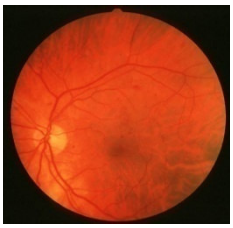
Scottish Diabetic Retinopathy Screening Programme

ANNUAL REPORT

2010



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The completed Annual Report should be sent electronically by 31 May following the reporting year to:

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Host NHS Board: NHS Highland

Service: National Diabetic Retinopathy Screening Service

Report: Annual report 2010-2011

SECTION A: GENERAL DESCRIPTION OF SERVICE/PROGRAMME

1 Overview/Aim of Programme

People with diabetes can develop a condition affecting the eyes called retinopathy, which although initially asymptomatic can lead to partial loss of vision and eventual blindness. Research has shown that early detection of sight threatening diabetic retinopathy through screening, and subsequent treatment of those affected by laser photocoagulation, can substantially reduce the risk of visual loss.

In July 2003 the Scottish Executive Health Department issued guidance (HDL (2003)33) to Health Boards to the effect that each Board should take steps to provide diabetic retinopathy screening for all people with diabetes over the age of 12 to the standards recommended by the Health Technology Board for Scotland in its report published in April 2002 and according to subsequent guidance on its implementation, as part of a Scottish National Diabetic Retinopathy Screening Programme.

The national Diabetic Retinopathy Screening Programme (DRSP) is an integral part of patients' diabetes care and involves a regular (usually annual) eye check using a digital photograph of the retina or slit lamp examination if photography is not possible. The primary objective of the programme is to detect referable (potentially sight-threatening) retinopathy so that it can be treated at a stage where the probability of preservation of vision is high.

The DRS Collaborative has been established to bring together individuals from all NHS Boards in Scotland involved in the delivery of the retinopathy screening programme, including representatives of the various professions involved as well as patient representatives and other stakeholders. The aim of the DRS Collaborative is to facilitate the delivery of the national diabetic retinopathy screening service in Scotland through the development and maintenance of effective service interfaces across Scotland, and the provision of support for good practice.

What is Diabetic Retinopathy?

People with diabetes have a higher chance of developing certain serious health problems, including damage to the eyes. A well-recognised and common complication of diabetes is damage to the blood vessels in the retina, the nerve fibre layer at the back of the eye. This is known as retinopathy and is the largest single cause of blindness amongst adults of a working age in the UK (*Scottish Diabetes Framework,* April 2002). In its early stages, diabetic retinopathy is symptom-free and progression of disease can be prevented by laser treatment or by improved metabolic and/or blood pressure control.

2 Description of Screening Pathway

a) All patients with diabetes in Scotland over the age of 12 are to be offered diabetic retinopathy screening using digital photography within an organised NHS Board programme that meets the recommendations of the Health Technology Assessment published in 2002.

b) An invitation to patients will be automatically sent on an annual basis to invite them to screening – or more frequently if the screening programme requires it– to all those aged 12 and over. Patients will be automatically sent reminder letters if they fail to attend and they may only be permanently suspended from the programme by their GP. Patients will be sent result letters within 20 working days of the appointment. The patients GP or care provider will also be sent a result letter. The patient result letter will inform patients of the follow outcomes –

- No retinopathy
- Mild retinopathy
- Observable maculopathy/ observable background retinopathy
- Referable maculopathy / referable background retinopathy/ proliferative retinopathy

SECTION B: QUALITY DOMAINS

1 Efficient

a) See Annex A for details of numbers invited and number screened/uptake by NHS Board of residence and for details of performance over the period 2008 to 2010.

b) See Annex E for details of resources and staffing used across the Health Boards including workforce information, See Annex D for staff training and accreditation.

c) See Annex C for details of the financial report for the DRS Collaborative.

d) See Annex A for details of KPI target of 80% successful screening of eligible population and invitation to 100% of eligible population.

2 Effective

a) Audit activity
There was no clinical audit undertaken during this financial year. Visits to Board areas were undertaken by Dr Ken Swa, M Black and N Lee. Health Board areas and departments were visited as part of the annual objectives of the DRS collaborative to provide a general review of the area performance. Health Board areas visited were NHS Grampian, NHS Highland, NHS Tayside, and NHS Greater Glasgow. There were no outcomes or actions taken/being taken as a result. Further visits to all Health boards in Scotland are planned for 2011 on a rolling basis.

b) Clinical Outcomes/Performance against national standards –

Performance of the DRSP currently meets the essential requirements NHS QIS March 2004 standards by the use of the Soarian system and nationally agreed policies/procedures. Those essential QIS requirements are

Essential

2(a) 1 all eligible people have a written prompt to attend for screening at least once every year, unless a current screening result is already on the call-recall module.

2(a) 2 Arrangements are in place to reach people not on the diabetes register or accessible via their GP (e.g. long-stay institutions).

2(a) 3 a minimum of 80% of eligible people with diabetes are screened within the last year. (See Annex A for performance results)

2(a) 4 Screening uptake is monitored at NHS Board level and action taken where targets are not achieved. (See Annex A for performance results)

2(a) 5 The NSD protocol is followed for the management of non-attendees, both those who fail to attend appointments and those who actively opt out of the screening programme, taking into account patient choice and responsibility for their care.

2(a) 6 all staff involved in call-recall receive training in using the call-recall IT system before undertaking unsupervised work.

2(b) 1 A national protocol defining failsafe procedures for follow-up of eligible people with diabetes with referable grades of retinopathy are in use.

3(a) 1 Photographs are taken using equipment and techniques in accordance with national guidelines.

3(b) 1 all staff have full training in retinal screening before working unsupervised, and all staff receive training in new techniques.

3(b) 2 Staff undertake continuing professional development (CPD) as per professional and/or national guidelines.

3(c) 1 A minimum of 80% of people screened are sent the result in writing within 4 weeks (20 working days) of the photograph being taken.

4(a) 1 only staff trained and accredited according to national guidelines sign-off reports.

4(b) 1 the images from a minimum of 500 randomly selected patients (or all images graded if less than 500 patients) per grader per annum, not otherwise referred to a third level grader, are reviewed by a third level grader.

4(b) 2 if clinically important grading errors are found, further investigation and/or additional training of the grader is carried out.

4(c) 1 Screening histories of eligible people with diabetes developing referable retinopathy are reviewed, and any areas in the programme which require improvement are identified and addressed.

4(c) 2 all services must submit national minimum dataset returns. (See Annex A for data returns)

4(d) 1 all staff in the screening programme participate in NSD proficiency testing as part of revalidation training.

5(a) 1 there is a referral process to a consultant ophthalmologist-led service for people with diabetes, with identified signs of developing diabetes-related retinopathy, in accordance with national grading recommendations.

5(a) 2 the diabetes care provider should be notified of all people whose eye examination has revealed retinopathy.

c) Service Improvement –

See Annex D for a report on staff training and accreditation undertaken over the reporting year. The training and accreditation coordinator has also highlighted that there are continuing issues regarding the following points -

- The lack of Optometrists within the DRS who are attaining City and Guild units.
- Only two candidates in two Health Boards have attained the Slit Lamp Accreditation Award.

The Training Coordinator has also informed all Service Managers that City & Guilds registrations are valid for 3 years. In September 2009 the existing DRS Certificate was upgraded to the new DRS Qualifications and all candidates already registered were given the opportunity to transfer (free of charge) to the new qualification and at that point their registrations were extended another 3 years. **The end date for these registrations is 1st September 2012. All of the candidates registered via the Scottish Diabetes Collaborative are included.** Any candidate who falls into this category must send their assessed units in the completed format to the Administration centre by **1st June 2012**. This is to allow time for units to be internally verified and certificated.

Any Candidate who does not complete by the deadline date will need to re-register with City and Guilds at additional cost to either the Screening Programme or themselves.

NHS Lanarkshire is to be congratulated as all of their staff have now completed the City and Guilds accreditation. This is the first Health Board area in Scotland to have fully completed the qualification standard.

d) Research activities
There were two research projects carried out in conjunction with NHS Tayside and the Wellcome Trust Centre for Molecular Medicine based in Tayside University. We contributed effort in providing data from the Soarian system. These research projects which are still ongoing are led by Professor Helen Colhoun and Dr Helen Looker. We support these research projects by providing anonymised eye image data for patients from NHS Tayside. This research is regarding the treatment of diabetes and outcomes for patients.

3 Safe

a) Risk Register and Adverse Events
A risk register is maintained by the DRS Collaborative Co-ordinator a sample of some outstanding risks for the DRSP are outlined in Annex H.

b) Quality Assurance-
Internal (IQA) and External Quality Assurance (EQA) activities were undertaken by all graders in 2010. IQA is undertaken by all graders as a mandatory function of the Soarian system. This system passes a percentage of graded images up to

the next level grader for assessment. Level 1 images are assessed by a Level 2 grader and Level 2 images are assessed by Level 3 grader. Level 3 graders are then assessed by the External Quality assurance system as provided and hosted by Aberdeen University. All graders participate in the EQA scheme; however its main purpose is to show that an equitable and high quality grading standard is maintained across all 9 grading centres in Scotland. See Annex C for an overview of national EQA performance.

c) Clinical Governance -
DRS Service across Scotland varies slightly where it sits within local NHS Board structures, some within CHP and some within Operational Divisions. They are required to participate in local configuration for clinical governance. For example as in NHS Lothian, the DRS service Lead Clinician sits on the local Ophthalmology Quality Improvements team as well as in the NHS Lothian DRS Steering Group both of which report to the Diabetes MCN. Both Diabetes MCN and Ophthalmology teams report to NHS Lothian's Clinical Governance & Risk Management board. Appointed DRS lead clinicians within NHS Boards report to their own Clinical or Medical Directors. All DRS Programs are expected to take part in local clinical and service audits. e.g. DNA audit in NHS Lothian.

d) Healthcare Acquired Infection (HAI) & Scottish Patient Safety Programme (SPSP).
DRS services across Scotland sit within local NHS Board structures. They are required to participate in the local healthcare acquired Infection (HAI) and Scottish Patient Safety Programmes (SPSP) of their hosting Health Boards. DRS Service managers, Lead Clinicians and DRS Public Health Consultants (Board Coordinators) within NHS Boards report on these matters to their own Clinical or Medical Directors.

e) Complaints & Compliments
NHS Boards deal with local complaints and compliments using their local procedures. The DRS Collaborative Coordinator has not had any complaints or compliments escalated to him for resolution or response.

4 Timely

a) See page 18 for a table of Key Performance statistics for the 12 month period ending 31st march 2011. A summary is listed below.

- **84.84% of the total number of the currently eligible population was successfully screened in the year 2010-11.**
- **108.44% of the total number of the currently eligible population was invited to screening in 2010-11.**

The KPI system which has now become available as of 1st April 2011 will provide detailed reports on the following waiting/response times for 2011 such as the following.

- KPI 8 – Duration to written report
- KPI 9 – Written report success rate
- KPI 10- Twelve Month Recall result rate
- KPI 11 - Six Month Recall result rate
- KPI 12 - Six Month recall re-screen rate
- KPI 13 - Referable Result rate
- KPI 14 – Ophthalmology Report Interval
- KPI 15 – Ophthalmology review target
- KPI 16 – Ophthalmology attendance rate

b) Review of Screening Pathway
There were no formal reviews carried out in 2010 of the local screening pathway/process and procedures. Reviews and changes to the pathway are continuously suggested and implemented as part of the Request for Change process to implement changes within the Soarian system and as part of the policy or procedure changes as requested by actions from management meetings. The current pathway complies with all the requirements of the 5 QIS Standards 2004 as listed below

- STANDARD 1 - Organisation
- STANDARD 2 - Call-Recall and Failsafe
- STANDARD 3 - Screening Process
- STANDARD 4 - Proficiency Testing
- STANDARD 5 - Referral

5 Person Centred

a) General

A national patient survey was carried out in 2010 of patients attending the DRS programme. The results of this survey were presented by Angela Ellingford at the national DRS Study Day 11th Nov 2010. See Annex G for a brief summary of the slides shown.

b) User Surveys/Action Plan

Two patient surveys were undertaken in 2010:-
1. Patient Survey in NHS Lothian on DNA rates (Annex F)
2. Patient survey for the DRS programmes 2010. (Annex G)

6 Equitable

a) Fair for All: Equality & Diversity
The DRS Service as a national programme has not undertaken an Equality and Diversity Impact Assessment in last 3 years. Individual Health boards may have completed this for their own local programmes. This assessment will be planned into the next year 2011. Patients are automatically referred via their GP or secondary care system into the programme based only on their diabetes diagnosis. Patients can also be screened if they are diagnosed with diabetes and present themselves at a screening clinic.

b) Geographical Access
Mobile DRS screening services are provided by some Health Board areas. Boards may also provide fixed or GP based screening clinics in remote or rural areas. NHS Highland, NHS Borders, NHS Western Isles and NHS Ayrshire and Arran use Optometry services for eye image capture, these are all listed and described in the programme delivery report (Annex E) for each Health Board.

