

Level 3 Diploma in Diabetic Retinopathy Screening

Centre Resource Pack

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1 About this document

This document contains the specific details that centres will require to offer the Diploma in Diabetic Screening (7359-03).

This document includes

- centre resource requirements
- learner entry requirements
- information about progression to other qualifications
- unit specifications
- assessment requirements
- assessing learners
- quality assurance
- links to other useful information

Other relevant publications

There are also other City & Guilds documents which contain the latest information regarding the assessment of VRQs:

- *Providing City & Guilds qualifications (PCGQ)* – a guide to centre and scheme approval
- *Ensuring quality* - containing updates on assessment and policy issues
- *City & Guilds centre toolkit* – additional information on running City & Guilds qualifications is given in a CD-ROM, which links to the internet for access to the latest documents, reference materials and templates
- *City & Guilds Directory of Qualifications* – provides details of general regulations, registration and certification procedures and fees. This information also appears on the online qualification administration service for City & Guilds approved centres – The Walled Garden at www.walled-garden.com.

Details of general regulations, registration and certification procedures, including fees, are included in the City & Guilds Directory of Qualifications. This information appears on the online qualification administration service for City & Guilds approved centres - The Walled Garden at www.walled-garden.com.

2 About the qualification

Introduction

This Diploma is intended to be a response to the National Service Framework for Diabetes which set the target in its delivery strategy in 2003 that 'by 2006, a minimum of 80% of people with diabetes to be offered screening for the early detection (and treatment if needed) of diabetic retinopathy as part of a systematic programme that meets national standards, rising to 100% coverage of those at risk of retinopathy by end 2007'. This target was reflected in the Department of Health Performance and Planning Document for 2003-6 and in the recent Department of Health document "National Standards, Local Actions".

In order to fulfil this target there has to be a competent workforce who can provide evidence of skills and knowledge. This can be achieved by setting a national syllabus and assessment standard, so that all providers of training are working towards a nationally accredited qualification. This qualification will allow retinal screeners to obtain regulation and thereby safeguard patients.

It is anticipated that this will encourage the recruitment of more staff for diabetic retinal screening (and so meet the Department of Health targets) and will also aid retention of staff.

Aims of the qualification

The qualification recognises the development of knowledge and practical skills with the aim of improving peoples' practice in whatever form that might take. It aims to provide a clear, coherent framework that relates to the type of complex, practical issues people screening for diabetic retinopathy encounter.

NB. This Diploma has been developed to assess learning outcomes which map to National Occupational Standards. It does not provide materials or recommend training to achieve the learning, although a list of resources is available on the National Screening Programme for Diabetic Retinopathy website at www.nscoretinopathy.org.uk.

3 Learner entry and progression

Target group

This qualification is designed to meet the learning needs of all personnel involved in the identification of sight threatening diabetic retinopathy in the National Screening Programme for Diabetic Retinopathy.

This qualification has been specifically developed to meet the requirements of the National Service Framework (NSF) for new and existing key workers. It is designed to encourage a multi-disciplinary and interprofessional focus for learners from a diverse range of backgrounds.

Learner entry requirements

The National Service Framework (NSF) requires that all retinal screeners in the National Screening Programme are properly trained and accredited. Learners will normally be employed to work in retinopathy screening and will be referred by their NHS trust or by the organisation contracted by the PCT to provide screening. This will presuppose the necessary literacy, numeracy and care skills required to undergo the training.

Progression

Learners may take a further 2 optional units for a wider breadth of knowledge within Diabetic Retinopathy Screening. This could lead to a career pathway in management of a screening programme, to a high level grading post or to aid delivery of this (or other) qualification.

An alternative pathway could be to move into long-term diabetes care or ophthalmic science.

4 Centre requirements

Centre and scheme approval

City & Guilds qualifications may only be offered by approved organisations, called centres. This section provides an outline of the process of applying for approval. Centres must meet a set of quality criteria which include

- Provision of adequate resources, both physical and human
- Clear management information systems
- Effective assessment and quality assurance procedures including learner support and reliable recording systems

An organisation that has not previously offered City & Guilds qualifications will have to apply for approval to become a centre. This is known as **centre approval**. They will also need approval to offer the specific qualification. This is called **scheme approval**. Organisations which are not already centres, must apply for centre and scheme approval at the same time. Existing City & Guilds centres will only need to apply for scheme approval for the specific qualification.

Full details of the procedures and forms for applying for centre and scheme approval are given in Providing City & Guilds qualifications – a guide to centre and scheme approval Providing City & Guilds Qualifications (PCGQ), which is also available on the City & Guilds centre toolkit, or downloadable from the City & Guilds website www.cityandguilds.com.

Regional/national offices will support new centres and appoint a Quality Systems Consultant to guide the centre through the approval process. They will also provide details of the fees applicable for approvals.

Assessments must not be undertaken until centre approval and scheme approval have been obtained.

City & Guilds reserves the right to withdraw scheme or centre approval for reasons of debt, malpractice or non-compliance with City & Guilds' policies, regulations, requirements, procedures and guidelines, or for any reason that may be detrimental to the maintenance of authentic, reliable and valid qualifications or that may prejudice the name of City & Guilds.

Further details of reasons for suspension and withdrawals, procedures and timescales, are contained in *PCGQ*.

Time Constraints

All assignments must be completed and assessed within the learners' period of registration. Centres should advise learners of any internal timescales for the completion and marking of each assignment.

Administration

Administrative details for VRQs are provided in the Directory of Qualifications and Assessment, the VRQ Centre Guide and on the Walled Garden section of the City & Guilds website. Centres should follow this guidance, particularly noting the registration and certification end dates for the qualification.

The City & Guilds scheme number is 7359-03.

Registration and Certification

Learners must be registered at the beginning of their programme using Form S or the Walled Garden using the appropriate scheme /complex number.

City & Guilds will despatch a copy to the centre of the relevant learner guide, which will contain all information relevant to the learner.

When assignments have been successfully completed, learners' results should be submitted on Form S or via the Walled garden. Centres should note that results will not be processed until verification records have been completed.

Full details on the above can be found in the *Directory of Qualifications* published annually by City & Guilds. This is also available on our website www.city-and-guilds.co.uk

Supporting information

Learners have the responsibility to understand the requirements for the qualification and to collect the evidence to meet these requirements.

In order to fully support learners, centres are required to retain copies of assessment records for a period of 3 years after completion of the qualification and certification. All evidence must be signed and dated by the assessor.

Learner support

The learner should meet with a mentor appointed by their local screening programme (e.g. line manager or programme manager within the workplace) regularly on an individual or group basis to review learning and progress needs. The mentor will direct and support the learner and engage experts to act as assessors. The mentor may also act as an assessor for some units.

5 Roles and occupational expertise requirements

Occupational expertise requirements for centre staff

It is important that centre staff meet the criteria for delivering, assessing and internally verifying qualifications set out in PCGQs. There are additional requirements for the qualifications, which centres must comply with.

Internal Quality Assurance

It is important that approved centres have effective quality assurance systems to ensure optimum delivery and assessment of qualifications. Centres are responsible for internal quality assurance, and City & Guilds is responsible for external quality assurance.

Full details and guidance on internal and external quality assurance requirements and procedures, are provided in the *Centre toolkit*. The guidance also explains the tasks, activities and responsibilities of quality assurance staff.

Workplace Assessor requirements

Workplace Assessors must be occupationally competent in the areas of expertise that they will be assessing in this qualification. They will observe, record, discuss, provide constructive criticism, advise and guide the learner in order to confirm that the assessment criteria have been met.

An understanding of training and assessment will also be necessary to assess learners. Assessor guidance will be provided but evidence of relevant training qualifications will be an advantage.

Internal verifier requirements

Internal verifiers must have a health and social care background, preferably in diabetic retinopathy screening, long term conditions or ophthalmology.

External Quality assurance

External quality assurance for the qualification will be provided by a City & Guilds appointed external verifier to ensure that national standards are maintained.

Quality assurance includes initial centre approval, scheme approval, the centre's own procedures for monitoring quality and City & Guilds ongoing monitoring. Details of City & Guilds criteria and the role of centre staff and External Verifiers can be found in *Providing City & Guilds qualifications – a guide to centre and scheme approval*. This can be downloaded from our website www.cityandguilds.com or provided by any of our regional/national offices.

A/V Units (Assessor/Verifier Units)

While the A/V units are valued as qualifications for centre staff, they are not currently a requirement for assessors and verifiers to carry out their respective roles for this qualification.

GOLA system installation support

The person responsible for setting up GOLA online tests within centres should be able to carry out the following:

- Ability to create shared directories and set directory permissions within either Microsoft operating systems Windows 98, NT4, 2000, XP.
- Ability to logon to the local network and GOLA identified PCs with full administrative privileges.
- Ensure unrestricted communication with the internet is possible via ports 80 (http) and port 443 (SSL) to www.catglobal.com (administer proxy rules if required).
- Knowledge of local ISP connectivity and firewall configuration.
- Ability to network computers and manage a domain if required.

6 Course design and delivery

Notional learning hours

This learning time should include all the learning activities which the learner is expected to undertake in order to achieve the learning outcomes, including:

- Formal learning (classes, seminars, tutorials)
- Practical work
- Information retrieval in libraries
- Expected private study and revision
- Work based activities leading to assessment
- All forms of assessment

As long as the requirements of the qualification are met, deliverers may design programmes of study that best meet the needs and capabilities of learners.

Duration of programme

This programme is an in-service, work-based qualification. The duration of the programme will be determined, to some extent, by the number of clinics that the learner can work in to gain the learning outcomes. It is expected that all learners will achieve the qualification within 2 years of appointment to the post.

Recommended delivery strategies

In terms of delivering the qualification, the emphasis is on learner learning by doing, and on building and accrediting a learner's knowledge and skills acquired in the work sector. Learners will be expected to carry out practical activities and to demonstrate knowledge and understanding.

Provided that the requirements for the qualification are met, centres may design course programmes of study in any way that they feel best meets the needs and capabilities of their learners. Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualifications before designing a course programme. It is the responsibility of approved screening programmes to provide resources, mentors and assessors. Assessments must meet the learning outcomes of the qualification.

Mentors and assessors must familiarise themselves with the structure and the content of the qualification.

The Wider Curriculum

It is recommended that centres and screening programmes consider the following:

- ? Key Skills (communication, application of Number, Information Technology, Working with Others, Improving Own Learning and Performance, Problem Solving)
- ? Health and Safety Considerations, in particular to impress to learners that they must preserve the health and safety of others as well as themselves
- ? Spiritual, moral, social and cultural issues
- ? Environmental education

Health and safety

The requirement to follow safe working practices is an integral part of all City & Guilds qualifications and assessments, and it is the responsibility of centres to ensure that all relevant health and safety requirements are in place before learners start practical assessments.

Should a learner fail to follow health and safety practice and procedures during an assessment (e.g. practical assessment, assignment) the test must be stopped and the learner advised of the reasons why. The learner should be informed that they have failed the assessment. Learners may retake the assessment at a later date, at the discretion of the centre. In any cases of doubt, guidance should be sought from the external verifier.

Appeals

Centres must have their own, auditable, appeals procedure. If a learner is not satisfied with the assessor's judgment of his/her competence during the assessment process, or a learner feels that the opportunity for assessment is being denied, the internal verifier and centre co-ordinator should, in the first instance, address the problem.

Further information is given in PCGQ. There is also appeals information for centres and learners on the City & Guilds website at www.cityandguilds.com or available from the Customer Relations department.

Equal opportunities

It is a requirement of centre approval that centres have an equal opportunities policy (see PCGQ). The regulatory authorities require City & Guilds to monitor centres to ensure that equal opportunity policies are being followed.

The City & Guilds equal opportunities policy is set out on the City & Guilds website: www.cityandguilds.com, in PCGQ, in the Directory of Qualifications, and is also available from the City & Guilds Customer Relations department.

Access to assessment

For learners with particular assessment requirements, centres should refer to our policy document *Access to assessment, learners with particular requirements*. This can be downloaded from our website www.cityandguilds.com

Confidentiality

The importance of maintaining confidentiality is paramount. Learners are reminded that the portfolio must not contain any material from which a patient can be identified. Portfolios containing such material will not be considered for the qualification.

7 The qualification structure

This qualification is a vocationally related qualification (VRQ), which has been developed by a multidisciplinary expert reference group* set up by NHSU and comprising clinicians and educationalists.

The award of Diploma in Diabetic Retinopathy Screening comprises the 8 mandatory units and an exit examination. The exit examination can only be taken after achieving all the mandatory units. To gain the qualification, the following 8 mandatory units must be achieved and the exit examination passed.

- Unit 1: National Screening Programmes, Processes and Protocols
- Unit 2: Diabetes
- Unit 3: Anatomy, Physiology and Pathology of the Eye and its Clinical Relevance
- Unit 4: Preparing the patient for Retinal Screening
- Unit 5: Measuring Visual Acuity and Pharmacological Dilatation
- Unit 6: Imaging the Eye
- Unit 7: Detecting Retinal Disease
- Unit 8: Grading Diabetic Retinopathy

The 8 units required to achieve the diploma are expected to take approximately **310** notional learning hours. However, whilst some units are theoretical and could be delivered by lectures, seminars, and/or private study, many are practice based and need to be learned in the work environment.

The following two units are offered as options and are designed for more specific roles within the diabetic retinopathy screening process.

- Unit 9: Slit Lamp Assessment
- Unit 10: Retinal Screening Information Systems

Certificates of unit credit will be issued to learners who are successful in one or more units, but who do not wish to complete the full qualification.

Availability of unit specifications

The units for the qualification are contained in section 13 of this Resource Pack.

Structure of units

The units in the qualification are written in a standard format and comprise

- Rationale
- Unit level
- Credit value
- Statement of notional learning hours
- Connections to Key Skills
- Assessment details
- Learning outcomes which may be practical and/ or knowledge based

*Expert Reference Group

Cynthia Adipue, NHSU administrative support
Steve Aldington, Retinopathy Grading Centre, Imperial College, London
Susan Blakeney, Optometric Advisor, College of Optometrists
Deborah Broadbent, Training and Education Lead, National Screening Programme for Diabetic Retinopathy

Shirley Burnett, British Association of Retinal Screeners
Judy Craven, National Open College Network
Grant Duncan, British Association of Retinal Screeners
Gurpreet Sathya Narayanan, City & Guilds
Lyndy Pullan, Programme Manager, NHSU
John Talbot, Royal College of Ophthalmologists

8 Assessment requirements

Each unit can be assessed and certificated individually using a variety of assessment methods. The assignments are graded at pass, refer and fail and the exit examination is graded as pass or fail.

Assignments

Assessment will include practical demonstration of skills, case studies, feature identification and grading tests, labelling diagrams, written short answer tests and reflective journals.

Evidence should be presented in a portfolio with all evidence signed and dated by the assessor using the appropriate recording forms.

Exit examination

The exit examination is a multiple choice test which is designed to test learners' broad understanding of the knowledge requirements of the qualification in relation to specific situations.

Provision of assessments

City & Guilds provides the following assessments

- On-line, on-demand testing using multiple choice questions
- Assignments which are contained in section 14 of this Resource Pack.

GOLA-Global online assessment

An administrative centre only needs to register once for GOLA. There is a GOLA helpline number - centre enquiries and technical enquiries about GOLA can be directed to this number **0845 241 0070**.

Centres can also e-mail: gola@cityandguilds.com

The following leaflets are available:

A centre's guide to global on-line assessment

A centre's guide to technical requirements for global on-line assessment

A centre's guide to administering global on-line assessment

A learner's guide to global on-line assessment.

Centres looking for general information about GOLA or copies of the GOLA leaflets are advised to use the website www.cityandguilds.com/e-assessment

Grading and marking

Assignments are marked by the centre and are graded Pass/Refer/Fail. The highest grade of success in any task is a pass. The following are definitions of the possible gradings for assignments:

Pass: when all assignment tasks are achieved

Refer: when some tasks in the assignment need to be reworked and

Fail: when after the second attempt there are still a significant number of tasks that have not been completed to the required standard.

Exemption from units

Learners holding qualifications which already cover skills and knowledge for individual units may enable learners to be exempt from these units. In this case the learner will receive recognition but will not receive credits for the unit. The learner will be able to apply for the exit examination without completion of these units. Evidence of the relevant qualification and current practice of skills will be required.

Currently, optometrists registered with the General Optical Council (GOC) will be exempt from units 3 (Anatomy, Physiology, Pathology of the eye and its clinical relevance); 4 (Preparing the patient for retinal screening) and 5 (Measuring Visual Acuity and Pharmacological Dilatation).

Recommended units, matched to job role for learners not wishing to complete the whole qualification

Measurement of visual acuity and drop instillation

Units 1, 2, 4 and 5

Imaging the eye

Units 1, 2, 3, 4, 5 and 6

Grading diabetic retinopathy

Disease / no disease only

Units 1, 2, 3 and 7

Full disease grading

Units 1, 2, 3, 7 and 8

Slit-lamp biomicroscopy of patients with ungradable photographs / diabetic retinopathy

Units 1, 2, 3, 4, 5, 7, 8 and 9

Screening Centre Managers and Administrators

Units 1, 2, 4 and 10

For further information please contact Dr Deborah M Broadbent on deborah.broadbent@rlbuht.nhs.uk

Simulation

The practical activities in Unit 10 may be assessed by simulation.

Test specifications

City & Guilds provides a test specification covering units 1, 2, 3, 5, 6, 7 and 8 of the qualification which is outlined on the following pages.

Test specification

The knowledge requirements of the qualification will be assessed by a multiple choice test covering units 1 to 8 of the qualification.

Please note that there are no questions in the exit exam relating to Unit 4 “Preparing the patient”.

Paper 7359-03-011		
Test Duration 2 hours questions 48		Total
Unit Title	Assessment Criteria	Total number of questions
1. National Screening Programme, processes and protocols	1.1 Explain what screening means and what screening can and cannot detect	1
	1.2 Explain why it is important to screen for diabetic retinopathy and how effective screening is	2
	3.1 Describe the procedures in the screening programme	2
	4.1 Explain why it is necessary to implement effective internal and external quality assurance measures	2
	4.3 List the performance indicators in the National Screening Programme	2
	5.3 Describe the factors that might lead to non-compliance with screening	1
2. Diabetes	1.1 Explain the differences between type 1 and type 2 diabetes in terms of basic symptomatology, pathology and diagnostic criteria	2
	1.2 Describe the treatment options for diabetes	1
	2.1 Describe the signs and symptoms of hypoglycaemia	1
	2.2 Explain how to manage a patient if it is suspected that they could be hypoglycaemic	1
	3.1 Describe the macrovascular and microvascular complications of diabetes, including heart disease and stroke, nephropathy, neuropathy and retinopathy	2
	4.1 Explain the risk factors, including duration of diabetes, glycaemic control, blood pressure control and smoking in the development of retinopathy	2
	4.2 Explain the importance of monitoring patients regularly for these risk factors	1
3. Anatomy, physiology and pathology of the eye and its clinical relevance	1.1 Describe the anatomy of the anterior segment of the eye, including the cornea, iris and lens	1
	1.2 Describe the anatomy of the posterior segment of the eye, including the vitreous body, the retina, the retinal vasculature, the retinal pigment epithelium, the optic nerve, Bruch's membrane and the choroid	3
	1.3 Describe the normal appearance of the fundus and identify the macula and the area of the fundus image within one disc diameter of the centre of the fovea	1
	2.1 Explain how diabetes may affect the function of the retinal vasculature and the retina and the consequences for vision	1
	3.2 Describe the abnormal changes seen in the retina in diabetic retinopathy	4
	3.4 Describe the clinical features of diabetic retinopathy and explain their significance	3
	4.2 Explain the relevance of the following conditions: myopia,	1

	induced hypermetropia and cataract	
	5.2 Describe the relevance of the following conditions: drusen, age-related macular degeneration, choroidal neovascular membrane, choroidal naevus, choroidal melanoma, myelinated nerve fibres, myopic degeneration, old choroiditis, rhegmatogenous retinal detachment and asteroid hyalosis	1
5. Measuring visual acuity and pharmacological dilatation	1.1 Explain why the accurate measurement and recording of visual acuity is essential in screening for diabetic retinopathy	1
	2.1 Select the appropriate visual acuity test to be used depending on the individual's age, co-operation, ability, special needs or local protocols	1
	2.2 Explain the strengths and limitations of the different visual acuity tests	1
	2.3 Explain the significance of the use of an individual's spectacles and/or pinhole in testing visual acuity	1
	5.1 Explain the reasons for pupil dilatation in a screening programme for diabetic retinopathy	1
	6.1 Explain the action of mydriatic eye drops and contra-indications to their use	1
	6.2 Explain how to identify a situation in which pupil dilatation is contra-indicated	1
6. Imaging the eye	2.1 Explain the rationale behind choice of field position for imaging in the screening programme	1
	3.1 Explain the reasons why it may not be possible to obtain retinal images of sufficient quality or quantity for assessment	1
7. Detecting retinal disease	5.3 Correctly identify images with diabetic retinopathy requiring urgent referral	1
8. Grading diabetic retinopathy	2.1 Explain the relevance of the visual acuity measurement to grading for diabetic maculopathy	1
	2.2 Explain how levels of diabetic retinopathy are allocated by grouping of individual lesions	1
	4.1 Explain why it is important to record levels, and how level allocation affects management of the patient	1
Total number of items		48

9 Recording requirements

City & Guilds provides the following forms to help learners and assessors working towards the qualification. They should be photocopied as required for this VRQ.

- | | |
|------------|---|
| Form VRQ 1 | Learner and centre details
Form should be placed at the front of the file/portfolio in which learner assignments are kept |
| Form VRQ 2 | Summary of achievement
Form is used to record the learners on-going completion of units and progress to final achievement. It also allows the internal verifier and external verifier to indicate which units have been sampled for verification purposes. |
| Form VRQ 3 | Learner assessment record
Form is used to record the results of each assignment and feedback to the learner. It can be used for both first and second submission of the assignment where necessary. |
| Form VRQ 4 | Performance evidence record
Form used to record details of activities observed or for which a reflective account has been produced. |

Centres are reminded that forms VRQ 2, 3 and 4 must be safeguarded by the centre throughout the learner's period of assessment and then kept by the centre for a period of three years after completion of the qualification. Learners should be given a photocopy of these completed forms to keep in their file/portfolio.

Form VRQ 1

Learner and centre details

VRQ title.....

City & Guilds number.....Level.....

Learner contact details.....

.....

City & Guilds enrolment number.....

Date enrolled with centre.....

Date registered with City & Guilds.....

Centre name.....

Centre number.....

Centre address.....

.....

.....

.....

Centre telephone number.....Fax number.....

Centre contact/quality assurance co-ordinator (QAC) name.....

Centre contact/quality assurance co-ordinator (QAC) contact details.....

.....

.....

Centre contact/quality assurance co-ordinator (QAC) e-mail address.....

.....

Form VRQ 2

Summary of achievement

Learner name:.....City & Guilds ENR No:.....

Centre name:.....Centre number:.....

Unit	Assignments	Date completed	Pass Fail	IV Signature if sampled	EV Signature If sampled
Unit 1	National Screening Programmes, Processes and Protocols				
Unit 2	Diabetes				
Unit 3	Anatomy, Physiology and Pathology of the Eye and its Clinical Relevance				
Unit 4	Preparing the patient for Retinal Screening				
Unit 5	Measuring Visual Acuity and Pharmacological Dilatation				
Unit 6	Imaging the Eye				
Unit 7	Detecting Retinal Disease				
Unit 8	Grading Diabetic Retinopathy				
Unit 9	Slit Lamp Assessment				
Unit 10	Retinal Screening Information Systems				

All the assignments above have been completed to the required standard and meet the requirements for validity, currency, authenticity and sufficiency

Assessor's name:.....

Assessor signature..... Date:.....

Learner signature:..... Date:.....

Internal verifier signature..... Date.....

Form VRQ 3

Learner assessment record

Unit number and title.....

Learner assessment record – assignment feedback and result sheet

Learner name.....City & Guilds enrolment number.....

Assessor's name.....Centre number.....

Dates assignment submitted 1st.....2nd.....

Assignment	1st submission outcome Pass/Refer	2nd submission outcome Pass/Fail
A		
B		
C		
D		

Assessor/Tutor's comments to learner
Target date and action plan for resubmission (if applicable)
Outcome of second submission

Date of final assessment decision.....

I confirm that this assessment has been completed to the required standard and meets the requirements for validity, currency, authenticity and sufficiency

Tutor/assessor's signature.....Date.....

I confirm that the assignment work to which this result relates is all my own work

Learner signature.....Date.....

Internal verifier signature.....Date.....

Form VRQ4

Performance evidence record

Unit number and title

.....

Learner name

.....

Use this form to record details of activities (tick as appropriate)

? observed by your assessor

? self reflective account

The person who observed your activity must sign and date overleaf.

Links to:	Date of Activity:
Task	Performance evidence

Learner signature Date.....

Assessor signature..... Date.....

Internal Verifier signature (if sampled)..... Date

(photocopy as required)

10 Links to National Occupational Standards

In fulfilling the above learning outcomes for this qualification, dependent on personal job description, the participant, would also meet the following National Occupational Standards:

- HC1 Confirm that the patient and the equipment are ready for screening for diabetic retinopathy
- HC2 Measure visual acuity
- HC3 Instil eye drops to dilate the pupil prior to image capture
- HC4 Obtain images of the retina
- HC5 Assess images of the fundus for evidence of disease
- HC6 Assess images of the fundus to establish the degree of diabetic retinopathy or other abnormality
- HC7 Assess the eye for evidence of disease or abnormality using slit-lamp biomicroscopy
- HC8 Maintain an information system to support retinal screening for patients
- HC9 Arrange appointments to suit patient and organisational needs
- HC10 Receive individuals and carers who attend appointments

And the following occupational standards

- Identify and manage hypoglycaemic emergencies
- Take action to help others to manage hypoglycaemic emergencies
- Promote effective communication and relationships
- Support staff in maintaining their identity and safe personal boundaries

11 Key Skills signposting

The qualification provides opportunities to gather evidence for the accreditation of Key skills as shown in the table below. However, to gain Key Skills certification the Key Skills would need to be taken as additional qualification/s.

D indicates that the unit content provides opportunities for developing and practising a key skill.

E indicates that the unit or assignment provides opportunities for evidencing the Key Skill.

Information technology

e.g. All units except unit 9 provide opportunities to develop and practise or evidencing this key skill.

Communication

e.g. The tasks that are assessed through written assignments and may provide evidence for the written aspects of communication.

Application of number

e.g. There is an opportunity for candidates to evidence the use of number in units 5 -10.

Working with others

e.g. Units 4, 5, 6, 9 and 10 provide opportunities for evidencing this key skill.

Problem solving

e.g. Units 4 -10 provide opportunities for developing and practising or evidencing this key skill.

Improving own learning and performance

e.g. Units 4 -10 provide opportunities for developing and practising or evidencing this key skill.

12 The wider curriculum

Each unit has specific links made to the following issues through the learning outcomes and hence related assignments.

Unit	Spiritual	Moral	Ethical	Social	Legal	Econ	Cultural	H&S	Europe
001	v		v	v	v	v	v		
002	v		v	v			v		
003									
004	v	v	v	v	v	v	v	v	v
005	v	v	v	v	v	v	v	v	v
006	v	v	v	v	v	v	v	v	v
007					v	v		v	v
008					v	v		v	v
009	v	v	v	v	v	v	v	v	v
010	v	v	v	v	v	v	v	v	v

13 Units

Unit 001 National Screening Programme Processes and Protocols

Level 3

Credit value: 3

Rationale

Understanding how a National Screening Programme for Diabetic Retinopathy developed and functions is a key requirement for all personnel involved in the identification and management of diabetic retinopathy.

This unit covers the processes, protocols and targets for national screening for diabetic retinopathy.

Learning outcomes

There are 5 outcomes to this unit. The learner will be able to:

- Understand the purpose of screening
- Understand the impact that screening may have on the patient
- Understand the procedures in their National Screening Programme
- Understand quality assurance in national screening programmes
- Understand the factors which lead to effective screening

Notional learning hours

A total of 30 notional learning hours has been allocated to this unit.

Links to NOS

This unit contributes towards the knowledge and understanding required for the following NOS from the National Service Framework for Diabetes:

? HC1, HC2, HC3, HC4, HC5, HC6, HC7, HC8, HC9 and HC10.

Links to Knowledge and Skills Framework

This unit links with the following dimensions and levels within the NHS Knowledge and Skills Framework

? Dimension HWB6: Assessment and treatment planning Level 1

? Dimension HWB6: Assessment and treatment planning Level 2

? Dimension HWB6: Assessment and treatment planning Level 3

? Dimension G5: Services and project management Level 1

? Dimension G5: Services and project management Level 2

Key Skills

This unit contributes towards the Key Skills in the following areas:

? Information Technology

? Communication

Assessment and grading

This unit will be assessed by:

assignment

- an assignment covering underpinning knowledge and its application and
- a **multiple choice test** covering the underpinning knowledge

Unit 001 National Screening Programme Processes and Protocols

Outcome 1 - Understand the purpose of screening

The learner will be able to

1.1 Explain what screening means and what screening can and cannot detect

1.2 Explain why it is important to screen for diabetic retinopathy and how effective screening is

Unit 001 National Screening Programme Processes and Protocols

Outcome 2 - Understand the impact that screening may have on the patient

The learner will be able to

2.1 Describe the psychological impact that screening might have on the patient

2.2 Describe the process for patients' informed decision making in a screening programme

Unit 001 National Screening Programme Processes and Protocols

Outcome 3 - Understand the procedures in their National Screening Programme

The learner will be able to

3.1 Describe the procedures in the screening programme

3.2 Evaluate the advantages and disadvantages of the methods chosen in your screening programme

Unit 001 National Screening Programme Processes and Protocols

Outcome 4 - Understand quality assurance in national screening programmes

The learner will be able to

- 4.1** Explain why it is necessary to implement effective internal and external quality assurance measures
- 4.2** Describe the process for monitoring the effectiveness of the programme
- 4.3** List the performance indicators in the National Screening Programme
- 4.4** Describe how their own performance will be monitored in the programme and how this will influence the overall performance of the programme.

