



# Scottish Diabetic Retinopathy Screening Programme

## ANNUAL REPORT

2012



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**Host NHS Board: NHS Highland**

**Service: National Diabetic Retinopathy Screening Service**

**Report: Annual report 2012-2013**

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## **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 1<sup>st</sup> April 2011 to 31<sup>st</sup> March 2013.
- b) See Annex E for details of resources and staffing used across the Health Boards including workforce information, See Annex D for a report on 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 2 target of 80% uptake rate and invitation to 100% of eligible population.

### 2 Effective

- a) Audit activity  
An audit was undertaken during to report on the outcomes patients referred to Ophthalmology and treatment given. The results of this audit were not complete at the time of writing and they will be added to this report for next 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. These visits are undertaken to provide a general review of the area performance. There were no outcomes or actions taken/being taken as a result. Further visits to all Health boards in Scotland are planned for 2013 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 attend a screening appointment within the last year. (See Annex A for KPI 2 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 KPI 2 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 is in use. See <http://www.ndrs.scot.nhs.uk/Manual/Docs/Follow-up%20protocol%20v1.2.pdf> for full details

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. (See Annex A of this report for KPI 9 performance results)

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 an overview of these data returns)

4(d) 1 all grading staff in the screening programme participate in NSD proficiency testing as part of revalidation training. IQA and EQA programmes are in place. (See Annex B for an overview of EQA results)

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 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 Diploma 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 until March 2013. **All of the candidates registered via the Scottish Diabetes Collaborative were included.** Candidates who did not pass the qualification by the deadline have had to re-register for the qualification.

See Annex I for a report of the DRS combined management groups meeting held on Nov 30<sup>th</sup> at the Steele lecture Theatre, Perth Royal Infirmary.

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.

Research activities for the 4 Nations diabetic screening programmes across England, Scotland Wales and Northern Ireland are also being supported and actively contributed to. Dr K Swa, Dr G Leese (NHS Tayside) and M Black are members of the research groups. Information exchange and direct research is being undertaken in order to create new understanding and national policies regarding screening intervals and risk based recall of patients for further screening.

### 3 Safe

a) Risk Register and Adverse Events-

A risk register is maintained by the DRS Collaborative Co-ordinator, the outstanding risks for the DRSP in April 2013 are outlined in Annex J to this report.

b) Quality Assurance-

Internal (IQA) and External Quality Assurance (EQA) activities were undertaken by all graders in 2012. 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 B for an overview of national EQA performance for the 2 rounds undertaken in 2012.

A recovery action plan was developed to assist boards with the steps they may need to consider should graders perform below standards in EQA. The recovery action plan has been agreed and accepted by all boards and adopted as policy for DRS EQA.

- 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 ( See Annex F to this report)
- 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 serious complaints or compliments escalated to him for resolution or response although he has dealt with several general complaints from patients who express concerns regarding patient letters in terms of wording and for patients who DNA. There were also complaints regarding the opting out policy and the policy requirement to have a GP authorise this. Action has now been taken to amend Soarian letters to reword these. A new information leaflet for patients has also been produced along with the patient information web site – [www.nhsinform.co.uk](http://www.nhsinform.co.uk) being updated with information regarding Diabetic Retinopathy Screening which is relevant to the service being provided in Scotland.

#### 4 Timely

- a) See Annex A of this report for Key Performance Indicators (KPI) statistics for the 12 month period ending 31<sup>st</sup> March 2013. A summary is listed below-
- **97.9 %** of the total number of the currently eligible population was invited to screening in 2012 (KPI 1).
  - **77.8%** of the total number of the currently eligible population attended at least once in the FY 2012 (KPI 2).
  - **75.2 %** of the total number of the currently eligible population was successfully screened in FY 2012 (KPI 4)
  - **3.6%** of the total number of the current eligible population were referred to Ophthalmology on account of retinopathy (KPI 13)
  - **94.7%** of written reports were produced within 20 working days (KPI 9)
- b) Review of Screening Pathway  
There were no formal reviews carried out in 2012 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 patient survey was carried out in 2010 of patients attending the DRS programme in NHS Tayside. The results of this survey were presented by Angela Ellingford at the national DRS Study Day 11<sup>th</sup> Nov 2010. See Annex G of this report for a brief summary of the slides shown.

New patient information leaflets were designed and distributed to all boards in early 2013. These leaflets were designed in collaboration with NHS Health Scotland and will be reviewed on a regular basis. These leaflets were also published in several alternative languages and in easy read format and can be viewed and downloaded at-

<http://www.healthscotland.com/uploads/documents/6257-YourGuideToDiabeticRetinopathyScreening.pdf>

<http://www.healthscotland.com/documents/6257.aspx>

<http://www.nhsinform.co.uk/Screening/diabeticretinopathy>

### b) User Surveys/Action Plan

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-

This annual report includes information on the distribution of patients by gender, age, ethnicity and deprivation quintile. These KPI reports can also be broken down to NHS board areas and will be used to analyse and show the equitable provision of DRS screening regardless of where patients may live. See Annex A of this report.

The DRS Service supported an ethnic minority project in NHS Lothian with NHS Lothian's Minority Ethnic Health Inclusion Service (MEHIS) Link workers to target high risk ethnic diabetics from the South Asia region. These patients are in a high risk group for clinical reasons and also because they tend to have a high DNA rate. The project is underway at the time of writing but the project outline and objectives are attached as

1. See Annex H - **Increasing the uptake of DRS appointments in higher risk South Asian patients in NHS Lothian.**

The DRS Service as a national programme has not undertaken an Equality and Diversity Impact Assessment in last 3 years although individual Health boards may have completed this for their own local programmes. A report of invitation rate (KPI 1) against Uptake Rate (KPI 2) showing Ethnicity indicates that there are no specific ethnic or other groups that are disadvantaged. (See Annex A of this report).



Patients are automatically referred via their GP or secondary care system into the programme based only on their diabetes diagnosis and clinical eligibility. Patients can also be screened if they are diagnosed with diabetes and present themselves at a screening clinic; there is therefore an equitable service provision across Scotland for all patients regardless of ethnicity, gender, age or demographics.

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 localised Optometry based 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**

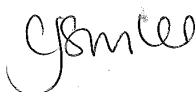
In the DRS Collaborative report for 2012-13 we present our aims and achievements against the quality ambitions of NHS Scotland as an effective, safe and person centred service.

The service screened 77.8% of the eligible population with diabetes this year missing our national target of 80% this year. This was disappointing but not unexpected given the rising prevalence of diabetes in Scotland. 743 people per month become eligible for screening across Scotland every month and this is presenting all programmes with significant capacity challenges. There has been very little change in staff numbers over the last few years and it is a credit to everyone involved that despite this we have managed to get close to our target. The autograder and a continuing collaborative approach to sharing best practice will help to manage our increasing population requiring screening. However achieving 80% remains a significant challenge.

Our service continues to develop with the introduction of the autograder into the grading process. We are the first service in the world to trial and implement this, and it allows our service to work more efficiently with our scarce resources- our trained graders- so that they can work at the top of their skill set. We implemented the autograder after much discussion in the collaborative in a step by step process with adverse event recording in place, to ensure the safety and reliability of the service. There is interest in our experience with this technology from England, Wales and Ireland.

We have identified that DNAs are an area for quality improvement and the collaborative has began an analysis of our DNA data in more detail to enable each board to provide the most appropriate service to this group who we know can be at a high risk for sight loss. We continue to work with our optometry and ophthalmology colleagues to address these issues.

The continued representation from patients and patient groups such as RNIB and Diabetes UK in our collaborative allows us to listen to the views of our users and form mutually beneficial partnerships.



Dr Caroline Styles  
National Clinical Lead, DRS Collaborative, NSS  
June 2013

**Objectives are set as part of the annual report for the DRS Collaborative. The objectives for 2013 are summarised here.**

As part of the NSD annual reporting format for National Specialist Services and National Screening Programmes there is a framework of quality domains that we report against and these are:

- Efficient, Effective, Safe, Timely, Person Centred, Equitable.

Over and above these the DRS Collaborative have also set some key objectives for it to achieve in the year ahead. These are based on some of the strategic key challenges for the programme as distilled from the management group conference of 2010 -

1. To have robust and secure IT systems to support the requirements of the diabetic retinopathy screening Programme. We will analyse possible options and begin to prepare the requirements for a national system replacement. The Soarian system is contracted until 2014 with further extensions to 2016 possible.
2. To ensure that Key Performance Indicators (KPIs) are available to boards and support quality improvement.
3. To develop the reporting capabilities of Soarian to support daily management activities and provide bespoke reporting and research capabilities from the data held by the DRS Collaborative.
4. To maintain and develop the national EQA programme with a bi-annual cycle to be undertaken by all graders in Scotland for quality assurance and educational purposes.
5. To ensure that the screening programme meets the requirements of NHS QIS for Training and Accreditation of Staff by facilitating the City and Guilds certification in Scotland and offering Slit Lamp Examiner training and accreditation.
6. To maintain communication within the DRS Collaborative by launching a new DRS website, organising DRS management group meetings on a quarterly basis and an In-Service training day for all staff in November. We will continue to minimise cost, travel and make the most efficient use of staff time by webinar, website, teleconference and videoconferencing technologies.
7. To develop the national screening programme by implementing a national automated grading system through computerised image analysis. The throughput of the system is to be extended to cover as much as possible of the Level 1 work-list.
8. To enhance communication with patients by developing a new patient leaflet, investigating electronic communications with patients and care providers, and working with ethnic minority support teams.
9. To undertake short, medium and long term planning to take into account the changing landscape of DRS screening activities i.e. OCT, screening interval, risk based patient recall, and national eHealth policies. We will work in partnership with other diabetic retinopathy screening programmes in the 4 Nations.
10. The Lead Clinician, Coordinator and System Specialist will visit health board areas and meet with DRSP teams in order to provide support on specific local issues related to the provision of the DRS Service to agreed national standards.

Mike Black  
DRS Collaborative Coordinator  
NHS Highland

**Progress against objectives for 2012** - The following table summarises the progress against the 2012 objectives over the 12 month period to April 2013.

| Objective  | Current Status   |
|--|--|
| <p>1. To have robust and secure IT systems to support the requirements of the diabetic retinopathy screening programme. It is anticipated that the contract for the Soarian system will be extended beyond Sept 2012. Planning for a future replacement system should begin immediately and this should include archiving of data.</p> | <p>The current contract with Siemens UK for the Soarian system was resigned with ATOS as the single solution provider. The new contract runs for 2 years to Sep 2014 with further optional extensions to Sep 2016. A Statement of Requirement (SOR) document was drafted by the Collaborative. The Collaborative are now working in conjunction with NSD to explore the options going forwards. We will need to focus on the requirements of any new system proposed and the steps needed in order to deliver any new screening system to the Health Boards.</p> <p>There were some instances of incorrect patient suspension messages passed from SCI-DC. The collaborative have worked closely with SCI-DC to identify and correct these errors which are created as a result of the complex interactions within SCI-DC and other third party systems such as GP practise or clinical systems. These can supply contradicting diabetes diagnosis data which can then suspend or unsuspended patients. Service managers are closely monitoring this problem and in conjunction with the system specialist correct the patient's status to ensure screening takes place as appropriate. The roll out of the new SCI-Diabetes product (replacing SCI-DC in 2013) as a single database should prevent these occurrences and improve overall data quality.</p> <p>In early 2012 there were serious reliability issues with the Soarian system. The system would fail on a regular basis for no apparent reason. A system re-boot cured the problem and users were able to carry on, however these outages caused major disruption for users and patients. After a series of high level meetings with Siemens and ATOS it was proposed to split the system across 2 virtual environments to mitigate the problems. After further testing and investigation by the system specialist a problem was discovered with a built in report that caused the system to crash. A fix to this was applied by Siemens in July 2012 and the system has proven to be extremely reliable since. The long standing automated overnight system re-start was also removed by ATOS. The system has now been stable and reliable since this time.</p> <p>Oracle database tablespace issues disabled the Soarian system in Dec 2012. ATOS were to resize table space dynamically in future; however this happened again in Feb 2013.</p> <p>In January 2013 erroneous data being sent to Soarian from SCI-DC suspended 4100 patients. The problem arose after the migration of NHS Greater Glasgow and Clyde from SCI-DC to SCI-Diabetes. The messaging interface from SCI-DC to Soarian had been switched off over this migration period and manual data uploads were taking place. The result was that patients who were in workflow on Soarian had their upcoming appointments automatically cancelled and for others their results could not be accessed by graders/admin staff. The incident came about as a result of a manual error in the data preparation for the migration to SCI-Diabetes. The patients' statutes were corrected and there were no adverse outcomes as a result. The problem will be fully resolved once all boards in Scotland are migrated to SCI-Diabetes and re-conciliation reports are provided post migration (end of May 2013).</p> <p>The Soarian system is currently only supported to operate on Internet Explorer ver. 6.0 (IE 6.0). This is in compliance with national e-Health standards for early 2012. As part of the renewed contract for Soarian agreed in Sept 2012 and RFC 131 it is to be ported across to Internet Explorer 8.0 (IE 8.0) within 12 months. This will also allow for the PC desktop operating system (OS) to move to Windows 7.0. There is increasing pressure from E-Health departments to have this done quickly as most boards are moving to the new national E-Health standard of desktop OS Win 7.0 and IE 8.0. As of April 2013 there was no date available for this important development. A medium risk was raised in the risk register (Risk 12) as boards had reported that PCs which were being used in clinics have been inadvertently upgraded to IE 8.0 are therefore disabling Soarian.</p> |

| Objective  | Current Status  |
|--|---|
|  | <p>The use of OCT within the DRS programme is currently being investigated. NHS Grampian are currently using Soarian to manage patients referred to OCT clinics. A draft patient pathway for OCT within Soarian was developed by the system specialist and the collaborative maintains a watching brief on developments across the UK. The collaborative await further advice from the UK National Screening Committee and Scottish Government on the possible introduction of OCT as a new modality within DRS.</p>  |
| <p>2. To coordinate work in Scotland to continually develop the national screening programme. We will implement, manage and further develop a national first level automated grading system through computerised image analysis. The system will be available to all boards on an equitable basis.</p> | <p>The Collaborative was previously successful in the business case made to NSD and the Public Health Portfolio Management Group (PHPMG) for the funding of a national automated grading system. The system was installed on a virtual hardware platform based in the ATOS data centre in Aug –Sept 2011. The system was made fully available to all health boards in the last quarter of 2011. Additional hardware will need to be added to the system to realise the full potential and to get the system using all 4 processing algorithms available to us. Currently with one algorithm the system can cope with 43,800 patient episodes per annum. With all four algorithms running the system should be able to process circa 175,200 patients per annum. The autograding system has been a welcome boost to DRS grading capacity as the diabetic population continues to rise and may prove cost effective. However not all boards are in a position to make best use of the Auto-grader as their staffing levels are already sufficiently high to be able to cope with the numbers of diabetic patients. Some boards are also reluctant to commit fully to the system as its funding is not assured and boards must rely on sufficient human graders to carry out Level 1 grading. Funding has currently only been provided until March 2013. A legal question was also raised and answered by the CLO. The auto-grader participates in Internal and External Quality assurance and performs as a cautious grader with a low specificity. The auto-grader will be re-developed as a Level 0 (zero) grader to prevent an increase in referrals to Level 2 occurring. The latest EQA rounds results from Aug 2012 are attached as Annex B to the DRS Annual report. A breakdown of the overall performance of the auto-grading system for the period 1<sup>st</sup> April 2012 to 1<sup>st</sup> April 2013 is attached as Annex L to the DRS annual report 2012.</p> |
| <p>3. Ongoing development of the reporting capabilities with regards to daily management activities which provides bespoke reporting and research capabilities from the data held by the DRS Collaborative including the L1 auto-grader.</p>   | <p>The system specialist (Neville Lee) has developed bespoke reporting capabilities in Soarian. These reports have been crucial in reducing the dependence on support from the software supplier in confirming and then correcting Soarian data problems. They have also allowed us to confirm that system or software changes undertaken by suppliers such as Siemens and SCI-DC are carried out with high confidence.</p> <p>There have been several research projects undertaken on diabetes in Scotland by the Universities of Dundee and Aberdeen and we have significantly contributed to these important activities which we were previously not able to do. The data contained within 5 years of national screening records is a valuable and rich resource for researchers to interpret. We have been able to participate in a number of research projects both within Scotland and also as part of the UK Four Nations review of screening intervals. These projects require bespoke anonymised data extracts to specific requirements and have shown the high value of the data within the Soarian system.</p> <p>Reporting is also being provided on activities by the auto-grading system. Further reporting is being developed to allow the DRS collaborative to analyse the effectiveness and efficiency of the auto-grader over many thousands of images screened.</p>  |
| <p>4. To maintain and further develop the national EQA programme with a bi-annual cycle to be undertaken by all graders in Scotland. This EQA cycle will also be extended to include SLEs who are not</p>  | <p>The Collaborative continues to work in partnership with Aberdeen University who have developed comprehensive advanced software that will capture grading data for the external quality assurance programme. We carried out 2 successful rounds in Spring and Autumn of 2012.</p> <p>The Spring 2012 round had a 99% uptake of graders from around Scotland and was undertaken from 12<sup>th</sup> April until 12<sup>th</sup> May. .</p>  |

| Objective   | Current Status   |
|---|--|
| <p>already undertaking QA in remote and rural areas in order to provide assurance of ongoing quality standards to boards.</p>   | <p>The overall result was that grading centre's continue to perform to a high and equitable standard. The policy for EQA continues to be developed and the previously developed action plan used for the Spring 2011 review has now been adopted as part of the DRS EQA policy. The lead clinicians group reviewed the Spring round using web conference technology (WEBEX) and this saved significant travel time away from base. This technology will be used to review the clinical outcomes for each round and these lessons learned from each round are promulgated prior to the subsequent round. These 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 financially supported.</p> <p>The Autumn 2012 round was undertaken from 17<sup>th</sup> Sept until the 15<sup>th</sup> Oct with a high uptake of graders. We used a set of images used in a 2010 round. It was reported that there was an overall improvement in performance of graders in Scotland both for sensitivity and specificity with a comparison of the results shown.</p> <p>The Spring 2013 round was set for 25<sup>th</sup> March until 26<sup>th</sup> April and the results for this round were awaited. A new set of 100 images was selected.</p> <p>A paper by Dr K Goatman (Aberdeen University) on the "EQA for image grading in the Scottish Diabetic Retinopathy Screening Programme" was recently published in the Diabetic Medicine Journal (DME-2011-00339).</p> <p>A new support arrangement was in discussion for agreement with Aberdeen University as Dr Goatman had moved to Edinburgh. The system is seen to be an important and advanced tool for other DRS programmes out- with Scotland.</p> <p>A demonstration of the Scottish DRSP EQA system can be seen at <a href="http://www.abdn.ac.uk/eqa">http://www.abdn.ac.uk/eqa</a> (username: demo password: test)</p> |
| <p>5. 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.</p> | <p>We continue to facilitate the registration and accreditation of staff through the City &amp; Guild level 3 Certificates and the Diploma in Diabetic Retinopathy Screening. There continues to be challenges in having a fully accredited workforce and the DRS collaborative continue to strongly encourage staff to complete the academic requirements.</p> <p>The Collaborative have developed and approved a national standard for the training and accreditation of slit lamp examiners (SLE). 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. In recognition of the commitment of staff members in achieving Slit Lamp Examiner status the DRS collaborative will issue accreditation certificates. A full report on the current accreditation of staff can be seen in Annex D of this report.</p>  |
| <p>6. To ensure that Key Performance Indicators (KPIs) are available and used to monitor the performance of DRS across Scotland. During the coming years the reporting of the uptake and performance of the DRS Service will be by using the definitive KPIs.</p>   | <p>The KPI system has now been used as the reporting system for the DRS Collaborative. The national performance reports for Q4 2012 are included as Annex A to this report.</p> <p>The KPI system has proved in general to be an accurate tool for reporting of patient's activity within Soarian. However there have been some anomalies that have become apparent over time. The most serious of these is that we appear to invite significantly more than 100% of our patients over a 12 month period. The reason for this 'error' has been worked out but due to our inability to change KPIs we will to accept a correction factor to KPI 1 (Screening Invitation Rate). The output of KPI reports is being developed to have the output reported on Excel spreadsheets, this allows for graphing and flexibility of presentation of</p>  |

| Objective   | Current Status   |
|---|--|
|   | <p>data.</p> <p>Monthly performance profiles are sent to Service managers to enable a dash-board view of performance compared to other boards. Ongoing development of reports is taking place. Other reports are produced and used for management of performance as required.</p>  |
| <p>7. The Lead Clinician, Coordinator and System Specialist are to visit health board areas and meet with DRSP teams in order to provide support on specific local issues related to the provision of the DRS Service to agreed national standards. A framework for reporting to NSD and the hosting board on specific key service deliverables as specified in the DRS annual report will be developed.</p>    | <p>Visits have been carried out to NHS Grampian, NHS Tayside and NHS Greater Glasgow. Further visits to Health Board areas are planned for the remainder of this year and will be undertaken when the opportunity arises. It is likely that 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 2012 -2013. It is anticipated that a series of regular visits be undertaken on a rolling basis across Scotland.</p>  |
| <p>8. Short, medium and long term planning will be undertaken to take into account the changing landscape of DRS screening activities i.e. OCT, screening interval, risk based patient recall, Soarian replacement, national eHealth policies, L2 evolution to L3 graders etc.</p>  | <p>A DRS programme progression and planning roadmap for 2012 and beyond has been drafted. This document outlines the proposed planned (and possible) significant events for the DRS collaborative in the years ahead. There are also some events with unknown timescales but can be anticipated to impact DRS. The key early events that will occur in 2012 -13 are – Soarian contract extension, L1 Auto-grader(and funding), Internet Explorer 8.0 Upgrade to Soarian, Windows 7.0 upgrade to desktop PCs, L2 to L3 graders. See Annex K of the annual DRS report for planning roadmap for 2012.</p>   |
| <p>9. To utilise and make best use of any alternative methods of communication within the collaborative to minimise cost, reduce travel and make most efficient use of staff time.</p>  | <p>The Collaborative use the national WEBEX and BT Meet Me tools to facilitate desktop conferencing and teleconference meetings where possible. These have been successfully used this year in place of face to face meetings for the IT Users Group and to allow the Lead clinicians to review the outcome report for each of the EQA rounds. These tools make best use of time and reduce travel as well as cost. The Collaborative will also make best use of traditional VC and teleconference facilities where available.</p>   |
| <p>10. To investigate and develop opportunities for electronic communications with patients and care providers in order to minimise the need for letter production and improve DNA rates. The system specialist will develop interfacing methodologies with viable e-systems. A national system to communicate electronically with all DRS stakeholders should be identified and a business case developed.</p> | <p>The system specialist (Neville Lee) has been working in conjunction with his other eHealth colleagues from boards to develop methods of communication to patients via electronic means such as SMS and email. NHS Fife has been trialling a Voice Messaging system called Telephonetics VIP and we will provide Comma Separated Variable (CSV) data files from Soarian. We will develop this in conjunction with NHS Fife and monitor how this might help reduce DNA rates.</p> <p>We are also working with the 'My Diabetes-My Way' patient portal team from SCI-DC to merge our results with other diabetes data. The system has so far shown great promise and the limited number of patients who are currently piloting this system can access all of their DRS results and letters on-line via this portal. 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.</p> |

| Objective   | Current Status  |
|---|---|
|   | <p>The system specialist has also commenced work on trials of sending electronic messages to SCI-Gateway from Soarian. This is in anticipation of being able to send automated referrals to Ophthalmology departments and board PMS system such as Track-Care. Work in this area will be important to fully understand the requirements for a future Soarian replacement.</p>   |
| <p>11.To maintain communication within the collaborative. The DRS Collaborative will organise a DRS management group conference in November. Ongoing collaborative management meetings will continue to be held on a quarterly basis. The NDRS website will be redeveloped and re-launched. In-service training will be delivered in a 2 yearly cycle as from 2013.</p> | <p>Ongoing communication is maintained through the regular meetings of the 4 sub-groups and the Executive as well as regional meetings 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.</p> <p>The DRS Collaborative held a combined management group for all 5 management groups on November 30<sup>th</sup>. This meeting allowed the management groups to work together in a collaborative way and focus on OCT developments and potential, research activities and the new patient leaflets being developed for 2013. There will be an in-service training day offered for DRS staff in 2013.</p> <p>The collaborative also maintains a website <a href="http://www.ndrs.scot.nhs.uk">www.ndrs.scot.nhs.uk</a>. This is being currently re-developed and will be re-launched in early 2013.</p> |



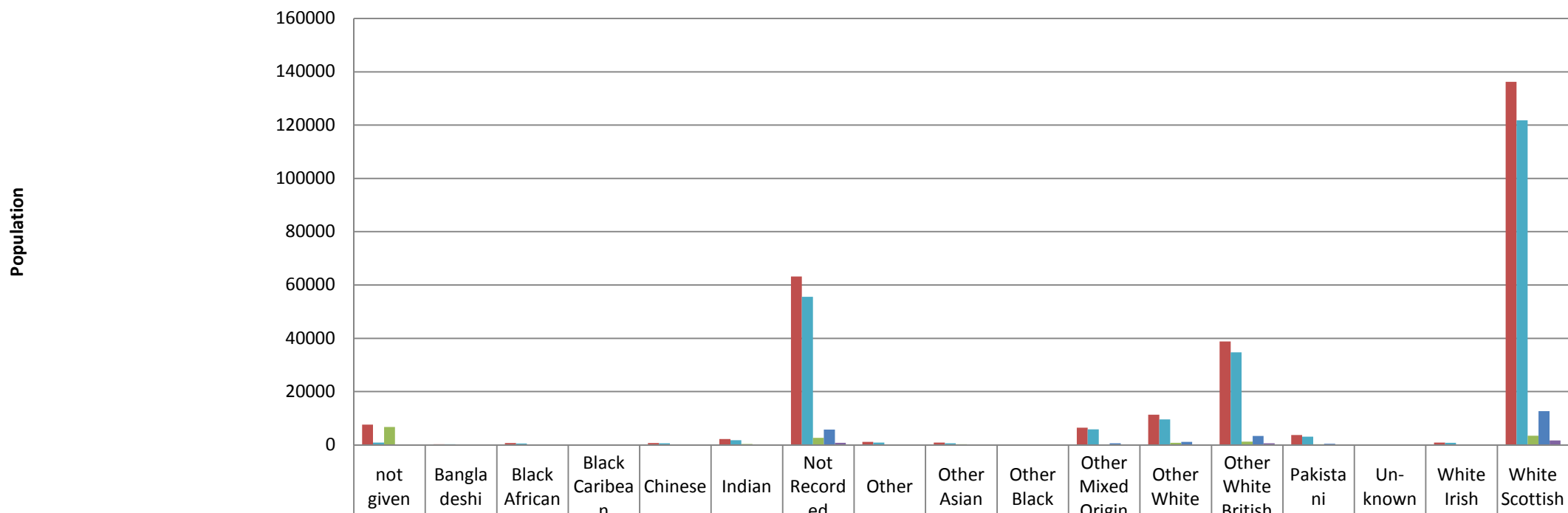
Annex A to DRS Annual Report

**Key Performance Statistics**

| <b>DRSP Key performance report for Q4 2012 as at 01 April 2013. (All patient numbers are taken from Soarian)</b> |                  |              |
|--|------------------|--------------|
| Start date   | <b>01 Apr-12</b> |              |
| Reference date   | <b>01-Apr-13</b> |              |
| Total Diabetic Population aged 12 and over on Soarian (KPI 0)  | <b>275,061</b>   |              |
| Total number of people who are permanently suspended (KPI 0)   | <b>16,801</b>    |              |
| Total number of people who are temporarily suspended (KPI 0)   | <b>24,577</b>    |              |
| Eligible population as at 01 April 2012 (KPI 0)  | <b>237,333</b>   |              |
| Number of individuals attending at least once (KPI 2) - QIS Target is <b>80%</b>                                 | <b>184,617</b>   | <b>77.8%</b> |
| Total number of the current eligible population successfully screened (KPI 4)                                    | <b>178,559</b>   | <b>75.2%</b> |
| Remaining population not suspended or screened   | <b>52,716</b>    | <b>22.2%</b> |
| Number of referrals to Ophthalmology on account of Retinopathy (KPI 13)  | <b>6,834</b>     | <b>3.6%</b>  |
| Episodes for which written report is less than or equal to 20 working days. (KPI 9)                              |                  | <b>94.7%</b> |

| <b>DRSP performance Q4 2011 as at 01 April 2012.</b> |                  |
|--|------------------|
|  | <b>31 Mar 11</b> |
|  | <b>01-Apr-12</b> |
|  | 263,838          |
|  | 15,001           |
|  | 25,696           |
|  | 227,380          |
|  | 180,431          |
|  | 174,417          |
|  | 52,963           |
|  | 6,547            |

### National Average - DRS Population by Ethnicity

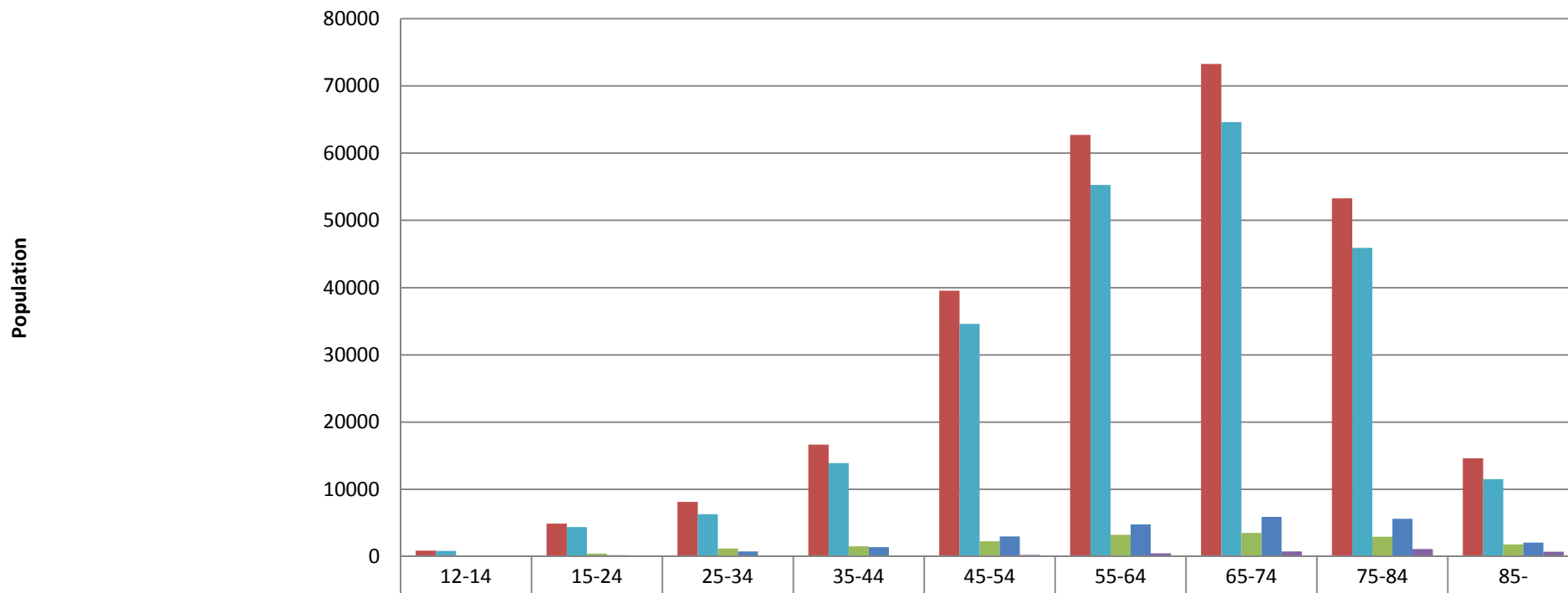


|  | not given | Bangladeshi | Black African | Black Caribbean | Chinese | Indian | Not Recorded | Other | Other Asian | Other Black | Other Mixed Origin | Other White | Other White British | Pakistani | Unknown | White Irish | White Scottish |
|--|-----------|-------------|---------------|-----------------|---------|--------|--------------|-------|-------------|-------------|--------------------|-------------|---------------------|-----------|---------|-------------|----------------|
| ■ Total Population (TP)                  | 7619      | 305         | 738           | 97              | 745     | 2264   | 63196        | 1203  | 968         | 164         | 6552               | 11357       | 38841               | 3768      | 39      | 963         | 136242         |
| ■ Eligible Population (EP = TP-TS-PS+TU) | 859       | 240         | 495           | 69              | 619     | 1775   | 55596        | 911   | 646         | 126         | 5833               | 9608        | 34777               | 3137      | 5       | 847         | 121790         |
| ■ Permanently suspended (PS)             | 6727      | 48          | 210           | 21              | 73      | 345    | 2716         | 221   | 275         | 32          | 177                | 822         | 1269                | 254       | 34      | 62          | 3515           |
| ■ Temporarily suspended (TS)             | 69        | 21          | 44            | 8               | 65      | 175    | 5722         | 94    | 58          | 8           | 604                | 1144        | 3410                | 429       | 1       | 68          | 12658          |
| ■ Temporarily unavailable (TU)           | 36        | 4           | 11            | 1               | 12      | 31     | 838          | 23    | 11          | 2           | 62                 | 217         | 615                 | 52        | 1       | 14          | 1721           |

