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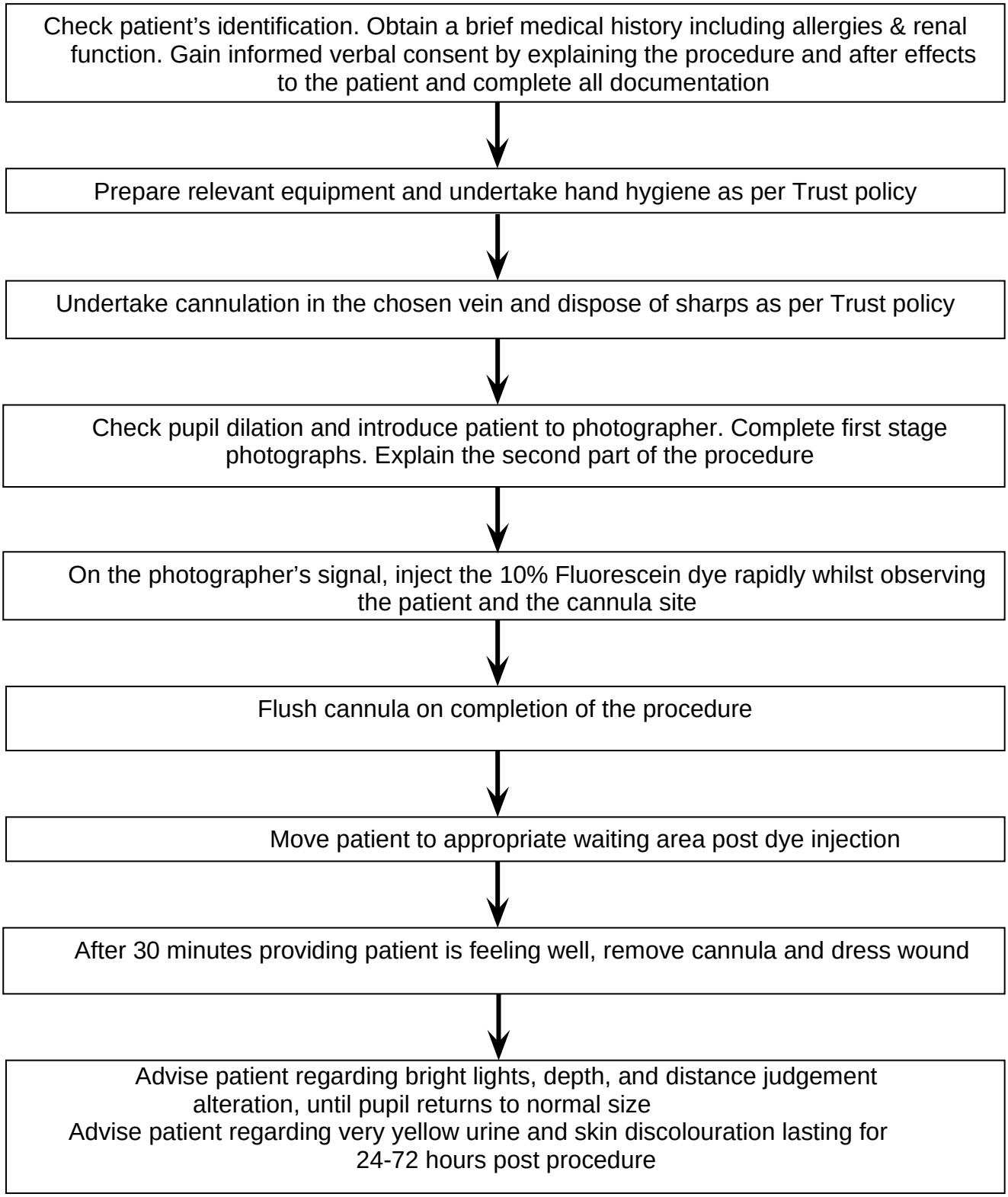
Royal Cornwall Hospitals NHS Trust

Nurse-Led Fundus Fluorescein Angiography (FFA) Clinic Policy

V5.0

February 2023

Summary


Check patient's identification. Obtain a brief medical history including allergies & renal function. Gain informed verbal consent by explaining the procedure and after effects to the patient and complete all documentation
Prepare relevant equipment and undertake hand hygiene as per Trust policy
Undertake cannulation in the chosen vein and dispose of sharps as per Trust policy
Check pupil dilation and introduce patient to photographer. Complete first stage photographs. Explain the second part of the procedure
On the photographer's signal, inject the 10% Fluorescein dye rapidly whilst observing the patient and the cannula site
Flush cannula on completion of the procedure
Move patient to appropriate waiting area post dye injection
After 30 minutes providing patient is feeling well, remove cannula and dress wound
Advise patient regarding bright lights, depth, and distance judgement alteration, until pupil returns to normal size
Advise patient regarding very yellow urine and skin discolouration lasting for 24-72 hours post procedure