Unit 001 National Screening Programme Processes and Protocols

Outcome 5 - Understand the factors which lead to effective screening

The learner will be able to

5.1 Describe the National Screening Programme targets for screening in the programme

5.2 Explain the importance of maintaining accurate registers on patients with diabetes

5.3 Describe the factors that might lead to non-compliance with screening

Unit 002 Diabetes
Level 3
Credit value: 3

Rationale

This unit covers the knowledge base about the types and management of diabetes and the risk factors for the development and progression of diabetic retinopathy required by anyone involved in the screening process.

Learning outcomes

There are 4 outcomes to this unit. The learner will be able to:

- Understand the difference between type 1 and type 2 diabetes
- Recognise the symptoms of hypoglycaemia
- Be aware of the long-term complications of diabetes
- Understand the relevance of risk factors in development of diabetic retinopathy

Notional learning hours

A total of 30 notional learning hours has been allocated to this unit.

Links to NOS

This unit contributes towards the knowledge and understanding required for the following NOS from the National Service Framework for Diabetes:
? HC1, HC2, HC3, HC4, HC5, HC6, HC7, HC8, HC9 and HC10.

Links to Knowledge and Skills Framework

This unit links with the following dimensions and levels within the NHS Knowledge and Skills Framework

- ? Dimension HWB6: Assessment and treatment planning Level 1
- ? Dimension HWB6: Assessment and treatment planning Level 2
- ? Dimension HWB6: Assessment and treatment planning Level 3
- ? Dimension G5: Services and project management Level 1
- ? Dimension G5: Services and project management Level 2

Key Skills

This unit contributes towards the Key Skills in the following areas:

- ? Information Technology
- ? Communication

Assessment and grading

This unit will be assessed by:

assignment

- an assignment covering underpinning knowledge and its application and
- a **multiple choice test** covering the underpinning knowledge

Unit 002 Diabetes

Outcome 1 - Understand the difference between type 1 and type 2 diabetes

The learner will be able to

- 1.1** Explain the differences between type 1 and type 2 diabetes in terms of basic symptomatology, pathology and diagnostic criteria
- 1.2** Describe the treatment options for diabetes

Unit 002 Diabetes

Outcome 2 - Recognise the symptoms of hypoglycaemia

The learner will be able to

2.1 Describe the signs and symptoms of hypoglycaemia

2.2 Explain how to manage a patient if it is suspected that they could be hypoglycaemic

Unit 002 Diabetes

Outcome 3 - Be aware of the long-term complications of diabetes

The learner will be able to

- 3.1** Describe the macrovascular and microvascular complications of diabetes, including heart disease and stroke, nephropathy, neuropathy and retinopathy

Unit 002 Diabetes

Outcome 4 - Understand the relevance of risk factors in development of diabetic Retinopathy

The learner will be able to

- 4.1** Explain the risk factors, including duration of diabetes, glycaemic control, blood pressure control and smoking in the development of retinopathy
- 4.2** Explain the importance of monitoring patients regularly for these risk factors
- 4.3** Describe the role of the retinal screener in enabling the patient to obtain advice to help them with the self-management of their diabetes

**Unit 003 Anatomy, Physiology and Pathology of the Eye and its clinical
relevance
Level 3
Credit value: 6**

Rationale

This unit covers the anatomy, physiology, pathology of the eye, and their clinical relevance in relation to diabetic retinopathy and other defined ophthalmic conditions.

Learning outcomes

There are 5 outcomes to this unit. The learner will be able to:

- Know the basic anatomy of the eye
- Know how the physiology of the eye is affected in patients with diabetes
- Recognise the abnormal changes involved in, or that are part of, or that constitute, diabetic retinopathy
- Know how diabetes may cause or be associated with abnormal changes in structures in the eye other than the retina
- Recognise other significant diseases of the retina

Notional learning hours

A total of 60 notional learning hours has been allocated to this unit.

Links to NOS

This unit contributes towards the knowledge and understanding required for the following NOS from the National Service Framework for Diabetes:

? HC2, HC3, HC4, HC5, HC6, HC7.

Links to Knowledge and Skills Framework

This unit links with the following dimensions and levels within the NHS Knowledge and Skills Framework

? Dimension HWB6: Assessment and treatment planning Level 1

? Dimension HWB6: Assessment and treatment planning Level 2

? Dimension HWB6: Assessment and treatment planning Level 3

Key Skills

This unit contributes towards the Key Skills in the following areas:

? Information Technology

? Communication

Exemptions

Optometrists registered with the General Optical Council (GOC) are exempt from taking this unit.

Assessment and grading

This unit will be assessed by:

assignment

- an assignment covering underpinning knowledge and its application and
- a **multiple choice test** covering the underpinning knowledge

Unit 003 Anatomy, Physiology and Pathology of the Eye and its clinical relevance

Outcome 1 - Know the basic anatomy of the eye

The learner will be able to

- 1.1** Describe the anatomy of the anterior segment of the eye, including the cornea, iris and lens
- 1.2** Describe the anatomy of the posterior segment of the eye, including the vitreous body, the retina, the retinal vasculature, the retinal pigment epithelium, the optic nerve, Bruch's membrane and the choroid
- 1.3** Describe the normal appearance of the fundus and identify the macula and the area of the fundus image within one disc diameter of the centre of the fovea
- 1.4** Explain the significance of changes within one disc diameter of the centre of the fovea
- 1.5** Explain the significance of changes in the peripheral retina

Unit 003 Anatomy, Physiology and Pathology of the Eye and its clinical relevance

Outcome 2 - Know how the physiology of the eye is affected in patients with diabetes

The learner will be able to

2.1 Explain how diabetes may affect the function of the retinal vasculature and the retina and the consequences for vision

Unit 003 Anatomy, Physiology and Pathology of the Eye and its clinical relevance

Outcome 3 - Recognise the abnormal changes involved in, or that are part of, or that constitute, diabetic retinopathy

The learner will be able to

- 3.1** Describe changes in the fundus appearance that are not normal
- 3.2** Describe the abnormal changes seen in the retina in diabetic retinopathy
- 3.3** Identify the individual features of diabetic retinopathy including retinal haemorrhages, microaneurysms, cotton wool spots, venous abnormalities, intraretinal microvascular anomalies, new vessels, fibrovascular proliferation, pre-retinal haemorrhage, vitreous haemorrhage, retinal exudates
- 3.4** Describe the clinical features of diabetic retinopathy and explain their significance

Unit 003 Anatomy, Physiology and Pathology of the Eye and its clinical relevance

Outcome 4 - Know how diabetes may cause or be associated with abnormal changes in structures in the eye other than the retina

The learner will be able to

- 4.1** Describe the changes that may occur in the lens in diabetes including induced myopia, induced hypermetropia and cataract
- 4.2** Explain the relevance of these conditions
- 4.3** Describe and identify the changes that may occur in the retinal vasculature (other than diabetic retinopathy) in diabetes
- 4.4** Explain the significance of these changes

Unit 003 Anatomy, Physiology and Pathology of the Eye and its clinical relevance

Outcome 5 Recognise other significant diseases of the retina

The learner will be able to

- 5.1** Identify the following conditions on a retinal image: - drusen, age-related macular degeneration, choroidal neovascular membrane, choroidal naevus, choroidal melanoma, myelinated nerve fibres, myopic degeneration, old choroiditis, rhegmatogenous retinal detachment and asteroid hyalosis
- 5.2** Describe the relevance of these conditions

Unit 004 Preparing the patient for retinal screening

Level 3

Credit value: 2

Rationale

This unit covers the preparation of the patient for screening for diabetic retinopathy in a variety of settings and where patients have particular needs.

Learning outcomes

There are 5 outcomes to this unit. The learner will be able to:

- Check patient's identity
- Understand the ways in which screening is affected by patient needs and the environment
- Communicate effectively with the patient in preparation for screening
- Understand the requirements and processes relating to confidentiality
- Understand their role within the procedure for handling complaints throughout the screening process

Notional learning hours

A total of 20 notional learning hours has been allocated to this unit.

Links to NOS

This unit contributes towards the knowledge and understanding required for the following NOS from the National Service Framework for Diabetes:

? HC1

Links to Knowledge and Skills Framework

This unit links with the following dimensions and levels within the NHS Knowledge and Skills Framework

? Dimension HWB6: Assessment and treatment planning Level 1

Key Skills

This unit contributes towards the Key Skills in the following areas:

- ? Information Technology
- ? Working with others
- ? Improving own learning and performance

Exemptions

Optometrists registered with the General Optical Council (GOC) are exempt from taking this unit.

Assessment and grading

This unit will be assessed by:

assignment

- an assignment covering practical skills and underpinning knowledge

Unit 004 Preparing the patient for retinal screening

Outcome 1 - Check patient's identity

The learner will be able to

1.1 Explain the importance of correctly confirming patient identity

1.2 Demonstrate how to confirm patient identity

Unit 004 Preparing the patient for retinal screening

Outcome 2 - Understand the ways in which screening is affected by patient needs and the environment

The learner will be able to

- 2.1** Explain how the results of the examination may be influenced by factors such as patient age, co-operation, ability or special needs
- 2.2** Describe how lack of privacy can affect an eye test
- 2.3** Explain why it is important to modify the examination if factors which might influence the results of the examination are identified
- 2.4** Demonstrate how to record that the examination has been modified

Unit 004 Preparing the patient for retinal screening

Outcome 3 -Communicate effectively with the patient in preparation for screening

The learner will be able to

- 3.1** Explain why it is important that the patient understands why they are undergoing the particular procedures
- 3.2** Describe bars to understanding and how to overcome them
- 3.3** Explain how to ensure that the patient has understood the nature of the particular tests to be performed
- 3.4** Explain the importance of patient consent to procedures and how to confirm and record that the patient has given consent
- 3.5** Explain how to proceed if the patient did not understand the procedures or did not wish to proceed

Unit 004 Preparing the patient for retinal screening

Outcome 4 - Understand the requirements and processes relating to confidentiality

The learner will be able to

- 4.1** Describe the requirements and processes for the use and storage of patient information and why it is important
- 4.2** Inform the patient who will receive the results of the examination
- 4.3** Explain how to ensure that the patient has understood how the information they have given will be used and stored and who will have access to this information

Unit 004 Preparing the patient for retinal screening

Outcome 5- Understand their role within the procedure for handling complaints throughout the screening process

The learner will be able to

5.1 Describe the local procedure for handling complaints within the organisation

5.2 Describe how they would deal with patient complaints

Unit 005 Measuring Visual Acuity and Pharmacological Dilatation

Level 3

Credit value: 3

Rationale

This unit covers the ability to accurately record the visual acuity using a variety of visual acuity charts and in patients with particular needs, and the ability to safely dilate the pupils.

Learning outcomes

There are 8 outcomes to this unit. The learner will be able to:

- Understand the purpose of visual acuity measurement
- Select the most appropriate test
- Know the importance of patient's posture and position
- Measure the visual acuity in each eye separately
- Understand the purpose of dilation of the pupils
- Understand the action of the drops and contra-indications to their use
- Know the correct procedures for storage of eye drops
- Know the correct way to instil eye drops

Notional learning hours

A total of 30 notional learning hours has been allocated to this unit.

Links to NOS

This unit contributes towards the knowledge and understanding required for the following NOS from the National Service Framework for Diabetes:

? HC1, HC2, HC3

Links to Knowledge and Skills Framework

This unit links with the following dimensions and levels within the NHS Knowledge and Skills Framework

? Dimension HWB6: Assessment and treatment planning Level 1

? Dimension HWB6: Assessment and treatment planning Level 2

Key Skills

This unit contributes towards the Key Skills in the following areas:

- ? Information Technology
- ? Numeracy
- ? Working with others
- ? Improving own learning and performance
- ? Problem Solving

Exemptions

Optometrists registered with the General Optical Council (GOC) are exempt from taking this unit.

Assessment and grading

This unit will be assessed by:

assignment

- an assignment covering practical skills and underpinning knowledge and
- a **multiple choice test** covering the underpinning knowledge

Unit 005 Measuring Visual Acuity and Pharmacological Dilatation

Outcome 1 - Understand the purpose of visual acuity measurement

The learner will be able to

1.1 Explain why the accurate measurement and recording of visual acuity is essential in screening for diabetic retinopathy

Unit 005 Measuring Visual Acuity and Pharmacological Dilatation

Outcome 2- Select the most appropriate test

The learner will be able to

2.1 Select the appropriate visual acuity test to be used depending on the individual's age, co-operation, ability, special needs or local protocols

2.2 Explain the strengths and limitations of the different visual acuity tests

2.3 Explain the significance of the use of an individual's glasses and/or pinhole in testing visual acuity

Unit 005 Measuring Visual Acuity and Pharmacological Dilatation

Outcome 3 - Know the importance of patient's posture and position

The learner will be able to

3.1 Explain why it is important for the patient to be comfortable

3.2 Explain why it is important to position the patient at the correct distance from the test chart

Unit 005 Measuring Visual Acuity and Pharmacological Dilatation

Outcome 4 - Measure the visual acuity in each eye separately

The learner will be able to

4.1 Use the occluder effectively to completely cover the eye not being tested

4.2 Demonstrate how visual acuity is measured

Unit 005 Measuring Visual Acuity and Pharmacological Dilatation

Outcome 5 -Understand the purpose of dilation of the pupils

The learner will be able to

5.1 Explain the reasons for pupil dilatation in a screening programme for diabetic retinopathy

Unit 005 Measuring Visual Acuity and Pharmacological Dilatation

Outcome 6 -Understand the action of the drops and contra-indications to their use

The learner will be able to

- 6.1** Explain the action of mydriatic eye drops and contra-indications to their use
- 6.2** Explain how to identify a situation in which pupil dilatation is contra-indicated
- 6.3** Demonstrate how to determine which eye drop should be used

Unit 005 Measuring Visual Acuity and Pharmacological Dilatation

Outcome 7 - Know the correct procedures for storage of eye drops

The learner will be able to

7.1 Explain the correct procedures for storage of eye drops

Unit 005 Measuring Visual Acuity and Pharmacological Dilatation

Outcome 8 - Know the correct way to instil eye drops

The learner will be able to

8.1 Explain the infection control procedures necessary in the instillation of eye drops

8.2 Explain how to confirm that the eye drop is safe to use

8.3 Demonstrate how to instil eye drops correctly

8.4 Explain how to identify and manage an adverse or critical incident

Unit 006 Imaging the eye

Level 3

Credit value: 6

Rationale

This unit covers the knowledge and skills required to carry out imaging of the retina and anterior segment, so as to support the accurate detection of possible features of diabetic retinopathy and includes practical demonstrations of the necessary skills.

Learning outcomes

There are 3 outcomes to this unit. The learner will be able to:

- Prepare the retinal camera and associated equipment for obtaining images of the eye
- Obtain images of the retina
- Obtain images of the fundus reflex

Notional learning hours

A total of 60 notional learning hours has been allocated to this unit.

Links to NOS

This unit contributes towards the knowledge and understanding required for the following NOS from the National Service Framework for Diabetes:

? HC4

Links to Knowledge and Skills Framework

This unit links with the following dimensions and levels within the NHS Knowledge and Skills Framework

? Dimension HWB6: Assessment and treatment planning Level 3

Key Skills

This unit contributes towards the Key Skills in the following areas:

- ? Information Technology
- ? Numeracy
- ? Working with others
- ? Improving own learning and performance
- ? Problem Solving

Assessment and grading

This unit will be assessed by:

assignment

- an assignment covering practical skills and underpinning knowledge and
- a **multiple choice test** covering the underpinning knowledge

Unit 006 Imaging the eye

Outcome 1 - Prepare the retinal camera and associated equipment for obtaining images of the eye

The learner will be able to

- 1.1** Verify that the equipment is in working order and correctly calibrated
- 1.2** Open the appropriate imaging software package on the retinal camera's computer
- 1.3** Prepare and align the retinal camera for a specific patient imaging session
- 1.4** Prepare a patient's record for the current imaging visit

Unit 006 Imaging the eye

Outcome 2 - Obtain images of the retina

The learner will be able to

- 2.1** Explain the rationale behind choice of field position for imaging in the screening programme
- 2.2** Obtain colour retinal images of sufficient quality and quantity and in the correct positions for both eyes
- 2.3** Explain when it may be appropriate to take additional retinal images to inform diagnosis, according to local protocols
- 2.4** Save the images and complete the session

Unit 006 Imaging the eye

Outcome 3 - Obtain images of the fundus reflex

The learner will be able to

- 3.1** Explain the reasons why it may not be possible to obtain retinal images of sufficient quality or quantity for assessment
- 3.2** Obtain a colour image of the fundus reflex suitable for subsequent assessment of possible media opacities and small pupil size

Unit 007 Detecting Retinal Disease

Level 3

Credit value: 6

Rationale

This unit covers the ability to recognise the normal appearance of the retina and changes in the retina due to diabetic retinopathy, and how the results of the examination will affect the patient.

Learning outcomes

There are 6 outcomes to this unit. The learner will be able to:

- Prepare the equipment for grading for disease
- Check patient identity relates to images
- Use grading software to assess images
- Understand the criteria for assessment of images for clarity, positioning and gradability
- Record the presence or absence of diabetic or other disease according to defined standards
- Record and communicate the results of image assessment

Notional learning hours

A total of 60 notional learning hours has been allocated to this unit.

Links to NOS

This unit contributes towards the knowledge and understanding required for the following NOS from the National Service Framework for Diabetes:

? HC5, HC6, HC7

Links to Knowledge and Skills Framework

This unit links with the following dimensions and levels within the NHS Knowledge and Skills Framework

? Dimension HWB6: Assessment and treatment planning Level 3

Key Skills

This unit contributes towards the Key Skills in the following areas:

- ? Information Technology
- ? Numeracy
- ? Improving own learning and performance
- ? Problem Solving

Assessment and grading

This unit will be assessed by:

assignment

- an assignment covering practical skills and underpinning knowledge and
- a **multiple choice test** covering the underpinning knowledge

Unit 007 Detecting Retinal Disease

Outcome 1 - Prepare the equipment for grading for disease

The learner will be able to

- 1.1** Verify that equipment is in working order and computer screen resolution is set at the appropriate level
- 1.2** Open the appropriate software package on the personal computer

Unit 007 Detecting Retinal Disease

Outcome 2 - Check patient identity relates to images

The learner will be able to

2.1 Verify that the images to be graded relate to the patient details

2.2 Explain the importance of correctly confirming patient identity

2.3 Explain why review of images from a previous screen event may help in the assessment process

Unit 007 Detecting Retinal Disease

Outcome 3 Use grading software to assess images

The learner will be able to

3.1 Navigate correctly through the grading software

3.2 Complete mandatory fields in the software

3.3 Save work

3.4 Describe the importance of correct data entry

3.5 Manage software problems within and without own area of competency and authority

Unit 007 Detecting Retinal Disease

Outcome 4 - Understand the criteria for assessment of images for clarity, positioning and gradability

The learner will be able to

- 4.1** Describe the criteria for assessment of images for clarity, field position and gradability according to national and local standards
- 4.2** Assess images for clarity, field position and gradability according to national and local standards
- 4.3** Explain how the interpretation of images for disease may be compromised if the clarity or field position of the images does not meet national or local criteria
- 4.4** Describe how assessment of images for gradability relates to national and local targets for quality assurance
- 4.5** Manage the results of assessment for clarity, field position and gradability appropriately

Unit 007 Detecting Retinal Disease

Outcome 5- Record the presence or absence of diabetic or other disease according to defined standards

The learner will be able to

- 5.1** Identify all the lesions of diabetic retinopathy as defined by national and local protocols
- 5.2** Identify images with diabetic retinopathy
- 5.3** Correctly identify images with diabetic retinopathy requiring urgent referral
- 5.4** Identify images with other eye disease as defined by national and local protocols
- 5.5** Identify images without diabetic retinopathy and without other eye disease as defined by national and local protocols

Unit 007 Detecting Retinal Disease

Outcome 6 - Record and communicate the results of image assessment

The learner will be able to

- 6.1** Record the presence or absence of diabetic retinopathy and other eye disease
- 6.2** Describe the internal quality assurance process in the organisation
- 6.3** Describe the process for further grading of images if assessment is not the final assessment in the process
- 6.4** Describe how the results of a final assessment will affect the referral and management of the patient
- 6.5** Manage the results of assessment according to local systems

Unit 008 Grading Diabetic Retinopathy

Level 3

Credit value: 2

Rationale

This unit covers the ability to identify and classify the lesions of diabetic retinopathy according to national and local protocols and how to manage the patient according to the grade allocated.

Learning outcomes

There are 4 outcomes to this unit. The learner will be able to:

- Understand the system for grading the level of eye disease in people with diabetes
- Grade level of diabetic retinopathy
- Record the level of diabetic or other eye disease according to defined standards
- Understand the system for communicating results of grading and the impact on patient referral and management

Notional learning hours

A total of 20 notional learning hours has been allocated to this unit.

Links to NOS

This unit contributes towards the knowledge and understanding required for the following NOS from the National Service Framework for Diabetes:

? HC2, HC5, HC6, HC7

Links to Knowledge and Skills Framework

This unit links with the following dimensions and levels within the NHS Knowledge and Skills Framework

? Dimension HWB6: Assessment and treatment planning Level 2

? Dimension HWB6: Assessment and treatment planning Level 3

Key Skills

This unit contributes towards the Key Skills in the following areas:

- ? Information Technology
- ? Numeracy
- ? Improving own learning and performance
- ? Problem Solving

Assessment and grading

This unit will be assessed by:

assignment

- an assignment covering practical skills and underpinning knowledge and
- a **multiple choice test** covering the underpinning knowledge

Unit 008 Grading Diabetic Retinopathy

Outcome 1- Understand the system for grading the level of eye disease in people with diabetes

The learner will be able to

- 1.1** Explain the national and local targets for examination of images for disease
- 1.2** Describe the national and local grading protocol for diabetic retinopathy

Unit 008 Grading Diabetic Retinopathy

Outcome 2 - Grade level of diabetic retinopathy

The learner will be able to

- 2.1** Explain the relevance of the visual acuity measurement to grading for diabetic maculopathy
- 2.2** Explain how levels of diabetic retinopathy are allocated by grouping of individual lesions

Unit 008 Grading Diabetic Retinopathy

Outcome 3 - Record the level of diabetic or other eye disease according to defined standards

The learner will be able to

3.1 Demonstrate how to correctly identify the lesions and record the level of diabetic retinopathy, or verify that an appropriate level has been ascribed by the computer software programme you are using

Unit 008 Grading Diabetic Retinopathy

Outcome 4 - Understand the system for communicating results of grading and the impact on patient referral and management

The learner will be able to

- 4.1** Explain why it is important to record levels, and how level allocation affects management of the patient
- 4.2** Explain who will receive the results of the final examination of images

Unit 009 Slit Lamp Assessment

Level 3

Credit value: 6

Rationale

This unit covers the skills and knowledge required to use a slit lamp to examine the eye for diabetic retinopathy and to ascertain the reason why a digital photograph may be ungradable.

Learning outcomes

There are 6 outcomes to this unit. The learner will be able to:

- Prepare the equipment for an examination for diabetic retinopathy
- Know how to use the slit lamp
- Ensure that the patient understands the nature of, and is ready for, assessment
- Assess the patient and the eye for factors that would prevent adequate photography
- Grade and record level of diabetic retinopathy
- Understand the appropriate arrangements for referral of the patient for follow up or treatment

Notional learning hours

A total of 60 notional learning hours has been allocated to this unit.

Links to NOS

This unit contributes towards the knowledge and understanding required for the following NOS from the National Service Framework for Diabetes:

? HC1, HC3, HC5, HC6, HC7

Links to Knowledge and Skills Framework

This unit links with the following dimensions and levels within the NHS Knowledge and Skills Framework

? Dimension HWB6: Assessment and treatment planning Level 1

? Dimension HWB6: Assessment and treatment planning Level 3

Key Skills

This unit contributes towards the Key Skills in the following areas:

- ? Numeracy
- ? Working with others
- ? Improving own learning and performance
- ? Problem Solving

Assessment and grading

This unit will be assessed by:

assignment

- an assignment covering practical skills and underpinning knowledge

Unit 009 Slit Lamp Assessment

Outcome 1 - Prepare the equipment for an examination for diabetic retinopathy

The learner will be able to

1.1 Verify that the equipment is in working order and correctly calibrated

Unit 009 Slit Lamp Assessment

Outcome 2- Know how to use the slit lamp

The learner will be able to

- 2.1** Explain the basic principles of slit lamp biomicroscopy
- 2.2** Demonstrate how to adjust the eyepieces for personal use
- 2.3** Demonstrate how to position the patient and himself/herself correctly at the slit lamp
- 2.4** Demonstrate how to adjust the angle of the slit beam arm, slit width and length, the light intensity and the magnification
- 2.5** Explain in which circumstances one would make adjustments to the slit-lamp settings
- 2.6** Demonstrate how to examine the anterior chamber of the eye, the lens and the vitreous cavity
- 2.7** Demonstrate how to use indirect lenses to visualise the retina
- 2.8** Explain how to choose which indirect lens to use

Unit 009 Slit Lamp Assessment

Outcome 3 - Ensure that the patient understands the nature of, and is ready for, assessment

The learner will be able to

3.1 Explain the importance of correctly confirming patient identity

3.2 Explain why it is important to modify the examination if factors such as patient age, co-operation, ability, special needs are identified

Unit 009 Slit Lamp Assessment

Outcome 4 - Assess the patient and the eye for factors that would prevent adequate photography

The learner will be able to

4.1 Explain the reasons why it may not be possible to obtain retinal images of sufficient quality or quantity for assessment

4.2 Demonstrate how you would identify the factors that would prevent adequate photography

Unit 009 Slit Lamp Assessment

Outcome 5 - Grade and record level of diabetic retinopathy

The learner will be able to

5.1 Describe the national and local grading protocol for diabetic retinopathy

5.2 Explain the relevance of the visual acuity measurement to grading for diabetic maculopathy

5.3 Explain how levels of diabetic retinopathy are allocated by grouping of individual lesions

5.4 Demonstrate how to correctly identify the lesions and record the level of diabetic retinopathy

Unit 009 Slit Lamp Assessment

Outcome 6 - Understand the appropriate arrangements for referral of the patient for follow up or treatment

The learner will be able to

6.1 Explain how level allocation affects management of the patient

6.2 Explain who will receive the results of this examination

Unit 010 Retinal Screening Information Systems

Level 3

Credit value: 6

Rationale

This unit covers the knowledge and skills required in order to administrate a retinopathy screening programme using electronic information programmes.

Learning outcomes

There are 11 outcomes to this unit. The learner will be able to:

- Understand how to obtain information on who has diabetes in the area covered by the screening programme
- Understand how the electronic information system works
- Understand why it is important to keep the database up to date and how to input information
- Understand the system for making and changing appointments
- Provide information to patients and colleagues
- Know the procedure for dealing with patient complaints
- Know how to provide information to screening centres
- Input data from screening centres
- Generate audit reports for internal and external audit
- Understand the necessity to update and improve the information system
- Understand the requirements for data protection and patient consent

Notional learning hours

A total of 60 notional learning hours has been allocated to this unit.

Links to NOS

This unit contributes towards the knowledge and understanding required for the following NOS from the National Service Framework for Diabetes:

? HC8, HC9, HC10

Links to Knowledge and Skills Framework

This unit links with the following dimensions and levels within the NHS Knowledge and Skills Framework

? Dimension G5: Services and project management Level 1

? Dimension G5: Services and project management Level 1

Key Skills

This unit contributes towards the Key Skills in the following areas:

- ? Information Technology
- ? Numeracy
- ? Working with others
- ? Improving own learning and performance
- ? Problem Solving

Assessment and grading

This unit will be assessed by:

assignment

- an assignment covering practical skills and underpinning knowledge

Unit 010 Retinal Screening Information Systems

Outcome 1- Understand how to obtain information on who has diabetes in the area covered by the screening programme

The learner will be able to

1.1 Explain how a diabetic register is compiled for retinal screening

1.2 Assess the gaps in the records and give the reasons for these gaps

Unit 010 Retinal Screening Information Systems

Outcome 2- Understand how the electronic information system works

The learner will be able to

2.1 Describe the operations that can be performed by the database software

2.2 Identify faults in the operations of the system and either rectify the fault or contact professional expertise when necessary

Unit 010 Retinal Screening Information Systems

Outcome 3 - Understand why it is important to keep the database up to date and how to input information