SECTION C: LOOKING AHEAD / DEVELOPMENTS

SECTION D: SUMMARY OF HIGHLIGHTS

Statement from the DRS Lead Clinician 2010 - Dr Kenneth K. Swa

I am delighted to present this report which shows evidence of continual improvement of DRS in Scotland. We continue to invite and offer screening to all of the diabetic population in Scotland. In 2010 we managed to successfully screen 84.84% of the eligible population despite another annual increase of 4% to the total diabetic population aged 12 and over.

External Quality Assurance is now bedding in to a biannual cycle within the collaborative and proving to have very good educational feedback as well as being an excellent tool for continual improvement. All graders are expected to participate and our EQA system has been presented at conferences in the UK and beyond.

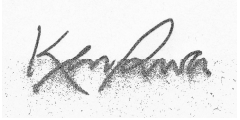
We have been piloting an automated-grading system in NHS Grampian for the last year. It has been successful in showing that it can replace the functionality of Level 1 graders in determining the basic features of retinopathy and will help remove the onerous task of reviewing the many thousands of images with no pathology present. Images which have passed through the auto grader with pathology will then be reviewed by normal graders as at present. We have now just started work to provide a national version for Scotland using a centrally hosted model. All NHS Boards will be able to access this automated grading system. We are confident that it will contribute to national efficiency savings despite of increasing demands from a rising diabetic population.

The DRS program in Scotland has retained all retinal images on the national database for a number of years. We have recently successfully managed to re-design the data storage without any impact on functionality for the users. This will significantly reduce the revenue costs over the coming years.

I am most appreciative to all DRS programme staff across Scotland, especially to the screeners, graders and service managers who worked hard in trying to provide screening services over the harsh winter months of last year. The weather severely impacted varying level of screening activities; however no screening days were lost due to staff shortages.

We were unable to visit all of the NHS Boards, which we intended to do last year due to a number of circumstances especially the forces of nature…volcanic ash clouds and the winter snow!!! However, we will continue to visit boards on a rolling basis as the opportunity presents.

We are continually working with our colleagues, Optometrists, Ophthalmologists, Diabetes UK and RNIB Scotland in an ever changing clinical, technical and financial environment to improve our service in the most cost effective and clinically safe way for all our patients.



Dr Kenneth K. Swa
National Clinical Lead, DRS Collaborative, NSS
May 2011

In April 2010 objectives were set as part of the annual report for the DRS Collaborative. Those objectives and outcomes are summarised here.

The key objectives for the DRS Collaborative for the year 2010 were:

1. To have robust and secure IT systems to support the requirements of the Screening Programme. In the coming year we will complete the implementation of the latest software changes. The new version of software release is due to be implemented in Aug 2010
2. To ensure that Key Performance Indicators (KPIs) are available to monitor the performance of DRS in Scotland. During the coming year the reporting of the uptake and performance of the DRS Service will be by using the definitive KPIs across Scotland.
3. To establish and maintain an EQA programme with a bi-annual cycle to be undertaken by all graders in Scotland.
4. To ensure that the screening programme meets the requirements of NHS QIS for Training and Accreditation of Staff. The collaborative will continue to facilitate the City and Guilds certification in Scotland and implement the Slit Lamp Examiners training and accreditation scheme for the Diabetic Retinopathy Screening Programme.
5. To maintain communication within the collaborative. The DRS Collaborative will organise an annual DRS conference and Study Day for Scotland in November. Ongoing collaborative meeting will continue to be held.
6. To coordinate work in Scotland to develop the screening programme. We will pursue the opportunity to further implement the pilot of first level automated grading through computerised image analysis.
7. To investigate and develop opportunities for methods of electronic communications with patients and GPs in order to minimise the need for letter production from the Soarian system and to help reduce DNA rates for patients.
8. The Lead Clinician, Coordinator and IT system specialist are to visit Health Board areas and meet with DRS teams in order to discuss and provide support on specific local issues related to the provision of the DRS Service to agreed national standards.
9. To develop the reporting capabilities with regards to daily management activities and provide bespoke reporting and research capabilities from the data held by the DRS Collaborative.

Progress against these objectives

The following table summarises the progress against these 9 objectives over the 12 month period to April 2011.

Objective	Current Status
1. To have robust and secure IT systems to support the requirements of the Screening Programme. In the coming year we will complete the implementation of the software changes. The new software releases are due to be implemented in Aug 2010.	The software suppliers (Siemens) had developed the changes requested by the screening programme and we jointly testing the revised software. Preparations for the testing of this release were extensive. This new software release was successfully implemented in Aug 2010. The new software release encompassed changes which included the new Generic camera interface and changes to the Internal Quality Assurance system. There were also bug fixes and updates to the software for previously identified problems. Along with these a correction was made to the software to allow the Ophthalmology failsafe trigger to be switched back on. (This had been switched off as a result of previous problems encountered in 2009) The implementation went extremely well with no unforeseen issues or problems. The system was released back to the users slightly ahead of schedule on the 11th Aug. Post implementation use of the system has not shown any further problems and users have expressed satisfaction with the upgrade process and the new changes to the system software. The contract with Siemens UK in regards to the Soarian system is due to expire in Sep 2012. This means that a new tender for a potential replacement system will need to be ready for Autumn 2011. A statement of requirement (SOR) for this replacement will need to be drafted for mid 2011. The collaborative will need to focus on the requirements of any new system proposed and the steps needed in order to deliver a new screening system to the Health Boards. This will be a key objective for 2011. In early April 2011 the eye image data was moved from Tier 1 storage to Tier 3 (PACS Archive class) storage array. This was successfully completed after 2 attempts. The IT system specialist carried out timing tests of particular functions of the Soarian system before and after the data migration. This testing showed that the system continued to perform at the same speed with the data on Tier 3. The migration provided significant saving to NHS Scotland in terms of reducing the annual storage costs. Further work is required to realise more savings by investing in an archiving system which will remove data for patients that are deceased or have older image data that has no clinical value. In April 2011 a successful disaster recovery (DR) test was carried out by ATOS for the Soarian system. The alternative hosting site for the system in ScoLocate, Edinburgh was brought online and tested by Siemens. We intend to run an annual DR test.

	In Sept 2010 the DRS Collaborative signed an Operational Level Agreement (OLA) with SCI-DC. This was an important document in recognition of the interdependence of the DRS Collaborative and the SCI-DC system and the patient data interchange it provides. SCI-DC provides Soarian the patient data from GP practices and clinical systems in Scotland along with demographic data from the National CHI. Soarian returns the clinical result information to SCI-DC and GP systems.
2. To ensure that Key Performance Indicators (KPIs) are available to monitor the performance of DRS in Scotland. During the coming year the reporting of the uptake and performance of the DRS Service will be by using the definitive KPIs across Scotland.	KPI software had previously been implemented as part of the upgrade rolled out in July 2009. Because of the problems at that time the priority was to ensure that the DRS service continued to be delivered and as a result testing of the KPIs was delayed. However the testing was undertaken earlier in across 2010 year with some corrections to the software required and carried out by Siemens. There corrections were implemented in Aug 2010. KPIs will now be used as the reporting system from 1st April 2011. It was agreed by the DRS Executive that the current reporting system should remain in place for this financial year to enable a stable review of progress. KPIs have been made available to all managers for their use.
3. To establish and maintain an EQA programme with a bi-annual cycle to be undertaken by all graders in Scotland.	The Collaborative continues to work in partnership with Aberdeen University and Dr Keith Goatman who has developed comprehensive software that will capture grading data for the External Quality Assurance (EQA) programme. It had been agreed that 2 rounds of EQA would take place in 2010 with round 1 in Spring 2010 and round 2 in Autumn 2010. The first full round of was undertaken from 22nd March – 19th April 2010 with 94% of Scottish graders taking part. This EQA round used the same 100 retinal images as used in the 2008 pilot. The outcome was reported to the DRS Lead Clinicians and Executive groups via a highly technical report from Dr Keith Goatman (Aberdeen University). The overall result has show that grading centre performances are all generally higher than those measured in the 2008 pilot. Dr Ken Swa (DRS Lead Clinician) also expressed satisfaction that the grading quality being carried out across all grading centres was high and equitable with no areas of concern. A further round of EQA was carried out in Autumn 2010 from 22nd September - 22nd October with 97% of graders taking part. This EQA round included some enhancements to the system as a result of feedback from previous rounds. This round used 100 new images. The outcome report was presented to the DRS Lead clinicians and Executive groups by Dr Keith Goatman. The overall result showed that grading centre performance are again generally higher than those measured in previous rounds and this was in spite of new images being used. The DRS lead clinician (Dr Ken Swa) expressed satisfaction with the results and he was satisfied that the DRSP could show that all grading centres were continuing to provide high quality grading to an equitable degree with no areas of concern. The lessons learned from each round will be promulgated prior to the subsequent round and these will form an important part of the educational and quality improvement aspect of EQA. The EQA programme is a high priority for the DRS collaborative and will need to be supported. We will continue with the ongoing development of an

	EQA programme to meet the needs of the four nations working group. The overall report which shows the grading centre performance across all EQA rounds undertaken to date is attached as an Annex to the DRS annual report for 2010.
4. To ensure that the screening programme meets the requirements of NHS QIS for Training and Accreditation of Staff. The collaborative will continue to facilitate the City and Guilds certification in Scotland and implement the Slit Lamp Examiners training and accreditation scheme for the Diabetic Retinopathy Screening Programme.	We continue to facilitate the registration and accreditation of staff through the City &Guild level 3 certificates and the Diploma in Diabetic Retinopathy Screening. The Collaborative have developed and approved a national standard for the training and accreditation of slit lamp examiners. Significant challenges remain in accreditation of SLE in remote and rural areas especially where there is no grading centre present. Discussion and debate continues about the high standards that have been set and how they can be achieved for all SLE across Scotland. The annual report from the Training and Accreditation Coordinator (Angela Ellingford) is attached as part of the DRS annual report 2010.
5. To maintain communication within the Collaborative. The DRS Collaborative will organise an annual DRS conference and Study Day for Scotland in November. Ongoing collaborative meeting will continue to be held.	Ongoing communication is maintained through the regular meetings of the 4 sub-groups along with the Executive group as well as regional meetings and short life working groups where appropriate. There is regular communication with all health boards and the IT systems suppliers on the IT Issues and this is mostly conducted via e-mail and teleconference. We have recently trialled a new technology called WEBEX which allows web conferencing and sharing of documents. This will allow short life working groups to work collaboratively from their offices using their desktop pc. The use of this system will reduce costs, travel and improve efficiency of staff by reduction of travelling. This will not remove the need for normal meetings to take place but will allow participants to engage in other ways. We have created a newsletter called **Insight** which is disseminated to all DRS staff every few months. The DRS Collaborative held a national DRS Study day on 11th November in Glasgow. The format of this study day followed the 2009 event. **Summary of the feedback for DRS Study Day 2010** Of all those who attended (118) 104 completed an evaluation form. In general the feedback was very positive. • The venue was rated as good to excellent by 94.2% of respondents. • The catering provided was rated good to excellent by 95% of respondents. • Presentations were rated as good to excellent by more than 82% of respondents • Opportunities for discussion was rated as good to excellent by 71% of respondents

