

## Document Control

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## 1. Background

The Assistant Practitioner is a non-registered practitioner, who has received sufficient training to perform Nursing duties during interventional procedures, in order to provide additional capacity to the workforce. The Assistant Practitioner performs protocol-limited clinical tasks under the direction and supervision of the registered Nurse, Radiographer, Radiologist or Surgeon who has overall responsibility for the "episode of care".

Assistant Practitioners will differ from the general support workforce in that, as part of their duties, they will perform limited clinical imaging examinations or treatment procedures in conjunction with, and under the supervision of, registered Practitioners. The range of such examinations or treatments will vary in accordance with locally identified need but is likely to be confined to standard examinations or treatments carried out on adult patients who are conscious, co-operative and communicative, and conducted in accordance with locally agreed protocols; this might also include patients who have been sedated.

Patients undergoing Interventional procedures often need to have Local Anaesthetic, Anticoagulant, Sedation and Antispasmodic drugs, Sympathomimetic Agents and Intravenous Contrast administered as part of their examination and this standard operating procedure sets out the procedure to allow Assistant Practitioners to draw these up in preparation for the examination.

On occasion, and during the procedure, these have also needed to be administered by the Assistant Practitioner; an occasion when this might happen is during an ERCP examination when the Assistant Practitioner, who is assisting the Radiologist or Surgeon with the scope, is the person who actually administers the Adrenaline to the patient down the cannula under the strict supervision and instruction of the Radiologist or Surgeon.

## 2. