

Ophthalmic Imaging Technician



Competency Pack

Ophthalmic Imaging Technician

Competency sign off

| Competency Number | Name of Competency | Time Length |
|-------------------|---|---------------------------|
| 1 | Clinical Hand Washing | 1 Month |
| 2 | Preparation and Set Up for Clinic | 1 Month |
| 3 | Accurately Testing and Recording Visual Acuities | 1 Month |
| 4 | Accurate use of the Automatic Focimeter Medical device | 1 Month |
| 5 | Instillation of Eye Drops | 2 Months (12 Sessions) |
| 6 | Accurate use of the Auto refractor | 2 Months |
| 7 | Visual Field Testing | 2 Months |
| 8 | Optical Coherence Tomography - Spectralis | 3 Months |
| 9 | Optical Coherence Tomography - Maestro | 3 Months |
| 10 | Corneal Topography | 3 Months |
| 11 | Corneal Specular Microscopy | 3 Months |
| 12 | Retinal Photography - Clarus | 3 Months |
| 14 | Anterior Segment Photography – 50DX | 6 Months |
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| | Additional competencies | |
| 15 | Measuring Intra Ocular Pressure accurately with Icare Tonometer | |
| 16 | Induction of new starters to the department | |
| 17 | Preparation and Set Up for Clinical Activity – Outpatients clinic rooms | |
| 18 | Retinal Photography – 50DX | |

1. HANDWASHING

Aim:

To ensure that every health care worker who has clinical contact with patients decontaminates their hands to the standard required by the task undertaken:

- Social hand washing
- Aseptic techniques preparation
- To be confident and competent in completing Hand Hygiene Audits

All in accordance with The National and Trust guidelines

Method of achievement:

- Through discussion and practical teaching
- One to one observation

Method of Assessment

Through assessment by a practitioner who is competent in hand washing techniques

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
|--|---------------------------------------|---------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Demonstrates knowledge and understanding of Trust Guidelines for hand washing | | | | | |
| Demonstrates knowledge and understanding of potential problems associated with hand washing | | | | | |
| Demonstrates the correct procedure for minimising infection through hand washing and bare below the elbow in ALL clinical settings | | | | | |

Supporting knowledge – Checklist for Hand washing Training

- What is the most important means of preventing the spread of infection in the clinical setting
- When is it necessary to wash hands in the clinical setting
- Describe the five moments of hand hygiene
- What action should you take if you develop an allergy/skin irritation
- What is the difference between transient and resident organisms (flora)?

Hand Washing Demonstration

- Apply lotion to hands – cover all surfaces
- View hands with the ultra violet light
- Perform handwashing
- View hands with ultra violet light, noting areas that glow. These are the area's most frequently missed in handwashing

Repeat as necessary

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| <u>Trainee Signature:</u> | | | | | |
| <u>Mentor Signature:</u> | | | | | |
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2. PREPARATION AND SET UP FOR CLINICAL ACTIVITY

Aim:

To ensure every member of the team understands how to set up the imaging rooms for the start of clinic.

Method of achievement:

- Through discussion and practical teaching
- One to one observation

Method of Assessment

Supervised practice

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
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| Opens three imaging rooms. Prepares work surfaces and imaging modalities, following infection control procedures. | | | | | |
| Turns all imaging modalities on. Logging in to ensure that they are working correctly before the start of clinic. Removing covers and putting on breathe shields. | | | | | |
| Ensure each room has adequate alcohol wipes, tissues and gloves. Top up twice a week. | | | | | |
| Reports damaged or faulty equipment to Team Leader. | | | | | |
| Identify hazards in the corridor or waiting room. Removes or reports to person in charge of the shift. | | | | | |
| At the end of clinic, clean and cover each imaging modality. Removing the Spectralis OCT's breath shield. Tests emergency bell to ensure it is working | | | | | |

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| Updates the cleaning schedule and temperature chart by signing/dating. | | | | | |
| <u>Supporting knowledge – One to one questioning</u> <ul style="list-style-type: none"> • Why is it necessary to date and sign the cleaning schedule • Why is it important to minimise hazards in the working area • Discuss Health & Safety at Work Act, COSHH and Infection Control Policy | | | | | |
| <u>Preparation and Set up – Demonstration</u> <ul style="list-style-type: none"> • Observe full set up and clean down of all three imaging rooms | | | | | |
| <u>Trainee Signature:</u> | | | | | |
| <u>Mentor Signature:</u> | | | | | |
| <u>Date:</u> | | | | | |

3. ACCURATELY TEST AND RECORD VISUAL ACUITIES

Aim:

To measure each patient's BEST distance visual acuity accurately, documenting with or without glasses clearly. This is a base line of each patient's vision to plan the future tests and treatments if required.