The learner will be able to

3.1 Explain why it is important to keep the database up to date

3.2 Explain the importance of accurate data input e.g. NHS numbers, complex surnames

3.3 Explain how to obtain accurate information e.g. from GPs

Unit 010 Retinal Screening Information Systems

Outcome 4 - Understand the system for making and changing appointments

The learner will be able to

4.1 Describe the appointments system (this may include a variety of centres) and the system for changing appointments.

Unit 010 Retinal Screening Information Systems

Outcome 5 - Provide information to patients and colleagues

The learner will be able to

5.1 Handle enquiries from patients and colleagues in an efficient and helpful manner

5.2 Explain to patients the importance of attending the screening

5.3 Explain the process of screening; ie what to expect, the effects of the drops, and what to bring to the appointment.

Unit 010 Retinal Screening Information Systems

Outcome 6 - Know the procedure for dealing with patient complaints

The learner will be able to

6.1 Describe the procedure for dealing with patient complaints

Unit 010 Retinal Screening Information Systems

Outcome 7 - Know how to provide information to screening centres

The learner will be able to

7.1 Describe how to provide relevant information to screening centres.

Unit 010 Retinal Screening Information Systems

Outcome 8- Input data from screening centres

The learner will be able to

8.1 Identify and audit non attendance at screening appointment

8.2 Explain importance of checking patient identity

8.3 Input data accurately

8.4 Save data appropriately

8.5 Generate letters and reports for GPs and referrals to ophthalmology

Unit 010 Retinal Screening Information Systems

Outcome 9 - Generate audit reports for internal and external audit

The learner will be able to

9.1 Explain the national quality assurance systems

9.2 Explain how to generate audit reports

Unit 010 Retinal Screening Information Systems

Outcome 10 - Understand the necessity to update and improve the information system

The learner will be able to

10.1 Describe the back-up system for the database

10.2 Explain why it is important to update and improve the information system in relation to evolving patient pathways within the area covered by the screening programme

Unit 010 Retinal Screening Information Systems

Outcome 11 - Understand the requirements for data protection and patient consent

The learner will be able to

11.1 Describe the requirements of the Data Protection Act in working practices

11.2 Describe the need for patient consent to store their records on a central database

14 Assignments

Unit 001 National Screening Programme, processes and protocols

Assignment tasks

The whole assignment must be completed in order to achieve this unit.

This assignment has TWO tasks, A and B.

A. **Write short notes on the following:*

1. What you understand by the general term "screening".
2. What screening for diabetic retinopathy aims to detect, and what it does not aim to detect.
3. Why it is important to screen for diabetic retinopathy.
4. What are the important components of a systematic screening programme for diabetic retinopathy?
5. The individual procedures in the screening process in your national screening programme for diabetic retinopathy.
6. What are the advantages and disadvantages of the procedures that are used?
7. How the effectiveness of an individual screening programme can be measured.
8. Why it is necessary to implement internal and external quality assurance in a national screening programme.
9. List the Performance Indicators for external quality assurance in your national screening programme and explain what each one measures and why.
10. What are the targets for screening provision for each screening programme?

Your completed work should be no more than 2000 words.

B. *Complete a reflective log* describing incidents involving patients where you identified the various issues below, how you managed the situation or how you observed others handling the situation and what you learnt from these incidents.

- How your own performance is being monitored in the screening programme, and the potential impact this might have on patients
- The psychological impact of screening on patients
- The process and importance of informed decision making
- The importance of accurate patient registers
- The factors leading to non-compliance with screening

This may form part of an overall reflective log covering topics in other learning units.

Footnotes

* Special arrangements can be made for evidence to be submitted as a recorded question and answer session with the assessor as an alternative to written responses. Learners wishing to provide such evidence will need to obtain advance permission from City & Guilds.

Unit 002 Diabetes

Assignment tasks

The whole assignment must be completed in order to achieve this unit.

This assignment has TWO tasks, A and B.

A. *Write TWO short case studies* under the following headings, ONE based on a patient with Type 1 diabetes and ONE based on a patient with Type 2 diabetes

- Patient profile (age, sex, ethnic group, occupation)
- Date of diagnosis and age at diagnosis
- Family history of diabetes
- Past history of gestational diabetes
- Presenting symptoms
- Method of diagnosis
- Location of management (GP/hospital)
- Self monitoring (glucose, BP)
- Existing co-morbidity
- Current and past treatment of diabetes, including reasons for changes in management
- Diabetic complications
- Management of risk factors for potential/current complications through life style or medication

Your completed work should be not more than 1500 words.

B. **Write short answers on the following topics:*

1. Describe the microvascular and macrovascular complications of diabetes.
2. Discuss the risk factors for the development of diabetic retinopathy in patients with Type 1 and Type 2 diabetes.
3. a) What is hypoglycaemia?
b) What are the signs & symptoms of hypoglycaemia?
c) How would you treat a patient having a mild (not needing the assistance of another person) hypoglycaemic episode?
d) How would a patient having a severe (needing the assistance of another person) hypoglycaemic attack be managed?
4. a) How would you find out who is responsible for the patient's diabetes education?
b) How would you advise a patient to obtain the education information they needed?

Your completed work should be not more than 1000 words.

Footnotes

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Unit 003 Anatomy, physiology and pathology of the eye and its clinical relevance

Assignment tasks

The whole assignment must be completed in order to achieve this unit.

This assignment has TWO tasks, A and B.

A. **Write short notes on the following topics.*

1. A description of the appearance and normal function of the cornea, iris, lens, vitreous body, retina, retinal vasculature, retinal pigment epithelium, optic nerve, Bruch's membrane and choroid.
2. How diabetes may affect the function of the retinal vasculature and the retina and the consequences for vision.
3. The clinical features of diabetic retinopathy and their significance.
4. Changes in the retinal vasculature in diabetes, other than diabetic retinopathy, and their relevance.

Your completed work should be not more than 2000 words.

B. *Supervised test*

- Correctly label a test set of anatomical diagrams of the eye
- Correctly identify the lesions of diabetic retinopathy on a test set of images
- Correctly identify other relevant retinal lesions on a test set of images.

Footnotes

* Special arrangements can be made for evidence to be submitted as a recorded question and answer session with the assessor as an alternative to written responses. Learners wishing to provide such evidence will need to obtain advance permission from City & Guilds.

Unit 004 Preparing the patient for retinal screening

Assignment tasks

The whole assignment must be completed in order to achieve this unit

This assignment has THREE tasks, A, B and C.

A. **Write short answers to the following questions:*

1. How would you correctly confirm the patient's identity before the screening examination and why is this important?
2. How might the screening examination be adversely influenced by the following?
 - a) The patient's age.
 - b) The patient's physical ability.
 - c) The patient's mental ability (learning difficulty and or mental health problems).
 - d) A general lack of co-operation by the patient.
3. How might the screening examination be modified to deal with the above factors?
4. Why is privacy important in the screening examination?
5. What methods could be employed to ensure that the patient understands what the screening examination involves?
6. What factors may prevent the patient from understanding what the screening examination involves and what effect might a lack of understanding have?
7. Why is it important to obtain patient consent before the screening examination and how should consent be recorded?
8. What should be done if the patient does not consent?
9. How should patient information be stored and who should be able to access it?
10. How would you deal with patient complaints using the appropriate local procedure/protocol?

Your completed work should be not more than 2000 words.

B. *Practical demonstration* to the satisfaction of the assessor (one clinic with a minimum of 8 patients) to include the following:

- Confirmation of patient identity
- Explanation to the patient of what the screening examination involves
- Recording of patient consent
- Recording of modifications to screening examination as necessary
- Explanation to the patient of how information will be used and who will have access to it

C. *Complete a reflective log* describing incidents where you have modified the screening examination to meet with the requirements of individual patients, where you have been unable to or had difficulty obtaining consent and how you have dealt with patient complaints or concerns connected with the screening examination.

Footnotes

* Special arrangements can be made for evidence to be submitted as a recorded question and answer session with the assessor as an alternative to written responses. Learners wishing to provide such evidence will need to obtain advance permission from City & Guilds.

Unit 005 Measuring Visual Acuity and Pharmacological Dilatation

Assignment tasks

The whole assignment must be completed in order to achieve this unit

This assignment has THREE tasks, A, B and C.

A. *Write short answers to the following questions:

1. Why might it be necessary to measure distance visual acuity as part of the screening examination?
2. Under what circumstances might you use the following different methods of visual acuity testing?
 - a) Standard Snellen letter chart.
 - b) E Chart.
 - c) Bailey Lovie logMAR.
 - d) Kay picture test chart.
 - e) Sheridan - Gardner test.
3. Why is visual acuity measured using the patient's spectacles?
4. What is the effect of the pinhole on visual acuity testing?
5. Why is patient comfort important when testing visual acuity?
6. What is the correct distance between the patient and the chart when using a Snellen chart and why is it important that this is adhered to?
7. Why is it better to use an occluder rather than the patient's hand when testing visual acuity?
8. How can pupil dilatation improve the result of the screening examination?
9. What questions should you ask the patient to establish whether the use of mydriatic drops is contra-indicated?
10. How should mydriatic drops be correctly stored and what checks should be made to confirm they are safe to use?
11. What should be done in the event of an adverse or critical incident as a result of the use of mydriatic drops?

Your completed work should be not more than 2000 words.

- B. *Practical demonstration* to the satisfaction of the workplace assessor (two clinics with a minimum of 16 patients) to include the following:
- Appropriate choice of visual acuity test
 - Correct patient positioning
 - Correct use of occluder and pinhole as necessary
 - Check for possible contra-indications to the use of mydriatic drops
 - Proper infection control procedure
 - Correct instillation of eye drops
- C. *Complete a reflective log* describing incidents where you have modified the visual acuity test used to meet with the requirements of individual patients, where you have been unable to or had difficulty obtaining an accurate visual acuity test result, where you have identified possible contra-indications to the use of mydriatic drops and how you have dealt with adverse or critical incidents as a result of the instillation of mydriatic eye drops.

Footnotes

* Special arrangements can be made for evidence to be submitted as a recorded question and answer session with the assessor as an alternative to written responses. Learners wishing to provide such evidence will need to obtain advance permission from City & Guilds.

Unit 006 Imaging the eye

Assignment tasks

The whole assignment must be completed in order to achieve this unit

This assignment has FOUR tasks, A, B, C and D.

A. *Write short answers on the following:

1. Describe the field position /s utilised in your National Screening Programme and the rationale behind the choice of these fields.
2. What factors may cause the operator to take additional retinal images in addition to the required fields during the patient investigation?
3. What factors may prevent the operator from obtaining retinal images of suitable quality or quantity?

Your completed work should be not more than 1000 words.

