

Other lesions: Exploring The Optic Nerve Head, its variants, anomalies and disorders. ISSN 2055-1282 September 2015 / Issue 5

2014

2015

Diabetic Eye Disease: Detecting Diabetic Papillopathy during Diabetic Eye Screening.

Spotlight on DESP: North Yorkshire DESP - covering the largest county in the country.

Project Uganda by Mr Terry Cooper from Volk

Diabetes UK: The bigger picture by one of the Directors Mr Simon O'Neill







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DiabeticEyeJournal

EDITORIAL

Well into our fifth issue and now firmly established, the DiabeticEyeJournal is enjoying a flourishing and growing relationship with **BARS**. As they say '*united we stand*', in order to bring you interesting and stimulating articles. You, our audience, are the reason for this Journal's existence, and this is always on our minds when choosing topics for each issue.

This couldn't be more true for this 5th edition where we explore 'The Optic Nerve Head', its function, or should we say dysfunctions. Dr Helena Hurairah and Mr Fion Bremner explore its normal variations and anomalies which can be associated with complications. Optic nerve disfunction can cause changes in its appearance giving a clue to retinal screeners to warrant further investigation in HES. One of those is Diabetic Papillopathy, which is investigated more deeply by the team from Research Department at MEH and UCL Institute of Ophthalmology - see section 'Diabetic Eye Disease'.

Because the variety of articles is important to us we are introducing another one of our country's DESPs. This time North Yorkshire, with its long and sometimes amusing history, providing its service to the largest county in the country.

Looking further afield, we go to Uganda, and hear how eye disease can be identified in this challenging environment.

We hope that you thoroughly enjoy this Autumnal issue, and as always we welcome your feedback.

IN THIS ISSUE

5 COURSES AND CONFERENCES

6 DIABETIC EYE DISEASE

Diabetic Papillopathy by Research Department at MEH and UCL Institute of Ophthalmology

10 DIABETES UK

The bigger picture by Mr Simon O'Neill

14 SPOTLIGHT ON DESP

North Yorkshire - The Largest County in England

18 BARS 2015 - The time of posititve progress

19 TAT Updated Test and Training reports

21 NDESP Keeping you up to date from the National Team

23 OTHER LESIONS

The Optic Nerve Head by Dr Helena Hurrairah and Mr Fion Bremner from University College London Hospital

30 UGANDA PROJECT

Detection of Retinal Disease in chalenging enviroment of Uganda by Mr Terry Cooper from Volk

34 AUDIT

Analysis of SMS text reminder service by Mr Christopher Ingram from Harrow DESP

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British Association of Retinal Screening





Join us at our Annual Conference





Great opportunity to network with others in similar roles, share good practice, receive needed support to improve and expand your skills and career prospects.

The 2014 BARS Conference in Birmingham was one of the most successful conferences of recent years, with positive comments being received from delegates regarding the location, ease of access and helpfulness of the hotel staff. As a result BARS has decided to return to the Holiday Inn, Birmingham, for the 2016 conference. BARS council will be working hard to put together a programme of interesting and diverse speakers, to make the 2016 conference even bigger and better than its predecessors.

Look out for announcements on the bars website for next year's Conference in Birmingham City Centre.

www.eyescreening.org.uk



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October 2015 - April 2016

Events Diary

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Courses

Training Courses at Retinopathy Screening Centre, Heartlands Hospital, Birmingham

OCT Course: 01 October 2015 DR Grader Course: 19 to 23 October 2015 and 01 to 05 February 2016 Clinical Lead and Medical Retina Specialists Course: 03 to 04 November 2015 Advanced DR Grader Course: 02 to 04 December 2015 To register: www.retinalscreening.co.uk

Optometric Management of Diabetic Eye Disease

School of Health Sciences City University, London EC1V 0HB When: call 0207 040 5835 to enquire To register: www.city.ac.uk/courses/cpd

Diabetic Retinopathy Screening Training

Clinical Tutorial Centre (CTC) Moorfields Eye Hospital, London EC1V 2PD 12th and 13th November 2015 **To register**: *www.readingcentre.org/Training*

Qualification in Diabetic Retinopathy Screening

DRS Qualifications Office Orchard Centre, 1st Floor Gloucester Royal Hospital GLOUCESTER GL1 3NN Tel: 0300 422 2199 To find out more: www.drsdiploma.org drsadministrator@glos.nhs.uk