IT IS A LEGAL PROCEDURE

Method of achievement:

- Supporting knowledge base
- Observation and one to one teaching

Method of Assessment

Supervised practice

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
|--|---|---|---------------------------------|---------------------------------|---------------------------------|
| Check patient's <ul style="list-style-type: none"> • Name • Date of Birth • Previous VA's if applicable/ available Make sure stickers and front sheet are correct | | | | | |
| Position patient at the specified distance from the vision chart, giving clear and concise explanation to the patient | | | | | |
| Ensure that the vision chart is correctly illuminated and the room is dim to avoid glare | | | | | |
| Find out if the patient has distance glasses or contact lenses and record correctly in the medical notes. | | | | | |
| Ensure the patient is looking through the correct part of the glasses if worn | | | | | |
| Demonstrates sensitivity for the needs of the patient with communication difficulties by selecting an alternative method of vision testing not dependant on the reading or speaking of English | | | | | |
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| <p>Test each eye separately, taking care that the other eye is well occluded, with a clean occluder.</p> <ul style="list-style-type: none"> • When VA is less than 0.2 or 6/9 in any eye use pinhole appropriately • If the patient is unable to see the vision chart, test counting fingers each eye separately – then try pin hole for each eye • If the patient is unable to see count fingers – move to hand movement each eye and document clearly • If the patient is unable to see hand movement – move to pin light and document • Clean occlude after each patient | | | | | |
| <p>Accurately documents in the patient record and signs, dates and times the entry.</p> | | | | | |
| <p>Promptly reports any concerns about the result to the nurse in charge of the shift</p> | | | | | |
| <p><u>Supporting knowledge – One to one questioning</u></p> <ul style="list-style-type: none"> • Discuss the rationale for testing the vision of every patient • Discuss why distance is important when testing vision • Explain why it is necessary to obtain best visual acuity • Explain when it would be advisable to select the following alternative methods of visual acuity testing: <ul style="list-style-type: none"> + Sheridan Gardiner test + Kays picture test + E test • What is the purpose of using pin hole? • Why is it necessary to date, sign and record the time of the vision test? • What are the concerns about the visual acuity results which would require prompt reporting? | | | | | |

- List some causes of the following: + Sudden loss of vision
+ Gradual loss of vision

Testing and recording visual acuity – Demonstration

- One to one teaching
- Observation

SNELLEN

LOGMAR

THOMPSON

Trainee Signature:

Mentor Signature:

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4. FOCIMETER

Aim:

To understand the methods and rationale for how the Focimeter operates and what Focimetry is measuring. How it is measured appropriately and its relevance to understanding and qualifying the Biometric readings.

Method of achievement:

- Through discussion and practical teaching
- One to one observation

Method of Assessment

Supervised practice

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
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| Explain how patients focimetry/refraction readings relate to a patients vision | | | | | |
| Define the expected parameters for focimetry/refraction and the difference between both eyes | | | | | |
| Discuss the reasons why focimetry may not be required | | | | | |
| Measure each lens separately and record refraction to assist in Biometric calculation. | | | | | |
| Problem solve if unable to quantify readings. | | | | | |
| Records measurements correctly in patients notes | | | | | |
| Demonstrates how to turn off the Focimeter | | | | | |
| Manual/ automatic – ability to do both | | | | | |
| Document – signed and dated | | | | | |

Supporting knowledge – Checklist for Focimeter Training

- Demonstrates understanding of the calibration of the TopCom Focimeter device
- Follows the Infection Control Policy for hand washing and cleaning of medical devices
- Give a clear, concise explanation of the procedure/process to the patient
- Gain consent for measurement of patients spectacles
- Analyses results and demonstrates the application of theory to practice regarding the patients refraction and ophthalmic history
- Demonstrates the ability to analyse and record the lens, sphere, cylinder and axis

Testing and recording Focimeter – Demonstration

- One to one teaching
- Observation

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5. INSTILLATION OF EYE DROPS

Aim:

Demonstrates the correct technique for installing eye drops in a clinical setting.

- Tropicamide 1%
- Phenylephrine 2.5%
- Proxymetacaine 0.5%
- Cyclopentolate 1%

Method of achievement:

Formal lecture on the use, action and side effects of the drops

Eye drops are medications given by group clinic/protocol prescriptions

- Gt Tropicamide and Phenylephrine dilate the pupil
- Gt Proxymetacaine is a local anaesthetic
- GT Cyclopentolate is primarily used for children, but can be used for adults with an allergy to Tropicamide

TROPICAMIDE = produces a short acting mydriasis (4-8hrs)


PHENYLEPHRINE = produces a longer acting mydriasis (over 8hrs)

PROXYMETACAINE = anaesthetic

Method of Assessment

- One to one observation of practice
- One to one supervised practice

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
|---|--|------------------------------------|--------------------------|--------------------------|--------------------------|
| On every occasion check the following <ul style="list-style-type: none"> - Name - Date of Birth - Address - Allergies | | | | | |
| Check the triage slip from the nurse/doctor | | | | | |
| On every occasion check the eye drops have been prescribed by a member of the medical team ensuring the following <ul style="list-style-type: none"> - The correct eye drops - The right patient - At the right time - By the right route | | | | | |
| Demonstrate awareness of the need for good hand hygiene and follows infection control policy | | | | | |
| Demonstrates awareness of patient safety By consistently | | | | | |

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| checking if the patient is DRIVING prior to installing the eye drops | | | | | |
| EVEN IF ONE EYE DILATED PATIENT MUST NOT DRIVE | | | | | |
| Ensures the patients head is in the correct position and well supported | | | | | |
| Correctly and gently pulls down the lower eyelid with a clean folded tissue. <ul style="list-style-type: none"> - Asks the patient to look up - Instils a single eye drop into the centre of the lower fornix | | | | | |
| Signs and documents the time the eye drop was given | | | | | |
| Reports any reactions or allergies to a doctor | | | | | |
| <u>Supporting knowledge – One to one questioning</u> <ul style="list-style-type: none"> • Why is your role limited to the above listed eye drops • List some of the visual side effects of pupil dilation and why driving is contraindicated. • What are the contra-indications, allergies or sensitivities to the eye drops? • What are the 3 steps to follow BEFORE it is safe to instil the eye drop in to the patient's eye? • Why is good hand hygiene necessary? • Discuss the importance of signing and timing eye drop instillation • Discuss the different ways of storing eye drops | | | | | |
| <u>Instillation of eye drops – Demonstration</u> <ul style="list-style-type: none"> - One to one teaching - Observation - Information Booklet <div style="text-align: center;">  0728_001.pdf </div> | | | | | |
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6. AUTOREFRACTOR

Aim:

To understand the methods and rationale for how the autorefractor operates and what autorefraction is measuring, how it is measured appropriately and its relevance.