### National Average - Invitation rate Vs Uptake by Ethnicity

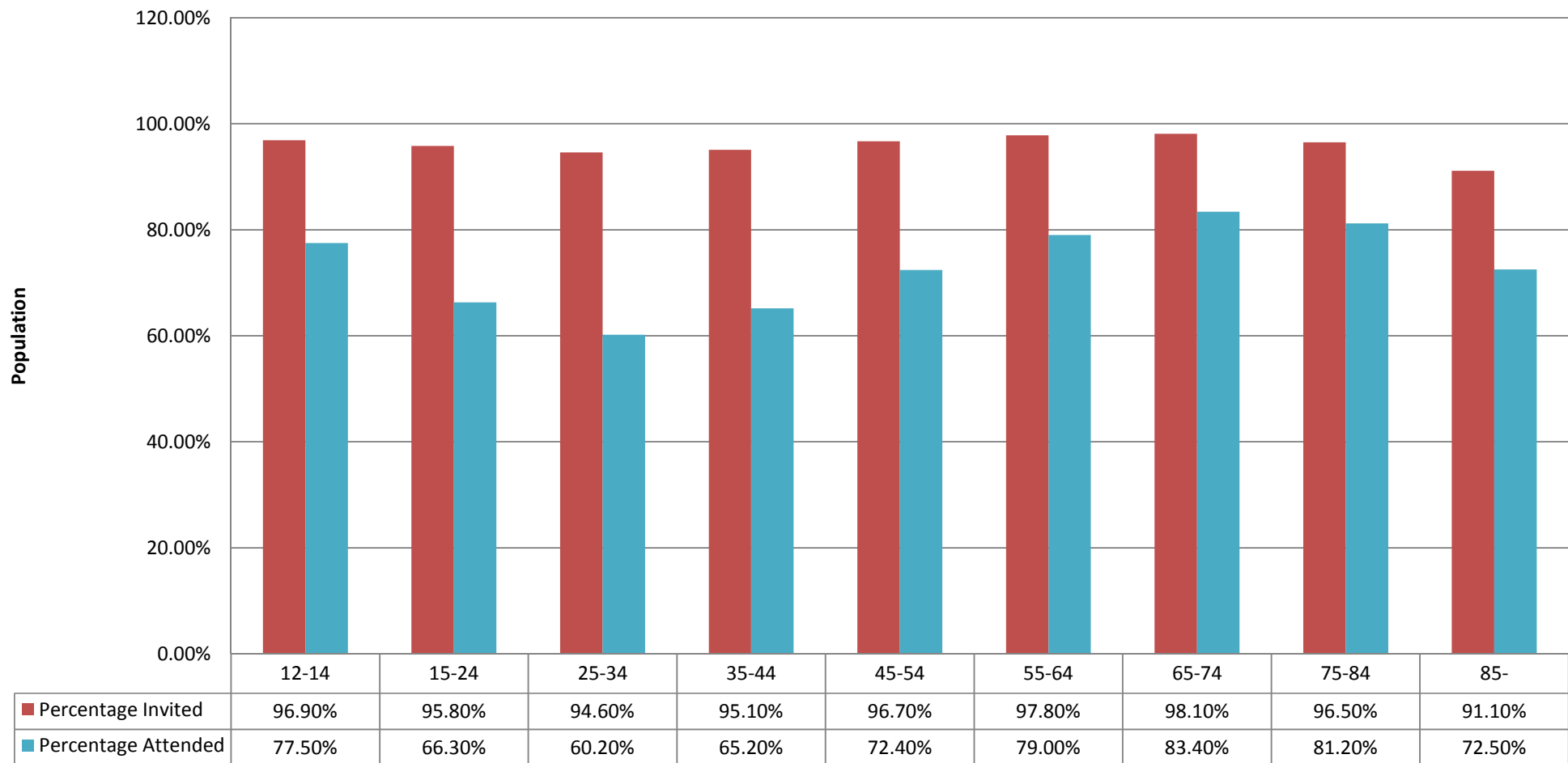


### National Average - DRS Population by age groups

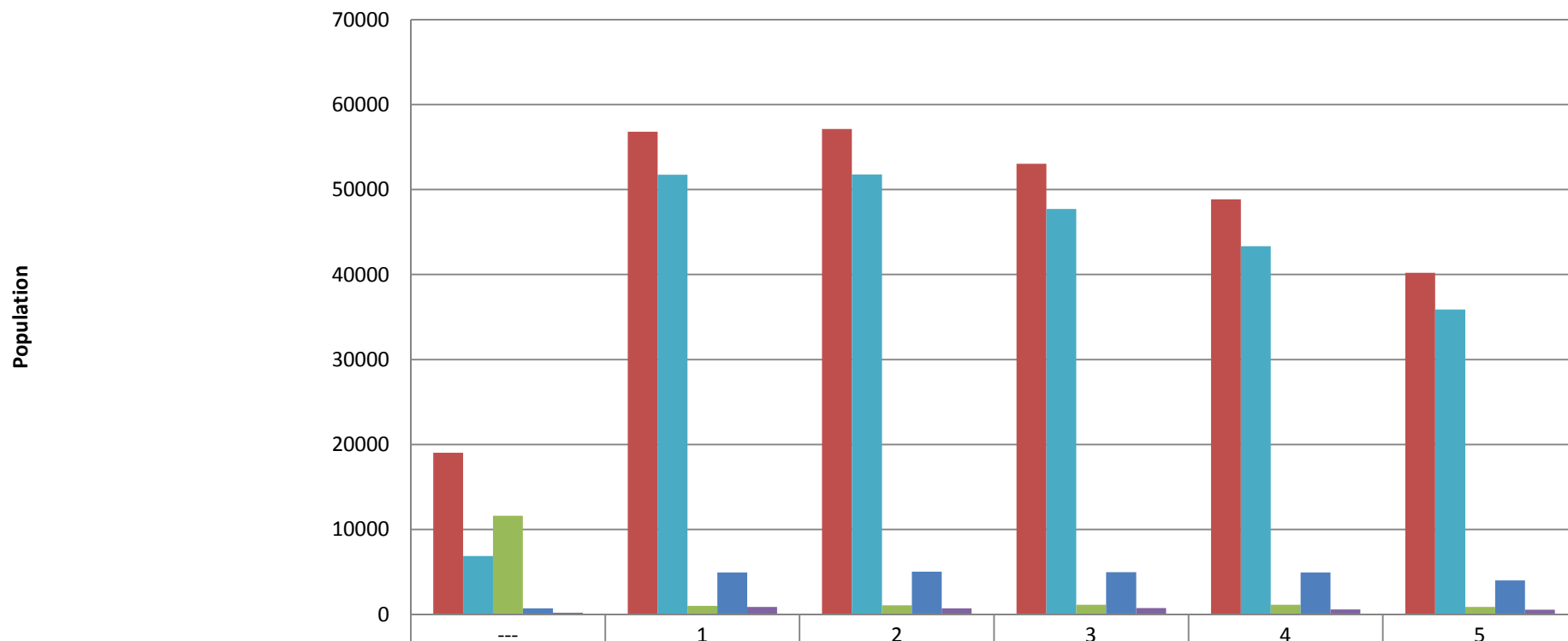


|  | 12-14 | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65-74 | 75-84 | 85-   |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ■ Total Population (TP)                  | 883   | 4912  | 8104  | 16633 | 39547 | 62701 | 73264 | 53300 | 14597 |
| ■ Eligible Population (EP = TP-TS-PS+TU) | 853   | 4379  | 6283  | 13916 | 34597 | 55275 | 64617 | 45903 | 11498 |
| ■ Permanently suspended (PS)             | 25    | 412   | 1194  | 1488  | 2260  | 3195  | 3503  | 2926  | 1762  |
| ■ Temporarily suspended (TS)             | 12    | 180   | 710   | 1358  | 2952  | 4734  | 5919  | 5577  | 2061  |
| ■ Temporarily unavailable (TU)           | 7     | 59    | 83    | 129   | 262   | 503   | 775   | 1106  | 724   |

### National Average - Invitation rate Vs Uptake by Age

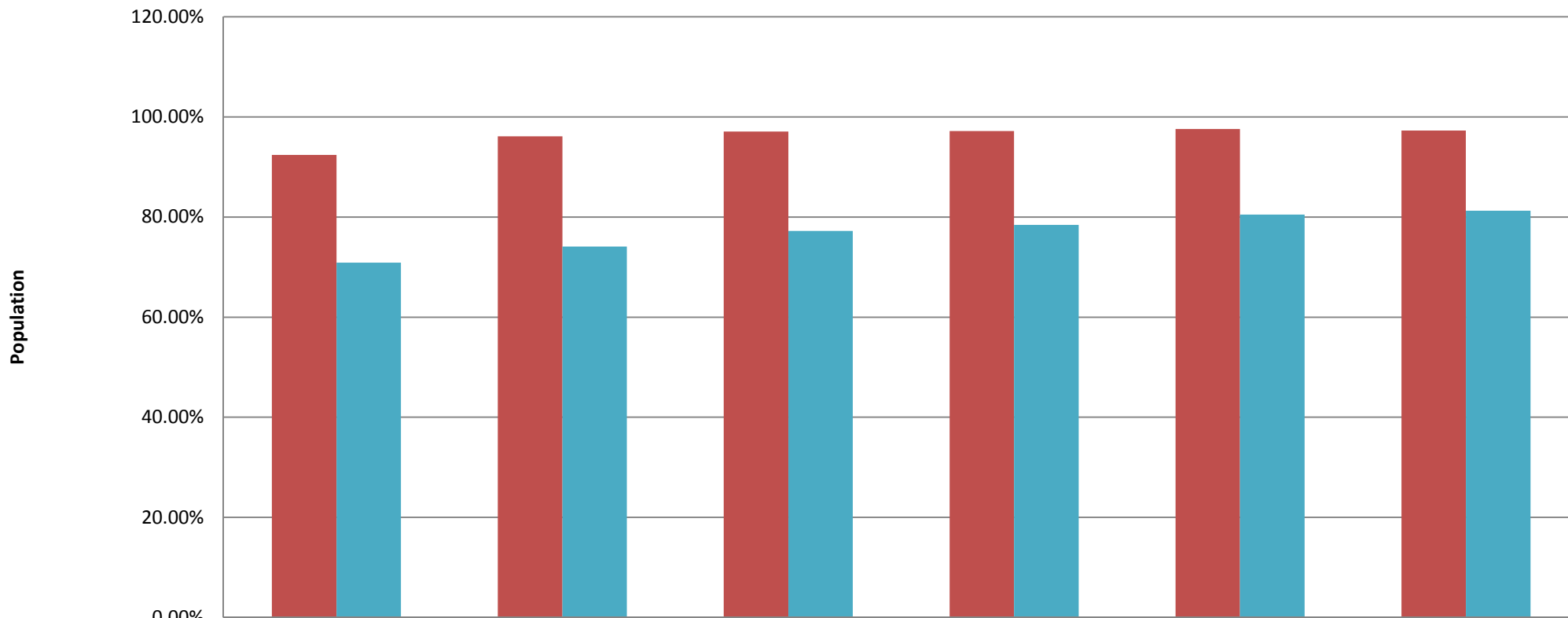


### National Average - DRS Population by Deprivation Quintile

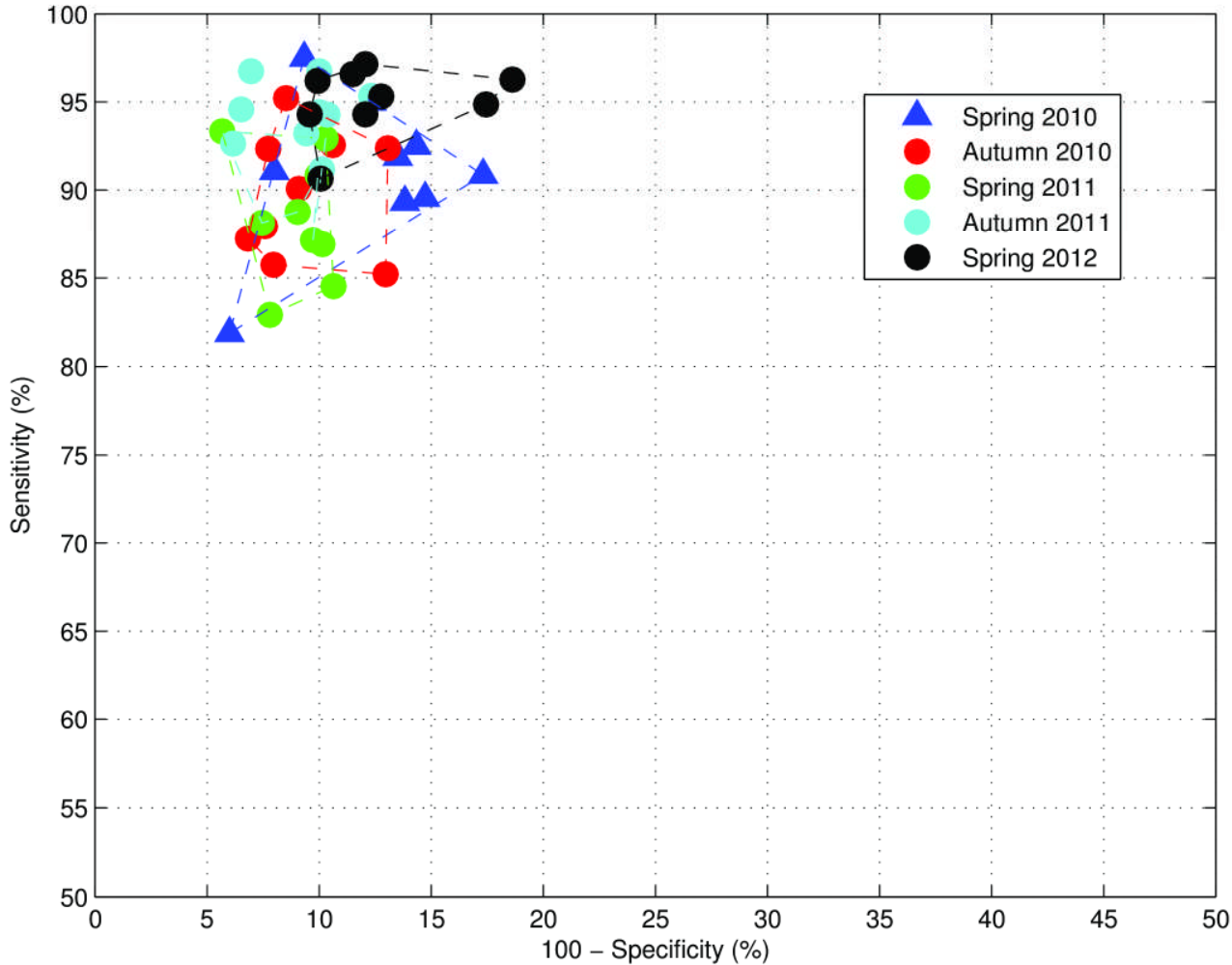


|  | ---   | 1     | 2     | 3     | 4     | 5     |
|--|-------|-------|-------|-------|-------|-------|
| Total Population (TP)                  | 19020 | 56804 | 57144 | 53051 | 48844 | 40198 |
| Eligible Population (EP = TP-TS-PS+TU) | 6882  | 51739 | 51780 | 47704 | 43333 | 35895 |
| Permanently suspended (PS)             | 11609 | 997   | 1050  | 1128  | 1142  | 875   |
| Temporarily suspended (TS)             | 710   | 4946  | 5030  | 4958  | 4945  | 3989  |
| Temporarily unavailable (TU)           | 181   | 878   | 716   | 739   | 576   | 561   |