Diabetes UK – Diabetes Awareness Training

Various dates and in-house training available. One-day course accredited by the Royal College of Nursing (RCN) Phone: 0345 123 2399 Contact enquiry: commissioning@diabetes.org.uk

Conferences

Diabetic Retinopathy Screening Training Alumni Day

Thursday 8th October 2015 Venue: Imperial College London The Great Hall Sherfield Building, South Kensington Campus South Kensington London SW7 2AZ **To register**: www.readingcentre.org/Alumni/index.aspx

EVER 2015 Congress

The European Association for Vision and Eye Research Venue: Nice, France 7th to 10th October/2015 **To register**: *www.ever.be*

Laser tips, trips and technology - RSM

Thursday 12th Novenber 2015 Venue: Royal Society of Medicine 1 Wimpole Street, LONDON W1G 0AE To find out more: www.rsm.ac.uk/events

The 4th National Diabetes in Pregnancy Conference, Challenges & Innovative Practice

Thursday 19th November 2015 Venue: Mercure Piccadily Hotel Manchester M1 4PH Phone: 01922 614500 To enquire: midlands@diabetes.org.uk

Diabetes UK Professional Conference

02 to 04 March 2016 Venue: SECC, Glasgov To find out more: www.diabetes.org.uk/Diabetes-UK-Professional-Conference/

DiabeticEyeJournal does not endorse published details of the events and this list was compiled for information only. Please check the details prior the start of these events, as those can still change.

Diabetic Papillopathy

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No financial disclosures to make.

During this article I will give a summary of a somewhat elusive condition known as 'diabetic papillopathy' and how to distinguish it from other conditions found during the screening process.

The pathogenesis of 'Diabetic Papillopathy' (DP) is often uncertain and not fully agreed on by all. The most common theory suggests that it is a mild form of nonarteritic anterior ischemic optic neuropathy (NAION). Consistent clinical characteristic of this uncertain ocular manifestation will reveal unilateral or bilateral optic disc swelling caused by vasculature leakage and axonal oedema in and around the optic nerve head.

The prognosis and presentation of DP can differ greatly from other severe conditions that lead to bilateral disc swelling and increased intracranial pressure such as papillodema. Therefore it is essential to distinguish between them as early recognition may spare the patient any unnecessary neurological examinations and invasive procedures, although in many cases DP is a diagnosis of exclusion, i.e. it is reached when all other, usually more sinister causes, are ruled out.

In 1971 Lubow and Makley described DP as a condition occurring in young patients with type 1 diabetes mellitus (DM). More recent reports found that it occurs in older patients with type 2 DM as well, with an incidence rate of 0.5%.¹

As it known to occur in both type 1 and type 2 DM, regardless of metabolic control or severity of diabetic retinopathy (DR), it may go unnoticed unless it is discovered when patients attend their annual retinal screening appointments.

The criteria currently accepted for the diagnosis of DP include:²

- Confirmed diagnosis of DM (about 70% having type 1 and 30% type 2 DM)
- Oedema of the optic disc (mostly unilateral in 60%)
- Absence of optic nerve dysfunction
- Normal intracranial pressure
- Lack of nerve inflammation, infection or infiltration.

It is difficult to determine this condition as it usually has a diagnosis of exclusion made only after other severe conditions have been ruled out. As we are only able to ascertain certain information during the screening process, a correct diagnosis of DP may not be made initially but is it still important to consider the criteria above. Therefore recognising the features is key as it leads to timely referral.

Symptoms

Predominantly and positively, there will be no or only minimal visual complaints or pain experienced by the patient. On occasion mild, nonspecific visual disturbance can occur such as blurring or distortion. Short but sudden visual obscuration has been reported but is extremely rare. It has been recorded that over 75% of patients with DP have had a visual acuity of 6/12 or better.³ Therefore the visual acuity obtained during the screening appointments may be of limited help with the diagnosis, especially when maculopathy accompanies the condition.

Fundus Presentation

The most consistent clinical characteristic found in DP is the hyperaemic oedema of the optic disc. This presents itself as dilated, telangiectactic optic disc vessels, something that can be observed during the screening process. To make an accurate diagnosis, these telangiectatic vessels should be distinguished from the optic disc neovascularisation that is more commonly found during the screening process especially when DR is present in over 80% of reported cases of patients with DP. New vessels on the disc caused by DR are usually oriented randomly throughout the vitreous, whereas the vessels found in DP usually stay on the disc surface so this may be a way of distinguishing between the two.

There has also been evidence to suggest that DP can be associated with a small cup/disc ratio so this is also something that can be observed through fundus photography. Unlike anterior ischemic optic neuropathy, there will not be any pale swelling or atrophic appearance.

Treatment

There is currently no accepted treatment to alter the course of DP. The swelling of the optic disc usually resolves itself within 2-10 months without resulting in optic atrophy or loss of vision. However, the long term visual prognosis can be limited by the DR associated with DP. Therefore patients may simply need to be monitored regularly for evidence of other DR or maculopathy. There have been reports that anti-VEGF (such as bevacizumab) can reduce the duration of the disease. The mechanics of this are not yet fully understood but the positive response to the treatment may indicate that VEGF has a substantial role in the pathogenesis of this condition.

Case report 1

Fig.1 and **Fig.2** are the fundus images of twin brothers, both of whom have type 1 DM. They were seen 9 months apart at the emergency department, both complaining of blurry vision. The first brother to attend had a visual acuity of 6/36 (right eye) and 6/18 (left eye), the second 6/36 (right eye) and 6/9 (left eye). Neither of them had a history of redness or pain but both presented with unilateral disc swelling combined with the dilated, telangiectactic optic disc vessels. As you can see, one brother also suffered from stable proliferative DR (**Fig.2**), a phenomenon that is reported in 9% of cases of DP. So with this in mind and the fact that neither of them had any other relevant cause for their painless vision loss, the diagnosis of DP was decided upon once imaging ruled out other disease.

They were both reviewed regularly and their DP started to resolve spontaneously over a matter of weeks but unfortunately visual improvement was slow and minimal. Both patients had poorly controlled DM and hypertension during the period leading up to DP. This report not only confirms the description of association of poor diabetic control but also presents a possible genetic propensity for DP in some cases.

Figure 1. Right fundus image from first twin demonstrating disc swelling.





Figure 2.

Left fundus image from the second twin demonstrating stable proliferative DR as well as disc swelling.

Case report 2

In some more subtle cases of DP, more tests need to be carried out to establish diagnosis. **Fig. 3** and **Fig. 4** are fundus images from a 54 year old Indian female with type 2 DM. She had a 4 week history of gradual blurred vision in the left eye but without pain or discomfort. At examination, her best corrected visual acuity was 6/6 in the right and 6/24 (was 6/9 a year earlier) in the left eye. Observation of the lens showed that she had a moderate cataract forming in the left eye which you may, at first consider the cause of the weaker VA.

As you can see from her posterior segment examinations below, she presented with very minimal non-proliferative DR with healthy maculae. The left eye had a small cup/disc ratio but did not present any telangiectasic vessels as seen in the previous case study. The only visual sign that would indicate possible DP is the 180 degree blurring of the left optic disc margin. The absence of pale swelling is also criterion for exclusion and would suggest AION instead. So consideration of the disc colour can be helpful with the initial diagnosis.

The intraocular pressure (IOP) was measured at 16mmHg in the right eye and 18mmHg in her left eye. There was also no sign of relative afferent papillary defect (RAPD) in either eye. This information is important to rule out other potential diseases where IOP might be higher.



Figure 3. Fundus images demonstrating unilateral disc swelling. Figure 4.





Figure 5.

Fluorescein angiography of the left eye revealed a hyperflourescent disc with blurred margins. You can also see the generalised leakage of the dye at the optic disc. This is consistent with DP and excludes an irregular disc as an explanation for the swelling. Flourescein angiography can also help differentiate any dilated vessels over the optic disc from neovascularisation in proliferative DR.



Figure 6.

An optical coherence Tomography (OCT) scan exposed the swelling of the left optic disc especially when compared to the right.

Further investigations

A visual field test was carried out which demonstrated the lack of any dense visual field defects in the left eye. Visual fields abnormalities in DP are usually mild and transient compared to other more severe conditions so this tests can greatly assists with the diagnosis.

A CT scan of the brain and orbit was done to rule out any space occupying lesion but did not show any abnormalities. Her blood pressure was slightly elevated at 159/92 but her blood test which included a full blood count was normal.



Figure 7.

A couple of months later, a second OCT scan of the left eye demonstrated how disc swelling spontaneously resolved with time and helped solidify the diagnosis of DP.