Method of achievement:

- Through discussion and practical teaching
- One to one observation

Method of Assessment

- Supervised practice

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
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| Use clear and concise language in order to position patient correctly at the autorefractor | | | | | |
| Explains to the patient how to focus on the target light | | | | | |
| Demonstrates the ability to use equipment controls to obtain a sharp image of the cornea | | | | | |
| Consistently selects IOL mode on the autorefractor as appropriate | | | | | |
| Tests each eye separately and then prints out results for patient notes. After placing in patient notes enters the date and time of the procedure and signs entry | | | | | |
| Reports any concerns about the results to the relevant doctor | | | | | |

Supporting knowledge – Checklist for Autorefractor Training

- Explain when autorefraction might be performed
- Describe how you would explain the procedure to the patient
- Describe the anatomy of the cornea and what an astigmatism is
- Explain why you might not get a sharp image of the cornea and how you might resolve this
- Explain why it is necessary to put the date and time of the procedure in the patients notes and then sign the entry
- Discuss what concerns you would report to the doctor

Testing and recording Focimeter – Demonstration

- One to one teaching
- Observation

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7. MEASURING INTRA OCULAR PRESSURE ACCURATELY WITH ICARE TONOMETER

Aim:

To understand the methods and rational behind measuring the intra ocular pressure and obtaining the accurate reading

Method of achievement:

- Anatomy and physiology of the cornea
- Formal teaching of Glaucoma

Method of Assessment

Supervised practice

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
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| Correctly positions the patient comfortably and consistently, giving an explanation to enable compliance | | | | | |
| Correctly calibrates ICARE placing the probe using a non-touch technique and ensuring it is magnetised | | | | | |
| Demonstrates dexterity and accurate placement/alignment of the ICARE tonometer and 90 degree angle | | | | | |
| Correctly and consistently interprets and records the measurements, and reports any abnormal findings to the requesting doctor/nurse Top line = measure again Middle line = ≤ 19 acceptable. ≥ 19 re measure Bottom line = Acceptable No line = Perfect | | | | | |
| Demonstrates care of specialised equipment and follows correct aseptic technique | | | | | |
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Supporting knowledge – One to one questioning

- Explain the rational for measuring intra ocular pressures

- Under what circumstances would you not attempt to measure IOP
- Which eye drop could you use when measuring the IOP if a patient was anxious and why
- If correct technique is used and pressure is put on the globe describe how this may affect the reading
- What measures are taken to prevent cross infection
- How does Herpes Simplex and Adenovirus cross infect

Testing and recording visual acuity – Demonstration

- One to one teaching
- Observation

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8. VISUAL FIELDS
ACCURATELY PERFORMS VISUAL FIELD TESTING

Aims: To understand the rationale for assessing the visual field
 To competently carry out a visual field assessment, using the Humphrey Visual Field Analyser (HFT), in order to obtain accurate results

Method of achievement:
 Formal lecture of anatomy of the visual pathway and visual field defects
 Discussion and practical teaching

Method of assessment:
 One to one assessment of practice

| <u>Performance Criteria</u> | <u>Achieved/ Not achieved</u> | <u>Date of initial assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
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| Prepares the environment, sets up and inspects that equipment is ready for use | | | | | |
| Follows the Infection Control Policy for hand hygiene and cleaning of medical devices – including cleaning chin rest, patient buzzer and white plastic eye patch | | | | | |
| Checks patient's: <ul style="list-style-type: none"> • Name • Date of birth | | | | | |
| Correctly inputs patient data and selects appropriate assessment programme | | | | | |
| Correctly inputs patient's refractive error to calculate lens needed for each eye to carry out test. Places correct lens in lens holder. | | | | | |
| Explains the purpose of the test | | | | | |
| Hands buzzer to the patient and explains when they need to press the buzzer | | | | | |
| Uses clear and concise language in order to position the patient correctly at the HFT and if appropriate occludes one eye | | | | | |

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| Explains to the patient how to focus on the target light. | | | | | |
| Monitors patient fixation and encourages compliance | | | | | |
| Tests each eye separately (except Estermann for DVLA) with appropriate lens for each eye. Prints out fields for patient's notes. Records in notes that HFT carried out, which programme and any necessary comments. Date and sign entry. | | | | | |
| Carries out procedure within appropriate time frame | | | | | |
| Reports any concerns to the relevant clinician | | | | | |
| <p><u>Supporting knowledge</u></p> <ul style="list-style-type: none"> • Explain why a visual field might be performed • Describe how you would explain the procedure to a patient • Explain why it is important to position the patient correctly • Explain why it is important to monitor the patient's fixation • Explain why you might get inaccurate visual fields plotted • Explain why it is necessary to put the date, time and your stamp in the notes. | | | | | |
| <u>Trainee Signature:</u> | | | | | |
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9. ACCURATE USE OF THE HEIDELBERG ENGINEERING SPECTRALIS OCT – OPTICAL COHERENCE TOMOGRAPHY
SEH - OUTPATIENTS

Aim:

To produce accurate scans of the macular or macular area. Cross sectional scans will display clear images of the retina’s distinctive layers, whilst displaying a sharp infrared fundus photograph.