	• Networking Opportunities were rated as good to excellent by 77% of respondents • The workshops were all highly rated by those who attended. • A full breakdown of feedback data for all workshops and presentations is available on the website. From the 56 individual comments received it was clear that the workshops were too short and felt rushed. There was little opportunity in a very busy day for questions and answers. There were also comments that some of the workshop sessions were not detailed enough and this is probably because of the time limits imposed on workshop leaders. The workshops were however very popular with all staff able to attend something of relevance. The conclusion from the feedback and comments is that the event was relevant and provided good training opportunities for staff although somewhat rushed. The costs for the study day event are as follows Venue and Catering £5581.26 Materials and Admin £1170.21 Miscellaneous travel £245 **Total cost £6996.47** Cost per registered attendee (118) for 2010 was £59.29* (*The 2009 DRS study day cost was £65.50 per attendee.) The overall conclusion is that the event was a welcome and efficient opportunity to deliver relevant and specific training for all DRS staff across Scotland. Funding for such events will continue to be a challenge. The choice of venue and the delivery of sufficiently diverse workshops to a relevant depth of knowledge will be key elements of success in the 2011 study day. The venue and dates for the 2011 **In- Service Training** day is 10th Nov in the Perth Concert hall. This year we also held a National Conference for all 5 management groups on the 10th Nov 2010. This meeting allowed the management groups to work together in a collaborative way and focus on some strategic issues facing the DRSP in the years ahead. Short presentations were given on the following subjects – • Soarian System replacement • The Diabetes Burden, • Patient Engagement • Staff Accreditation • Optometry pilots This combined conference replaced all of the normal third quarter management group meetings held in November and was therefore cost neutral. The meeting was requested to decide on some key challenges for the years ahead for DRS.

	The key points, challenges and targets for future work are as follows:- **Soarian System Replacement** · Automated Grading · Integrate with Patient Focussed Booking (PFB) · Data Mining · Stop Paper printing · Stop electronic referral to Ophthalmology with images **Diabetes Burden** · Automated Grading · Research into increasing screening interval · O.C.T refinement of referral **Patient Engagement / Patient Information Portals** · Support for information · Equality of access · Maximum data collection at DRS to free up time elsewhere for education · Make general diabetic information available at screening **Clinical Accreditation** · Review accreditation processes - reflect app competence · Need protected time · Need further role clarification · NES · Make C&G modules more relevant to role **Communication** · Need to look at Professional isolation (silo mentality) · Develop public domain web site · Improve IT - videoconferencing / teleconferencing · Optometry colleagues · Develop better communications with Health Board senior management These challenges will drive some of the key objectives of the Collaborative over the next few years and short term working groups will be formed to address these. Some of these challenges are already in hand such as auto-grading and improved teleconferencing (Webex). The management group conference is to be repeated in 2011 with a date set for the 9th Nov in the Perth Concert Hall.

	The collaborative also maintains a website www.ndrs.scot.nhs.uk
6. To coordinate work in Scotland to develop the screening programme. We will pursue the opportunity to further implement the pilot of first level automated grading through computerised image analysis.	The Collaborative have developed the opportunity to introduce automated level 1 grading into the screening programme. The following actions are currently in progress or have been completed: - QIS have completed an assessment of the technology and deemed it as safe to use. - We have engaged with 2 companies called Medalytix and Blue Prism to provide a pilot project in NHS Grampian. This has been set up and has been successfully working since April 2010. - The outline business case for a national auto-grading system was submitted to NSD in Oct. This submission went before the Public Health Portfolio Management Group. The outcome was that the business case was approved in late March 2011. Contracts were awarded to Medalytix for the software/support and to ATOS for hosting of the national system. The auto-grader will be provided to all health boards for a 12 month period with no cost to them. It will be imperative the health boards decide over this period if the auto-grader provides the cost savings and performance as predicted. Boards will be required to fund the ongoing provision/support costs thereafter. As of April 2011 the project for the provision of a national auto-grader was just about to start with a national delivery of the system for late June 2011. - We also submitted a request for funding to an organisation called SHINE Health Foundation - see - (http://www.health.org.uk/) for one-off funding of £75k to help implement the national auto-grading project. We were however not successful in this bid. .
7.To investigate and develop opportunities for methods of electronic communications with patients and GPs in order to minimise the need for letter production from the Soarian system and to help reduce DNA rates for patients.	The system specialist (Neville Lee) has been working in conjunction with his eHealth colleagues to develop methods of communication to patients via SMS and email. We believe a system to allow us to text patients with reminders of screening appointments should be achievable. Further development is required to enable us to present a business plan. This work is still underway however as the Soarian system replacement is due for tender submission in late 2011 there will be a phase of no system changes being undertaken. This may prevent changes being undertaken on the system to allow electronic communication. We are also working with the 'My Diabetes-My Way' patient portal team in SCI-DC to investigate if we can merge our system letters and appointment booking systems in a way which allows us to communicate electronically with patients. We believe this will become an important and vital part of any future development of the DRS system. Ongoing development is required and being undertaken prior to developing a business case.
8.The Lead Clinician, Coordinator and IT system specialist are to visit each Health Board area and meet with DRS teams in order to discuss and provide support on specific local issues related to the	Scheduled visits were planned for NHS Shetland, NHS Orkney and the NHS Western Isles areas at the beginning of the year unfortunately they were cancelled at the last minute because of the Volcano activity in Iceland. Further planned visits had also to be cancelled due to illness. Visits to Health Board areas are planned for the remainder of this year and will be undertaken when the opportunity arises. Visits were undertaken to NHS Grampian, NHS Highland, NHS Tayside and NHS Greater Glasgow. There were no outcomes or actions required. It is likely that

provision of the DRS Service to agreed national standards.	all of the Health Boards won't be visited prior to the end of the business year and these visits will therefore be carried into 2011 -2012. Its anticipated that a series of regular visits be undertaken on a rolling basis across Scotland as the opportunity arises.
9. To develop the reporting capabilities with regards to daily management activities and provide bespoke reporting and research capabilities from the data held by the DRS Collaborative.	The Collaborative have a full time system specialist (Neville Lee) and part of his role is to enable and develop bespoke reporting capabilities in Soarian. These were particularly useful during the system upgrade as we were able to predict with certainty on the changes to data as a result of the upgrade. This gave us high confidence of the changes being undertaken and allowed the users back onto the system ahead of schedule. There are also 2 research projects being undertaken on Diabetes in Scotland and we are able to contribute anonymised image data for the patients in NHS Tayside to these studies which we were previously not able to do. The system specialist will require the procedures and processes to be developed in conjunction with this capability along with relevant safeguards to protect the data and ensure we comply with the Data Protection Act. Some limited ah-hoc reporting has been made available for data validation purposes to service managers. These reports are run by the system specialist on behalf of service managers as requested.

Annex A

Key Performance Statistics for 2010

Key Performance Statistics as at **These statistics are for people by Board of Residence**	***31-Mar-11***				
-	**Reported Numbers**	**% of eligible population**	**% of diabetic population**	**% of screened population**	**Predicted Year End % of eligible population**
Start Date	**01/04/2010**				
Reporting Date	**31/03/2011**				
Total Diabetic Population aged 12 and over	**238,383**				
Total number of people who are permanently suspended	**8,446**		**3.5%**		
Total number of people who are temporarily suspended	**24,170**		**10.1%**		
Total Number of the currently eligible population successfully screened in year 10/11	**174,582**	**84.84%**	**73.2%**		**84.84%**
Total number of people who have been examined slit lamp in year 10/11	**16,863**			**9.66%**	
Remaining population not suspended or screened	**31,185**	**15.16%**	**13.1%**		**15.16%**
TOTAL ELIGIBLE POPULATION	**205,767**				
Total Number of people invited to screening in 10/11	**223,124**	**108.44%**			**100.00%**
Number of referrals to Ophthalmology on account of retinopathy in year 10/11	**6,788**			**3.89%**	
Number of people overdue for recall for Photographic screening	**2,992**	**1.45%**			
Number of people overdue for recall for Slit lamp examinations	**2,196**	**1.07%**			

Annex A

Scotland DRSP Performance tables 2008 - 2010

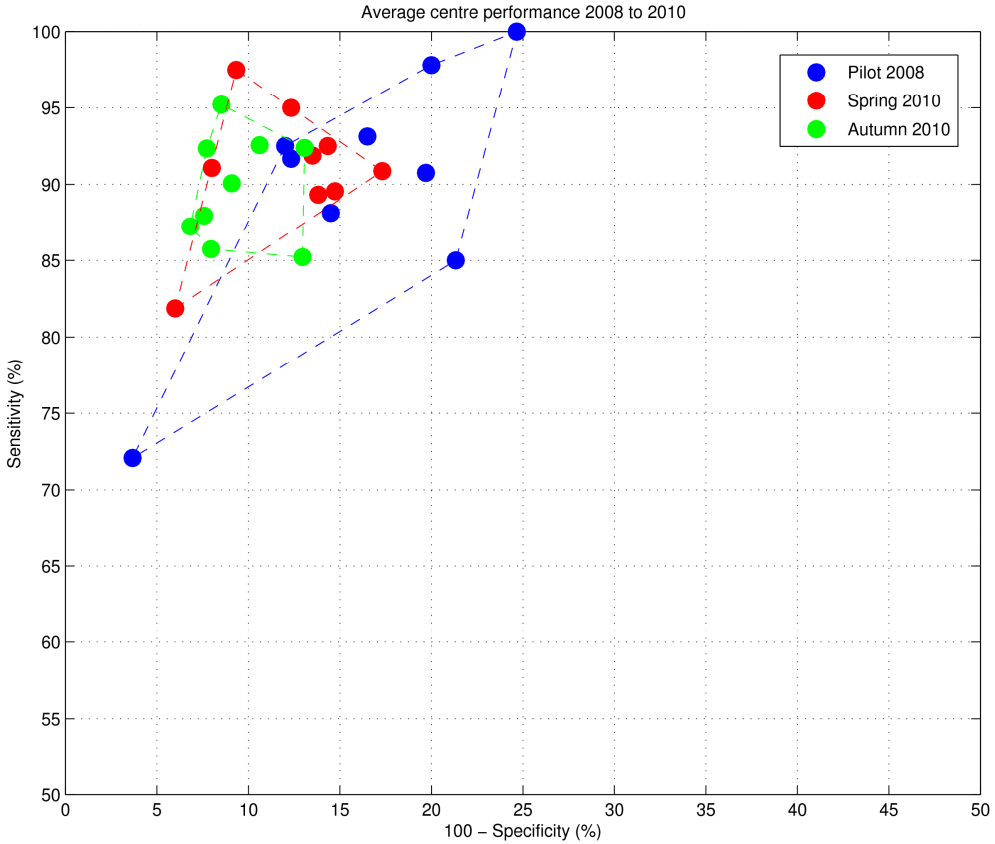
	2008/09		2009/10		2010/11	
	Total	Percentage	Total	Percentage	Total	Percentage
Diabetic Population aged 12 and over	217,041		227,293[4]	increase of 4.72%	238,383	increase of 4.87%
Number of individuals temporarily suspended[1]	21,904	10.1%	23,534	10.4%	24,170	10.1%
Number of individuals permanently suspended[1]	6,833	3.1%	7,073	3.1%	8,446	3.5%
Eligible population as at 31st March	188,277		196,686	increase of 4.46%	205,767	increase of 4.61%
Number of individuals offered an appointment[2]	188,015	99.86%	210,015	106.78%	223,124	108.44%
Number of individuals successfully screened of which[3]:	156,312	83.0%	157,937	80.3%	174,582	**84.84%**
By photography	*141,590*		*142,627*		*157,719*	
By slit lamp	*14,722*		*15,310*		*16,863*	
Number of individuals referred to Ophthalmology on account of Retinopathy	5,539	3.54%	5,569	3.53%	6,788	3.89%

[1] This number is expressed as a percentage of the total diabetic population aged 12 and over.