Conclusion

Even if the elusive condition of DP is not fully understood, there is only so much information that can be acquired during a patient's annual eye screening appointment. A definite diagnosis is not expected to be made during the screening episode straight away but having an awareness of the condition may help with any initial suspicions and with timely grading and referral.

Any presence of optic disc swelling/asymmetry must be referred to ophthalmology. From a primary or secondary grading point of view, a simple note explaining the suspected disc abnormality should be made and a relevant eye condition should be selected on the software (this varies from programme to programme). From there, the referral outcome grader can send it through to ophthalmology for further examinations to be carried out.

Once space occupying conditions have been ruled out, only then will the diagnosis of DP be made. The diagnosis will spare the patients having to go through any further invasive procedures. Proliferative DR occurs in approximately 25% of cases of patients with DP. Therefore these patients should be carefully monitored and the importance of strict glycaemic control together with good control of other systemic factors such as hypertension must be emphasised.

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6. See reference 2.

Further reading

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Diabetes - the bigger picture

Keeping the eyes healthy is only one of the many challenges faced by people with diabetes. This is why Diabetes UK works on many fronts to offer support. *Simon O'Neill*, **the charity's Director of Health Intelligence and Professional Liaison**, presents an update on current campaigning and looks to the future of diabetes.

For those of you who are not familiar with our organisation, I would like to introduce Diabetes UK. We are a growing community with more than 300,000 supporters nationwide, including people with diabetes, their friends and families. Working with 6,500 volunteers and 265 local groups, we raise awareness and funds. We also campaign for change and provide support. Diabetes UK also has more than 10,000 healthcare professionals supporters from varied clinical settings, including retinal screening. Earlier this year, around 3,500 delegates attended the Diabetes UK Professional Conference, which is the UK's leading professional forum for exchanging ideas and sharing information about the condition.

Diabetes UK offers one-to-one support through its Care Call Centre, which supports thousands of people every month, as well as providing information and support through its print, website and social media channels. The charity has 82,000 Facebook and over 114,000 Twitter followers. Diabetes UK also runs peer support programmes, which put people with diabetes in touch with each other.

Diabetes UK invests over £6m in diabetes research every year. This work has led to the development of the insulin pen and digital retinal screening and is currently looking at reversing Type 2 diabetes through very low calorie diets and developing a cure for Type 1 diabetes based on immunotherapy.

Furthermore, the charity provides educational opportunities for both people with diabetes and healthcare professionals, through its Care Events for children and families, online and face-to-face learning. In 2014, 17,864 healthcare professionals received formal education, up-skilling or face-to-face briefings from Diabetes UK.

Campaigning – more important than ever

At Diabetes UK, we campaign both to raise awareness of diabetes and to ensure that people with diabetes receive the care and treatment that they need. We campaign on many aspects of diabetes, including:

- Footcare
- Essential diabetes checks
- Children and Young People
- Type 1 diabetes in school
- Risk assessment in Type 2 diabetes.

Above all, we challenge policy and ensure that the patient voice is heard where it needs to be heard. A notable recent success has been on prescription exemption certificates, where people with diabetes are now able to get refunds on fines previously – and wrongly – imposed.





DIABETES

We face a huge challenge in diabetes today, as the following figures show:

• The number of people with diabetes in the UK is increasing – from 2,634,263 (5.1 per cent of the population) in 2010 to 3,333,069 (6.2 per cent) in 2014. That's an increase of nearly 700,000 cases of diabetes in five years – with no sign of a slow down. It is predicted that there will be five million cases by 2025.

• Prevalence of diabetes is over three times higher than the prevalence of all cancers combined (2008-2013 figures). The trajectory is still upwards, while cardiovascular disease seems to be levelling off.

• There are about 11.5 million people in the UK at increased risk of diabetes, with 4.75 million already having impaired glucose regulation.

• More than 750 people a day are diagnosed with some type of diabetes (National Diabetes Audit data).

• Public Health England estimates that there are 589,500 people with undiagnosed Type 2 diabetes, giving a total diabetes prevalence of at least 7.5 per cent.

• Ten per cent of the NHS budget is spent on managing diabetes and its complications and this is set to rise to 17 per cent by 2035.

• National Diabetes Audit data for England and Wales show that targets in diabetes care are not being achieved. Retinal screening is not currently included in NDA data, but we hope it will be soon. We are good at measuring things (which is a start), but not so good at achieving targets (could do much better).