To produce an accurate scan of the optic nerve. A retinal nerve fibre layer scan of the highest possible quality will be captured.

To capture sharp and anatomically correct Fundus Autofluorescence photographs.

This allows the medical team to identify the layers of the retina and determines macular thickness. These measurements help with diagnosis. They also provide treatment guidance for glaucoma and diseases of the retina. These retinal diseases include age-related macular degeneration (AMD) and diabetic eye disease

Method of achievement:

- Observation and one to one teaching
- Supervised practice
- Supporting knowledge base – Vitreo-Retinal anatomy

Method of Assessment

Supervised practice
 One to one teaching
 Knowledge base

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
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| Prepares the environment, set up and inspect equipment ready for use for clinic | | | | | |
| Follows the Infection Control Policy for hand washing and cleaning of Medical Devices | | | | | |
| Understands the risk associated with items of equipment and uses them appropriately to each patient | | | | | |
| Understands the importance of checking and confirming correct patient. asking | | | | | |

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| Name | | | | | |
| Date of Birth | | | | | |
| Searching patient by their Hospital Number | | | | | |
| Obtain the correct scan in accordance with patient's ophthalmic condition / clinic you are covering. | | | | | |
| Input the patient details into the machine, confirming with the notes and the patient | | | | | |
| Respect the cultural and spiritual needs of the patient | | | | | |
| Ensure the patient is comfortable and machine is at eye level | | | | | |
| Apply scan on to fovea/ optic nerve correctly | | | | | |
| Move the internal fixation target | | | | | |
| Use external light in case inner fixation target is invisible to the patient | | | | | |
| Modify the scan area by using the mouse. | | | | | |
| Identify the anatomy of the fundus image whilst doing a OCT. | | | | | |
| Encourage and motivate patients to achieve relevant scan | | | | | |
| Continuously monitors and observes the patient during scanning | | | | | |
| Knows the difference between strong, weak and low signal quality scans | | | | | |
| Knows how to delete a scan and modify a patient's details. | | | | | |
| Aware of the limitations of the test and know when to withdraw | | | | | |
| Obtain a correctly positioned macular | | | | | |

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| scan | | | | | |
| Knows how to send scans through to Harmony | | | | | |
| Document what you've done – date, time, signature and stamp | | | | | |
| Evaluate the technical quality of the scan and discuss with the requester as appropriate. | | | | | |
| Carries out the procedure within appropriate timeframe | | | | | |
| Ensures that the OCT is kept clean and covered after each clinic | | | | | |
| <p><u>Supporting knowledge – One to one questioning</u></p> <ul style="list-style-type: none"> • Name the layers of the retina • Fundus photograph – name the anatomy • Describe safety checks related to the imaging machine • How can you support patients inability to comply with visual target instruction • Discuss the difference between imaging a patient who is dilated and another who isn't • Discuss the importance of clearly communicating with the patient • Discuss difficulties that may arise, such as communication barriers, patient positioning etc. • Outline how to report a fault with the machine | | | | | |
| <p><u>Testing and recording visual acuity – Demonstration</u></p> <ul style="list-style-type: none"> • One to one teaching • Direct observation • Evaluation of knowledge base | | | | | |
| <u>Trainee Signature:</u> | | | | | |
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**10. ACCURATE USE OF THE TOPCON MAESTRO OCT –
OPTICAL COHERENCE TOPOGRAPHY**

PRH – Outpatients/SOTC and Hove Polyclinic

Aim:

To produce accurate radial scans of the macula area. Twelve cross sectional scans will display clear images of the retina’s distinctive layers.

To produce an accurate scan of the optic nerve. A retinal nerve fibre layer scan of the highest possible quality will be captured.

This allows the medical team to map and measure their thickness. These measurements help with diagnosis. They also provide treatment guidance for glaucoma and diseases of the retina. These retinal diseases include age-related macular degeneration (AMD) and diabetic eye disease

Method of achievement:

- Observation and one to one teaching
- Supervised practice
- Supporting knowledge base – Vitreo-Retinal anatomy

Method of Assessment

Supervised practice
One to one teaching
Knowledge base

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
|---|---------------------------------------|---------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Prepare the environment, set up and inspect equipment ready for use for clinic | | | | | |
| Follows the Infection Control Policy for hand washing and cleaning of Medical Devices | | | | | |
| Understands the risk associated with items of equipment and uses them appropriately to each patient | | | | | |
| Understands the importance of checking and confirming correct patient. asking Name Date of Birth | | | | | |
| Searching patient by their Hospital Number | | | | | |