[2] This number is expressed as a percentage of the current eligible population on the 31st March and will include patients who have been offered an appointment but who were no longer within the eligible population on that date. This number is therefore likely to be higher than if calculated according to the agreed formula for the definitive KPI's.

[3] This number is expressed as a percentage of the number of individuals who have been successfully screened.

[4] The Scottish Diabetes Survey for 2009 reports that 228,004 people are diagnosed with diabetes in Scotland with a relative increase of 3.7% from the 2008 figures (219,963).



Receiver operator characteristic (ROC) plot showing the change in centre sensitivity/specificity for centres between the 2008 pilot study, 2010 Spring EQA and 2010 Autumn EQA rounds. This report was provided by Dr Keith Goatman – Aberdeen University in November 2010.

Annex C

Financial report for 2010 -11 DRS Collaborative

Diabetic Retinopathy Screening Collaborative
Budget Report Year Ended 31st March 2011
National Services Division

	Budget £	Actual YTD £	Variance £	
Salaries & Wages				
Lead Clinician	9960	9960	0	
Admin Support [Band 4]	1170	1170	0	
IT Systems Specialist	39318	39322	-4	
Co-ordinator [Band 7]	45261	45263	-2	
Education & Training	4230	4230	0	
Supplies & Services				
Computer/Office Equipment	2711	2726	-15	
Stationery/Printing Supplies	22	22	0	
Travel Expenses	5862	6085	-223	
Facilities Booking	6604	6833	-229	
Training Materials & Events	6431	6430	1	Includes Perth 2011
External Quality Assurance	10000	10000	0	
ATOS charges	11880	11880	0	
Autograding	111115	111115	0	
Total Expenditure	**254564**	**255036**	**-472**	

Projected overspend of £1772 covered by NSD
Shortfall of £120 re ATOS covered by NSD
Final position overspend of £472 covered by NHS Highland

Annex D

Annual Training Report 2010-2011

Health Board	Optoms registered	Units registered	Unit passed	Unit credits attained*	Screener/ graders registered	Units registered	Units passed	Diploma award attained	Admin registered	Units registered	Units passed	SL examiner probationer	SL award attained
Ayrshire & Arran	32	94	0	1	4	24	9	0	2	2	0	0	0
Dumfries & Galloway	Not used				2	12	0	2	1	2	1	0	0
Fife	Not used				2	16	8	4	2	2	0	0	1
Forth Valley	2	10	4	0	7	42	9	0	1	1	0	0	0
Glasgow	5	20	0	1	11	83	33	3	4	4	0	0	0
Grampian	Not used				5	37	12	0	0	0	0	0	0
Highland	Not used				2	13	0	2	1	1	1	NA	NA
Lanarkshire	Not used							7				0	0
Lothian	3	12	0	1	12	86	11	1	1	1	0	0	0
Orkney	Not used								1	1	0	NA	NA
Shetland	Not used				0	0	0	0	1	1	0	NA	NA
Tayside	Not used				3	22	10	2	1	1	1	0	1
Western Isles	1	3	0	0	2	12	0	0	1	1	1	NA	NA

*Please note: Optometrists are exempt from several units and therefore are accredited with units when attained

Items to note

- The lack of Optometrists within the DRS who are attaining City and Guild units.
- All staff in NHS Lanarkshire have completed the award.
- Only two candidates in two Health Boards have attained the Slit Lamp Accreditation Award.

Annex D

The Training Coordinator has informed all Service Managers that City & Guilds registrations are valid for 3 years. In September 2009 the existing DRS Certificate was upgraded to the new DRS Qualifications and all candidates already registered were given the opportunity to transfer (free of charge) to the new qualification and at that point their registrations were extended another 3 years. **The end date for these registrations is 1st September 2012. All of the candidates registered via the Scottish Diabetes Collaborative are included.** Any candidate who falls into this category must send their assessed units in the completed format to the Administration centre by **1st June 2012**. This is to allow time for units to be internally verified and certificated.

Any Candidate who does not complete by the deadline date will need to re-register with City and Guilds at additional cost to either the Screening Programme or themselves.

1. Programme Information					
1.1 Health Board Name	**Ayrshire & Arran**	**Borders**	**Dumfries & Galloway**	**Forth Valley**	**Fife**
1.2 Programme Board Coordinator	Dr James McHardy, Consultant in Public Health Medicine, Afton House, Ailsa Hospital, Jim.Mchardy@aapct.scot.nhs.uk, Tel 01292 515866	Dr. Tim Patterson Consultant in Public Health Medicine Newstead Melrose TD6 9DA 01896 825517 Tim.patterson@borders.scot.nhs.uk	Dr David Breen, DRS Board co-ordinator Tel: 01387 272 724 email: david.breen@nhs.net	Dr Rani Balendra, Consultant in Public Health Medicine, Carseview House, Stirling, 01786 457262/290. rani.balendra@nhs.net	Dr Charles Saunders , DRS Board Co-ordinator Email: charles.saunders@nhs.net
1.3 Accountable clinical lead	Dr Mohan Varikkara, Consultant Ophthalmologist Mohan.Varikarra@aaaht.scot.nhs.uk, Tel 01563 527040	Dr. Ken Swa Ken.swa@luht.scot.nhs.uk 07785370242	Dr Brian Power, DRS Service Lead Clinician Tel: 01387 246246 email: brian.power@nhs.net	Dr John Doig. John.doig@nhs.net 01324 624000	Dr Caroline Styles, DRS Lead Clinician Telephone: 01592 623623 ext 3853. Email: caroline.styles@nhs.net
1.4 Service Manager	Diane Smith, Diabetes MCN Manager/Retinal Screening Facilitator, diane.smith@aapct.scot.nhs.uk, Tel 01294 323470	Ms Norah Grant DRS Service Manager E3, PAEP, Chalmers Street Edinburgh EH3 9HA Norah.grant@luht.scot.nhs.uk 0131 536 3928	Jane Carrick, DRS Service Manager Tel: 01387 244310 email: jane.carrick@nhs.net	Lorraine Fowler, Diabetes Systems Administrator, Stirling Royal Infirmary, Livilands Gate, Stirling, FK8 2AU. Lorraine.fowler@nhs.net . 01786 434169.	Karen Gibb, Service Manager Telephone: 01592 653334 Email: karengibb@nhs.net
1.5 Location	Room 745, 2nd Floor, Administration Building, Ayrshire Central Hospital, Kilwinning Road, Irvine KA12 8SS	DRS Service E3, PAEP, Chalmers Street Edinburgh EH3 9HA 0131 536 4145	Diabetic Retinopathy Screening Service, Cairnsmore East, Crichton Hall, Bankend Road, Dumfries DG1 4TG Tel: 01387 244228 email: craig.mccallay@nhs.net or Tel: 01387 244325 email: kym.cowan@nhs.net	Diabetes Unit, Stirling Royal Infirmary, Livilands Gate, Stirling, FK8 2AU. 01786 434169. Falkirk Royal Infirmary, Hut 8, Westburn Avenue, Falkirk – 01324 624000 ext 5735.	NHS FIFE DIABETIC RETINOPATHY SERVICE, Ward 8, Cameron Hospital, Windygates, Fife, KY8 5RRk. Tel: 01592 226852
1.6 Referral Centres	Ayr Hospital, Crosshouse Hospital, Inverclyde Royal Hospital,	Eye Centre, Borders General Hospital (BGH)	Ophthalmology Department, D&G Royal Infirmary, Bankend Road, Dumfries DG1 4AP Tel: 01387 246246 Ophthalmology Department, Galloway Community Hospital, Stranraer DG9 7HX Tel: 01776 707707 Ophthalmology Department, 4 Warrell Drive, Rosehill, Carlisle Tel: 01228 602780 or 01228 814366	Ophthalmology Dept, Stirling Royal Infirmary, Livilands Gate, Stirling, FK8 2AU. OCT Clinic – Ophthalmology Day Unit, Falkirk Royal Infirmary, Westburn Avenue, Falkirk.	Queen Margaret Hospital, Whitefield Road, Dunfermline,KY12 0SU Victoria Hospital, Hayfield Road, Kirkcaldy,KY2 5AH Ninewells Hospital, Dundee, DD1 9SY
1.7 Biomicroscopy arrangements	Slit lamp examination carried out by all accredited Optometrists at 25 Optometry Practices immediately following photograph. If screening is deemed ungradable at the Diabetic Clinics, patients are sent an invitation to make an appointment with an accredited Optometrist for biomicroscopy	Either an appointment is made for them in a slit lamp clinic at the BGH or they are asked to make an appointment with a local optometrist, choosing from a list of participating optometrists provided.	4 static sites 3 of these sites provide a one stop photo +- slit lamp bio microscopy same day appt 1 static site and mobile service patients require a second appointment for bio microscopy. Appt usually within 4 weeks as there is a clinic first Thursday	Patients with un-gradable or unobtainable images following camera screening are examined in a slit lamp clinic. There are four slit lamp clinics per week in NHS Forth Valley. Three clinics are held in Falkirk Royal Infirmary, Retinal	3 slit lamp site across fife patients are referred according to area

			of the month.	Screening Dept, Hut 8, Westburn Avenue, Falkirk and one other clinic held in Stirling Royal Infirmary, Livilands Gate, Stirling.,	
1.8 Health Board GP Practices	59	25	35	57	57
1.9 Screening GP Practices	60	25	35	57	57

2. Delivery Model					
	Ayrshire & Arran	**Borders**	**Dumfries & Galloway**	**Forth Valley**	**Fife**
2.1 Programme structure/ model	Patients are invited to make an appointment for screening when their recall date is imminent. They are sent an invitation letter and list of Opticians including the hospital sites to choose from. 25 Optometry Practices providing digital screening and Biomicroscopy. 2 Hospital sites providing digital screening. External Agencies, Visioncall, Healthcall, First Sight Opticians and W Aitchison Opticians all carry out Domiciliary visits only. JR Shaw Optometrists carry out Slit Lamp examinations at HMP Bowhouse	The programme is delivered using 1 mobile camera visiting various GP practices and NHS Borders premises. There is also a pilot underway using 3 optician practices for image capture. Slit lamp bio-microscopy is done by an ophthalmologist at the BGH or one of 17 community optometrists throughout the Borders. The optometrists are being used on a short term basis to help with a backlog.	Brief summary of how screening is delivered, including: - number of photographic static sites - 4, (2 within optometrists, 2 within hospital bases) - mobile – 1 van covering 21 G.P. practices, - optometric sites – 2- one in Dumfries and one in Newton Stewart - number of bio microscopy sites – 3 one in Dumfries, one in Stranraer and one in Newton Stewart - whether any independent/external provider is used – yes 2 optometrists in static sites within their own premises	People with diabetes within Forth Valley are invited to attend an annual retinal screening examination from the age of 12 onwards. There are 2 static photographic sites – Stirling Royal Infirmary which has the capacity to screen 102 patients per week and Falkirk Royal Infirmary which has the capacity to screen 150 patients per week. Forth Valley has 4 slit lamp clinics with the capacity to examine 60 patients per week. There is no mobile service within Forth Valley.	Fundus Photography The service has fixed cameras at Victoria and Queen Margaret Hospitals and a mobile camera which visits 11 further locations Fife At each of the Fixed sites 34 patients are appointed a day and 28 patients appointed at a mobile on average. At the Victoria Hospital clinics are run 5 days a week, on a Wednesday afternoon no patients are appointed and Thursday morning 3 patients are appointed as we offer a Walk in service for anyone attending their Diabetes annual review Mobile locations are governed by the number of patients due and the availability of rooms as 9 of our locations are within GP surgeries. The images are graded and the results sent out. Biomicroscopy If the patient requires biomicroscopy an appointment is made and sent out requesting the patient attend 1 of the 3 sites where we provide biomicroscopy. These are Victoria and Queen