Overall, we are pleased to note that at least complication rates in diabetes are improving slightly but we do need a big push to get them to improve further. Readers of DEJ will be pleased that retinopathy rates do seem to be improving and that, as you know, diabetic retinopathy is no longer the leading cause of blindness in the working age population. We presume that national screening programmes have made a big contribution here.

The patient's perspective

Self-management is key in diabetes, for the average patient has just 3 hours contact with a healthcare professional each year. They are left to look after their diabetes on their own for the remaining 8,757 hours. Education programmes like DAFNE play a crucial role in self-management, yet of all people with diabetes in the National Diabetes Audit 2012/13, only 6.8 percent had been either offered or had attended a structured education course. Clearly, we need a big push on diabetes education, offering support in innovative and flexible ways so that more people with diabetes benefit.

Diabetes UK's 15 Healthcare Essentials,

of which over one million copies have now been distributed, remain the keystones to successful diabetes management, enabling people with diabetes to understand what care they should receive. One of the Essentials relates to retinal screening. It states: " Have your eyes screened for signs of retinopathy each year. Using a specialised digital camera, a photo of each eye will be taken and examined by a specialist, who will look for any changes to your retina (the seeing part at the back of your eye)."



In the modules above you'll find a range of resources to help you learn more about diabetes and support people with the condition. You can complete the modules in your own time but we recommend you complete them in order. When you exit the course, we'll save your progress for next time.

It is also vital that people with diabetes are truly placed at the centre of their care, with proper care planning, agreeing achievable goals in partnership with their health care professionals, to enable them to better self-manage their diabetes.

Focus on prevention

The key to meeting the challenge of diabetes has to lie with prevention of the condition in the first place, by tackling the underlying causes. This is why Diabetes UK welcomes the commitment to prevention in NHS England's Five Year Forward View – an ambitious vision of how the NHS in England will change in the future. In short, the Forward View calls for a reconfiguration of the way the NHS delivers healthcare, with a strong focus upon prevention. A National Diabetes Prevention Programme will be set up. This will reduce the rise in Type 2 diabetes by identifying those at risk early, and referring them to evidence-based lifestyle management programmes. Diabetes UK is working with NHS England and Public Health England on the design of the programme. This could mean prevention of more cases of retinopathy or treatment at an earlier stage. In conclusion, we are committed to pushing prevention so that the bigger picture in diabetes changes for the better in the long term.

DIABETES UK CARE. CONNECT. CAMPAIGN.



Fully CAP certified diabetic eye screening software



North Yorkshire Diabetic Eye Screening Programme

History of DR Screening in North Yorkshire

North Yorkshire is the largest county in England, and prior to the formation of the North Yorkshire Diabetic Eye Screening Programme (NYDESP) in 2008, diabetic eye screening was provided by local hospitals from the Craven district in the Pennines, to Harrogate, York and Scarborough and the East coast. Coverage was fragmented and nonstandardised, with some areas providing more than others. Both mobile and fixed base models were used, and numbers of diabetics varied according to local populations.



Mike Pringle, the medical photographer at York Hospital remembers photographing diabetic retinas as early as 1979 – not as part of a formal screening programme, but as general record photographs for the ophthalmologists. These were recorded on colour slides, negatives and Polaroid. In Harrogate, Dr Rosemary Hawe was using polaroid photography as early as 1982 on patients attending the Diabetes Clinic – this was considered to be very ahead of the game.

2 images were recorded as a general rule, a macular shot of each eye, and clinic lists were long – a typical day might see a photographer working 9-5, imaging 70+ patients. It is hard to imagine this with today's standards!



A formal screening programme was set up in York in 1995/6, headed by the Diabetes Centre manager, with one photographer, one admin lady and 2 doctors performing diagnostics – c2000 diabetics were screened during the first year. Using an early mobile model, the photographer travelled with the camera in an Astra estate car to begin with, visiting GP surgeries in and around the city of York and travelling as far afield as Selby and Easingwold. 35mm film mounted on slides were also introduced in Harrogate during the mid 1990s. Provision in Harrogate was on a fixed base model, with patients visiting the Eye Clinic at the District Hospital for their photographs once a year – these were performed by either the hospital optometrist, or the ophthalmic photographer. With time constraints on doctors, it could therefore be weeks between imaging and grading, and if the patient blinked at the time and the photographer didn't notice, they had to be recalled and so the length of time between initial photography and possible treatment could often run to months. With great fanfare, the 1st digital camera in North Yorkshire was purchased for Harrogate Hospital around 2002.