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| Obtain the correct scan in accordance with patient's ophthalmic condition / clinic you are covering. | | | | | |
| Input the patient details into the machine, confirming with the notes and the patient | | | | | |
| Respect the cultural and spiritual needs of the patient | | | | | |
| Ensure the patient is comfortable and machine is at eye level | | | | | |
| Apply scan on to fovea/ optic nerve correctly | | | | | |
| Move the internal fixation target | | | | | |
| Use external light in case inner fixation target is invisible to the patient | | | | | |
| Modify the scan area by using the touchscreen. | | | | | |
| Identify the anatomy of the fundus image whilst doing a OCT. | | | | | |
| Encourage and motivate patients to achieve relevant scan | | | | | |
| Continuously monitors and observes the patient during scanning | | | | | |
| Knows the difference between strong, weak and low signal quality scans | | | | | |
| Knows how to delete a scan and modify a patient's details. | | | | | |
| Aware of the limitations of the test and know when to withdraw | | | | | |
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| Obtain a correctly positioned macula scan | | | | | |
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| Knows how to send scans through to Harmony | | | | | |
| Document what you've done – date, time, signature and stamp | | | | | |
| Evaluate the technical quality of the scan and discuss with the requester as required | | | | | |
| Carries out the procedure within appropriate timeframe | | | | | |
| Ensures that the OCT is kept clean and covered after each clinic | | | | | |
| <p><u>Supporting knowledge – One to one questioning</u></p> <ul style="list-style-type: none"> • Name the layers of the retina • Fundus photograph – name the anatomy • Describe safety checks related to the imaging machine • How can you support patients inability to comply with visual target instruction • Discuss the difference between imaging a patient who is dilated and another who isn't • How to report a fault with the machine | | | | | |
| <p><u>Testing and recording visual acuity – Demonstration</u></p> <ul style="list-style-type: none"> • One to one teaching • Direct observation • Evaluation of knowledge base | | | | | |
| <u>Trainee Signature:</u> | | | | | |
| <u>Mentor Signature:</u> | | | | | |
| <u>Date:</u> | | | | | |

11. CORNEAL TOPOGRAPHY

Aim:

To understand the different types of Topography performed, inclusive of the Anatomy and Physiology.

Method of achievement:

- Understanding of types of Topography.
- Understand the readings.

Method of Assessment

- Supervised practice.
- One to one teaching.
- Knowledge base.

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
|---|---------------------------------------|---------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Prepare the environment, set up and inspect equipment ready for use for clinic. | | | | | |
| Follows the Infection Control Policy for hand washing and cleaning of Medical Devices. | | | | | |
| Understands the risk associated with items of equipment and uses them appropriately to each patient. | | | | | |
| Understand importance of checking and confirming correct patient asking for: Name Date of Birth | | | | | |
| Input the patient details into the machine confirming with the notes and the patient. | | | | | |
| Obtain the correct scan in accordance with patient's ophthalmic condition or practitioner's request. | | | | | |
| Respect the cultural and spiritual needs of the patient. | | | | | |
| Ensure the patient is comfortable and machine is at eye level. | | | | | |
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|--|--|--|--|--|--|
| Ensuring the patient maintains correction patient positioning. | | | | | |
| Apply scan to the central aspect of the cornea. | | | | | |
| Encourage and motivate patients to achieve relevant scan. | | | | | |
| Continuously monitors and observes the patient during scanning. | | | | | |
| Know the difference between strong, weak and low signal quality scans. | | | | | |
| Aware of the limitations of the test and know when to withdraw. | | | | | |
| Aware when the eyelid is interrupting the image quality. | | | | | |
| Evaluate the technical quality of the scan and discuss with the requester. | | | | | |
| Carries out the procedure within appropriate time frame. | | | | | |
| Knows how to send through to Harmony | | | | | |
| Documents in notes – date, time, Pentacam, signature and your stamp | | | | | |
| Ensures that the Topography machine is kept clean. | | | | | |

Supporting knowledge – One to one questioning

- Name the layers of the cornea.
- Discuss the reason for obtaining the different refractive outcomes.
- Describe safety checks related to the imaging machine.
- How can you support patient's inability to comply with visual target instruction?
- What concerns about Topography result would require prompt reporting?
- Understands the patient's condition in relation to each scan?

Testing and recording visual acuity – Demonstration

- One to one teaching.
- Direct observation.
- Evaluation of knowledge base.

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| <u>Trainee Signature:</u> | | | | | |
| <u>Mentor Signature:</u> | | | | | |
| <u>Date:</u> | | | | | |

12. SPECULAR MICROSCOPY

Aim:

To understand the different rationales for performing specular microscopy, inclusive of the relevant Anatomy and Physiology.

Method of achievement:

- Understanding of the specular microscope.
- Understand the readings.

Method of Assessment

- Supervised practice.
- One to one teaching.
- Knowledge base.

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
|--|---------------------------------------|---------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Prepares the environment, set up and inspect equipment ready for use for clinic. | | | | | |
| Follows the Infection Control Policy for hand washing and cleaning of Medical Devices. | | | | | |
| Understands the risk associated with items of equipment and uses them appropriately to each patient. | | | | | |
| Understand importance of checking and confirming correct patient asking for: Name Date of Birth Hospital Number | | | | | |
| Input the patient details in to the machine confirming with the notes and the patient. | | | | | |
| Obtain the correct scan in concordance with patient's ophthalmic condition or practitioner's request. | | | | | |
| Respect the cultural and spiritual needs of the patients. | | | | | |
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| Ensure the patient is comfortable and machine is at eye level. | | | | | |
| Apply scan on to central aspect of the corneal. | | | | | |
| Correctly position the patient and explain where you need them to look | | | | | |
| Encourage and motivate patients to achieve relevant scan. | | | | | |
| Continuously monitors and observes the patient during scanning. | | | | | |
| Know the difference between strong, weak and low signal quality scans. | | | | | |
| Aware of the limitations of the test and know when to withdraw. | | | | | |
| Aware when the eyelid is interrupting the image quality. | | | | | |
| Evaluate the technical quality of the scan and discuss with the requester. | | | | | |
| Carries out the procedure within appropriate time frame. | | | | | |
| Knows how to send scans through to Harmony | | | | | |
| Documents in notes – date, time, anterior photograph, signature and your stamp | | | | | |
| Ensures that the corneal specular microscopy is kept clean. | | | | | |
| <p><u>Supporting knowledge – One to one questioning</u></p> <ul style="list-style-type: none"> • Name the layers of the cornea. • Discuss the reason for obtaining the different refractive outcomes. • Cover safety checks related to the imaging machine. • How can you support patient's inability to comply with visual target instruction? • What concerns about Topography the result would require prompt reporting. | | | | | |

- Understands the patient's condition in relation to each scan.