					Margaret Hospitals plus Cupar Health Centre. Once a patient has been appointed to biomicroscopy they are recalled there every year rather than Fundus Photography. The only exception to this is when they patient are discharged back from ophthalmology. Slit lamp examinations where undertaken by a Locum optometrist until November 2009 through a service contract arrangement. Since then this is being undertaken in-house by one of the Level 2 screener/graders with another screener grader currently training . We currently see 20 patients at the Victoria and Queen Margaret Hospitals sites and 16 at Cupar Health Centre
2.2 Cameras Used	23 Topcon TRCNW6 with Nikon D70S 2 Topcon TRCNW6 with Nikon D80S 1 Topcon TRCNW6 with Nikon D1X 1 Topcon TRCNW200? with Nikon D80S	1 Canon CR-DGi fundus cameras with Canon EOS 10D digital back.	5 cameras 3x Topcon TRC NW6S with Nikon D70 1x Topcon TRC NW6S with Nikon D80 1x Cannon CR-DGi with Canon EOS 20D	There are 2 cameras supplied by Topcon – TRC NW6S with Nikon D70 digital camera backs.	3 x Canon CR-DGI Fundus Camera backs 3 x Canon EOS 20D Digital Camera
2.3 Workforce Information	Patients are invited to make an appointment for screening when their recall date is imminent. They are sent an invitation letter and list of Opticians including the hospital sites to choose from. 25 Optometry Practices providing digital screening and Biomicroscopy. 2 Hospital sites providing digital screening. External Agencies, Visioncall, Healthcall, First Sight Opticians and W Aitchison Opticians all carry out Domiciliary visits only.	1 Service (Programme) Manager 3.9 Administrators 1 screener 4 Level 1 graders 3.8 level 2 graders 3 level 3 graders working part time I ophthalmologist working 0.2	Brief summary of workforce to deliver programme administrators - 1 retinal photographers – 4 (3 also L2 graders) graders – 3x L2 + 1x L3 Slit Lamp Examiners – 2 (also screeners/graders L2)	The workforce to deliver retinal screening within Forth Valley includes: 7 Part time retinal photographers 5 Part time administrators 2 Level 1/2 graders 1 Level 3 grader 2 Slit lamp examiners	1 x Level 3 Grader/SL examiners (Associate Specialist attached to service) 1 x Level 2 grader/SL examiner (Full time) 1 x Screener/Level 2 grader (trainee SL examiner) (Part time) 1 x Screener/Level 1 grader (Full time) 1 x Screener/Level 1 grader (Part time) 1 x Screener (trainee Level 1 grader) (Full time) 1 x System Administrator (Full Time) 1 x DRS Administrator (30hrs) 1 x Booking clerk (30hrs)

2. Delivery Model

2.4 Retinal Screeners

Ayrshire & Arran

	Full/part time	Units completed
Optom 1	Part	
Optom 2	Part	
Optom 3	Part	
Optom 4	Full	
Optom 5	Full	
Optom 6	Full	
Optom 7	Full	
Optom 8	Full	
Optom 9	Full	
Optom 10	Part	
Optom 11	Full	
Optom 12	Part	
Optom 13	Full	
Optom 14	Full	306, 307,308
Optom 15	Full	
Optom 16	Full	
Optom 17	Part	
Optom 18	Full	
Optom 19	Part	
Optom 20	Full	
Optom 21	Full	
Optom 22	Part	
Optom 23	Part	
Optom 24	Full	
Optom 25	Part	
Optom 26	Part	
Optom 27	Part	
Optom 28	Full	
Optom 29	Part	
Optom 30	Full	
Optom 31	Part	
Optom 32	Full	
Optom 33	Full	
Optom 34	Full	
Optom 35	Full	
Optom 36	Full	
Photo 1	Part	
Photo 2	Full	
Photo 3	Full	
Photo 4	Full	301,302

Borders

1.0 screener nil accredited
3 community optometrists P/T nil accreditation

All the above staff is current.

Dumfries & Galloway

A – current screener, full time, passed units 301,302,304,305 & 306 and has 303 ready to mark with online exam proposed to take on 12/05/2010

Forth Valley

Screener 1 – Current, part-time – Units 301 & 302 completed and passed.

Screener 2 – Current, part-time – Units 301 & 302 completed and passed.

Screener 3 – Current, part-time – Unit 301 completed and passed.

Screener 4 – Current, part-time – Units 301 & 302 completed and passed.

Screener 5 – Current, part-time – No C& G units completed.

Screener 6 – Current, part-time – Units 301, 302 & 304 completed and passed.

Screener 7 - Current, part-time – No C & G units completed

Fife

Current
1 x Full time Screener pass 304, 305, 306
1 x Full time Screener, pass 304, Commenced July 09
2 x Part Time Screener pass 304, 305, 306
1 x Full time Screener, Not started C&G, Commenced Jan 10

Non-Current
1 x Full Time Screener, pass 304, 305, left July 09
1 x Full time Screener Not started C&G, was on long term sick left June 09

2.5 Retinopathy Graders

Ayrshire & Arran

	Full/part time	Level	Units comp
Optom 1	Part	L1	
Optom 2	Part	L1	

Borders

1.0 Level 1 nil C&G accreditation
1.0 Level 1 nil C&G accreditation
1.0 Level 1 nil C&G accreditation

Dumfries & Galloway

B – current screener/grader L2, part time, passed Diploma
C - current screener/grader L2, part time, passed Diploma

Forth Valley

Grader 1 – Current, part-time – Units 301,302 & 308 completed and passed.

Fife

Current
1 x Level 3 Grader (Associate Specialist attached to service)

	Optom 3	Part	L1		1.0 Level 1 nil C&G accreditation 0.6 Level2 nil C&G accreditation 1.0 Level2 306 1.0 Level2 nil C&G accreditation 1.0 Level2 306 0.2 Level2 nil accreditation 0.1 Level2 nil accreditation **no longer employed** 3 x level 3; P/T, ophthalmologists All of the above staff members are current and shared with Lothian unless otherwise stated.	D – current screener/grader L2, part time, passed unit 306 still to undertake units 307 & 308	Grader 2 – Current, part-time – No C & G Units completed. Grader 3 – Current, part-time - C & G not required.	1 x Full time Level 2 Grader pass 303, 307, 308 1 x Part Time Level 2 Grader pass 303, 307, 308 1 x Part Time Level 1 Grader pass 303, 307, 308 1 x Full time Level 1 Grader, Commenced July 09 1 x Full time Level 2 Grader, Just started Grading Training, Commenced Jan 10 Non-Current 1 x Full time Screener No C&G, was on long term sick left June 09 1 x Full Time Screener, pass 303, 307, 308, left July 09 1 x Service Contract agreement with qualified optometrist Nov 09
	Optom 4	Full	L1					
	Optom 5	Full	L1					
	Optom 6	Full	L1					
	Optom 7	Full	L1					
	Optom 8	Full	L1					
	Optom 9	Full	L1					
	Optom 10	Part	L1					
	Optom 11	Full	L1					
	Optom 12	Part	L1					
	Optom 13	Full	L1					
	Optom 14	Full	L1 L2	306,307 308				
	Optom 15	Full	L1					
	Optom 16	Full	L1					
	Optom 17	Part	L1					
	Optom 18	Full	L1					
	Optom 19	Part	L1					
	Optom 20	Full	L1 L2					
	Optom 21	Full	L1					
	Optom 22	Part	L1					
	Optom 23	Part	L1					
	Optom 24	Full	L1					
	Optom 25	Part	L1					
	Optom 26	Part	L1 L2					
	Optom 27	Part	L1					
	Optom 28	Full	L1					
	Optom 29	Part	L1					
	Optom 30	Full	L1					
	Optom 31	Part	L1					
	Optom 32	Full	L1					
	Optom 33	Full	L1					
	Optom 34	Full	L1					
	Optom 35	Full	L1					
	Optom 36	Full	L1 L2					
	Ophth 1	Part	L3					
	Ophth 2	Part	L3					
2.6 Slit Lamp Examiners			Units complete		P/T ophthalmologist 0.2 17 P/T community optometrists None of the above perform grading or are undertaking C&Gs. Ths optometrists are being used to address a backlog and are likely to a temporary solution.	C - current screener/grader L2, SLE part time, passed Diploma D – current screener/grader L2, SLE part time, passed unit 306 still to undertake units 307 & 308	Examiner 1 – Current, part-time – Level 1-2 grader, Units 301,302 & 308 completed and passed. Examiner 2 – Current, part-time – Level 1-2 grader, no C & G units completed.	Current 1 x Level 3 Grader (Associate Specialist attached to service) 1 x Full time Level 2 Grader pass 303, 304, 305, 307, 308 1 x Part Time Level 2 Grader pass 303, 304, 305, 307, 308 (started training in Dec 2010)
	Optom 1	Part						
	Optom 2	Part						
	Optom 3	Part						
	Optom 4	Full						
	Optom 5	Full						
	Optom 6	Full						
	Optom 7	Full						
	Optom 8	Full						

	Optom 9 Full Optom 10 Part Optom 11 Full Optom 12 Part Optom 13 Full Optom 14 Full 306,307, 308 Optom 15 Full Optom 16 Full Optom 17 Part Optom 18 Full Optom 19 Part Optom 20 Full Optom 21 Full Optom 22 Part Optom 23 Part Optom 24 Full Optom 25 Part Optom 26 Part Optom 27 Part Optom 28 Full Optom 29 Part Optom 30 Full Optom 31 Part Optom 32 Full Optom 33 Full Optom 34 Full Optom 35 Full Optom 36 Full					Non-Current Nov 09 1 x Service Contract agreement with qualified optometrist left Nov 09
2.7 Screening GP practices	60	25	35	57	57

1. Programme Information					
1.1 Health Board Name	**Grampian**	**Greater Glasgow**	**Highland**	**Lanarkshire**	**Lothian**
1.2 Programme Board Coordinator	**Dr Simon Hilton,** DRS Board Co-ordinator Summerfield House Aberdeen, Summerfield Rd, Aberdeen AB15 6RE Telephone: 01224 558476 Email: simon.hilton@nhs.net	Dr Emilia Crighton, DRS Board Co-ordinator Telephone: 0141 2014747 Email: emilia.crighton@ggc.scot.nhs.uk	Dr Roderick Harvey DRS Board Co-ordinator, NHS Highland 6th Floor, Raigmore Hospital, Old Perth Road, Inverness IV2 3UJ Email: Roderick.harvey@nhs.net Tel: 01463 705640	Dr David Cromie Consultant in Public Health Medicine Department of Public Health NHS Lanarkshire 14 Beckford Street Hamilton ML3 0TA 01698 206336 david.cromie@lanarkshire.scot.nhs.uk	Dr. Joy Tomlinson Consultant in Public Health Medicine Deaconess House 148, Pleasance Edinburgh EH8 9RS joy.tomlinson@nhslothian.scot.nhs.uk 0131 536 9162
1.3 Accountable clinical lead	Dr John Olson, DRS Service Lead Clinician, David Anderson Building, Foresthill Rd, Aberdeen AB25 2ZP Telephone: 01224 555538. Email: john.olson@nhs.net	Dr William Wykes, DRS Service Lead Clinician Telephone: 0141 201 1582. Email: william.wykes@ggc.scot.nhs.uk	Dr Roderick Harvey, details as above.	Dr Meena Virdi Consultant Ophthalmologist Lead Clinician for Diabetic Screening Hairmyres Hospital Hairmyres	Dr. Ken Swa Ken.swa@luht.scot.nhs.uk 07785370242 (until Sept 2010 – this post is currently vacant)