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Data Protection Act 2018 (General Data Protection Regulation – GDPR) Legislation

The Trust has a duty under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 please see the Information Use Framework Policy or contact the Information Governance Team

Royal Cornwall Hospital Trust rch-tr.infogov@nhs.net

1. Introduction

1.1. Fundus Fluorescein Angiography (FFA) is a diagnostic procedure to examine the perfusion of the blood vessels supplying the retina and the choroid using a fluorescent dye and a specialised angiographic camera.

1.2. This version supersedes any previous versions of this document.

2. Purpose of this Policy/Procedure

2.1. This procedure applies to all registered nurses deemed proficient to undertake angiography within the ophthalmic setting, RCHT.

2.2. The purpose of this document is to ensure that all practitioners are undertaking this procedure in accordance with best and safe practice.

3. Scope

3.1. This procedure will be undertaken by ophthalmic nurses, working alongside the photographer, who have received training relevant to the procedure including peripheral intravenous cannulation, administration of intravenous drugs, anaphylaxis, and Immediate Life Support training.

3.2. It is only applicable to the Ophthalmic Unit, RCHT.

3.3. It is intended for patients from 16 years of age and above.

4. Definitions / Glossary

4.1. Fundus Fluorescein Angiography (FFA) – is a diagnostic test that allows the blood vessels in the back of the eye to be photographed as a fluorescent dye is injected into the bloodstream.

4.2. Fluorescein- is an organic compound and dye. It is available as a dark orange/red solution or powder slightly soluble in water and alcohol. Fluorescein Sodium 10% is used in the process of diagnostic fluorescein angiography.

5. Ownership and Responsibilities

5.1. Registered staff are accountable and have a duty of care.

5.2. The individual practitioner must ensure that they are competent to undertake the procedure to the standards required.

5.3. Staff must adhere to Trust policies and procedures at all times.

5.4. Staff must ensure that they constantly update their knowledge and proficiency.

5.5. The Department/Clinical Manager is responsible for ensuring that sufficient and appropriate training is available.

5.6. This policy is overseen by the Medical retina lead consultant and Clinical Nurse Specialist for the area. Any major amendments to this policy will be reviewed through the medical retina multi-disciplinary team meetings or Ophthalmology governance meetings.

5.7. *Role of the Managers*

Line managers are responsible for:

- Ensuring the area is staffed appropriately
- Reviewing staff competency regarding this diagnostic procedure to ensure they are current in their knowledge and skills

5.8. *Role of Individual Staff*

All staff members are responsible for:

- Ensuring that their training is up to date and working in line with the current policy as well as adhering to the Nursing Midwifery Council (NMC) standard of practice “The Code”
- Recognising own limitation in clinical practice. If unsure, staff must seek support from their senior line manager before carrying out the procedure
- Where there is uncertainty with regards to IV Fluorescein injection contact Royal Cornwall Hospital Trust medicine information department for advice
- Wearing appropriate Personal Protective Equipment (PPE) at all times

6. Standards and Practice

6.1. **Special Warning**

6.1.1. In severe renal insufficiency consult an ophthalmology doctor/renal doctor for advice prior to administration.

6.1.2. Traces of fluorescein in the body can stay for up to 72 hours and may interfere with other test such as urine, blood and clinical imaging testing if performed less than 72 hours post administration of fluorescein injection.

6.1.3. FFA test should not be performed for at least one week post injection.

6.1.4. Fluorescein use is for intravenous injection only and MUST NOT be injected into the arteries (arterial route) or into the spinal column (intrathecal route).

6.1.5. Be aware that medicines such as beta blockers used topically or orally (i.e., Atenolol, Bisoprolol, Metoprolol, Propranolol, Betaxolol, Levobunolol, and Timolol) and medicines used for the treatment of Gout known as organic anion transporters (i.e., Probenecid) may sometimes interact with Fluorescein and may cause unwanted side effects.

6.2. Side Effects

6.2.1. **Very common:** Nausea – may affect more than 1 in 10 people.