### National Average - Invitation rate Vs Uptake by Deprivation Quintile



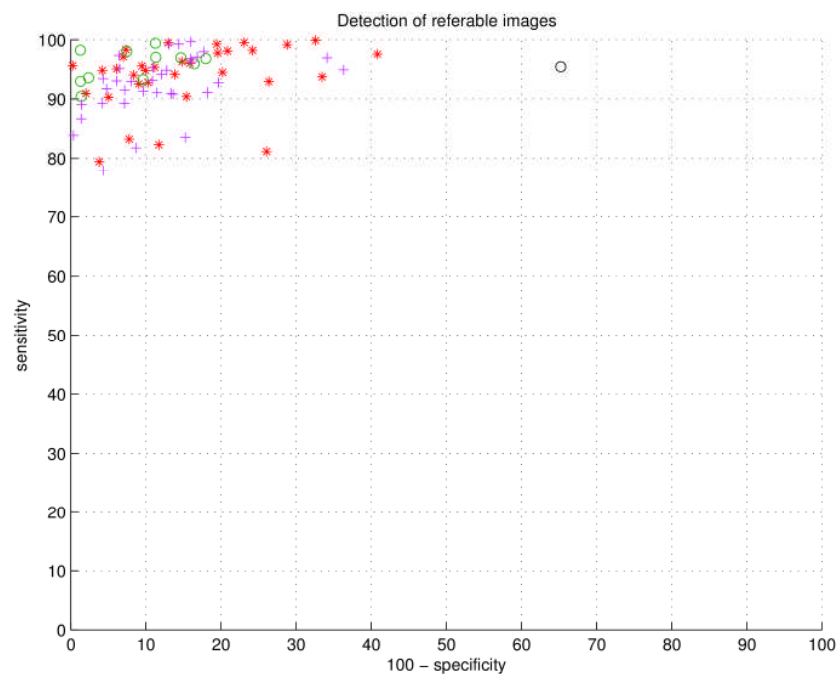
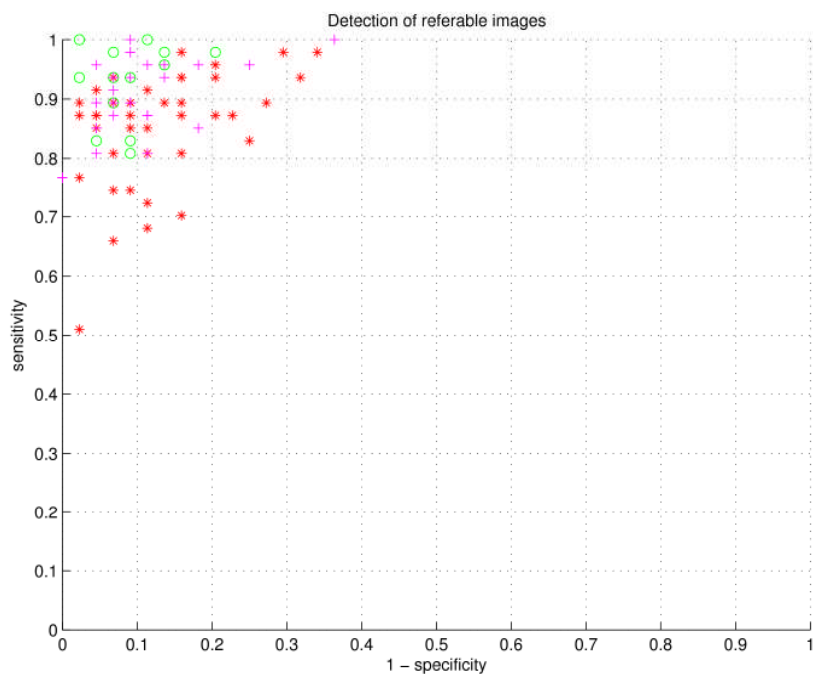
|                       | ---    | 1      | 2      | 3      | 4      | 5      |
|-----------------------|--------|--------|--------|--------|--------|--------|
| ■ Percentage Invited  | 92.40% | 96.10% | 97.10% | 97.20% | 97.60% | 97.30% |
| ■ Percentage Attended | 70.90% | 74.10% | 77.20% | 78.40% | 80.50% | 81.30% |



ROC plot showing the average centre sensitivities and specificities over four EQA rounds (Spring 2010, Autumn 2010, Spring 2011 and Spring 2012). Over this period there have been no large changes to average centre performances. This report was provided by Dr Keith Goatman – Aberdeen University.



Results from Autumn 2010 on the left and Autumn 2012 on the right using the same image set showing improvement of graders overall performance. These reports were provided by Dr Keith Goatman – Aberdeen University.



Receiver operator characteristic (ROC) plot for grader sensitivity/specificity detecting referable images. Level one graders are shown by red asterisks, level two by magenta crosses and level three by green circles. The black circle indicates the performance of the auto-grader in the 2012 chart.

Annex C to DRS Annual Report

**Details for NSD return re Financial year 1213 –**

Report provided by M MacGilp – South & Mid unit finance department - NHS Highland.

**Diabetic Retinopathy Screening Collaborative**

**Budget Report Year Ended 31st March 2013**

**National Services Division**

|                                   | Budget<br>£   | Actual YTD<br>£ | Variance<br>£ |   |
|-----------------------------------|---------------|-----------------|---------------|---|
| <b>Salaries &amp; Wages</b>       |               |                 |               |   |
| Lead Clinician                    | 3567          | 3567            | 0             | Dr Styles February & March  |
| IT Systems Specialist             | 41520         | 41520           | 0             | Neville Lee   |
| Co-ordinator [Band 7]             | 48672         | 48672           | 0             | Mike Black  |
| Education & Training              | 4230          | 4230            | 0             | Tayside SLA   |
| <b>Supplies &amp; Services</b>    |               |                 |               |   |
| Computer/Office Equipment         | 4287          | 4287            | 0             | furniture/broadband fob/purchase, telecoms equip/mobile charges/laptop/website  |
| Stationery/Printing Supplies      | 280           | 280             | 0             | printing/stationery/books   |
| Travel Expenses                   | 2268          | 2268            | 0             |   |
| Facilities Booking                | 2539          | 2539            | 0             | Meet Me conferences/subsistence/hotels  |
| External Quality Assurance        | 10000         | 10000           | 0             | EQA   |
| Autograding                       | 112250        | 112250          | 0             | Autograding   |
| Agreed adj at year-end re u/spend | 7952          | 7952            | 0             | agreed adjustment - this under spend will be carried over into 1314, therefore the payments to be paid by NSD in 1314 will be reduced by this amount. |
| <b>Total Expenditure</b>          | <b>237565</b> | <b>237565</b>   | <b>0</b>      |   |

**Funded by:**

Payments from NSD 1213 -234857

Opening accrual reversal re 1112 -2709

**-237566**

This is in respect of an under spend in 1112. An agreed adjustment with NSD allowed this under spend figure to be used in 1213, therefore the payments from NSD paid in 1213 were reduced by this amount.

## Annual Training Report 2011-2012

| Health Board        | Candidates registered and currently undertaking qualification | Qualification passed By April 2014 | Candidates who have had to re-register because did not pass in time | SL examiner probationer | SL award attained |
|---------------------|---|------------------------------------|---|-------------------------|-------------------|
| Ayrshire & Arran    | 3   | 0                                  | 3   | 0                       | 0                 |
| Dumfries & Galloway | 1   | 0                                  | 0   | 0                       | 1                 |
| Fife                | 1   | 0                                  | 0   | 0                       | 2                 |
| Forth Valley        | 0   | 0                                  | 4   | 0                       | 1                 |
| Glasgow             | 10  | 0                                  | 4   | 0                       | 1                 |
| Grampian            | 0   | 0                                  | 0   | 0                       | 0                 |
| Highland            | 2   | 0                                  | 0   | NA                      | NA                |
| Lanarkshire         | 1   | 0                                  | 0   | 3                       | 2                 |
| Lothian             | 1   | 1                                  | 1   | 0                       | 1                 |
| Orkney              | 0   | 0                                  | 0   | NA                      | NA                |
| Shetland            | 1   | 0                                  | 0   | NA                      | NA                |
| Tayside             | 1   | 0                                  | 0   | 0                       | 2                 |
| Western Isles       | 1   | 0                                  | 1   | NA                      | NA                |

## Item to note

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 Diploma 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 until March 2013. **All of the candidates registered via the Scottish Diabetes Collaborative were included.** Candidates who did not pass the qualification by the deadline have had to re-register for the qualification.

## DRS Programme Resources, Staffing and Models of delivery - 2012

| 1. Programme Information               |  |  |  |  |  |
|--|--|--|--|--|--|
| 1.1 Health Board Name                  | Ayrshire & Arran   | Borders  | Dumfries & Galloway  | Forth Valley   | Fife   |
| <b>1.2 Programme Board Coordinator</b> | Dr James McHardy, Consultant in Public Health Medicine, Afton House, Ailsa Hospital, <a href="mailto:Jim.Mchardy@aapct.scot.nhs.uk">Jim.Mchardy@aapct.scot.nhs.uk</a> , Tel 01292 515866 | Dr. Tim Patterson<br>Consultant in Public Health Medicine<br>Newstead<br>Melrose<br>TD6 9DA<br>01896 825517<br><a href="mailto:Tim.patterson@borders.scot.nhs.uk">Tim.patterson@borders.scot.nhs.uk</a>                      | Dr David Breen, DRS Board co-ordinator<br>Tel: 01387 272 724 email: <a href="mailto:david.breen@nhs.net">david.breen@nhs.net</a>   | Dr Oliver Harding, Consultant in Public Health Medicine, Carseview House, Stirling, 01786 457265<br><a href="mailto:oliver.harding@nhs.net">oliver.harding@nhs.net</a>                                   | Dr Charles Saunders , DRS Board Co-ordinator<br>Email: <a href="mailto:charles.saunders@nhs.net">charles.saunders@nhs.net</a>  |
| <b>1.3 Accountable clinical lead</b>   | Dr Mohan Varikarra, Consultant Ophthalmologist<br><a href="mailto:Mohan.Varikarra@aaaht.scot.nhs.uk">Mohan.Varikarra@aaaht.scot.nhs.uk</a> , Tel 01563 527040                            | Dr Karen Madill<br>Consultant Ophthalmologist<br>PAEP ,NHS Lothian<br>Chalmers Street<br>Edinburgh<br>EH3 9HA<br>0131 533712<br><a href="mailto:Karen.madill@nhslothian.scot.nhs.uk">Karen.madill@nhslothian.scot.nhs.uk</a> | Dr Brian Power, DRS Service Lead Clinician<br>Tel: 01387 246246 email: <a href="mailto:brian.power@nhs.net">brian.power@nhs.net</a>  | Dr John Doig. <a href="mailto:John.doig@nhs.net">John.doig@nhs.net</a><br>01324 566346 (Secretary)   | Dr Caroline Styles, DRS Lead Clinician<br>Telephone: 01592 623623 ext 3853.<br>Email: <a href="mailto:caroline.styles@nhs.net">caroline.styles@nhs.net</a>             |
| <b>1.4 Service Manager</b>             | Diane Smith, Diabetes MCN Manager/Retinal Screening Facilitator,<br><a href="mailto:diane.smith@aapct.scot.nhs.uk">diane.smith@aapct.scot.nhs.uk</a> , Tel 01294 323470                  | Ms Norah Grant<br>DRS Service Manager<br>E3, PAEP,<br>Chalmers Street<br>Edinburgh<br>EH3 9HA<br><a href="mailto:Norah.grant@luht.scot.nhs.uk">Norah.grant@luht.scot.nhs.uk</a><br>0131 536 3928                             | Jane Carrick, DRS Service Manager<br>Tel: 01387 244310 email: <a href="mailto:jane.carrick@nhs.net">jane.carrick@nhs.net</a>   | Lorraine Fowler, Diabetes Systems Administrator, Stirling Community Hospital, Livilands Gate, Stirling, FK8 2AU. <a href="mailto:Lorraine.fowler@nhs.net">Lorraine.fowler@nhs.net</a> .<br>01786 434169. | Karen Gibb, Service Manager<br>Telephone: 01592 653334<br>Email: <a href="mailto:karengibb@nhs.net">karengibb@nhs.net</a>  |
| <b>1.5 Location</b>                    | Room 745, 2 <sup>nd</sup> Floor, Administration Building, Ayrshire Central Hospital, Kilwinning Road, Irvine KA12 8SS  | DRS Service<br>E3, PAEP,<br>Chalmers Street<br>Edinburgh<br>EH3 9HA<br>0131 536 4145   | Diabetic Retinopathy Screening Service, Cairnsmore East, Crichton Hall, Bankend Road, Dumfries DG1 4TG<br>Tel: 01387 244228<br>email: <a href="mailto:ann.weir@nhs.net">ann.weir@nhs.net</a> or<br>Tel: 01387 244325 email: <a href="mailto:kym.cowan@nhs.net">kym.cowan@nhs.net</a>             | Diabetes Unit, Stirling Community Hospital, Livilands Gate, Stirling, FK8 2AU. 01786 434169.<br><br>Forth Valley Royal Hospital, Level 2, J block, Stirling Road, Larbert - 01324 566928                 | NHS FIFE DIABETIC RETINOPATHY SERVICE, Ward 8, Cameron Hospital, Windygates, Fife, KY8 5RRK. Tel: 01592 226852   |
| <b>1.6 Referral Centres</b>            | Ayr Hospital,<br>Crosshouse Hospital,<br>Inverclyde Royal Hospital,  | Eye Centre, Borders General Hospital (BGH)   | Ophthalmology Department, D&G Royal Infirmary, Bankend Road, Dumfries DG1 4AP Tel: 01387 246246<br>Ophthalmology Department, Galloway Community Hospital, Stranraer DG9 7HX Tel: 01776 707707<br>Ophthalmology Department, 4 Warrell Drive, Rosehill, Carlisle Tel: 01228 602780 or 01228 814366 | Ophthalmology Dept, Falkirk Community Hospital, Westburn Avenue, Falkirk.<br><br>OCT Clinic – Ophthalmology Dept, Falkirk Community Hospital, Westburn Avenue, Falkirk                                   | Queen Margaret Hospital, Whitefield Road, Dunfermline, KY12 0SU<br><br>Victoria Hospital, Hayfield Road, Kirkcaldy, KY2 5AH<br><br>Ninewells Hospital, Dundee, DD1 9SY |

|                                       |   |   |  |   |  |
|---------------------------------------|---|---|--|---|--|
| <b>1.7 Biomicroscopy arrangements</b> | Slit lamp examination carried out by all accredited Optometrists at 26 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. Slit Lamp is also carried out at HMP Bowhouse. | 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. | 2 static sites<br>Site 1 provides a one stop photo +/- slit lamp bio microscopy same day appt.<br>Site 2 provides a one stop photo + S/L appt as above for 50% of patients and the other 50% require a second invite to a S/L clinic (usually the first Friday of the Month)<br>Mobile service patients require a second appointment for bio microscopy at site 2. Appt usually within 4 weeks as there is a clinic first Friday of the month. | Patients with ungradable or unobtainable images following camera screening are examined in a slit lamp clinic. There are 3 slit lamp clinics per week in NHS Forth Valley. Two clinics are held in Forth Valley Royal, Outpatients Dept, Stirling Road, Larbert and one other clinic held in Stirling Community Hospital, Livilands Gate, Stirling., FK8 2AU. | 3 slit lamp site across five patients are referred according to area |
| <b>1.8 Health Board GP Practices</b>  | 56  | 25  | 37   | 57  | 58   |
| <b>1.9 Screening GP Practices</b>     | 57  | 25  | 37   | 57  | 58   |

| <b>2. Delivery Model</b>              |   |  |   |   |   |
|---------------------------------------|---|--|---|---|---|
|                                       | <b>Ayrshire &amp; Arran</b>   | <b>Borders</b>   | <b>Dumfries &amp; Galloway</b>  | <b>Forth Valley</b>   | <b>Fife</b>   |
| <b>2.1 Programme structure/ model</b> | <p>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.</p> <p>26 Optometry Practices providing digital screening and Biomicroscopy.</p> <p>2 Hospital sites providing digital screening.</p> <p>External Agencies, Visioncall, Healthcall, First Sight Opticians all carry out Domiciliary visits only. JR Shaw Optometrists carry out Slit Lamp examinations at HMP Bowhouse</p> | <p>The programme is delivered using 1 mobile camera visiting various GP practices and NHS Borders premises.</p> <p>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.</p> | <p>Brief summary of how screening is delivered, including:</p> <ul style="list-style-type: none"> <li>- number of photographic static sites - 3</li> <li>- mobile – 1 van covering 20 G.P. practices, at 22 locations due to branch surgeries</li> <li>- number of bio microscopy sites – 2, one in Dumfries, one in Stranraer</li> <li>- whether any independent/external provider is used – No</li> </ul> | <p>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 Community Hospital has the capacity to screen 129 patients per week and Forth Valley Royal Hospital has the capacity to screen 153 patients per week.</p> <p>Forth Valley has 3 slit lamp clinics with the capacity to examine 45 patients per week, an OCT clinic with the capacity to examine 13 patients per week and an Ophthalmology clinic which can examine 7 laser patients or 12 review patients per week.</p> <p>There is no mobile service within Forth Valley.</p> | <p><u>Fundus Photography</u><br/>The service has fixed cameras at Victoria and Queen Margaret Hospitals and a mobile camera which visits 11 further locations Fife<br/>At each of the Fixed sites 39 patients are appointed a day and 28 patients appointed at a mobile on average.<br/>At the Victoria Hospital and Queen Margret Hospital clinics are run 5 days a week,<br/>Mobile locations are governed by the number of patients due and the availability of rooms as 9 of our locations are within GP surgeries.<br/>The images are graded and the results sent out.<br/><u>Biomicroscopy</u><br/>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.<br/>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.</p> |