				East Kilbride Tel: 01355 584652 Meena.Virdi@lanrkshire.scot.nhs.uk	
1.4 Service Manager	Margaret Bruce, Retinal Screening Manager, David Anderson Building. Foresterhill Rd Aberdeen AB25 2ZP Telephone: 01224 550198. Email: m.bruce@nhs.net	David Sawers, Retinal Screening Manager Telephone: 0141 211 4754. Email: david.sawers2@ggc.scot.nhs.uk	Lisa Steele Service Manager, NHS Highland Diabetic Centre, Centre for Health Science, Old Perth Road, Inverness IV2 3JH Email: lisa.steele@nhs.net Tel: 01463 255946	Anne Dougan Retinal Screening Team Leader Administration Office Administration Building Coathill Hospital Coathill Coatbridge ML5 4DN 01236 707150 Ann.Dougan2@lanarkshire.scot.nhs.uk	Ms Norah Grant DRS Service Manager E3, PAEP, Chalmers Street Edinburgh EH3 9HA Norah.grant@luht.scot.nhs.uk 0131 536 3928
1.5 Location	David Anderson Building Foresterhill Road Aberdeen AB25 2ZP	Administrative centre address – Screening Department, 1st Floor, Building 2, Templeton Business Centre, 62 Templeton Street, Glasgow G40 1DA	Diabetic Retinal Screening Centre for Health Science Old Perth Road Inverness IV2 3JH Tel: 01463 255938/255939/255940	Administration Office Administration Building Coathill Hospital Coathill Coatbridge ML5 4DN 01236 707160 / 0845 337 3341	DRS Service E3, PAEP, Chalmers Street Edinburgh EH3 9HA 0131 536 4145
1.6 Referral Centres	Aberdeen Eye Clinic, Foresterhill Hospital. Dr Grays Hospital Elgin. Chalmers Hospital Banff. Jubilee Hospital Huntly. Turner Hospital Keith. Seafield Hospital Buckie.	Ophthalmology Departments at the following – Glasgow Royal Infirmary, Gartnavel General Hospital Stobhill Hospital, Victoria Infirmary, Southern General Hospital – all in Glasgow Royal Alexandra Hospital, Paisley; Inverclyde Royal Hospital, Greenock; Dumbarton Health Centre	North Highland patients are referred to: Raigmore Hospital Inverness but can be seen at any of the peripheral hospital sites in Golspie, Wick, Fort William and Portree, depending on the nearest venue and treatment required. Argyll & Bute patients are referred to: Campbeltown Hospital Dumbarton Health Centre Dunaros Hospital, Isle of Mull Dunoon General Hospital Inverclyde Royal Hospital, Greenock Mid Argyll Hospital, Lochgilphead Victoria Hospital, Rothesay Lorn & Isles DGH, Oban Gartnavel General, Glasgow Southern General, Glasgow	1. Ophthalmology Department Hairmyres Hospital Eaglesham Road East Kilbride 2. Ophthalmology Department Wishaw General Hospital Netherton Road Wishaw 3. Ophthalmology Department Monklands District General Hospital Monkscourt Drive Monklands Airdrie	Princess Alexandra Eye Pavilion, Edinburgh St. John's Hospital, Livingston.
1.7 Biomicroscopy arrangements	Technical failure examinations are performed at the following locations: All Aberdeen City residents are assessed at the David Anderson Building. Moray patient are offered a location closer to home and can may be booked into any of following venues: Leanchoil Hospital Forres. Dr Grays Hospital Elgin Jubilee Hospital Huntly Chalmers Hospital Banff	People with unobtainable or un-gradable images are assessed by slit-lamp biomicroscopy. These clinics are held weekly at Gartnavel General Hospital, Victoria Infirmary, Southern General Hospital and Glasgow Royal Infirmary – all in Glasgow, and as required at Royal Alexandra Hospital, Paisley, Greenock Health Centre, Dumbarton Health Centre and at First Sight Opticians, 66 High Street, Johnstone.	North Highland patients are referred to an Optometrist based slit lamp clinic in the following sites, depending on their nearest venue for referral: At Centre for Health Science, Inverness Lawson Memorial Hospital in Golspie Portree Hospital Belford Hospital in Fort William Caithness General Hospital in Wick Argyll & Bute patients are referred	Patients with a status of technical failure following photography, receive a letter to inform them that images taken are un-gradable and they have been put on a waiting list to have slit lamp examination carried out. There is a slit lamp service at each of the 3 static sites. There is 3 sessions of slit lamp carried out at each of the 3 static sites. (a total of 24 patients each week per site) = wte 0.3 per site. Technical failure at slit lamp will result in the patient being referred to ophthalmology. The slit lamp clinics	An appointment is made for patients in a slit lamp clinic at one of the locations below, based on where they live. St John's hospital, Livinston PAEP, Edinburgh Roodlands Hospital, Haddington.

	Seafeild Hospital Buckie	Ophthalmologists deliver the slit lamp clinics at Glasgow Royal Infirmary and at Royal Alexandra Hospital, Paisley. All the other slit lamp clinics are delivered by optometrists.	for a slit lamp examination into the Ophthalmology departments detailed above at item 1.6.	see patients for recall and patients who are newly referred to slit lamp. The slit lamp clinics are run by Registered Nurses who have undergone specialised training in slit lamp examination. The slit lamp clinics can be increased or decreased depending on demand as it is organised wholly within the Diabetes Retinal Screening Service.	
1.8 Health Board GP Practices	83	Approx 274	North Highland = 67 A&B = 34 Total GP practices = 101	98	126
1.9 Screening GP Practices	83	Approx 274	North Highland Patients are invited from the 12 Inverness based GPs to come for screening at DRS in Centre for Health Science, Inverness. DRS provide a mobile clinic based at the remaining 55 GP sites or nearest community hospital. Argyll & Bute DRS provide a mobile clinic based at three of the GP practices which are not accessible to a High Street Optometrist in the area. DRS control recall of patients for all 101 practices but in Argyll & Bute the remaining 31 practices have their patients invited to the nearest participating High Street Optometrist practice for screening.	98	126

2. Delivery Model					
	Grampian	**Greater Glasgow**	**Highland**	**Lanarkshire**	**Lothian**
2.1 Programme structure/ model	Screening is delivered through a combination of both mobile and static screening venues. The static site is used to screen patient who live within the City boundary. The mobile screening clinic visits GP practices in Aberdeenshire and Moray. Screening is carried out within the practice. Vehicles are for transportation of equipment only. One Static Site Three Mobile units	All diabetics are initially appointed to a photography screening clinic. These are held at 4 hospital sites and at 17 other sites – clinics, health centres, screening vans, and GP surgeries. 5 of the photography sites are generally in use 52 weeks/year, and the other 16 sites are used as required, from 4 – 25 weeks/year. Optometrists are not used to deliver photography clinics. Diabetics who have unobtainable or ungradable images at photography are	**North Highland** Static photographic sites = 1 based at DRS in CFHS, Inverness. **North Highland continued** Mobile clinics carried out at 55 GP locations in North Highland and/or nearest community hospital depending on room availability at the GP site. Photography is carried out by two full time NHS Highland retinal screeners. Slit lamp provision is provided at five sites detailed in item 1.7 and is carried	Administration office is responsible for booking, cancelling appointments. Telephone helpline is open from 9am to 12md and from 1.30pm to 3.30pm. There are 4 static sites in Lanarkshire, which are Time Capsule in Coatbridge, Wishaw Health Centre in Wishaw , Brandon House in Hamilton. Each of these sites has 2 fundus cameras and 1 slit lamp. One site in Cumbernauld has	The programme is delivered using 3 static cameras, located in the main Diabetic Out Patient Departments, and 3 mobile cameras in a variety of GP Practices and Health Centres. The screeners are photographers employed by the NHS. All of the screeners in Lothian also grade at either level 1 or level 2. Slit lamp bio-microscopy is

	Six slit lamp sites No independent or external provider is used.	assessed by slit-lamp biomicroscopy. (If at the slit lamp clinic it is felt that gradeable images can be obtained in future then the diabetic's next appointment will be for photography.) Slit lamp biomicroscopy is delivered weekly at 4 hospital sites, and less frequently at 1 other hospital site, at 2 health centres and from one optometrist's practice. 2 external optometrists are used occassionally, both to deliver biomicroscopy and for level 2 grading.	out by an NHS Highland Optometrist. **Argyll & Bute** Mobile clinics are carried out at 3 GP sites in the area; Rothesay, Tignabruaich and Lochgoilhead. This is covered by the NHS Highland retinal screening team from Inverness. The remaining areas are serviced by static photographic sites provided via external contractors who are professionally qualified High Street Optometrists. The area is split into 8 sites:- Oban, Lochgilphead, Campbeltown, Tarbert, Helensburgh, Dunoon, Isle of Islay and Isle of Mull. Over the 8 sites, there are 15 registered external Optometrists providing photographic screening only. Slit lamp referrals for the Argyll & Bute area are seen across the 10 Ophthalmology sites detailed in item 1.6.	one fundus camera. There mobile unit service was discontinued in September 2009, however a business plan to organise Topcon to safely transport one of fixed cameras to out lying areas and state hospital to provide screening. A contract is being negotiated.	done in 3 hospital sites (see 1.7 above) and is done by a mix of NHS employees (currently optometrists and ophthalmologists though 2 of our photographers are in the process of training for this) and community optometrists paid by the session.
2.2 Cameras Used	Canon CR6 x 2 Canon DGI x 2 Canon EOS digital backs 2 x EOS D30, 1 x EOS D60, 1 x EOS 10D	Fundus cameras – 4 x Canon CR6, 7 x Canon CR-DGI Digital backs – 5 x Canon D30, 2 x Canon 10D, 4 x Canon 20D	**North Highland** 1x Canon CR6 45NM Serial No: 300621/Canon EOS 20D 1x Canon DGI Serial No: 310325/Canon EOS 20D 1x Canon DGI Serial No: 311286/Canon EOS 20D **Argyll & Bute** 1x Topcon NW65 Serial No: 2881612/Nikon D90 1x Keeler Kowa NonMyd 7 Serial No: 1602600062/Nikon D80 1x Keeler Kowa NonMyd 7 Serial No: 160260068/Nikon D80 1x Keeler Kowa NonMyd 7 Serial No: 1602600049/Nikon D80 1x Keeler Kowa NonMyd 7 Serial No: 1602600091/Nikon AF15 1x Keeler Kowa NonMyd 7 Serial No: 1602600057/Nikon D80 1x Topcon TRC/NW6S Serial No: 2881259/Nikon D80 1x Topcon NW6S Serial No:	7 x Retinal Camera Fundus Topcon NW6S 7 x Nikon AS15 3 x Nidek SL 450 biomicroscopy	6 Canon CR-DGi fundus cameras with Canon EOS 10D digital backs.