Testing and recording visual acuity – Demonstration

- One to one teaching.
- Direct observation.
- Evaluation of knowledge base.

Trainee Signature:

Mentor Signature:

Date:

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13. RETINAL PHOTOGRAPHY USING THE CLARUS WIDE-FIELD CAMERA

Aim:

The Clarus wide-field camera is used to obtain wide-field colour fundus photographs of the patient's retina, in order to record and demonstrate a wide spectrum of retinal disease such as diabetic retinopathy, age related macular degeneration (AMD) retinal bleeds, naevae, retinal detachments, venous and arterial occlusions.

Method of achievement:

- Observation and one to one teaching
- Supervised practice
- Supporting knowledge base

Method of Assessment

Supervised practice

One to one teaching

Knowledge base

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
|---|---------------------------------------|---------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Explains the function of the Clarus Widefield camera and the difference between this and an ordinary retinal camera. | | | | | |
| Explain the process of the test procedure and the preparation. | | | | | |
| Have an applied knowledge of manual handling. | | | | | |
| Explain the basic anatomical structures of the retina as seen on an Clarus image (Optic disc, fovea, macula, inferior and superior arcade, superior and inferior, nasal and temporal regions) | | | | | |
| Prepare the environment, set up and inspect equipment ready for use for clinic. Follows the Infection Control Policy for cleaning Medical Devices. | | | | | |
| Reflect on the possible difficulties that can arise when performing this test (for example: eye movement, incorrect positioning) and discuss problem-solving the issues. | | | | | |
| Appraise the advice and action you would seek should any complication occur (for example, inability to obtain readings and photographs not sent to OIS Merge). | | | | | |
| Discuss your role and responsibilities with reference to the above and your legal position as an ophthalmic technician. | | | | | |
| Prepare environment and individual and ensure the Clarus and computer | | | | | |

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| are in full working order. Working environment is free from hazards and the patient is safe (Not wearing any glasses, eye dilated if necessary). | | | | | |
| Follows the Infection Control Policy for hand washing and cleaning of Medical Devices | | | | | |
| Undertakes standard infection prevention procedures relevant to this procedure (Handwashing, machine cleaning etc.) Ref https://nww.bsuh.nhs.uk/clinical/teams-and-departments/infection-prevention/ | | | | | |
| Introduce themselves and confirms patient's D.O.B, explains procedure clearly including positioning of patient's head, the need to keeping head straight, where to look to view the fixation target. | | | | | |
| Obtains verbal consent from patient/carer. | | | | | |
| Develop strategies to overcome complex communication issues to be effective with both patient and staff alike. | | | | | |
| Understands the risk associated with items of equipment and uses them appropriately to each patient | | | | | |
| Position and align patient correctly ensuring patient is comfortable (this may need physical positioning of patient's head). | | | | | |
| Understands the difference and reasoning to choose between WF and UWF. | | | | | |
| Saves images and sends across to Harmony | | | | | |
| Document what you've done – date, time, signature and stamp | | | | | |
| Input the patient details in to the machine confirming with the notes and the patient | | | | | |
| Respect the cultural and spiritual needs of the patient | | | | | |
| Use external light in case inner fixation target is invisible to the patient | | | | | |
| Obtain a good focus and flash level | | | | | |
| Encourage and motivate patients to achieve relevant photographs | | | | | |
| Aware of the limitations of the test and know when to withdraw | | | | | |
| Carries out the procedure within appropriate timeframe | | | | | |
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| Ensures that the Clarus is kept clean and covered after each clinic | | | | | |
| <u>Supporting knowledge – One to one questioning</u> <ul style="list-style-type: none"> • Identify posterior anatomy • Discuss the reason for dilating the pupils with mydriatic drops • Discuss safety checks related to the imaging machine • How can you support patients inability to comply with visual target instruction? • What concerns about the retinal image would require prompt reporting? • | | | | | |
| <u>Testing and recording visual acuity – Demonstration</u> <ul style="list-style-type: none"> • One to one teaching • Direct observation • Evaluation of knowledge base | | | | | |
| <u>Trainee Signature:</u> | | | | | |
| <u>Mentor Signature:</u> | | | | | |
| <u>Date:</u> | | | | | |

14. ANTERIOR SEGMENT PHOTOGRAPHY – 50DX RETINAL CAMERA

Aim:

To accurately document and record conditions such as, pterygium, naevi, conjunctival contraction, keratitis and styes, on the anterior of the eye. These photographs are then used for comparison and teaching purposes.