|                                  |   |   |   |   |  |
|----------------------------------|---|---|---|---|--|
|                                  |   |   |   |   | Slit lamp examinations are performed by the Level 2 graders/ SL examiner. We currently see 20 patients at the Victoria and Queen Margaret Hospitals sites and 17 at Cupar Health Centre  |
| <b>2.2 Cameras Used</b>          | 22 Topcon TRCNW6 with Nikon D70S<br>3 Topcon 3D-OCT with Nikon D7000<br>3 Topcon TRCNW6 with Nikon D80S<br>1 Topcon TRCNW8 with Nikon D90<br>1 Kowa Keeler Nonmyd 7 with Nikon AS15 | 1 Canon CR-DGI fundus cameras with Canon EOS 10D digital back.  | 4 cameras<br>3x Topcon TRC NW6S with Nikon D70<br>1x Topcon TRC NW6S with Nikon D80   | There are 2 cameras supplied by Topcon – TRC NW6S with Nikon D70 digital camera backs.  | 3 x Canon CR-DGI Fundus Camera backs<br>3 x Canon EOS 20D Digital Camera<br>2 camera's and backs changed in Feb 13 to<br>2 x Canon CR-DGI2 Fundus Camera backs<br>2 x Canon EOS 60D Digital Camera   |
| <b>2.3 Workforce Information</b> | Service Manager 1<br>Administrator 1<br>L3 Graders 2<br>L2 Graders 4<br>L1 Graders 32<br>Retinal Photographers 40   | 1 Service (Programme) Manager<br>3.9 Administrators<br>1 screener<br>4 Level 1 graders<br>3.8 level 2 graders<br>3 level 3 graders working part time<br>1 ophthalmologist working 0.2 | Brief summary of workforce to deliver programme administrators - 0.8<br>retinal photographers – 3 (2 also L2 graders)<br>graders – 2x L2 + 1x L3<br>Slit Lamp Examiners – 1 (also screener/grader L2) | The workforce to deliver retinal screening within Forth Valley includes:<br><br>6 Part time retinal photographers<br>3 Part time administrators<br>2 Level 1/2 graders<br>1 Level 3 grader<br>2 Slit lamp examiners | 0:2 WTE Level 3 Grader/SL examiners (Associate Specialist attached to service)<br>1:6 WTE Level 2 grader/SL examiners (0:8 WTE On mat leave from April 12 – Jan 13)<br>1 :5 Screener/Level 2 grader<br>1:0 WTE Screener (trainee Level 1 grader)<br>1:0 WTE System Administrator (Full Time)<br>1:0 WTE DRS Administrator (30hrs)<br>0:5 WTE Booking clerk (18.5hrs) |

## 2. Delivery Model

|                              | Ayrshire & Arran |                          |               | Borders   | Dumfries & Galloway   | Forth Valley   | Fife  |
|------------------------------|------------------|--------------------------|---------------|---|---|--|---|
| <b>2.4 Retinal Screeners</b> | Optom 1          | Part                     | 306,307,308   | A – current screener, part time, passed units 306, has sent 304 and 305 in for marking 303 ready to mark by local assessor, 302 in progress, 301 still to do. | 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 | Screener 1 – Current, part-time – Units 301 & 302 completed and passed.<br><br>Screener 2 – Current, part-time – Units 301 completed and passed.<br><br>Screener 3 – Current, part-time – Unit 301 & 302 completed and passed.<br><br>Screener 4 – Current, part-time – Units 301 & 302 completed and passed.<br><br>Screener 5 – Current, part-time – No C&G units completed. | Current<br>1 x Full time Screener pass 304, 305, 306<br>1 x Full time Screener, pass 304, Commenced July 09<br>2 x Part Time Screener pass 304, 305, 306<br>1 x Full time Screener, undertaking C&G, Commenced Jan 10 |
|                              | Optom 2          | Part                     | 306,307,308   |   |   |  |   |
|                              | Optom 3          | Part                     | Re-registered |   |   |  |   |
|                              | Optom 4          | Full                     | 306,307,308   |   |   |  |   |
|                              | Optom 5          | Full                     | 306,307,308   |   |   |  |   |
|                              | Optom 6          | Full                     | 306,307,308   |   |   |  |   |
|                              | Optom 7          | Full(Mat leave Jan 2013) | 306,307,308   |   |   |  |   |
|                              | Optom 9          | Full                     | 306,307,308   |   |   |  |   |
|                              | Optom 10         | Part                     | 306,307,308   |   |   |  |   |
|                              | Optom 11         | Part                     | 306,307,308   |   |   |  |   |
|                              | Optom 12         | Part                     | 306,307,308   |   |   |  |   |
|                              | Optom 13         | Full                     | 306,307,308   |   |   |  |   |
|                              | Optom 14         | Full                     | 306,307,308   |   |   |  |   |
|                              | Optom 15         | Full                     | 306,307,308   |   |   |  |   |
|                              | Optom 16         | Part                     | Re-registered |   |   |  |   |
|                              | Optom 17         | Part                     | 306,307,308   |   |   |  |   |
|                              | Optom 18         | Full                     | 306,307,308   |   |   |  |   |
|                              | Optom 19         | Part                     | 306,307,308   |   |   |  |   |
|                              | Optom 20         | Part                     | 306,307,308   |   |   |  |   |
|                              | Optom 21         | Full                     | Re-registered |   |   |  |   |
|                              | Optom 22         | Part                     | 306,307,308   |   |   |  |   |
|                              | Optom 23         | Full                     | 306,307,308   |   |   |  |   |
|                              | Optom 24         | Part                     | 306,307,308   |   |   |  |   |
|                              | Optom 25         | Full                     | 306,307,308   |   |   |  |   |

|                                |   |                             |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
|--------------------------------|---|-----------------------------|--------------------|-------------|-------------|---------|-------------|----------|-------------|---------------|----------|------|---------------|----------|------|-------------|-------------|---------|-------------|----------|--------------------------|-------------|----------|------|-------------|----------|--------------------------|-------------|-------------|---------|--------------------|--|--|--|---|------|--------------------|----------|------|-------------------------|-------------|----------|-------------------------|---------|-------------|-----------------------------|---------|-------|-----------------------------|----------|------|--|-------------|----------|------|----|-------------|----------|------|----|---------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|----|---------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|-------|-------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|----|-------------|----------|------|----|------------|----------|------|----|----------------|----------|------|----|------------|----------|------|----|--------------------|---------|------|----|-----|---------|------|----|-----|--|---|---|--|
|                                | <table border="1"> <tr><td>Optom 26</td><td>Part</td><td>306,307,308</td></tr> <tr><td>Optom 27</td><td>Part</td><td>306,307,308</td></tr> <tr><td>Optom 28</td><td>Part</td><td>306,307,308</td></tr> <tr><td>Optom 29</td><td>Full</td><td>306,307,308</td></tr> <tr><td>Optom 30</td><td>Part</td><td>306,307,308</td></tr> <tr><td>Optom 31</td><td>Part</td><td>306,307,308</td></tr> <tr><td>Optom 32</td><td>Part</td><td>306,307,308</td></tr> <tr><td>Optom 33</td><td>Full</td><td>306,307,308</td></tr> <tr><td>Optom 35</td><td>Full</td><td>Registered</td></tr> <tr><td>Optom 36</td><td>Full</td><td>New-not registered</td></tr> <tr><td>Optom 37</td><td>Full</td><td>Registered</td></tr> <tr><td>Optom 38</td><td>Part</td><td>New-not registered</td></tr> <tr><td>Photo 1</td><td>Full</td><td>301,302,303,304,305,306</td></tr> <tr><td>Photo 2</td><td>Part</td><td>301,302,303,304,305,306</td></tr> <tr><td>Photo 3</td><td>Full</td><td>303 Remainder re-registered</td></tr> <tr><td>Photo 4</td><td>Full</td><td>301,302,303,304,305,306,307</td></tr> </table>   | Optom 26                    | Part               | 306,307,308 | Optom 27    | Part    | 306,307,308 | Optom 28 | Part        | 306,307,308   | Optom 29 | Full | 306,307,308   | Optom 30 | Part | 306,307,308 | Optom 31    | Part    | 306,307,308 | Optom 32 | Part                     | 306,307,308 | Optom 33 | Full | 306,307,308 | Optom 35 | Full                     | Registered  | Optom 36    | Full    | New-not registered | Optom 37   | Full   | Registered   | Optom 38  | Part | New-not registered | Photo 1  | Full | 301,302,303,304,305,306 | Photo 2     | Part     | 301,302,303,304,305,306 | Photo 3 | Full        | 303 Remainder re-registered | Photo 4 | Full  | 301,302,303,304,305,306,307 |          |      | Screener 6 - Current, part-time – No C & G units completed |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 26                       | Part  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 27                       | Part  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 28                       | Part  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 29                       | Full  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 30                       | Part  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 31                       | Part  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 32                       | Part  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 33                       | Full  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 35                       | Full  | Registered                  |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 36                       | Full  | New-not registered          |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 37                       | Full  | Registered                  |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 38                       | Part  | New-not registered          |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Photo 1                        | Full  | 301,302,303,304,305,306     |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Photo 2                        | Part  | 301,302,303,304,305,306     |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Photo 3                        | Full  | 303 Remainder re-registered |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Photo 4                        | Full  | 301,302,303,304,305,306,307 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| <b>2.5 Retinopathy Graders</b> | <table border="1"> <tr><td>Optom 1</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 2</td><td>Part</td><td>L1, L2</td><td>306,307,308</td></tr> <tr><td>Optom 3</td><td>Part</td><td>L1</td><td>Re-registered</td></tr> <tr><td>Optom 4</td><td>Full</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 5</td><td>Full</td><td>L1, L2</td><td>306,307,308</td></tr> <tr><td>Optom 6</td><td>Full</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 7</td><td>Full(Mat leave Jan 2013)</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 9</td><td>Full</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 10</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 11</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 12</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 13</td><td>Full</td><td>L1,L2</td><td>306,307,308</td></tr> <tr><td>Optom 14</td><td>Full</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 15</td><td>Full</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 16</td><td>Part</td><td>L1</td><td>Re-Registered</td></tr> <tr><td>Optom 17</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 18</td><td>Full</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 19</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 20</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 21</td><td>Full</td><td>L1</td><td>Re-Registered</td></tr> <tr><td>Optom 22</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 23</td><td>Full</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 24</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 25</td><td>Full</td><td>L1 L2</td><td>306,307,308</td></tr> <tr><td>Optom 26</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 27</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 28</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 29</td><td>Full</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 30</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 31</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 32</td><td>Part</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 33</td><td>Full</td><td>L1</td><td>306,307,308</td></tr> <tr><td>Optom 35</td><td>Full</td><td>L1</td><td>Registered</td></tr> <tr><td>Optom 36</td><td>Full</td><td>L1</td><td>Not registered</td></tr> <tr><td>Optom 37</td><td>Full</td><td>L1</td><td>Registered</td></tr> <tr><td>Optom 38</td><td>Part</td><td>L1</td><td>New-not registered</td></tr> <tr><td>Ophth 1</td><td>Part</td><td>L3</td><td>N?A</td></tr> <tr><td>Ophth 2</td><td>Part</td><td>L3</td><td>N?A</td></tr> </table> | Optom 1                     | Part               | L1          | 306,307,308 | Optom 2 | Part        | L1, L2   | 306,307,308 | Optom 3       | Part     | L1   | Re-registered | Optom 4  | Full | L1          | 306,307,308 | Optom 5 | Full        | L1, L2   | 306,307,308              | Optom 6     | Full     | L1   | 306,307,308 | Optom 7  | Full(Mat leave Jan 2013) | L1          | 306,307,308 | Optom 9 | Full               | L1   | 306,307,308  | Optom 10   | Part  | L1   | 306,307,308        | Optom 11 | Part | L1                      | 306,307,308 | Optom 12 | Part                    | L1      | 306,307,308 | Optom 13                    | Full    | L1,L2 | 306,307,308                 | Optom 14 | Full | L1   | 306,307,308 | Optom 15 | Full | L1 | 306,307,308 | Optom 16 | Part | L1 | Re-Registered | Optom 17 | Part | L1 | 306,307,308 | Optom 18 | Full | L1 | 306,307,308 | Optom 19 | Part | L1 | 306,307,308 | Optom 20 | Part | L1 | 306,307,308 | Optom 21 | Full | L1 | Re-Registered | Optom 22 | Part | L1 | 306,307,308 | Optom 23 | Full | L1 | 306,307,308 | Optom 24 | Part | L1 | 306,307,308 | Optom 25 | Full | L1 L2 | 306,307,308 | Optom 26 | Part | L1 | 306,307,308 | Optom 27 | Part | L1 | 306,307,308 | Optom 28 | Part | L1 | 306,307,308 | Optom 29 | Full | L1 | 306,307,308 | Optom 30 | Part | L1 | 306,307,308 | Optom 31 | Part | L1 | 306,307,308 | Optom 32 | Part | L1 | 306,307,308 | Optom 33 | Full | L1 | 306,307,308 | Optom 35 | Full | L1 | Registered | Optom 36 | Full | L1 | Not registered | Optom 37 | Full | L1 | Registered | Optom 38 | Part | L1 | New-not registered | Ophth 1 | Part | L3 | N?A | Ophth 2 | Part | L3 | N?A | B – current screener/grader L2, full time, passed Diploma<br>C - current screener/grader L2, full time, passed Diploma | B – current screener/grader L2, part time, passed Diploma<br>C - current screener/grader L2, part time, passed Diploma<br>D – current screener/grader L2, part time, passed unit 306 still to undertake units 307 & 308 | Grader 1 – Current, part-time – Units 301,302, 307 & 308 completed and passed. Qualified in Slit Lamp Accreditation.<br><br>Grader 2 – Current, part-time – C & G Completed completed.<br><br>Grader 3 – Current, part-time - C & G not required. | Current<br>1 x Level 3 Grader (Associate Specialist attached to service)<br>4x Level 2 Grader pass 303, 307, 308<br>1 x Full time Level 1 Grader, Commenced July 10<br>Non-Current |
| Optom 1                        | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 2                        | Part  | L1, L2                      | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 3                        | Part  | L1                          | Re-registered      |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 4                        | Full  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 5                        | Full  | L1, L2                      | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 6                        | Full  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 7                        | Full(Mat leave Jan 2013)  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 9                        | Full  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 10                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 11                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 12                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 13                       | Full  | L1,L2                       | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 14                       | Full  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 15                       | Full  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 16                       | Part  | L1                          | Re-Registered      |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 17                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 18                       | Full  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 19                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 20                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 21                       | Full  | L1                          | Re-Registered      |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 22                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 23                       | Full  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 24                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 25                       | Full  | L1 L2                       | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 26                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 27                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 28                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 29                       | Full  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 30                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 31                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 32                       | Part  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 33                       | Full  | L1                          | 306,307,308        |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 35                       | Full  | L1                          | Registered         |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 36                       | Full  | L1                          | Not registered     |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 37                       | Full  | L1                          | Registered         |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 38                       | Part  | L1                          | New-not registered |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Ophth 1                        | Part  | L3                          | N?A                |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Ophth 2                        | Part  | L3                          | N?A                |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| <b>2.6 Slit Lamp Examiners</b> | <table border="1"> <tr><td>Optom 1</td><td>Part</td><td>306,307,308</td></tr> <tr><td>Optom 2</td><td>Part</td><td>306,307,308</td></tr> <tr><td>Optom 3</td><td>Part</td><td>Re-Registered</td></tr> <tr><td>Optom 4</td><td>Full</td><td>306,307,308</td></tr> <tr><td>Optom 5</td><td>Full</td><td>306,307,308</td></tr> <tr><td>Optom 6</td><td>Full</td><td>306,307,308</td></tr> <tr><td>Optom 7</td><td>Full(Mat leave Jan 2013)</td><td>306,307,308</td></tr> <tr><td>Optom 9</td><td>Full</td><td>306,307,308</td></tr> <tr><td>Optom 10</td><td>Part</td><td>306,307,308</td></tr> <tr><td>Optom 11</td><td>Part</td><td>306,307,308</td></tr> </table>   | Optom 1                     | Part               | 306,307,308 | Optom 2     | Part    | 306,307,308 | Optom 3  | Part        | Re-Registered | Optom 4  | Full | 306,307,308   | Optom 5  | Full | 306,307,308 | Optom 6     | Full    | 306,307,308 | Optom 7  | Full(Mat leave Jan 2013) | 306,307,308 | Optom 9  | Full | 306,307,308 | Optom 10 | Part                     | 306,307,308 | Optom 11    | Part    | 306,307,308        | C - current screener/grader L2, SLE, full time, passed Diploma | C - current screener/grader L2, SLE part time, passed Diploma<br>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, 307 & 308 completed and passed.<br><br>Examiner 2 – Current, part-time – Level 1-2 grader, C & G units completed and passed | Current<br>1 x Level 3 Grader (Associate Specialist attached to service)<br>2 x Part time Level 2 Grader pass 303, 304, 305, 307, 308 |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 1                        | Part  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 2                        | Part  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 3                        | Part  | Re-Registered               |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 4                        | Full  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 5                        | Full  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 6                        | Full  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 7                        | Full(Mat leave Jan 2013)  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 9                        | Full  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 10                       | Part  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |
| Optom 11                       | Part  | 306,307,308                 |                    |             |             |         |             |          |             |               |          |      |               |          |      |             |             |         |             |          |                          |             |          |      |             |          |                          |             |             |         |                    |  |  |  |   |      |                    |          |      |                         |             |          |                         |         |             |                             |         |       |                             |          |      |  |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |               |          |      |    |             |          |      |    |             |          |      |    |             |          |      |       |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |             |          |      |    |            |          |      |    |                |          |      |    |            |          |      |    |                    |         |      |    |     |         |      |    |     |  |   |   |  |