B. *Practical demonstration* to the satisfaction of the workplace assessor during a single clinic with a minimum of 6 patients, to include the following:

- Confirm correct operation of the imaging equipment
- Check and calibrate the imaging equipment
- Access and open the appropriate software application
- Open/initiate/confirm a new visit session for the patient
- Correctly position the patient relative to equipment
- Correctly use the external and if appropriate internal fixation device(s)
- Correctly orient the patient's eye(s) so as to obtain multi-field images
- Obtain fundus reflex images of both eyes
- Save the images and complete the session

C. *Provide a Practice File* containing appropriate digital retinal and anterior segment images, obtained from no less than 6 individual persons (both eyes), ideally with diabetes, all of whom must have been imaged during a single clinical contact session (i.e. 3-4 hours duration):

- All of the supplied images must be of a minimum quality sufficient to be graded for field positioning and focus/clarity as 'assessable'
- AND images from no less than two of the participants (both eyes) must be of 'perfect' image quality in terms of field positioning and focus/clarity (fully assessable)
- AND, if not otherwise included in the above selection of participants, selection for submission MUST include at least one person from each of the following 4 categories:
 - Person with diabetes whose pupil(s), which after pharmacological dilatation (after waiting no less than 30 minutes), are still less than 6mm diameter
 - Person with diabetes in whom there is visible central nuclear sclerosis, cortical or posterior subcapsular cataract on/near the optical axis in at least one eye
 - Person with diabetes who is over the age of 70 years

- Person with diabetes who is of ethnic origin other than white Caucasian (e.g. Afro-Caribbean, Asian sub-continent)

(N.B. This may therefore require submission of a practice file containing images from a total of up to 10 participants [both eyes])

D. *Complete a reflective log* describing how you have developed your standard procedures and routines for high quality imaging and also describing incidents where you have had to modify your standard procedures so as to obtain the highest quality images possible in patients who would be considered to be difficult to image, taking particular note of the patient groups required for submission in the practice file.

Footnotes

*Special arrangements can be made for evidence to be submitted as a recorded question and answer session with the assessor as an alternative to written responses. Learners wishing to provide such evidence will need to obtain advance permission from City & Guilds.

Unit 007 Detecting retinal disease

Assignment tasks

The whole assignment must be completed in order to achieve this unit.

This assignment has FOUR tasks, A, B, C and D.

A. *Practical demonstration of the following:*

1. How to verify that equipment is in working order and computer screen resolution is set at the appropriate level
2. How to open the appropriate software package on the personal computer
3. How to verify that the images to be graded relate to the patient details
4. How to navigate correctly through the grading software
5. How to complete mandatory fields in the software
6. How to save work
7. How to manage the results of assessment for image gradability appropriately.
8. The process for further grading of images if this assessment is not the final assessment in the process

B. **Write short answers to the following questions:*

1. What are the criteria for assessment of images for gradability according to national standards?
2. How might the interpretation of images for disease be compromised if the clarity or field position of the images does not meet national or local criteria, and how would this affect the patient?
3. Describe the pathways for grading of images in a national screening programme and the qualification of the health professional permitted to perform each step in the grading process.
4. How will the results of a final grading affect the referral and management of the patient?

Your completed work should be not more than 1000 words.

C. *Supervised test*

Grade a sample of images from an image bank for gradability, any retinal disease and fast track retinopathy.

D. *Complete a reflective log* describing situations in which you dealt with, or observed others dealing with, the following issues, and what you learnt from these experiences:

- The importance of correct data entry
- How you managed software problems within and without your own area of competency and authority
- The importance of correctly confirming patient identity on the image
- Where review of images from a previous screen event helped in the assessment process

This may form part of an overall reflective log covering topics in other learning units

Footnotes

* Special arrangements can be made for evidence to be submitted as a recorded question and answer session with the assessor as an alternative to written responses. Learners wishing to provide such evidence will need to obtain advance permission from City & Guilds.

Unit 8 Grading diabetic retinopathy

Assignment tasks

The whole assignment must be completed in order to achieve this unit.

This assignment has THREE tasks, A, B and C.

A Write short notes on the following topics:*

1. Describe the national performance targets for timely examination of images for disease and how this is achieved in your local screening programme
2. Describe your local grading protocol for diabetic retinopathy showing, if appropriate, how levels of diabetic retinopathy are allocated by grouping of individual lesions.
3. Discuss why the various indicators of diabetic maculopathy have been chosen and how effective they are at detecting clinically significant macular oedema (CSMO).
4. Explain who will receive the results of the final examination of images, when, how and why.

Your completed work should be not more than 1500 words.

B. Supervised test

Grade a sample of images from an image bank for individual lesions of diabetic retinopathy and level of retinopathy.

C. Complete a reflective log demonstrating why it is important to record levels, and how level allocation affected the management of the patient and what you learnt from this.

This may form part of an overall reflective log covering topics in other learning units

Footnotes

* Special arrangements can be made for evidence to be submitted as a recorded question and answer session with the assessor as an alternative to written responses. Learners wishing to provide such evidence will need to obtain advance permission from City & Guilds.

Unit 009 Slit Lamp Assessment

Assignment tasks

The whole assignment must be completed in order to achieve this unit.

This assignment has THREE tasks, A, B and C.

A. **Write short answers to cover the following topics:*

1. The basic principles of slit-lamp biomicroscopy including the different structures that can be viewed using direct and indirect illumination
2. The basic principles of slit-lamp binocular indirect ophthalmoscopy and the use of various fundus viewing lenses to include the different magnifications, approximate field of view and working distance for each lens
3. The limitations of photography and strategies that can be used to obtain a fundus view in patients with media opacities
4. How to identify factors that would prevent images of sufficient quality or quantity for assessment

Your completed work should be not more than 2000 words.

B. *Complete a reflective log* and where appropriate describe incidents involving patients where you identified various issues, how you managed the situation or how you observed others handling the situation and what you learnt from these incidents. These issues will include dealing with at least 6 patients with ungradable photographic images. These should include patients who have small pupils, media opacities, or patients who are unable to co-operate well with the examination for reasons such as special needs. In each case you should identify the reason for the poor photographic results. Discuss the future management of these patients including steps, if any, that could be taken to obtain a photographic image of that patient's retina in the future.

This may form part of an overall reflective log covering topics in other learning units.

C. *Supervised test to include a practical demonstration to the satisfaction of the assessor.* The demonstration should include

- How to turn the equipment on and how to change a bulb and fuse(s)
- How to vary the angle of the slit beam arm and how to vary the slit beam length, width, brightness and magnification
- How to adjust the eyepieces for examiner comfort
- How to position the patient and yourself correctly at the slit-lamp
- Examine both eyes of 8 patients with varying degrees of diabetic retinopathy. In each case, demonstrate how to examine the:
 - anterior chamber of the eye
 - lens
 - vitreous cavity
 - retina, using indirect lenses. You will be expected to select an appropriate indirect lens for the purpose. The demonstration should include asking the patient to look in the four cardinal positions of gaze, and obtaining a view of the retina in each position

In each case you will be asked to grade the degree of retinopathy present according to national criteria and explain what further action you would take in the management of that patient.

Footnotes

* Special arrangements can be made for evidence to be submitted as a recorded question and answer session with the assessor as an alternative to written responses. Learners wishing to provide such evidence will need to obtain advance permission from City & Guilds.

Unit 010 Retinal Screening Systems

Assignment tasks

The whole assignment must be completed in order to achieve this unit

This assignment has TWO tasks, A and B.

A. *Write short answers to the following questions:

1. Where would you obtain the names of all diabetic patients in the area covered by the programme?
2. What is the minimum and maximum age for recruitment into the programme for a patient with diabetes?
3. Which patient details need to be recorded onto the database at patient recruitment?
4. How would you check patient's details if a patient's letter is returned by the Royal Mail?
5. How would you identify missing patient data on the database?
6. What problems could arise if the patient data are inaccurate?
7. What is the procedure for dealing with complaints from patients?
8. Which images need to be graded by a second grader?
9. How is screening data on the database backed up?
10. How might the database be enhanced to improve the flow of information in relation to the patient pathway?
11. How do Data Protection Act requirements affect working practice in a diabetic retinopathy screening programme?
12. Why is patient consent required to store their records on the screening database?

Your completed work should be not more than 2000 words.

B. *Practical demonstration* to the satisfaction of the workplace assessor to include the following:

1. How to search the database to find out if a patient is already registered
2. The method used to change patient details on the database when necessary (e.g. change of address)
3. How to enter and save a patient record
4. Ways to check that information is accurate e.g. from GPs
5. How to record where a patient's diabetic eye care is being managed if he/she is not part of the photographic screening programme
6. How to make a patient's screening appointment
7. How to change a patient's appointment
8. How to deal with patient enquiries, including those on the importance of attending for screening and what will happen at the screening appointment
9. How to deal with enquiries from a colleague e.g. an optometrist, a diabetologist
10. How to generate clinic lists and any relevant documentation to screening centres
11. How to operate the recall process and sending of patient letters, GP reports and referral letters to ophthalmology

12. How internal QA reports are generated

13. How to deal with problems in the database software and how to rectify them

Footnotes

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Further information

Further information regarding centre/scheme approval or any aspect of assessment of our qualifications should be referred to the relevant City & Guilds regional/national office:

City & Guilds region/nation	Telephone	Facsimile
Scotland	0131 226 1556	0131 226 1558
North East	0191 402 5100	0191 402 5101
North West	01925 897900	01925 897925
Yorkshire	0113 380 8500	0113 380 8525
Wales	02920 748600	02920 748625
West Midlands	0121 503 8900	0121 359 7734
East Midlands	01773 842900	01773 833030
South West	01823 722200	01823 444231
London and South East	020 7294 2468	020 7294 2419
Southern	020 7294 2468	020 7294 2412
East	01480 308300	01480 308325
Northern Ireland	028 9032 5689	028 9031 2917
City & Guilds Customer Relations Unit	020 7294 2800	020 7294 2400

General information about City & Guilds is available on our website www.city-and-guilds.co.uk or from our Customer Relations team at the address below or by phoning 020 7294 2800 or e-mailing enquiry@city-and-guilds.co.uk.

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