6.2.2. **Common**: Vomiting, blackout (also known as syncope), redness and itching of the skin, discolouration (yellowing) of the skin and eyes, discolouration (yellowing) of the urine, abdominal discomfort, pain at the site of injection (if the product leaks into the surrounding tissue around the site of the injection (extravasation), a painful inflammatory reaction could occur, even leading to the death of affected tissue) - may affect up to 1 in 10 people.

6.2.3. **Uncommon**: Allergic reactions such as oedema of the face urticarial (red itchy skin also known as hives), feeling flushed, abdominal pain, feeling numb, feeling dizzy, headache, tingling (also known as paresthesia), venous clot (also known as thrombophlebitis)- may affect up to 1 in 100 people.

6.2.4. **Rare**: Hypotension, cardiac arrest, chest pain, breathing difficulties including shortness of breath or bronchospasm, anaphylactic reaction – may affect 1 in 1,000 people.

6.2.5. **Very rare:** Fatal anaphylactic reaction, Myocardial infarction, breathing difficulties, collapse of the cardiovascular system, convulsion (fits), laryngeal oedema, pulmonary oedema, angina pectoris, slow heart rate, fast heart rate – may affect 1 in 10,000 people.

6.2.6. Additionally, the procedure will not be carried out unless there is a Medical Practitioner in the Ophthalmology Department who knows the procedure is taking place and can be on hand if necessary.

6.2.7. The appropriate emergency procedure (i.e., RCH Trust Anaphylaxis Algorithm for anaphylactic reaction) must be instigated in the event of reaction to drug.

6.3. Incompatibilities

In the absence of compatibility studies, Fluorescein injection should not be administered simultaneously with other solution or medicine for injection, especially those with an acid pH (especially antihistamines) by the same intravenous route.

6.4. Exclusions

- Previous anaphylaxis to Intravenous Fluorescein
- Pregnancy and breastfeeding

- Children under the age of 16 years

6.5. **Criteria**

6.5.1. Patient's notes or Medisoft notes must be made available for this procedure.

6.5.2. A Photography request card must be available; correctly completed with all medication and cannulation prescribed and signed by the Medical Practitioner.

6.5.3. Before beginning the procedure, an appropriate treatment room will be selected and all clinical equipment that is required will be gathered.

6.5.4. Patient's visual acuity is recorded using Snellen or LogMar charts.

6.5.5. Both pupils are dilated with drops as prescribed.

6.5.6. Explanation of procedure and side effects explained to the patient.

6.5.7. Brief medical history obtained and documented.

6.5.8. Informed verbal consent obtained and documented.

6.5.9. Allergic reactions recorded, any query with previous reactions to be discussed with the medical practitioner.

6.5.10. Any complex medical conditions (cardiac/respiratory) which may cause concern to be discussed with the medical practitioner.

6.5.11. A medical practitioner must be in the department whilst this procedure is being undertaken.

6.5.12. The nurse performing the procedure will refer any patient they are unhappy to treat to an appropriate member of the medical team.

6.6. **Contrast Medium**

Fluorescein Sodium (C20H10NA2) – a highly soluble, complex organic molecule. It has several physical and chemical properties that make it an excellent diagnostic tool. The fluorescence of this molecule is very intense, peak excitation and absorption occurs at 494 nm and peak emission maximum is at 521 nm. Next Paragraph.

7. Dissemination and Implementation

7.1. This policy will be available on the document library.

7.2. All staff will have access to this document.

7.3. The nurse in charge of the clinical area will be responsible for ensuring the practitioner has been suitably trained before delegating this task.

7.4. Training and Supervision.

7.4.1. Selected staff will attend the in-house training courses for peripheral intravenous cannulation, intravenous drug administration, anaphylaxis, and Immediate Life Support, and complete the relevant self-directed learning packs.

7.4.2. Staff will be supervised on 10 occasions by a competent practitioner performing cannulation and the administration of intravenous (IV)Fluorescein.

7.4.3. Once the practitioner is deemed competent by the supervising practitioner, they will be allowed to undertake the procedure independently.

7.4.4. The theoretical knowledge underpinning this procedure will be gained both through appropriate reading, and experientially through working alongside competent ophthalmic trained nurses.

7.4.5. The assessment process will be appropriately documented and copies of the process relating to individual staff members will be available within the department.

8. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	All aspects of compliance with procedure
Lead	Ophthalmology Sister and Medical Retina CNS Ophthalmology
Tool	Audits – Infection, Prevention, and control, and angiography audit tool
Frequency	Audits – Infection, Prevention and Control auditing monthly. Angiography audit annually. Both reported at staff meeting
Reporting arrangements	The report will be used to identify gaps in staff training and the results fed back to staff to reinforce good practice
Acting on recommendations and Lead(s)	The Ophthalmology Sister and Medical Retina CNS in Ophthalmology will be responsible for implementing any actions or changes recommended to improve the service
Change in practice and lessons to be shared	Any required changes to practice will be identified and actioned by the Ophthalmology Sister and Medical Retina CNS within four weeks. Any changes will be discussed at the relevant staff meetings

9. Updating and Review

This process will be managed via the document library biannually unless the practice dictates otherwise.

10. Equality and Diversity

10.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the 'Equality, Inclusion and Human Rights Policy' or the Equality and Diversity website.

10.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Nurse-Led Fundus Fluorescein Angiography (FFA) Clinic Policy V5.0
This document replaces (exact title of previous version):	Nurse-Led Fundus Fluorescein Angiography (FFA) Clinic Policy V4.0
Date Issued/Approved:	January 2023
Date Valid From:	February 2023
Date Valid To:	February 2025
Directorate / Department responsible (author/owner):	Mr Ashish Patwardhan (Consultant) Eye Unit Ellen C Daquioag (Clinical Nurse Specialist) Eye Unit
Contact details:	01872 252244
Brief summary of contents:	Defines safe practice in regard to performing Nurse-led fundus fluorescein angiography
Suggested Keywords:	Fundus Fluorescein Angiography
Target Audience:	RCHT: Yes CFT: No CIOS ICB: No
Executive Director responsible for Policy:	Chief Medical Officer
Approval route for consultation and ratification:	Consultant, Ward Manager
General Manager confirming approval processes:	Roz Davies
Name of Governance Lead confirming approval by specialty and care group management meetings:	Maria Lane
Links to key external standards:	None required
Related Documents:	None required
Training Need Identified?	No

Information Category	Detailed Information
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Clinical/ Ophthalmology

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
10 Jun 10	V1.0	Initial Issue	Alison Halloren, Sister Ophthalmology Anne Pinch, SSN
1 Feb 11	V2.0	Addition of Monitoring Compliance table.	Alison Halloren, Sister Ophthalmology Anne Pinch, SSN
15 Jan 12	V2.1	Governance information moved to an appendix. EIA updated. Governance information amended to align with format of	Alison Halloren, Sister Ophthalmology Anne Pinch, SSN
5 Aug 13	V2.2	Updated governance information table to include KCCG.	Alison Halloren, Sister Ophthalmology Anne Pinch, SSN
May 17	V3	Moved into new template	Alison Halloren, Sister Ophthalmology Anne Pinch, SSN
31 Jan 20	V4.0	Full review and transposed to latest trust template	Alison Halloren, Sister Ophthalmology Anne Pinch, SSN
24 Jan 23	V5.0	Full review and transposed to latest trust template	Alison Halloren, Sister Ophthalmology Anne Pinch, SSN

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity and Inclusion Team rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy / policy / proposal / service function to be assessed:	Nurse-Led Fundus Fluorescein Angiography (FFA) Clinic Policy V5.0
Directorate and service area:	Ophthalmology
Is this a new or existing Policy?	Existing
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Ellen C Daquioag
Contact details:	01872 252244

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	Fundus Fluorescein Angiography (FFA) is a diagnostic procedure to examine the perfusion of the blood vessels supplying the retina and the choroid using a fluorescent dye. This procedure applies to all registered nurses deemed proficient to undertake angiography, within the ophthalmic setting, RCHT.
2. Policy Objectives	The purpose of this document is to ensure that all practitioners are undertaking this procedure in accordance with best practice.
3. Policy Intended Outcomes	Safer clinical practice.
4. How will you measure each outcome?	As per section 3.
5. Who is intended to benefit from the policy?	Ophthalmology patients.

Information Category	Detailed Information
6a. Who did you consult with? (Please select Yes or No for each category)	• Workforce: Yes • Patients/ visitors: No • Local groups/ system partners: No • External organisations: No • Other: No
6b. Please list the individuals/groups who have been consulted about this policy.	**Please record specific names of individuals/ groups:** Consultants Ward Manager
6c. What was the outcome of the consultation?	Approved
6d. Have you used any of the following to assist your assessment?	No

7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	
Religion or belief	No	
Marriage and civil partnership	No	

Protected Characteristic	(Yes or No)	Rationale
Pregnancy and maternity	No	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	No	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Ellen C Daquioag

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:
Section 2. Full Equality Analysis