|                                   |          |      |                     |    |    |    |    |
|-----------------------------------|----------|------|---------------------|----|----|----|----|
|                                   | Optom 12 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 13 | Full | 306,307,308         |    |    |    |    |
|                                   | Optom 14 | Full | 306,307,308         |    |    |    |    |
|                                   | Optom 15 | Full | 306,307,308         |    |    |    |    |
|                                   | Optom 16 | Part | Re-Registered       |    |    |    |    |
|                                   | Optom 17 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 18 | Full | 306,307,308         |    |    |    |    |
|                                   | Optom 19 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 20 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 21 | Full | Re-Registered       |    |    |    |    |
|                                   | Optom 22 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 23 | Full | 306,307,308         |    |    |    |    |
|                                   | Optom 24 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 25 | Full | 306,307,308         |    |    |    |    |
|                                   | Optom 26 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 27 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 28 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 29 | Full | 306,307,308         |    |    |    |    |
|                                   | Optom 30 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 31 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 32 | Part | 306,307,308         |    |    |    |    |
|                                   | Optom 33 | Full | 306,307,308         |    |    |    |    |
|                                   | Optom 35 | Full | Registered          |    |    |    |    |
|                                   | Optom 36 | Full | Not registered      |    |    |    |    |
|                                   | Optom 37 | Full | Registered          |    |    |    |    |
|                                   | Optom 38 | Part | New -not registered |    |    |    |    |
| <b>2.7 Screening GP practices</b> | 57       |      |                     | 37 | 35 | 57 | 58 |



| 1.1 Health Board Name                  | Grampian   | Greater Glasgow  | Highland   | Lanarkshire   | Lothian   |
|--|--|--|--|---|---|
| <b>1.2 Programme Board Coordinator</b> | Dr Mike Crilly<br>MD MPH MRCPG MFPHM<br>Senior Lecturer in Clinical Epidemiology<br>University of Aberdeen Medical School<br>Polwarth Building at Foresterhill<br>Aberdeen Scotland<br>AB25 2ZD <a href="mailto:michael.crilly@nhs.net">michael.crilly@nhs.net</a> | Dr Emilia Crighton, DRS Board Co-ordinator<br>Telephone: 0141 2014747 Email: <a href="mailto:emilia.crighton@ggc.scot.nhs.uk">emilia.crighton@ggc.scot.nhs.uk</a>  | Dr Roderick Harvey<br>DRS Board Co-ordinator, NHS Highland<br>6 <sup>th</sup> Floor, Raigmore Hospital, Old Perth Road, Inverness<br>IV2 3UJ<br>Email: <a href="mailto:Roderick.harvey@nhs.net">Roderick.harvey@nhs.net</a><br>Tel: 01463 705640   | Dr David Cromie<br>Consultant in Public Health Medicine<br>Department of Public Health<br>NHS Lanarkshire<br>14 Beckford Street<br>Hamilton ML3 0TA<br>01698 206336<br><a href="mailto:david.cromie@lanarkshire.scot.nhs.uk">david.cromie@lanarkshire.scot.nhs.uk</a>                       | Dr. Joy Tomlinson<br>Consultant in Public Health Medicine<br>Deaconess House<br>148, Pleasance<br>Edinburgh<br>EH8 9RS<br><a href="mailto:joy.tomlinson@nhslothian.scot.nhs.uk">joy.tomlinson@nhslothian.scot.nhs.uk</a><br>0131 536 9162 |
| <b>1.3 Accountable clinical lead</b>   | Dr John Olson, DRS Service Lead Clinician, David Anderson Building, Foresthill Rd, Aberdeen AB25 2ZP<br>Telephone: 01224 555538. Email: <a href="mailto:john.olson@nhs.net">john.olson@nhs.net</a>   | Dr William Wykes, DRS Service Lead Clinician<br>Telephone: 0141 201 1582. Email: <a href="mailto:william.wykes@ggc.scot.nhs.uk">william.wykes@ggc.scot.nhs.uk</a>  | Dr Roderick Harvey, details as above.  | Dr Meena Viridi<br>Consultant Ophthalmologist<br>Lead Clinician for Diabetic Screening<br>Hairmyres Hospital<br>Hairmyres<br>East Kilbride<br>Tel: 01355 584652<br><a href="mailto:Meena.Virdi@lanarkshire.scot.nhs.uk">Meena.Virdi@lanarkshire.scot.nhs.uk</a>                             | Dr Karen Madill<br>Consultant Ophthalmologist<br>PAEP ,NHS Lothian<br>Chalmers Street<br>Edinburgh<br>EH3 9HA<br>0131 533712  |
| <b>1.4 Service Manager</b>             | Margaret Bruce, Retinal Screening Manager, David Anderson Building, Foresterhill Rd Aberdeen AB25 2ZP<br>Telephone: 01224 550198. Email: <a href="mailto:m.bruce@nhs.net">m.bruce@nhs.net</a>  | David Sawers, Retinal Screening Manager<br>Telephone: 0141 211 4754. Email: <a href="mailto:david.sawers2@ggc.scot.nhs.uk">david.sawers2@ggc.scot.nhs.uk</a>   | Lisa Steele<br>Service Manager, NHS Highland<br>Diabetic Centre, Centre for Health Science, Old Perth Road, Inverness<br>IV2 3JH<br>Email: <a href="mailto:lisa.steele@nhs.net">lisa.steele@nhs.net</a><br>Tel: 01463 255938   | Anne Dougan<br>Retinal Screening Team Leader<br>Administration Office<br>Administration Building<br>Coathill Hospital<br>Coathill<br>Coatbridge ML5 4DN<br>01236 707150<br><a href="mailto:Ann.Dougan2@lanarkshire.scot.nhs.uk">Ann.Dougan2@lanarkshire.scot.nhs.uk</a>                     | Ms Norah Grant<br>DRS Service Manager<br>E3, PAEP,<br>Chalmers Street<br>Edinburgh<br>EH3 9HA<br><a href="mailto:Norah.grant@luht.scot.nhs.uk">Norah.grant@luht.scot.nhs.uk</a><br>0131 536 3928  |
| <b>1.5 Location</b>                    | David Anderson Building<br>Foresterhill Road<br>Aberdeen<br>AB25 2ZP   | Administrative centre address –<br>Screening Department, 1 <sup>st</sup> Floor,<br>Building 2, Templeton Business<br>Centre, 62 Templeton Street,<br>Glasgow G40 1DA   | Diabetic Retinal Screening<br>Centre for Health Science<br>Old Perth Road<br>Inverness IV2 3JH<br>Tel Patient Booking Services on<br>0800 5877198  | Administration Office<br>Administration Building<br>Coathill Hospital<br>Coathill<br>Coatbridge ML5 4DN<br>01236 707160 / 0845 337 3341   | DRS Service<br>E3, PAEP,<br>Chalmers Street<br>Edinburgh<br>EH3 9HA<br>0131 536 4145  |
| <b>1.6 Referral Centres</b>            | Aberdeen Eye Clinic, Foresterhill Hospital.<br>Dr Grays Hospital Elgin.<br>Chalmers Hospital Banff.<br>Jubilee Hospital Huntly.<br>Turner Hospital Keith.<br>Seafield Hospital Buckie.   | Ophthalmology Departments at the following –<br>Stobhill Hospital, Victoria Infirmary,<br>Southern General Hospital – all in Glasgow<br>Royal Alexandra Hospital, Paisley;<br>Inverclyde Royal Hospital, Greenock;<br>Vale of Leven District General Hospital. | <u>North Highland patients are referred to:</u><br>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.<br><br><u>Argyll &amp; Bute patients are referred to:</u><br>Campbeltown Hospital<br>Dumbarton Health Centre<br>Duneros Hospital, Isle of Mull<br>Dunoon General Hospital<br>Inverclyde Royal Hospital, Greenock | Ophthalmology Department<br>Hairmyres Hospital<br>Eaglesham Road<br>East Kilbride<br><br>Ophthalmology Department<br>Wishaw General Hospital<br>Netherton Road<br>Wishaw<br><br>Ophthalmology Department<br>Monklands District General Hospital<br>Monkscourt Drive<br>Monklands<br>Airdrie | Princess Alexandra Eye Pavilion,<br>Edinburgh<br>St. John's Hospital, Livingston.   |

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|                                       |   |   | Mid Argyll Hospital, Lochgilphead<br>Victoria Hospital, Rothesay<br>Lorn & Isles DGH, Oban<br>Gartnavel General, Glasgow<br>Southern General, Glasgow   |   |   |
| <b>1.7 Biomicroscopy arrangements</b> | <p>Technical failure examinations are performed at the following locations:</p> <p>All Aberdeen City residents are assessed at the David Anderson Building.<br/>Moray patient are offered a location closer to home and can may be booked into any of following venues:</p> <p>Leancoil Hospital Forres.<br/>Dr Grays Hospital Elgin<br/>Jubilee Hospital Huntly<br/>Chalmers Hospital Banff<br/>Seafield Hospital Buckie<br/>Turner memorial; Hospital Keith</p> | <p>People with unobtainable or ungradable images are assessed by slit-lamp biomicroscopy.</p> <p>These clinics are held weekly at Gartnavel General Hospital, Victoria Infirmary, Southern General Hospital and Glasgow Royal Infirmary – all in Glasgow, New Sneddon Street Clinic, Paisley and as required at Greenock Health Centre and Vale of leven Distric General Hospital.</p> <p>Ophthalmologists deliver the slit lamp clinics at Glasgow Royal Infirmary and at Royal Alexandra Hospital, Paisley. All slit lamp clinics are delivered by optometrists or by a nurse trained in slit lamp examination.</p> | <p>North Highland patients are referred to an Optometrist based slit lamp clinic in the following sites, depending on their nearest venue for referral:</p> <p>At Centre for Health Science, Inverness<br/>Lawson Memorial Hospital in Golspie<br/>Portree Hospital<br/>Belford Hospital in Fort William<br/>Caithness General Hospital in Wick</p> <p>Argyll &amp; Bute patients are referred for a slit lamp examination into the Ophthalmology departments detailed above at item 1.6.</p>   | <p>Patients with a status of technical failure following photography, receive a letter to inform them that images taken are ungradable 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 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.</p> | <p>An appointment is made for patients in a slit lamp clinic at one of the locations below, based on where they live.</p> <p>St John's hospital, Livingston<br/>PAEP, Edinburgh<br/>Roodlands Hospital, Haddington.</p> |
| <b>1.8 Health Board GP Practices</b>  | 83  | Approx 274  | North Highland = 67<br>A&B = 34<br>Total GP practices = 101   | 98  | 126   |
| <b>1.9 Screening GP Practices</b>     | 83  | Approx 274  | <p><u>North Highland</u><br/>Patients are invited from the 12 Inverness based GPs to come for screening at DRS in Centre for Health Science, Inverness.<br/>DRS provide a mobile clinic based at the remaining 55 GP sites or nearest community hospital.</p> <p><u>Argyll &amp; Bute</u><br/>DRS provide a mobile clinic based at three of the GP practices which are not accessible to a High Street Optometrist in the area.<br/>DRS control recall of patients for all 101 practices but in Argyll &amp; Bute the remaining 31 practices have their patients invited to the nearest participating High Street Optometrist practice for screening.</p> | 98  | 126   |



| 2. Delivery Model                     |   |  |  |  |   |
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|                                       | Grampian  | Greater Glasgow  | Highland   | Lanarkshire  | Lothian   |
| <b>2.1 Programme structure/ model</b> | <p>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.</p> <p>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.</p> <p>One Static Site<br/>Three Mobile units<br/>Six slit lamp sites<br/>No independent or external provider is used.</p> | <p>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.</p> <p>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.</p> <p>Diabetics who have unobtainable or ungradable images at photography are 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.)</p> <p>Slit lamp biomicroscopy is delivered weekly at 4 hospital sites and at one other clinic site and less frequently at one other hospital site and at one other health centre site.</p> | <p><b>North Highland</b><br/>Static photographic sites = 1 based at DRS in CFHS, Inverness.</p> <p><b>North Highland continued</b><br/>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.</p> <p>Slit lamp provision is provided at five sites detailed in item 1.7 and is carried out by an NHS Highland Optometrist.</p> <p><b>Argyll &amp; Bute</b><br/>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.</p> <p>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:-</p> <p>Oban, Lochgilphead, Campbeltown, Tarbert, Helensburgh, Dunoon, Isle of Islay and Isle of Mull.</p> <p>Over the 8 sites, there are 15 registered external Optometrists providing photographic screening only.</p> <p>Slit lamp referrals for the Argyll &amp; Bute area are seen across the 10 Ophthalmology sites detailed in item 1.6.</p> | <p>Administration office is responsible for booking, cancelling appointments. To improve patient attendance office staff are responsible for reminder phone calls to patient on week of appointment. Telephone helpline is open from 9am to 12md and from 1.30pm to 3.30pm.</p> <p>There are 4 static sites in Lanarkshire, which are Buchanan Centre in Coatbridge, Wishaw Health Centre in Wishaw and Central Clinic in Hamilton. There is a satellite site in Central Health Centre in Cumbernauld. Each of the main sites has 2 fundus cameras and 1 slit lamp. Cumbernauld has 1 fundus camera.</p> | <p>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.</p> <p>Slit lamp bio-microscopy is 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.</p> |
| <b>2.2 Cameras Used</b>               | <p>2 new Canon CR2 digital retinal camera's<br/>2 canon CR1 digital retinal camera's with 50 D digital back</p>   | <p>Fundus cameras – 4 x Canon CR2, 5 x Canon CR-DGI, 4 x Canon CR6</p> <p>Digital backs – 4 X Canon EOS Retina back, several Canon D30, 10D and 20D</p>  | <p><b>North Highland</b><br/>1x Canon CR6 45NM Serial No: 300621/Canon EOS 20D<br/>1x Canon DGI Serial No: 310325/Canon EOS 20D<br/>1x Canon DGI Serial No: 311286/Canon EOS 20D</p> <p><b>Argyll &amp; Bute</b><br/>1x Topcon NW65 Serial No:</p>   | <p>7 x Retinal Camera Fundus Topcon NW6S<br/>7 x Nikon AS15<br/>3 x Nidek SL 450 biomicroscopy</p>   | <p>6 Canon CR-DGi fundus cameras with Canon EOS 10D digital backs.</p>  |