At either side of the county, some unusual methods were employed by screeners to overcome problems. For example, Sandra Smallwood, the photographer who covered Airedale and Craven remembers her father fashioning a black-out blanket for her to use for those days when she was given a sunny room in a GP surgery – she would drape this over the patient and camera to aide dilation!



Over on the East coast, a mobile model was also in place. This was based at Scarborough Hospital, and it provided cover to outreach clinics in Whitby, Bridlington, Driffield and the North Yorkshire Moors National Park. A 35mm camera was used, and if pre-booked equipment transport to the clinics failed to materialise, it was not unheard of for the photographer to load the camera onto the back seat of their car and put the seatbelt round it!

After the NSC commissioned the national programme, NYDESP was tasked with amalgamating the different areas into one, large geographic region, serviced by a central administration office in York. At this time, there were approximately 25,000 diabetics across the region. The new service started in the autumn of 2008, comprised of experienced photographers and new starters, all of whom embarked on the new City & Guilds qualification.

There were 3 separate Teams, co-ordinated and overseen by the centralised Administration Office and a Programme Manager:

- York the City of York and Selby
- Scarborough the east coast from Whitby to Bridlington, and inland from Driffield up to Helmsley and the North Yorkshire Moors

• Harrogate - Harrogate, Ripon, Knaresborough, Wetherby, Skipton, Settle and Bentham on the Pennine border with Lancashire.

Each team had 3-4 screener/graders, 2 Canon CR-DGi cameras mounted on trolleys, and 2 Fiat Doblo vans fitted with ramps and winches. The software was Orion. A mobile model was used throughout the county at GP practices in towns and large villages and from the start, flexibility for the patients was a central tenet to the Service's aims and standards.

Present Day

The Programme has grown as the number of diabetics throughout the county has increased – the current number is c40,000 diabetics. The original 3 teams are still in place, although there are now 5-6 screener/graders on each team. Each team has a Team Manager who co-ordinates the team. The Fiat vans have been replaced with Citroen Berlingos with wheelchair adaptations.

All original staff, including all the members of the Admin team have successfully completed the relevant modules of the City & Guilds qualification. Recent starters are in the process of completing this. A Training manager oversees all grading and training issues, ensuring that monthly arbitration reports are up to date, and that all graders are performing to the highest standards on the monthly online Test and Training image sets.

A monthly MDT meeting for all screener/graders ensures ongoing internal quality assurance – a monthly set of inhouse images called "Fred Bloggs 1-10" are chosen by one of the screener/graders – all of whom take turns at leading the meeting. Patient details are hidden and all the other graders grade them "blind". This differs slightly from the TAT in that after grading, the team can access the patient's real-life grading and referral outcome for a general discussion around agreement and problems with grading at the monthly meeting. This helps to highlight areas of disagreement and whether or not further training is required, either as a group or for individuals. It also helps to build confidence in a friendly, informal setting.

Continuing Professional Development

As well as Fred Bloggs, talks are given regularly by the Clinical Lead, HES optometrists, visiting Ophthalmologists, and screener/graders who take it in turns to research and present a small piece, for example, anatomy of the eye, ocular pathology, and screening topics.

Recent examples include:-

- Fuch's Dystrophy
- CHRPE (Examples right)
- Failsafes and How These Work in a DR Screening Programme
- Overview of R3 Referrals to HES the Last 6 Months
- Case Studies/Interesting Cases, including rapid progressive DR in a young ANC patient, and large malignant melanoma found in a 50 year old at 1st screening
- Cataract Surgery video
- · Glaucoma disc assessment when grading



Proliferative Diabetic Retinopathy and Co-Morbidities – a Case Study



The majority of screener/graders and Admin staff attend the annual BARS Conference, and all staff are encouraged and supported to submit posters and papers - to date NYDESP has submitted 5 posters, and given 2 talks. 2 screener/graders from the Programme have also been invited to sit on the national Grading College since its inception.



Fund Raising Activities

In 2013, a number of staff cycled from Skipton to Bridlington along the Sustrans Coast-to-Coast route, visiting GP surgeries along the way to raise awareness of DR, and fundraise for the Diabetic Centre at York Hospital, and Diabetes UK. Local GPs and staff joined in and cycled some of the route as well.