			2880004/Nikon D80 1x Topcon NW6S Serial No: 2881374/Nikon D80 1x Topcon NW6S Serial No: 2881347/Nikdon D80 1x Canon DGI Serial No: 311531/Canon 40D 1x Canon DGI Serial No: 300343/Canon 40D 1x Canon DGI Serial No: 311525/Canon 40D 1x Topcon NW6 Serial No: NK 1x Topcon NW8 Serial No: NK		
2.3 Workforce Information	Administrators x 2 part time Administrators x 1 full time Retinal Photographer x 6 part time L1 graders x 0 L2 graders x 4 part time L3 graders x 2 part time Slit lamp examiners x 2 part time	The service has – 1 service manager 1 nurse co-ordinator 8 (6 wte) admin staff 11 (9.9 wte) retinal photographers 1 (0.7wte) photographer/level 1 grader 3 (2.4 wte) photographers/level 2 graders 4 (1.3 wte) slit lamp examiners/level 2 graders 1 associate specialist ophthalmologist (0.8 wte) and 2 consultant ophthalmologists (approx 1 session/week each)	Service Manager: 1 Administrators: 3 Retinal Screeners: 2 External Photographer/Screeners: 15 Slit Lamp Examiner: 1 (North Highland only) All grading work is provided externally by the grading centre in NHS Grampian.	1wte x Administration Officer 1wte x Administration Assistant 3 x Retinal Screening Photographers wte 2.8 3 x Screener/level 2 grader – Registered Nurse wte 1.78 3 x Level 2 grader/ slit lamp examiner – Registered Nurse. WTE 2.34 1 x Level 3 Grader – Consultant Ophthalmologist WTE 0.2	1 Service (Programme) Manager 5 Administrators 3 screeners 4 Screeners/Level 1 graders 4 screeners/level 2 graders 3 level 3 graders 1 employed optometrist plus 2 community optometrists working as needed at slit lamp plus 2 ophthalmologist. working as needed at slit lamp .
2.4 Retinal Screeners	Retinal photographers x 6 Include. Name: SCR+G 1 part time. Current Name: SCR 5 full time (on Maternity leave) Name: SCR 2 full times. Current Name: SCR 7 part time. Current Name: SCR 3 full times. Current (on fixed term temp contract ending OCT.2010) Name; SCR+G 4 part time, Current No C & G units passed as yet.	Photographer 1 – current, 0.6 wte, no units completed Photographer 2 – current, full time, passed units 302 & 304 Photographer 3 – current, full time, passed units 302, 304, 305, 306 Photographer 4 – current, full time, passed units 302 & 304 Photographer 5 – current, full time, no units completed Photographer 6 – current, 0.7 wte, no units completed Photographer 7 – current, full time, passed units 304 & 305 Photographer 8 – current, full time, no units completed Photographer 9 - current, 0.6 wte, passed unit 302 Photographer 10 – current, full time, passed units 302,304, 305, 306 Photographer 11 – current, full time, passed units 304 & 305	1 x Current, Full Time Full accreditation achieved: units 301, 302, 303, 304, 305, 306 and 307. 1 x Current, Full Time Completed unit: 304 only. WIP for 301, 302, 303, 304, 305 and 306. 15 External photographer screeners – WIP unit 306 only.	1 x Current full time (Has C&G Diploma – units 301 – 308) 1 x Current full time (302, 304) 1 x Current part time (302, 304, 305, 306, 307, 308)	1.0 screener nil C&G accredited 1.0 screener nil C&G accredited 1.0 screener nil C&G accredited 1.0 screener/Level 1 nil C&G accreditation 1.0 screener/Level 1 nil C&G accreditation 1.0 screener/Level 1 nil C&G accreditation 1.0 screener/Level 1 nil C&G accreditation 0.6 screener/Level2 nil C&G accreditation 1.0 screener/Level2 306 1.0 screener/Level2 nil C&G accreditation 1.0 screener/Level2 306 All of the above staff

					members are current.
2.5 Retinopathy Graders	Name; SL+G 1, Part time, Current on Maternity leave. L2 grader YES Name: SCR+G 4, Part time, Current, L2 grader YES Name: SCR+G 1, Part time Current L2 grader YES Name: SL+G 2, Part time Current L2 grader YES Name: HG 1, part time Current L3 grader YES Name: HG 2, part time Current L3 grader YES All level two are studying and working towards the units	Photographer/grader 1 – current, 0.7 wte, grading at level 1, passed unit 304 Photographer/grader 2 – current, 0.9 wte, grading at level 2, no units passed Photographer/grader 3 – current, 0.5 wte, grading at level 2, passed units 307 & 308 Photographer/grader 4 – current, full time, grading at level 2, passed units units 301, 302, 303, 304, 305, 306, 307, 308 Photographer/grader 5 – current, full time, grading at level 2, passed units units 301, 302, 303, 304, 305, 306, 307, 308, 309 Ophthalmologist 1 – current, 0.8 wte, grading at level 3 Ophthalmologist 2 – current, 0.1 wte, grading at level 3 Ophthalmologist 3 – current, 0.1 wte, grading at level 3	Grading services provided externally via SLA with NHS Grampian.	1 x L2 Current part time – (City and Guilds assessor for units 302,304, 305, 306, 307, 308) Due to retire Dec 2010) 1 x L2 Current part time (302,304,305,307) 1 x L2Current Part time (302,304,305,306,307)	1.0 screener/Level 1 nil C&G accreditation 1.0 screener/Level 1 nil C&G accreditation 1.0 screener/Level 1 nil C&G accreditation 1.0 screener/Level 1 nil C&G accreditation 0.6 screener/Level2 nil C&G accreditation 1.0 screener/Level2 306 1.0 screener/Level2 nil C&G accreditation 1.0 screener/Level2 306 0.2 Level2 + slit lamp nil accreditation 0.2 Level2 + slit lamp nil accreditation **no longer employed** 3 x level 3; P/T, ophthalmologists All of the above staff members are current unless otherwise stated and are shared with Borders.
2.6 Slit Lamp Examiners	Current/Non-current Full/Part Time Are they a L2 grader? Level of accreditation achieved (i.e status against units 303, 304, 305, 307 and 308) Please note: - the C&G units should be complete ideally within 12 calendar months (one year) and exceptionally within 24 months (2 years) of joining the workforce. (Added as per minute of Executive committee 18 Sep 09) SL+G 1, part time Current on maternity leave. L2 Grader YES SL+G 2, part time. Current L2 Grader YES	Slit lamp examiner 1 – current, 0.6 wte, grading at level 2, passed units 301,302,307,308 Slit lamp examiner 2 – current, 0.1 wte, grading at level 2, no units completed Slit lamp examiner 3 – current, 0.5 wte, grading at level 2, no units completed Slit lamp examiner 4 – current, 0.1 wte, grading at level 2, no units completed	1 x Current, Part Time The are not working as a L2 grader. Full accreditation achieved: units 301, 302, 307 and 308.	1 x Current full time (301, 302, 304, 305, 306, 307, 308) also L2 grader 1 x Current part time (302, 304, 305, 306, 307, 308) also L2 grader 1 x Current part time (Has C&G Diploma units 301 – 308) also L2 grader	0.1 optometrist nil C&G accreditation **no longer employed** 0.2 optometrist + level 2 grader nil C&G accreditation P/T community optometrist nil C&G accreditation P/T community optometrist nil C&G accreditation P/T ophthalmologist + level 3 grader P/T ophthalmologist

	Both staff are working towards obtaining the unit credits				Unless stated the above are all current staff.
2.7 Screening GP practices	83	Approx 274	101 as per item 1.8.	98	126

1. Programme Information				
1.1 Health Board Name	**Orkney**	**Shetland**	**Tayside**	**Western Isles**
1.2 Programme Board Coordinator	Dr Ken Black, Consultant in Public Health Medicine, Public Health Office, Victoria Street, Kirkwall ken.black@nhs.net 01856 879800	Alison Irvine, Diabetic Specialist Nurse, Gilbert Bain Hospital, Lerwick. Email: alison.irvine@nhs.net Phone: 01595-743000 extension 3444.	Dr Julie Cavanagh DRS Board Coordinator Consultant in Public Health Directorate of Public Health King's Cross Clepington Road Dundee DD3 8EA 01382 425684 julie.cavanagh@nhs.net	Mr Phil Tilley Planning & Development Manager
1.3 Accountable clinical lead	Post vacant	Dr Pauline Wilson, Consultant Physician Email: paulinewilson@nhs.net Phone: 01595-743000 extension 3226	Dr Graham Leese DRS Clinical Lead Consultant Physician Wards ½ Ninewells Hospital Dundee DD1 9SY 01382 632237 or 01382 660111 bleep 4320 graham.leese@nhs.net	Dr K N Achar Consultant Physician
1.4 Service Manager	Nickie Milne, DRS Administrator, Assessment and Rehabilitation Office, Balfour Hospital, Kirkwall. Nichola.milne@nhs.net 01856 888023	Alison Irvine, Diabetic Specialist Nurse, Gilbert Bain Hospital, Lerwick. Email: alison.irvine@nhs.net Phone: 01595-743000 extension 3444.	Ms Angela Ellingford DRS Programme Mananger Diabetic Retinopathy Screening Programme Diabetes Support Centre Level 7 Ninewells Hospital Duundee DD1 9SY 01382 740068 angela.ellingford@nhs.net	Marina Sinclair Diabetes Service Co-ordinator
1.5 Location	Assessment and Rehabilitation Office, Balfour Hospital, Kirkwall. 01856 888023	Gilbert Bain Hospital, Lerwick. Contact number: 01595-743000 extension 3030	Diabetic Retinopathy Screening Programme Diabetes Support Centre Level 7	The Diabetes Centre, Western Isles Hospital HS1 2AF

			Ninewells Hospital Duundee DD1 9SY	
1.6 Referral Centres	Visiting Highland Ophthalmology Service held in Balfour Hospital, Kirkwall, Orkney	Gilbert Bain Hospital and Aberdeen Royal Infirmary (ARI)	Ninewells Hospital, Dundee Arbroath Infirmary Montrose Links Health Centre Stracathro Hospital Perth Royal Infirmary	Ophthalmology Clinic Out-Patient Department Western Isles Hopsital/ Uist & Barra Hospital
1.7 Biomicroscopy arrangements	At present all patients requiring slit-lamp assessment is referred to the visiting Ophthalmology Service and is seen within their Out-patient Eye Clinic which is held on a monthly basis at Balfour Hospital, Kirkwall.	Gilbert Bain Hospital with visiting Slit Lamp Nurse from ARI	Slit lamp examinations are carried out by Ophthalmologists. 2x clinics per week based at Ninewells Hospital 1x per week at Perth Royal Infirmary Montrose Links Centre x2 per annum Arbroath Infirmary x3 per annum Stracathro Hospital x3 per annum	R Doig Optometrist Ltd 36 Kenneth Street Stornoway R Doig Optometris Ltd Rathad Mhic Eoine Balivanich Benbecula Uist
1.8 Health Board GP Practices	15	10	69	12
1.9 Screening GP Practices	15	10	69	12

2. Delivery Model				
	Orkney	**Shetland**	**Tayside**	**Western Isles**
2.1 Programme structure/ model	Screening is delivered on one site which is within the Balfour Hospital. We have one static retinal camera. We have one Retinal Screening Technician who delivers approximately one clinic per week. All slit-lamp patients are seen by the visiting Ophthalmology Service and their information is passed back to the retinal screening administration. Our grading is sent to Tayside.	We have 1 static photographic site and no biomicroscopy sites. We do not use any independent/external provider.	• Two permanat static sites. One mobile unit which can be a 'transportable' system ie has a side lift so that equipment can be taken off the mobile unit and set up in a temporary static site. The same unit can also be used as a mobile unit. Second mobile unit is used for this purpose alone. • Five biomicroscopy sites Have an SLA with NHS Tayside Department of Ophthalmology to provide slit lamp service.	NHS Western Isles have contracted with R Doig Optometrist Ltd to provide image capture and slit lamp examinations. He has 2 cameras and 2 static sites, one in Stornoway(Lewis) and one in Benbecula (Uist). He is contracted to provide a peripatetic service and a domiciliary service. Patient are invited to make an appointment with R Doig Optometrist Ltd for their image capture. GPs can request a home visit for patients that are unable to go to either of R 'Doig Ltd premises. Screening is also provided for patients who are in hospital or nursing homes NHS Western Isles have a contract with NHS Tayside to provide Level