Method of achievement:

- Observation and one to one teaching
- Supervised practice
- Supporting knowledge base

Method of Assessment

Supervised practice
One to one teaching
Knowledge base

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
|--|---------------------------------------|---------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Explains the function of the anterior segment photograph. | | | | | |
| Able to understand clinician's request, so the correct area is photographed. Clarifies with clinician if necessary. | | | | | |
| Explain the process of the test procedure and the preparation. | | | | | |
| Have an applied knowledge of manual handling. | | | | | |
| Explain the basic anatomical structures of the anterior of the eye. | | | | | |
| Prepares the environment, set up and inspect equipment ready for use for clinic | | | | | |
| Reflect on the possible difficulties that can arise when performing this test (for example: eye movement, incorrect positioning) and discuss problem-solving the issues. | | | | | |
| Appraise the advice and action you would seek should any complication occur (for example, inability to obtain photographs). | | | | | |
| Discuss your role and | | | | | |

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| responsibilities with reference to the above and your legal position as an ophthalmic technician. | | | | | |
| Prepare environment and individual and ensure the retinal camera and computer are in full working order. Working environment is free from hazards and the patient is safe (Not wearing any glasses, eye dilated if necessary). | | | | | |
| Follows the Infection Control Policy for hand washing and cleaning of Medical Devices | | | | | |
| Undertakes standard infection prevention procedures relevant to this procedure (Handwashing, machine cleaning etc.) Ref https://nww.bsuh.nhs.uk/clinical/teams-and-departments/infection-prevention/ | | | | | |
| Introduce themselves and confirms patient's D.O.B, explains procedure clearly including positioning of patient's head, the need to keeping head straight, where to look to view the fixation target. | | | | | |
| Obtains verbal consent from patient/ carer. | | | | | |
| Develop strategies to overcome complex communication issues to be effective with both patient and staff alike. | | | | | |
| Understands the risk associated with items of equipment and uses them appropriately to each patient | | | | | |
| Position and align patient correctly ensuring patient is comfortable | | | | | |
| Maintains correct infection control measures as stipulated by local Trust | | | | | |

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| policy https://nww.bsuh.nhs.uk/clinical/teams-and-departments/infection-prevention/ | | | | | |
| Input the patient details in to the machine confirming with the notes and the patient | | | | | |
| Respect the cultural and spiritual needs of the patient | | | | | |
| Obtain a good focus and flash level | | | | | |
| Encourage and motivate patients to achieve relevant photographs | | | | | |
| Aware of the limitations of the test and know when to withdraw | | | | | |
| Carries out the procedure within appropriate timeframe | | | | | |
| Saves images and sends across to Harmony | | | | | |
| Documents in notes – date, time, anterior photograph, signature and your stamp | | | | | |
| Ensures that the device is kept clean | | | | | |
| <p><u>Supporting knowledge – One to one questioning</u></p> <ul style="list-style-type: none"> • Identify anterior anatomy • Discuss the reason for not dilating the pupils with mydriatic drops • Discuss understanding the clinician’s request and what to do if it is unclear • Discuss what you do if your struggling to position the patient on the machine • Cover safety checks related to the imaging machine • How can you support patients inability to comply with visual target instruction • | | | | | |
| <p><u>Testing and recording visual acuity – Demonstration</u></p> <ul style="list-style-type: none"> • One to one teaching • Direct observation • Evaluation of knowledge base | | | | | |
| <u>Trainee Signature:</u> | | | | | |
| <u>Mentor Signature:</u> | | | | | |
| <u>Date:</u> | | | | | |

Additional Competencies

15. PREPARATION AND SET UP FOR CLINICAL ACTIVITY

Aim:

To ensure every member of the team understands what equipment is required to set up the clinical rooms

Method of achievement:

11. Through discussion and practical teaching

One to one observation

Method of Assessment

Supervised practice

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
|--|---------------------------------------|---------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Opens rooms, prepares work surfaces and slit lamps, following infection control procedures. TURN ALL EQUIPMENT ON | | | | | |
| Ensure each cubical is equipped with the following: 12. Check POD is set up as per list including topping up drops 13. Tonometer heads disposable 14. Goldman Tonometer 15. Paper bag 16. Tissues 17. Gel tears 18. Tristel system X4 items 19. Occluder 20. Alcohol wipes 21. Dictaphone (if applicable) 22. TCI and outcome forms 23. Doctors tray if applicable 24. Patient information leaflets 25. Extra items as per room list | | | | | |
| Consistently checks the accurate positioning of the patients chair with the slit lamp and vision testing chart | | | | | |
| Check the calibration of | | | | | |

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| the applanation Tonometer | | | | | |
| Reports damaged or faulty equipment to the person in charge of the shift | | | | | |
| Identify hazards in the corridor or waiting room. Removes or reports to person in charge of the shift | | | | | |
| At the end of each clinic, constantly cleans each slit lamp and desk with the correct wipes, and all items to be returned to “home” bases | | | | | |
| <p><u>Supporting knowledge – One to one questioning</u></p> <ul style="list-style-type: none"> • Explain the different substances that are used to clean the slit lamps, tables and lenses • Why is it necessary to date and sign the cleaning schedule • Why is it important to minimise hazards in the working area • Discuss Health & Safety at Work Act, COSHH and Infection Control Policy | | | | | |
| <p><u>Preparation and Set up – Demonstration</u></p> <ul style="list-style-type: none"> • Observe full set up and clean down of two clinical prep rooms | | | | | |
| <u>Trainee Signature:</u> | | | | | |
| <u>Mentor Signature:</u> | | | | | |
| <u>Date:</u> | | | | | |

