Ophthalmol. 2003
Oct;**87**(10):1258-63



Validation Study

- 129 preselected patients Norwich
- 110 preselected patients Oxford
- Ophthalmologist slit lamp biomicroscopy
- 7-field stereo-photography
- (2-field digital images)

Br J Ophthalmol. 2003
Oct;**87**(10):1258-63



Results of Validation Study


- Ophthalmologist had
- Sensitivity of 87.4% (CI 83.5 –91.5)
- Specificity of 94.9% (CI 91.5-98.3).
- Ophthalmologist graded all selected patients but 7-field stereo had a 15.3% technical failure rate

Diabetic Retinopathy Screening – Optometric Conference

Peter Scanlon – Screening in the Future


Pandit RJ, Taylor R.
Mydriasis and glaucoma: exploding the myth.
A systematic review.
Diabet Med. 2000 Oct;17(10):693-9.

- Systematic review of published research 1933-1999. RESULTS: The risk of inducing acute glaucoma following mydriasis with tropicamide alone is close to zero, no case being identified. The risk with long-acting or combined agents is between 1 in 3,380 and 1 in 20,000.




Age at First Screen

- Youngest age of sight threatening DR - 11.3yrs in literature
Kernell A, Dedorsson I, Johansson B et al. Prevalence of Diabetic retinopathy in children and adolescents with IDDM – A population based study. *Diabetologia* 1997; **40**: 307 – 310




Patients with Ungradable Images

- Dedicated Sli-lamp Biomicroscopy clinics




Minimum Numbers for those Photographing patients?

- Intense discussion topic




Minimum Numbers for those Grading Images?

- Intense discussion topic



CAMERAS & SOFTWARE



Diabetic Retinopathy Screening – Optometric Conference

Peter Scanlon – Screening in the Future

Buying cameras



- Nationally negotiated price and a list of contracted suppliers has now been agreed. The list of cameras is available from the PASA website

<http://www.pasa.nhs.uk/diabeticretinopathy>



Buying software for managing a diabetic retinopathy screening programme

- Tender process with OJEC advertisement
- OBS was sent out to suppliers
- Contract negotiations with 4 suppliers – Digital Healthcare, Orion Imaging, Siemens & Sysmed



Thank you

•Questions?