Following this success in 2014, the group cycled from London to Paris, raising £6000 for the charity **Medical Detection Dogs**, to support the training of a diabetic alert dog. This was an amazing achievement by everybody.



The British Association of Retinal Screening

"Working to Support Professionals Involved in Retinal Screening for People with Diabetes"

The British Association of Retinal Screening (BARS) is the UK's professional organisation for those who provide retinal screening services for people with diabetes. We offer education, representation and support to a wide range of professionals involved in diabetic retinopathy screening, and our members include retinal screeners, graders, administrative and failsafe staff, programme managers, optometrists and ophthalmologists – in fact anyone with a professional interest or involvement in diabetic eye screening.

Membership of BARS is free, and you can join the association today by visiting our website at www.eyescreening.org.uk and completing the online registration form. Members receive a unique ID number, allowing them to log-in to the members area of the website and play an active role in the association's activities by voting on proposals, standing for election to the BARS council and voting for others who wish to stand.

Members are also entitled to attend the association's AGM which is held each year at our annual conference, giving everyone the chance to have their say in person and help to shape our future and that of our profession. Joining BARS is the best way to keep up to date on the latest job vacancies in diabetic eye screening, developments in the field, and upcoming courses and conferences, and gives you the chance to network with people in similar roles.

In addition to attending BARS events, you can interact with us and our members via our Facebook page at *www.facebook.com/eyescreening*. Simply *'Like'* the page to receive regular updates.

Amongst our upcoming events is another of our popular 'Failsafe Discussion Days', giving failsafe, admin and screening staff an opportunity to get together and discuss issues, overcome problems and share good practice. Check the BARS website for more details.

2015 has been a time of positive progress for BARS, with membership growing rapidly over recent months. In September, Mark Histed comes to the end of a successful three-year tenure as BARS Chair, and hands over to Grant Duncan, who chaired the association from 2007 to 2009 and has more than twenty years experience in diabetic eye screening. Grant is supported by a group of experienced and dedicated council members drawn from a range of roles within the profession.

To be a part of our success, and play an active role in the future of BARS, visit our website at *www.eyescreening.org.uk* and become a member today for free.











Test and Training

Updated test and training reports to improve consistency of grading across the country

We have updated the test and training (TAT) system to help improve the quality and consistency of grading in diabetic eye screening across the country. Consistent, high quality grading is essential for delivering a safe, efficient service that accurately identifies referable disease.

All graders need to complete a minimum number of standard sets of test images on the TAT system. We are now rolling out new grading management reports to programmes based on these TAT results. The reports use a traffic light flagging system (**Figure 1**) to identify the safety level of graders. The reports measure sensitivity and specificity to sight threatening diabetic retinopathy (STDR) based on screening outcome – non referable or referable – rather than the actual grade recorded. This means they measure graders' ability to identify referable disease, rather than their ability to accurately agree with the guide grade on TAT.

Sensitivity refers to the ability to correctly identify people with disease.

Specificity refers to the ability to correctly identify people without disease.

DES Test Syst Report date . The next rep	em - Somewhere I July 2014 to June ort will be availab	Programme 2015 ble on 1st Oc	Rolling 12 months					
Participation				Sensitivity to STDR (max 10 sets)			Cumulative sensitivity in 12 mont period (max 10 sets) For STDR	
				%	%	%	Sensitivity %	Specificity %
1234	Somewhere	Grader	12	98	97	98	98.97	96.12
1235	Somewhere	Grader	12	95	95	96	94.85	95.15
1236	Somewhere	Grader	12	95	96	95	89.69	93.2
1237	Somewhere	Grader	12	97	96	96	93.81	96.12
1238	Somewhere	Grader	11	96	96	96	94.85	73.79
1239	Somewhere	Grader	12	98	98	98	97.94	90.29
1240	Somewhere	Grader	12	99	99	100	96.91	97.09
1241	Somewhere	Grader	12	98	99	100	100	98.06
1242	Somewhere	Grader	12	95	98	99	97.94	99.03
1243	Somewhere	Grader	0	null	null	null	null	null
1244	Somewhere	Grader	5	100	100	100	100	95.24
1245	Somewhere	Grader	12	99	99	100	98.97	93.2
1246	Somewhere	Grader	12	97	96	96	95.88	95.15
1247	Somewhere	Trainee	7	95	95	94	94.85	95.15
1248	Somewhere	Grader	12	98	96	97	94.85	97.09
1249	Somewhere	Grader	10	88	93	94	92.55	92.45
1250	Somewhere	Grader	12	96	97	99	97.94	97.09
1251	Somewhere	Grader	12	97	96	96	94.85	97.09
1252	Somewhere	Grader	12	78	79	78	78.33	99.03
1253	Somewhere	Grader	10	92	98	95	92.78	91.26
1254	Somewhere	Grader	12	92	91	92	91.75	96.12

Figure 1.