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|   |  |   | <p>2881612/Nikon D90<br/> 1x Keeler Kowa NonMyd 7 Serial No: 1602600062/Nikon D80<br/> 1x Keeler Kowa NonMyd 7 Serial No: 160260068/Nikon D80<br/> 1x Keeler Kowa NonMyd 7 Serial No: 1602600049/Nikon D80<br/> 1x Keeler Kowa NonMyd 7 Serial No: 1602600091/Nikon AF15<br/> 1x Keeler Kowa NonMyd 7 Serial No: 1602600057/Nikon D80<br/> 1x Topcon TRC/NW6S Serial No: 2881259/Nikon D80<br/> 1x Topcon NW6S Serial No: 2880004/Nikon D80<br/> 1x Topcon NW6S Serial No: 2881374/Nikon D80<br/> 1x Topcon NW6S Serial No: 2881347/Nikon D80<br/> 1x Canon DGI Serial No: 311531/Canon 40D<br/> 1x Canon DGI Serial No: 300343/Canon 40D<br/> 1x Canon DGI Serial No: 311525/Canon 40D<br/> 1x Topcon NW6 Serial No: NK<br/> 1x Topcon NW8 Serial No: NK</p> |  |  |
| <p><b>2.3 Workforce Information</b></p> | <p><u>2 Admin staff = 2 wte</u><br/> Administrators x 1 full time receptionist<br/> Administrators x 1 full time</p> <p>Both current</p>   | <p>The service has –<br/> 1 service manager<br/> 1 nurse co-ordinator<br/> 8 (6 wte) admin staff<br/> 10 (9.0 wte) retinal photographers<br/> 1 (0.6wte) photographer/level 1 grader<br/> 4 (3.4 wte) photographers/level 2 graders<br/> 4 (1.1 wte) slit lamp examiners/level 2 graders<br/> 1 associate specialist ophthalmologist (0.8 wte) and 2 consultant ophthalmologists (approx 1 session/week each)</p> | <p>Service Manager: 1<br/> Administrators: 0.5<br/> Retinal Screeners: 1 x full time and 1 x 0.5 wte<br/> External Photographer/Screeners: 15<br/> Slit Lamp Examiner: 2 x 0.5 wte (North Highland only)<br/> All grading work is provided externally by the grading centre in NHS Grampian.</p>  | <p>Administration Assistant<br/> Band 2 1wte<br/> Administration Officer<br/> Band 3 1wte<br/> Retinal screener<br/> Band 3 0.8 wte<br/> Retinal screener<br/> Band 4 1wte<br/> Retinal Screener<br/> Band 4 1wte<br/> Retinal Screening Nurse<br/> Band 5 0.56wte<br/> Retinal Screening Nurse<br/> Band 5 0.69wte<br/> Retinal Screening Sp Nurse<br/> Band 6 0.8<br/> Retinal Screening Sp Nurse<br/> Band 6 0.53<br/> Retinal Screening Team Lead<br/> Band 7 1wte</p> | <p>1 Service (Programme) Manager<br/> 5 Administrators<br/> 3 screeners<br/> 4 Screeners/Level 1 graders<br/> 4 screeners/level 2 graders<br/> 3 level 3 graders<br/> 1 employed optometrist plus<br/> 2 community optometrists working as needed at slit lamp plus<br/> 2 ophthalmologist. working as needed at slit lamp</p> |
| <p><b>2.4 Retinal Screeners</b></p>     | <p><u>9 named screening staff = 8 wte</u> (including service manager) all participate in photographic screening sessions as required to meet service needs.<br/> All current</p> | <p>6 screeners have completed the C&amp;G Certificate<br/> 2 screeners have 1 unit outstanding<br/> 2 screeners have completed no units</p>   | <p>Retinal Screeners: 1 x full time and 1 x 0.5 wte completed full diploma</p>  | <p>Both band 4 retinal screener have completed City and Guilds diploma in retinal screening<br/> Band 3 retinal screener has registered to commence certificate in retinal screening.</p>  | <p>1.0 screener nil C&amp;G accredited<br/> 1.0 screener nil C&amp;G accredited<br/> 1.0 screener nil C&amp;G accredited</p>   |

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|                                |  |  |   | 2.8 wte spent on retinal photography  | <p>1.0 screener/Level 1 nil C&amp;G accreditation<br/>1.0 screener/Level 1 nil C&amp;G accreditation<br/>1.0 screener/Level 1 nil C&amp;G accreditation<br/>1.0 screener/Level 1 nil C&amp;G accreditation</p> <p>0.6 screener/Level2 nil C&amp;G accreditation<br/>1.0 screener/Level2 306<br/>1.0 screener/Level2 nil C&amp;G accreditation<br/>1.0 screener/Level2 306</p> <p>All of the above staff members are current.</p>   |
| <b>2.5 Retinopathy Graders</b> | <p><b>Level 3 graders x 2 named = ( 0.3 wte)</b><br/><b>Level 2 graders</b> – four staff from the screening team mentioned above, participate in level 2 grading, as required to meet service needs.(including service manager) All current<br/>All L2 Graders have completed the City and Guilds diploma.</p> | <p>Photographer/grader 1 – current, 0.6 wte, grading at level 1, passed units 302, 304, 306 and 307<br/>Photographer/grader 2 – current, 0.9 wte, grading at level 2, passed units 306 &amp; 308<br/>Photographer/grader 3 – current, 0.5 wte, grading at level 2, completed DRS Diploma<br/>Photographer/grader 4 – current, full time, grading at level 2, completed DRS Diploma<br/>Photographer/grader 5 – current, full time, grading at level 2, completed DRS Diploma</p> <p>Ophthalmologist 1 – current, 0.8 wte, grading at level 3<br/>Ophthalmologist 2 – current, 0.1 wte, grading at level 3<br/>Ophthalmologist 3 – current, 0.1 wte, grading at level 3</p> | Grading services provided externally via SLA with NHS Grampian. | <p>1.Retinal Screening Nurse (0.56 wte)<br/>0.4wte photography<br/>0.1 wte 2<sup>nd</sup> level grading<br/>0.6 wte slit lamp training.</p> <p>2. Retinal Screening Nurse (0.69wte)<br/>0.4wte photography<br/>0.2 wte 2<sup>nd</sup> level grading<br/>0.9 wte slit lamp examination</p> <p>3.Retinal Screening Specialist Nurse (0.8wte)<br/>0.3wte photography<br/>0.2wte grading<br/>0.3wte slit lamp examination</p> <p>4.Retinal Screening Specialist Nurse (0.53)<br/>0.2wte grading<br/>0.3wte slit lamp examination<br/>0.03wte Ophthalmic letters/office/orders</p> <p>5.Retinal Screening Team Leader (1wte)<br/>0.1wte grading<br/>0.3wte slit lamp examination<br/>0.1wte slit lamp training<br/>0.3wte clinical management<br/>0.2wte office/staff management (cover all types of clinics during staff shortage)<br/>All trained nursing staff have</p> | <p>1.0 screener/Level 1 nil C&amp;G accreditation<br/>1.0 screener/Level 1 nil C&amp;G accreditation<br/>1.0 screener/Level 1 nil C&amp;G accreditation<br/>1.0 screener/Level 1 nil C&amp;G accreditation</p> <p>0.6 screener/Level2 nil C&amp;G accreditation<br/>1.0 screener/Level2 306<br/>1.0 screener/Level2 nil C&amp;G accreditation<br/>1.0 screener/Level2 306</p> <p>0.6 screener/Level2 nil C&amp;G accreditation<br/>1.0 screener/Level2 306<br/>1.0 screener/Level2 nil C&amp;G accreditation<br/>1.0 screener/Level2 306</p> <p>0.2 Level2 + slit lamp nil accreditation<br/>0.2 Level2 + slit lamp nil accreditation <b>no longer employed</b></p> <p>3 x level 3; P/T, ophthalmologists</p> <p>All of the above staff members are current unless otherwise stated and are shared with Borders.</p> |

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|                                   |  |   |  | completed Diploma in Retinal Screening.  |   |
| <b>2.6 Slit Lamp Examiners</b>    | <p><u>Slit lamp examiners</u> - 3 staff from the screening team, participate in slit lamp examination as required to meet service needs (including service manager)</p> <p>. All are level 2 graders and have completed the city and guild diploma All Current</p> | <p>SLE 1 &amp; 2 have completed units 301,302,307 &amp; 308</p> <p>SLE 3 has completed units 301, 302 &amp; 308</p> <p>SLE 4 has completed unit 301</p> | <p>Slit Lamp Examiner: 2 x 0.5 wte (North Highland only) one fully accredited and one pending.</p> | <p>See above.</p> <p>4 slit lamp examiners have completed in service training and adhere to National Guidelines to ensure registration for slit lamp is up to date. E.g. visit ophthalmologist from outside own board for testing and complete grading standards and see at least 200 slit lamp patient/year.</p> <p>1 Nurse to commence slit lamp training in January 2013.</p> | <p>0.1 optometrist nil C&amp;G accreditation <b>no longer employed</b></p> <p>0.2 optometrist + level 2 grader nil C&amp;G accreditation</p> <p>P/T community optometrist nil C&amp;G accreditation</p> <p>P/T community optometrist nil C&amp;G accreditation</p> <p>P/T ophthalmologist + level 3 grader</p> <p>P/T ophthalmologist</p> <p>Unless stated the above are all current staff.</p> |
| <b>2.7 Screening GP practices</b> | 83   | Approx 274  | 101 as per item 1.8.   | 98   | 126   |

| 1. Programme Information               |   |   |  |  |
|--|---|---|--|--|
| 1.1 Health Board Name                  | Orkney  | Shetland  | Tayside  | Western Isles  |
| <b>1.2 Programme Board Coordinator</b> | Dr Ken Black, Consultant in Public Health Medicine, Public Health Office, Victoria Street, Kirkwall <a href="mailto:ken.black@nhs.net">ken.black@nhs.net</a> 01856 879800           | Kerry Russell, Clinical Services, Brevick House, Lerwick.<br>Email: <a href="mailto:kerry.russell@nhs.net">kerry.russell@nhs.net</a><br>Phone: 01595-743000 extension 3632.                 | Dr Julie Cavanagh<br>DRS Board Coordinator<br>Consultant in Public Health<br>Directorate of Public Health<br>King's Cross<br>Cleington Road<br>Dundee DD3 8EA<br>01382 425684<br><a href="mailto:julie.cavanagh@nhs.net">julie.cavanagh@nhs.net</a>                  | Mr Phil Tilley Planning & Development Manager  |
| <b>1.3 Accountable clinical lead</b>   | Post vacant   | Dr Pauline Wilson, Consultant Physician<br>Email: <a href="mailto:paulinewilson@nhs.net">paulinewilson@nhs.net</a><br>Phone: 01595-743000 extension 3226                                    | Dr Graham Leese<br>DRS Clinical Lead<br>Consultant Physician<br>Wards 5 & 6<br>Ninewells Hospital<br>Dundee DD1 9SY<br>01382 632237 or 01382 660111 bleep 4320<br><a href="mailto:graham.leese@nhs.net">graham.leese@nhs.net</a>                                     | Vacant   |
| <b>1.4 Service Manager</b>             | Nickie Milne, DRS Administrator, Assessment and Rehabilitation Office, Balfour Hospital, Kirkwall.<br><a href="mailto:Nichola.milne@nhs.net">Nichola.milne@nhs.net</a> 01856 888023 | Alison Irvine, Diabetic Specialist Nurse, Gilbert Bain Hospital, Lerwick.<br>Email: <a href="mailto:alison.irvine@nhs.net">alison.irvine@nhs.net</a><br>Phone: 01595-743000 extension 3444. | Ms Angela Ellingford<br>DRS Programme Manager<br>Diabetic Retinopathy Screening Programme<br>Diabetes Support Centre<br>Level 8<br>Ninewells Hospital<br>Duundee DD1 9SY<br>01382 740068<br><a href="mailto:angela.ellingford@nhs.net">angela.ellingford@nhs.net</a> | Marina Sinclair<br>Diabetes Service Co-ordinator   |
| <b>1.5 Location</b>                    | Assessment and Rehabilitation Office, Balfour Hospital, Kirkwall. 01856 888023  | Gilbert Bain Hospital, Lerwick.<br>Contact number: 01595-743000 extension 3030  | Diabetic Retinopathy Screening Programme<br>Diabetes Support Centre<br>Level 8<br>Ninewells Hospital<br>Duundee DD1 9SY  | The Diabetes Centre, Western Isles Hospital HS1 2AF  |
| <b>1.6 Referral Centres</b>            | Visiting Highland Ophthalmology Service held in Balfour Hospital, Kirkwall, Orkney  | Gilbert Bain Hospital and Aberdeen Royal Infirmary (ARI)  | Ninewells Hospital, Dundee<br>Arbroath Infirmary<br>Montrose Links Health Centre<br>Stracathro Hospital<br>Perth Royal Infirmary   | Ophthalmology Clinic Out-Patient Department<br>Western Isles Hospital/ Uist & Barra Hospital |
| <b>1.7 Biomicroscopy</b>               | At present all patients requiring slit-lamp   | Gilbert Bain Hospital with visiting Slit  |  | R Doig Optometrist Ltd   |



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|---------------------------------------|---|---|--|---|
| <b>arrangements</b>                   | 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.  | Lamp Nurse from ARI   | 1x Ophthalmologist Slit Lamp clinic per week based at Ninewells Hospital<br>1x Ophthalmologist Slit Lamp clinic per week at Perth Royal Infirmary<br>All Angus clinics undertaken by Specialist Screeners<br>Montrose Links Centre x2 per annum<br>Arbroath Infirmary x3 per annum<br>Stracathro Hospital x3 per annum   | 36 Kenneth Street<br>Stornoway<br><br>R Doig Optometris Ltd<br>Rathad Mhic Eoine<br>Balivanich<br>Benbecula<br>Uist   |
| <b>1.8 Health Board GP Practices</b>  | 15  | 10  | 68   | 10  |
| <b>1.9 Screening GP Practices</b>     | 15  | 10  | 68   | 10  |
| <b>2. Delivery Model</b>              |   |   |  |   |
|                                       | <b>Orkney</b>   | <b>Shetland</b>   | <b>Tayside</b>   | <b>Western Isles</b>  |
| <b>2.1 Programme structure/ model</b> | <p>Screening is delivered on one site which is within the Balfour Hospital. We have one static retinal camera. We have two Retinal Screening Technician who delivers approximately one clinic per week.</p> <p>All slit-lamp patients are seen by the visiting Ophthalmology Service and their information is passed back to the retinal screening administration.</p> <p>Our grading is sent to Tayside.</p> | We have 1 static photographic site and no biomicroscopy sites. We do not use any independent/external provider. OCT machine used to monitor patients with M2. | <ul style="list-style-type: none"> <li>Two permanent 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.</li> <li>Five biomicroscopy sites</li> </ul> <p>Have an SLA with NHS Tayside Department of Ophthalmology to provide slit lamp service.</p> | <p>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.</p> <p>Patients 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</p> <p>NHS Western Isles have a contract with NHS Tayside to provide Level 1-3 Grading</p> |
| <b>2.2 Cameras Used</b>               | 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.  | <p>Serial Number</p> <p>Canon CR6-45NM Non-Mydriatic Retinal Camera 300570<br/>Canon CR6-45NM Non-Mydriatic Retinal Camera 300654<br/>Canon CR-DGi Non-Mydriatic Retinal Camera 310708<br/>Canon CR-DGi Non-Mydriatic Retinal Camera 310368</p> <p>Canon EOS-20 Digital Camera</p>   | 2 fundus Cameras Nokia D70s<br>Topcon TRC NW6   |

|                                   |  |   |  |  |
|-----------------------------------|--|---|--|--|
|                                   |  |   | 14209103<br>Canon EOS-20 Digital Camera<br>19210113<br>Canon EOS-20 Digital Camera<br>14309090<br>Canon EOS-20 Digital Camera<br>15309056  |  |
| <b>2.3 Workforce Information</b>  | At present we have two 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. | 0.2WTE 2x Level 3 Grader/SL examiners<br>1.0 WTE Programme Manager - SL examiner, Level 2 grader, photographic screener<br>1.0 WTE Specialist Screener- SL examiner, Level 2 grader, photographic screener<br>1.0 WTE Senior Screener - Level 2 grader, photographic screener<br>1.8 WTE Screeners - training in Level 1 grading<br>0.8 WTE Camera Operator (yet to be appointed)<br>1.8 WTE Administrators<br>0.5 WTE Booking clerk | NHS Western Isles<br>1 Part Time Administrator<br>1 Part Time Service Manager<br>1 Part Time board Co-ordinator<br><u>R Doig Optometrist LTD</u><br>4 Screeners<br>1 Slit lamp examiner(Optometrist)<br>NHS Tayside<br>Level 1-3 Grading |
| <b>2.4 Retinal Screeners</b>      | 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 31 <sup>st</sup> March at the end of the reporting period:<br><br>Current employment<br>Part Time – 27 hours per week<br>Part time – 7.5 hrs per month<br>Not completed City and Guilds modules. | Current <i>1 (Part Time)</i> /Non-current <i>0</i><br>301 passed  | 1 - 10 years in post, full DRS Diploma<br>2 - 8 years in post, full DRS Diploma<br>3 - 5 years in post, full DRS Diploma<br>4 - 1 year in post, enrolled in DRS Diploma<br>5 - 4 years in post, units 1-6 DRS Diploma  | 4 Screeners<br>All working through the City & Guild Units with 3 having completed the City & guilds units.   |
| <b>2.5 Retinopathy Graders</b>    | Grading services are contracted to Tayside.  | N/A as all grading is completed in NHS Grampian   | 1 - as above<br>2 - as above<br>3 - as above<br>4 - as above<br>5 - as above   | Grading contracted to NHS Tayside  |
| <b>2.6 Slit Lamp Examiners</b>    | Not applicable as slit-lamp service at present delivered by Highland Ophthalmology Consultants   | From NHS Grampian - ARI   | 1 - 0.4 WTE Ophthalmologist, level 3 grader<br>2 - 0.1 WTE Ophthalmologist, level 3 grader<br>3 - 0.2 sessions per week, level 2 grader<br>4 - 0.1 sessions per week, level 2 grader   | 1 Slit Lamp Examiner - R Doig Optometrist LTD  |
| <b>2.7 Screening GP practices</b> | 15   | 10  | 68   | 10   |