				1-3 Grading
2.2 Cameras Used	We have one camera. Canon EOS 20D with CR-DGi at present we do not have any back up digital camera or fundus camera.	We use a Canon 10 D.	Serial Number Canon CR6-45NM Non-Mydriatic Retinal Camera 300570 Canon CR6-45NM Non-Mydriatic Retinal Camera 300654 Canon CR-DGi Non-Mydriatic Retinal Camera 310708 Canon CR-DGi Non-Mydriatic Retinal Camera 310368 Canon EOS-20 Digital Camera 14209103 Canon EOS-20 Digital Camera 19210113 Canon EOS-20 Digital Camera 14309090 Canon EOS-20 Digital Camera 15309056	2 fundus Cameras Nokia D70s Topcon TRC NW6
2.3 Workforce Information	At present we have one member of staff within the retinal screening programme in Orkney who delivers all the administration, screening and co-ordination of the service.	We have 1 administrator (15 hours per week) and 1 retinal photographer (15 hours per week). We do not have any graders. We have a visiting Slit Lamp Nurse from ARI every 3 months.	3x Level 3 Grader/SL examiners 1x Level 2 grader/SL examiner 1x Screener/Level 2 grader 3x Screener/Level 1 grader 1x Screener 1x Programme Administrator 1x Assistant administrator 1x Booking clerk	<u>NHS Western Isles</u> 1 Part Time Administrator 1 Part Time Service Manager 1 Part Time board Co-ordinator <u>R Doig Optometrist LTD</u> 3 Screeners 1 Slit lamp examiner(Optometrist) <u>NHS Tayside</u> Level 1-3 Grading
2.4 Retinal Screeners	For each retinal photographer who has worked in your programme at any time in the reporting period provide the following pseudonymised information. This information should reflect the status at the 31st March at the end of the reporting period: Current employment Part Time – 27 hours Not completed City and Guilds modules.	Current *1 (Part Time)* /Non-current *0* Level of accreditation achieved (i.e status against units 304, 305 and 306) *None as there was no assessor arranged until very recently.* Please note: - the C&G units should be complete ideally within 12 calendar months (one year) and exceptionally within 24 months (2 years) of joining the workforce. (Added as per minute of Executive committee 18 Sep 09)	1 – Completed C&G Diploma (WTE) units 301, 302, 303, 304, 305, 306, 307, 308 and 309 2 – Assessor for C&G (near retiral age) (WTE) 3 - Completed C&G Diploma (WTE) units 301, 302, 303, 304, 305, 306, 307 and 308 4 – units 302, 304, 305 and 306 (WTE) 5 – unit 305 (30 hpw) 6 – 304 and 305 (30 hpw)	3 Screeners All working through the City & Guild Units
2.5 Retinopathy Graders	Grading services are contracted to Tayside.	N/A as all grading is completed in NHS Grampian	1 – Completed C&G Diploma (WTE) units 301, 302, 303, 304, 305, 306, 307, 308 and 309 2 – Assessor for C&G (near retiral age) (WTE) 3 - Completed C&G Diploma (WTE) units 301, 302, 303, 304, 305, 306, 307	Grading contracted to NHS Tayside

			and 308 4 – units 302, 304, 305 and 306 (WTE) 5 – unit 305 (30 hpw)	
2.6 Slit Lamp Examiners	Not applicable as slit-lamp service at present delivered by Highland Ophthalmology Consultants	From NHS Grampian - ARI	6 – Ophthalmologist/Level 3 grader 7 - Ophthalmologist 8 - Ophthalmologist 1 – Completed C&G Diploma (WTE) units 301, 302, 303, 304, 305, 306, 307, 308 and 309	1 Slit Lamp Examiner - R Doig Optometrist LTD
2.7 Screening GP practices	15	10	69	12

Diabetic Retinopathy Screening – proposal for study to explore reasons for non-attendance

Purpose
This proposal is for a small study to support service improvement in the Diabetes Retinopathy Screening service, with a view to reducing the number of patients who miss multiple appointments.

Background
One of the main complications associated with diabetes is damage to the retina, which if undetected and left untreated can cause blindness. Annual retinopathy screening for early detection is therefore recommended for all patients with Type 1 and Type 2 diabetes.
The Diabetic Retinopathy Screening Office coordinates services throughout Lothian and Borders. Screening takes place in diabetes clinics, mobile units or at designated opticians with appropriate facilities.

Previous work
In March 2010 the Diabetic Retinopathy Screening (DRS) Service Steering Group carried out an audit of patients in Lothian who had failed to attend three invitations to attend DRS appointments(1). This found that patients in younger age groups (15-24 and 25-44) were more likely to DNA compared with older age groups, and that this pattern was more pronounced in some geographical areas, specifically North West Edinburgh, South East Edinburgh and West Lothian. Examination of DNA rates by smaller intermediate geographical area showed wide variation, with higher levels generally, though not exclusively, in areas with higher levels of deprivation. Patients with Type 1 were also more likely to DNA than patients with Type 2 diabetes and patients from some ethnic groups ('other white' and 'Indian') more likely to DNA in comparison with other ethnic groups ('white Scottish' and 'Pakistani').

A literature review was carried out at the same time to explore reasons for non attendance at general and specialist diabetes clinics, and possible interventions to reduce DNA rates (2). The review found that non attenders tend to be younger and less well informed about their condition, and are likely to miss further appointments having defaulted once. Common reasons cited for non attendance included access issues, such as lack of transport or conflict with employment, as well as forgetting or administrative error.

A more focused piece of work was carried out in October 2010 by the Screening Service Manager in the Borders, based on sending a postal questionnaire to patients who had missed their appointment (3). There was a 22% return rate, and access issues, including transport, illness and poor mobility, were a strong feature in responses received. However, a number of patients appeared to be confused about the purpose and importance of retinopathy screening, or possibly how this differed from an annual eye check.

Proposal - aim and method
Aim
During the time period covered by the Lothian audit (17th December 2008-13th March 2009) 527 people failed to attend three appointments, from a total of 30,514 diabetic people aged over 12 years of age on the Lothian SCI DC register.
Although this is a relatively small number, the consequences of not attending screening appointments can be very serious for individual patients, as well as costly for the heath service.

It is proposed that a small project be undertaken in Lothian to build on the work described above, with a view to exploring:

- Whether the reasons for non attendance are similar for Lothian patients, as for those in the Borders
- Which kind of interventions patients feel would facilitate their attendance

Annex F

The aim is to provide evidence to support service improvement by identifying how and where to target interventions that will reduce DNA rates for retinopathy screening in Lothian and Borders. The ultimate goal is to support a reduction in the number of people with diabetes suffering visual loss because of diabetic retinopathy.

Method
The proposed method is to conduct telephone interviews with 20 patients who have missed their appointments and failed to respond to two subsequent letters asking them to reschedule.
Potential participants for the study would be identified from the diabetes register, and should include a mix of patients i.e. women and men, from younger and older age groups, with Type 1 and Type 2 diabetes, and from different geographical areas.. The aim is to recruit patients who have missed multiple appointments. Invitation would be by letter in the first instance, offering preferred time slots for a phone call and giving people the option to refuse, and followed up by a phone call. Individuals can still decide not to participate at this point if they so wish.

The main areas which will be explored with respondents are:

- Administration (difficulty in cancelling or rescheduling an appointment, time between receipt of letter and appointment date, clarity of information contained in letter)
- Difficulty in getting to the appointment (issues to do with transport/parking, mobility, illness, of self or dependants)
- Knowledge and understanding (why screening is important, information received about DRS and who from, anxiety and/or misconceptions about the procedure)
- Ideas for practical or supportive measures which might address the difficulties identified, and help patients to attend appointments in the future

The project will be co-coordinated by:
Joy Tomlinson, Consultant in Public Health, NHS Lothian
Norah Grant, Manager Diabetic Retinopathy Screening Service, Lothian and Borders
Sheila Wilson, Senior Health Policy Officer, NHS Lothian (who will conduct the interviews)

(1) Tomlinson, Joy. Review of Patients who have not attended DRS appointments. Edinburgh, 2010

(2) Marsh, Allison. Causes for Do Not Attend status in Diabetic Retinopathy Screening Edinburgh, 2010

(3) Cameron, Tim. Diabetes Retinopathy Screening Programme - DNA Survey. 28 October 2010

Summary

This brief analysis has allowed us to examine the characteristics associated with multiple failures to attend screening appointments. Younger age groups of diabetic patients are more likely to have multiple DNA screening episodes in comparison to older age groups. This age related pattern is most pronounced in North West Edinburgh, South East Edinburgh and West Lothian. Type 1 diabetics are more likely to have multiple DNAs than those with type 2. Patients with multiple DNA's have on average a higher HbA1c. There is also an association between particular ethnicity coding and multiple failures to attend. Examination of the DNA rate by smaller intermediate geographical area shows multiple DNA rates vary from 1% to 14%. A substantial proportion of areas with higher DNA rates also have higher levels of deprivation but some relatively less deprived areas also feature. It is

possible that some of these areas may have a higher proportion of younger residents. The number of people who DNA in individual intermediate geographical areas is relatively small. It may be that some of the variation seen here could simply have occurred by chance. Development of a DNA dataset over time would allow more reliable analysis.

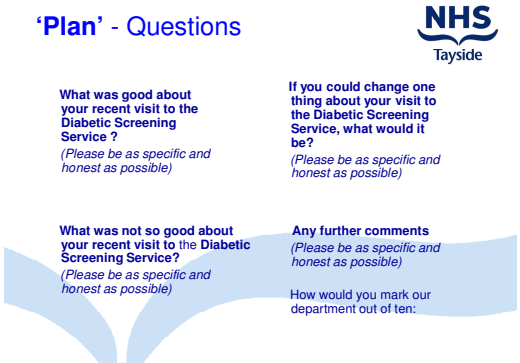
Suggested future areas of work:

- Repetition of DNA audit over the coming year in order to develop robust data set (problem of small numbers)
- Literature review to examine methods of reducing number of DNAs especially among younger people
- Consideration of possible interventions/investigations into high DNA localities
- Consider carrying out comparison of DNA rates from diabetic outpatient clinics utilising TRAK data.

Dr Joy Tomlinson
Consultant Public Health Medicine
NHS Lothian

Annex G Survey Report for DRS programme on patients attending eye screening

A brief summary of the survey report presented by Angela Ellingford (Service Manger NHS Tayside) given by power-point presentation. Only a selection of the slides is shown.



Annex G

National Feedback – What was good about the Service

- efficient and prompt service
- very reassuring, put mind at ease
- staff helpful, professional, polite
- staff explained each stage
- you get a good laugh
- very flexible, staff fitted me in
- home visits (optom service)

National Feedback – What was not so good about Service

- drops, not being allowed to drive
- parking
- lack of information
- waiting time for results
- perhaps more time to ask questions
- better signage
- having to take time off work

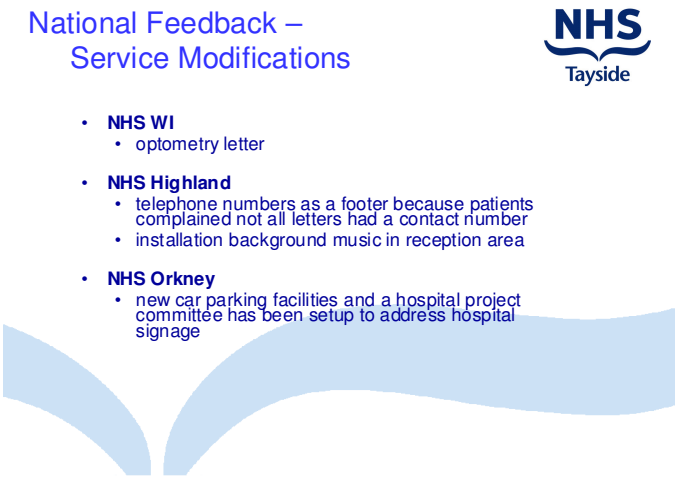
National Feedback – Changes you would like

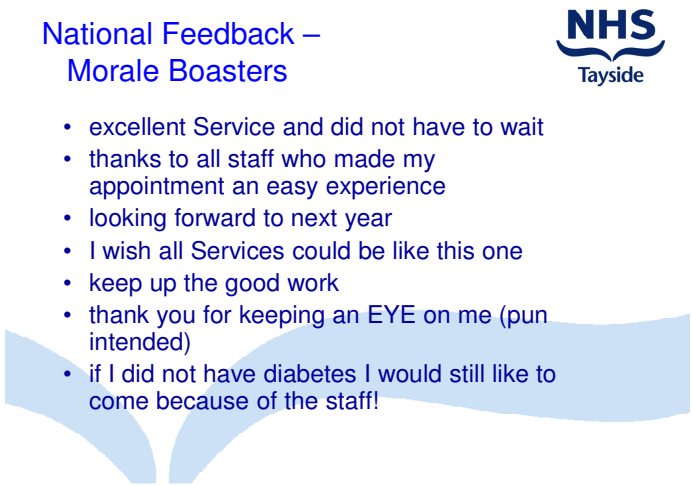
- not having to have dilating drops
- better access/parking
- not being informed of result at time of appointment
- more flexible appointments after working hours or weekends
- having a doctor to answer any questions

National Feedback – Further Comments

- text message reminder for your appointment
- result letter impersonal
- eye screening at the same time as diabetic appointment or same time as other health care professional appointments

Annex G





Report provided by Angela Ellingford (DRS Service manager NHS Tayside) at the DRS Study Day 2010.