17. MEASURING INTRA OCULAR PRESSURE ACCURATELY WITH ICARE TONOMETER

Aim:

To understand the methods and rational behind measuring the intra ocular pressure and obtaining the accurate reading

Method of achievement:

- Anatomy and physiology of the cornea
- Formal teaching of Glaucoma

Method of Assessment

Supervised practice

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
|---|---------------------------------------|---------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Correctly positions the patient comfortably and consistently, giving an explanation to enable compliance | | | | | |
| Correctly calibrates ICARE placing the probe using a non-touch technique and ensuring it is magnetised | | | | | |
| Demonstrates dexterity and accurate placement/alignment of the ICARE tonometer and 90 degree angle | | | | | |
| Correctly and consistently interprets and records the measurements, and reports any abnormal findings to the requesting doctor/nurse Top line = measure again Middle line = ≤ 19 acceptable. ≥ 19 re measure Bottom line = Acceptable No line = Perfect | | | | | |
| Demonstrates care of specialised equipment and follows correct aseptic technique | | | | | |

Supporting knowledge – One to one questioning

- Explain the rational for measuring intra ocular pressures
- Under what circumstances would you not attempt to measure IOP
- Which eye drop could you use when measuring the IOP if a patient was anxious and

why

- If correct technique is used and pressure is put on the globe describe how this may affect the reading
- What measures are taken to prevent cross infection
- How does Herpes Simplex and Adenovirus cross infect

Testing and recording visual acuity – Demonstration

- One to one teaching
- Observation

Trainee Signature:

Mentor Signature:

Date:

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18. RETINAL PHOTOGRAPHY – 50DX RETINAL CAMERA

Aim:

To accurately document the posterior pole, optic nerve and macula, applying the correct composition, exposure and alignment. These photographs are used for monitoring and teaching purposes.

Method of achievement:

- Observation and one to one teaching
- Supervised practice
- Supporting knowledge base

Method of Assessment

Supervised practice
One to one teaching
Knowledge base

| <u>Performance Criteria</u> | <u>Achieved / Not achieved</u> | <u>Date initial Assessment</u> | <u>Review date 1</u> | <u>Review date 2</u> | <u>Review date 3</u> |
|--|---------------------------------------|---------------------------------------|-----------------------------|-----------------------------|-----------------------------|
| Explains the function of the anterior segment photograph. | | | | | |
| Able to understand clinician's request, so the correct area is photographed. Clarifies with clinician if necessary. | | | | | |
| Explain the process of the test procedure and the preparation. | | | | | |
| Have an applied knowledge of manual handling. | | | | | |
| Explain the basic anatomical structures of the posterior of the eye. | | | | | |
| Prepares the environment, set up and inspect equipment ready for use for clinic | | | | | |
| Reflect on the possible difficulties that can arise when performing this test (for example: dilation, incorrect positioning) and discuss problem-solving the issues. | | | | | |
| Appraise the advice and action you would seek should any complication occur (for example, inability to obtain photographs). | | | | | |
| Discuss your role and responsibilities with reference to the above | | | | | |

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| and your legal position as an ophthalmic technician. | | | | | |
| Prepare environment and individual and ensure the retinal camera and computer are in full working order. Working environment is free from hazards and the patient is safe (Not wearing any glasses, eye dilated if necessary). | | | | | |
| Follows the Infection Control Policy for hand washing and cleaning of Medical Devices | | | | | |
| Undertakes standard infection prevention procedures relevant to this procedure (Handwashing, machine cleaning etc.) Ref https://nww.bsuh.nhs.uk/clinical/teams-and-departments/infection-prevention/ | | | | | |
| Introduce themselves and confirms patient's D.O.B, explains procedure clearly including positioning of patient's head, the need to keeping head straight, where to look to view the fixation target. | | | | | |
| Obtains verbal consent from patient/ carer. | | | | | |
| Develop strategies to overcome complex communication issues to be effective with both patient and staff alike. | | | | | |
| Understands the risk associated with items of equipment and uses them appropriately to each patient | | | | | |
| Position and align patient correctly ensuring patient is comfortable | | | | | |
| Input the patient details in to the machine confirming with the notes and the patient | | | | | |
| Respect the cultural and | | | | | |

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| spiritual needs of the patient | | | | | |
| Obtain a good focus and flash level | | | | | |
| Encourage and motivate patients to achieve relevant photographs | | | | | |
| Aware of the limitations of the test and know when to withdraw | | | | | |
| Carries out the procedure within appropriate timeframe | | | | | |
| Saves images and sends across to Harmony. | | | | | |
| Documents in notes – date, time, colour fundus photo, signature and your stamp | | | | | |
| Ensures that the device is kept clean | | | | | |
| <u>Supporting knowledge – One to one questioning</u> <ul style="list-style-type: none"> • Identify posterior anatomy • Discuss the reason for dilating the pupils with mydriatic drops • Discuss understanding the clinician’s request and what to do if it is unclear • Discuss what you do if your struggling to position the patient on the machine • Cover safety checks related to the imaging machine • How can you support patients inability to comply with visual target instruction • | | | | | |
| <u>Testing and recording visual acuity – Demonstration</u> <ul style="list-style-type: none"> • One to one teaching • Direct observation • Evaluation of knowledge base | | | | | |
| <u>Trainee Signature:</u> | | | | | |
| <u>Mentor Signature:</u> | | | | | |
| <u>Date:</u> | | | | | |