The performance reports will refresh at the end of every quarter and calculate sensitivity and specificity over the past 10 test sets. Graders must take 10 full test sets over a 12-month rolling period to ensure the reports are statistically valid and can detect outliers without incorrectly labelling good graders as poor by chance.

Staff who can access the reports will be able to download them from TAT and export them into Excel as a record of performance. The screening quality assurance service will also automatically receive an anonymised report to cascade to commissioners. Graders will be flagged according to national guidance (**Figure 2**). We expect programmes to take appropriate action, such as additional support and a recovery plan, if graders are flagged amber or red. The consistency of grading should improve across the country as this new process is rolled out, benefiting diabetic eye screening as a whole and, most importantly, patients.

Full interpretation guidance will be available on GOV.UK (www.gov.uk/topic/population-screening-programmes/diabetic-eye) in the grading management guidance document.

Shelley Widdowson National Grading Lead - NHS Diabetic Eye Screening Programme.

Sensitivity







Diabetic Eye Screening Services

Call and Recall • Imaging • Grading Training • Managed Services

CQC Registered ISO Certified

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NHS Diabetic Eye Screening Milestones 2015 - 16



New Websites

Information for healthcare professionals has moved to **GOV.UK**. All the latest information for professionals involved in DES at: https://www.gov.uk/topic/population-screening-programmes/diabetic-eye

Information for members of the public can be found at NHS Choices: http://www.nhs.uk/Conditions/Diabetes/Pages/diabetic-eyescreening.aspx



Screening Blog

PHE screening blogs now provide up-to-date information on all population screening programmes. Please sign up to our PHE screening blogs to ensure you are kept informed with the latest screening news for the DESP. Don't miss out. Sign up today using the 'sign up for updates' section on the link *https://phescreening.blog.gov.uk/*

Documents

The national programme has published new guidance for local programmes relating to patients who drive to screening appointments. The 'Patients who have driven to their screening appointment: guidance for local screening programmes' should be used to inform local programme policy and can be found at:

www.gov.uk/government/publications/diabetic-eye-screening-patientswho-drive-to-appointments.

Network Day

Thursday 21 January 2016 at Birmingham City Football Club. Important networking day for programme managers, clinical leads, QA teams, commissioners and SILs. Further information and details of how to register via PHE events will be put on the blog.

KPIs

The three DES KPIs have been published since September 2013. In 2014 we identified issues with the calculations of the KPIs within the programme software and reporting was suspended until a fix could be rolled out. Reporting resumed for quarter 3 2014/15 and retrospective data will be published in mid September 2015. Work between the national programme, local programmes and software suppliers has led to an improvement in data quality over 2014/15. **The DES KPIs are:**

- DE1 percentage of those offered DES who attend a routine digital screening event
- DE2 percentage of those attending for DES to whom results were issued within 3 weeks of the screening encounter
- DE3 percentage of screen positive subjects with referred proliferative DR receiving consultation within 4 weeks of notification of positive test.

Conferences

24-25 September 2015 BARS Bristol: the NDESP national team will be giving updates on the test and training reporting system, the new qualification and future plans for DES.

8 October 2015 World Sight Day London: the NDESP national team will be giving updates on data, grading, the new qualification and future plans for DES.

10-11 November 2015 Royal College of Midwives Conference Telford: NDESP will be sharing a stand with the antenatal and newborn screening teams to provide input on DES in pregnancy

2-4 March 2016 Diabetes UK Glasgow: NDESP will be hosting a stand with the DESPs of the other UK nations

22 April 2016 NDESP/RSM Joint Conference RSM London: Following the successful conferences in 2014 and 2015, NDESP is working with the RSM on the programme for 2016. Some free places will be available to programme staff and details will be put on the blog.