## Survey carried out by NHS Lothian on DNA rates

### 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 (17<sup>th</sup> December 2008-13<sup>th</sup> 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 health 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 to DRS Annual Report

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

## Annex F to DRS Annual Report

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*

## Survey 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.



Clinical Governance Team

Better Together, Scotland's Patient Experience programme

- Patients carers and staff as partners
- Experiences
- Improvement
- Sharing best practice

<http://www.bettertogetherscotland.com>



Better Together  
Scotland's Patient Experience Programme

### 'Plan' - How can we gather information?



Various techniques

- brief questionnaires
- complaints
- focus groups
- interviews
- patient forum
- patient stories

### 'Plan' – Method



Brief questionnaires

- simple/inexpensive
- responses anonymous, more likely to be honest
- visible comment cards on display board
- opportunity for feedback
- opportunity for improvement and reinforcement of good practice

### 'Plan' - Questions



What was good about your recent visit to the Diabetic Screening Service?  
*(Please be as specific and honest as possible)*

If you could change one thing about your visit to the Diabetic Screening Service, what would it be?  
*(Please be as specific and honest as possible)*

What was not so good about your recent visit to the Diabetic Screening Service?  
*(Please be as specific and honest as possible)*

Any further comments  
*(Please be as specific and honest as possible)*

How would you mark our department out of ten:

## Annex G to DRS Annual Report

### 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

### National Feedback – Service Modifications



- **NHS WI**
  - optometry letter
- **NHS Highland**
  - telephone numbers as a footer because patients complained not all letters had a contact number
  - installation background music in reception area
- **NHS Orkney**
  - new car parking facilities and a hospital project committee has been setup to address hospital signage

### National Feedback – Morale Boosters



- excellent Service and did not have to wait
- thanks to all staff who made my appointment an easy experience
- looking forward to next year
- I wish all Services could be like this one
- keep up the good work
- thank you for keeping an EYE on me (pun intended)
- if I did not have diabetes I would still like to come because of the staff!

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



## **Increasing the uptake of DRS appointments in higher risk South Asian patients in NHS Lothian.**

- Diabetic Retinopathy is a common complication of diabetes affecting the blood vessels of the retina. It is the leading cause of blindness amongst people of a working age in Scotland. However if detected early enough treatment can prevent the progression of the disease and prevent sight loss for many years in most patients.
- Diabetic retinopathy screening for diabetic patients aged 12 and over is carried out by the Diabetic Retinopathy Screening Service (DRS) normally on an annual basis with some patients being seen more often depending on their condition.
- In 2010 there were **237,468** (Scottish Diabetes Survey - 2010<sup>4</sup>) patients aged 12 or over who are diagnosed with diabetes in Scotland. Of these **205,767** were offered an appointment and **175,582** patients were successfully screened by photography.
- In NHS Lothian there are a total number of **38,887** diabetic patients registered on the Soarian system, see Annex 1 (DRS statistics for Feb 2012, NHS Lothian). (The Soarian system is used to call/recall and manage patients who are screened for diabetic retinopathy). After suspensions the total number of eligible patients due to have their eyes screened for NHS Lothian is **31,135**.
- It can be seen from the attached screening uptake report Annex 1 (DRS statistics report Feb 2012, NHS Lothian) that specific higher risk<sup>1,2</sup> ethnic groups have significantly lower than average national and local uptake rates for DRS screening appointments offered.
  - The screening uptake rate (Key Performance Indicator KPI 2) for
  - **NHS average in Scotland = 80.1%**
    - **Overall average uptake for NHS Lothian = 78.3%**
      - Chinese – **80.7%**
      - Pakistani – **74.9%**
      - Indian – **72.4%**
      - Black African- **72.0%**
      - Bangladeshi – **71.2%**
      - Black Caribbean- **66.7%**
- If these patients are not attending DRS appointments for retinopathy screening, it is highly likely that they may also not be attending other diabetes management appointments.
- Patients of South Asian ethnicity are at higher risk<sup>1,2</sup> than others of losing vision from diabetes. Diabetic retinopathy and retinal lesions occur earlier and at higher levels amongst South Asian diabetics compared to Caucasian diabetics<sup>1,2</sup>.
- The objective in encouraging patients to attend for retinopathy screening would be to reduce the risk of sight loss and to reduce the long term costs of diabetes complications developing. Since the number of South Asian patients are relatively small, personalised contact by Minority Ethnic Health Inclusion Service (MEHIS) Link workers is a realistic objective

- Description of the initiative/project, its aims and objectives
  - The aim of this initiative is to increase uptake of DRS screening for patients of South Asian ethnicity in NHS Lothian.
  - The objectives would be to
    1. Recognise barriers to good attendance for these ethnic groups and remove or reduce these where possible
    2. Educate individuals to understand the importance of attending all diabetic management appointments.
    3. Educate patients and staff on the higher risks of certain ethnic groups
    4. Encourage the recording of ethnicity to help target high risk groups.
- Proposed Pilot
  - NHS Lothian's Minority Ethnic Health Inclusion Service (MEHIS) Link workers have successfully increased uptake of Keep Well health checks and Oral Health screening programmes.  
Trained Urdu / Punjabi and Bengoli speaking MEHIS Link workers will contact identified Indian, Pakistani, Bangladeshi and other South Asian patients and invite them to screening appointments.
  - MEHIS will work closely with the DRS service in NHS Lothian
  - Baseline and monthly reports will be produced to monitor progress.
- Outcomes
  - An increase in DRS uptake rate to a level that is at least the average for NHS Lothian. As these groups are at higher risk<sup>1,2</sup> then a higher than average uptake rate would be preferred.
- Lessons we expect to learn
  - Identify barriers to screening take-up from the patient's perspective-(language, importance of location of screening services, female/male staff, etc).
  - Educational needs for DRS staff, other health professionals and patients including their families and carers.
  - Cost effectiveness
  - Adjustments required to DRS systems and procedure, e.g. to ensure 100% ethnic coding.
- Advice to others / things to look out for
  - To review the local ethnic groups and compare attendance with other groups.
  - Review local capability of Link workers to contact high risk ethnic groups.
  - Review local policies and procedures for recording ethnicity.
- Is there potential for the initiative / project to be integrated into the wider work of the organisation?
  - If the South Asian pilot is successful, African and African Caribbean communities could be targeted by MEHIS African Link workers. Although specific high risk ethnic groups are targeted in this proposal, the initiative can be widened to other groups where identified to be below the local average uptake.
- Is there potential for the initiative / project to be replicated in other areas of Scotland?

- Smaller health boards or boards with few high risk minority ethnic patients may not find it cost effective to employ Link workers.
- It is possible to develop MEHIS to provide Link worker support to other Health Boards.
  - Telephone invitations from Link workers could be used for all Health Boards.
  - Link workers could also support health professionals to work cross culturally using telephone or video conferencing facilities.
- Other Health Board areas in Scotland will have different ethnic groups represented within their demographic who may be poor attenders. The outcomes of this initiative will help inform other health boards that pro-active steps can be taken to ensure that high risk ethnic groups within their health boards can be encouraged to attend diabetic management appointments and that any potential barriers for their attendance can be removed or reduced.

#### Contact details

|                           |                                    |
|---------------------------|------------------------------------|
| Mike Black                | Smita Grant                        |
| DRS Service, NHS Scotland | NHS Lothian, MEHIS                 |
| mike.black1@nhs.net       | smita.grant@nhslothian.scot.nhs.uk |
| 01463 255958              | 0131 537 7565                      |

#### References

[1] Stolk RP, van Schooneveld MJ, Cruickshank JK, Hughes AD, Stanton A, Lu J, Patel A, Thom SA, Grobbee DE, Vingerling JR; AdRem Project Team and ADVANCE Management Committee. Retinal vascular lesions in patients of Caucasian and Asian origin with type 2 diabetes: baseline results from the ADVANCE Retinal Measurements (AdRem) study. *Diabetes Care*. 2008;31:708-13.

[2] Raymond NT, Varadhan L, Reynold DR, Bush K, Sankaranarayanan S, Bellary S, Barnett AH, Kumar S, O'Hare JP; UK Asian Diabetes Study Retinopathy Study Group. Higher prevalence of retinopathy in diabetic patients of South Asian ethnicity compared with white Europeans in the community: a cross-sectional study. *Diabetes Care*. 2009;32:410

Annex H to DRS Annual Report

**DRS statistics for NHS Lothian- Feb 2012 (report interval – last 367 days)**

**Screening Uptake**

Report: Board of Treatment 'Lothian' irrespective of Health Board (Board of Residence)

Grouped by: Ethnic Code

Reporting Start Date: 24/02/2011      Reference Date: 24/02/2012      Reporting Interval: 367 days

**KPI 0: Summary Statistics**

|   | ---  | Bangladeshi | Black   | Black     | Chinese | Indian | Not Re- | Other | Other | Other  | Other | Other   | Other | Pakistani | Un-known | White Irish | White | Total |
|---|------|-------------|---------|-----------|---------|--------|---------|-------|-------|--------|-------|---------|-------|-----------|----------|-------------|-------|-------|
|   |      |             | African | Caribbean |         |        | corded  | Asian | Black | Mixed  | White | White   |       |           |          | Scottish    |       |       |
|   |      |             |         |           |         |        |         |       |       | Origin |       | British |       |           |          |             |       |       |
| <b>Total Population (TP)</b>                  | 1867 | 75          | 134     | 6         | 151     | 278    | 9435    | 211   | 177   | 34     | 1127  | 1223    | 3242  | 479       | 5        | 151         | 19292 | 37887 |
| <b>Temporarily suspended (TS)</b>             | 51   | 8           | 9       | 0         | 15      | 21     | 1130    | 18    | 20    | 5      | 121   | 81      | 307   | 58        | 0        | 8           | 1642  | 3494  |
| <b>Permanently suspended (PS)</b>             | 1723 | 8           | 36      | 3         | 20      | 63     | 409     | 26    | 53    | 5      | 28    | 121     | 121   | 20        | 3        | 15          | 1037  | 3691  |
| <b>Temporarily unavailable (TU)</b>           | 47   | 0           | 4       | 0         | 3       | 2      | 126     | 3     | 6     | 0      | 17    | 10      | 30    | 2         | 0        | 1           | 182   | 433   |
| <b>Eligible Population (EP = TP-TS-PS+TU)</b> | 140  | 59          | 93      | 3         | 119     | 196    | 8022    | 170   | 110   | 24     | 995   | 1031    | 2844  | 403       | 2        | 129         | 16795 | 31135 |

**KPI 2: Screening uptake rate**

|   | ---   | Bangladeshi | Black   | Black     | Chinese | Indian | Not Re- | Other | Other | Other  | Other | Other   | Other | Pakistani | Un-    | White Irish | White | Total |
|---|-------|-------------|---------|-----------|---------|--------|---------|-------|-------|--------|-------|---------|-------|-----------|--------|-------------|-------|-------|
|   |       |             | African | Caribbean |         |        | corded  | Asian | Black | Mixed  | White | White   |       | known     |        | Scottish    |       |       |
|   |       |             |         |           |         |        |         |       |       | Origin |       | British |       |           |        |             |       |       |
| <b>People attending at least once (ATT)</b> | 53    | 42          | 67      | 2         | 96      | 142    | 5838    | 118   | 84    | 16     | 789   | 790     | 2276  | 302       | 2      | 102         | 13660 | 24379 |
| <b>Percentage (100 * ATT / EP)</b>          | 37.9% | 71.2%       | 72.0%   | 66.7%     | 80.7%   | 72.4%  | 72.8%   | 69.4% | 76.4% | 66.7%  | 79.3% | 76.6%   | 80.0% | 74.9%     | 100.0% | 79.1%       | 81.3% | 78.3% |



## Annex I to DRS Annual Report

### Evaluation of Management group meeting held on 30<sup>th</sup> Nov 2012

|   |                            |
|---|----------------------------|
| <b>Introduction Session - Dr C Styles, M Black</b>  | <b>Agree</b>               |
| Objectives of session set out clearly   | <b>99%</b>                 |
| Presentation style clear & understandable   | <b>98%</b>                 |
| Timely & appropriate summaries given  | <b>99%</b>                 |
| <b>Where will screening go in the future - Prof G Leese</b>   |                            |
| Objectives of session set out clearly   | <b>100%</b>                |
| Presentation style clear & understandable   | <b>100%</b>                |
| Timely & appropriate summaries given  | <b>100%</b>                |
| <b>Organising OCT Clinics - M Bruce</b>   | <b>Agree</b>               |
| Objectives of session set out clearly   | <b>100%</b>                |
| Presentation style clear & understandable   | <b>100%</b>                |
| Timely & appropriate summaries given  | <b>100%</b>                |
| <b>Improving the value of Screening for Macular Odema using surrogate photographic markers – Dr J Olson</b> | <b>Agree</b>               |
| Objectives of session set out clearly   | <b>100%</b>                |
| Presentation style clear & understandable   | <b>99%</b>                 |
| Timely & appropriate summaries given  | <b>100%</b>                |
| <b>Patient Information leaflet - N Healy</b>  | <b>Agree</b>               |
| Objectives of session set out clearly   | <b>100%</b>                |
| Presentation style clear & understandable   | <b>100%</b>                |
| Timely & appropriate summaries given  | <b>99%</b><br><b>Agree</b> |
| <b>Q &amp; A and closing session</b>  | <b>100%</b>                |
| Presentation style clear & understandable   | <b>100%</b>                |
| Timely & appropriate summaries given  | <b>99%</b>                 |
|   |                            |

## Report on the DRS combined management groups meeting 30<sup>th</sup> Nov 2012

### Introduction

The third combined DRS Management group meeting was held in the Steele Lecture Theatre, Perth Royal Infirmary. The day followed the format of previous events and consisted of a mixture of presentations and discussions with some networking opportunities, tea, coffee and lunch were provided.

There was a limit for the venue on 80 attendees and 62 attended. We had 5 presenters and we are very thankful to those who spoke at the event and took the time in preparing high quality presentations.

The presentations for the day are available on the DRS collaborative website at <http://www.ndrs.scot.nhs.uk/IT/index.htm>

### Summary of the feedback

Of all the total of 62 who attended 25 completed an evaluation form, the feedback was positive.

- The venue was rated as good to excellent by 96% of respondents.
- The catering provided was rated good to excellent by 70% of respondents.
- Presentations were rated as good to excellent by more than 85% of respondents
- Opportunities for discussion was rated as good to excellent by only 60% of respondents
- Networking Opportunities were rated as good to excellent by only 63% of respondents

From the individual comments received it was clear that the presentations were generally well received. The conclusion from the feedback and comments is that the event was relevant and provided good collaborative training opportunities for staff.

The costs for the event are as follows

|                        |                |
|------------------------|----------------|
| Venue and Catering     | £357.50        |
| Materials and Admin    | £50.64         |
| Miscellaneous travel   | £25.50         |
| <b>Total cost</b>      | <b>£433.64</b> |
| Cost per attendee (62) | £6.99          |

\*The 2009 DRS study day cost was £65.50 per attendee.

\*The 2010 DRS study day cost was £59.29 per attendee

\*The 2011 DRS study day cost was £48.67 per attendee

The overall conclusion is that the combined DRS management group event was a welcome and cost efficient opportunity to deliver relevant and specific information and training for staff across Scotland. Funding and staff availability for such events will continue to be a challenge. The delivery of sufficiently diverse workshops and presentations to a relevant depth of knowledge will be key elements of success in future training events.

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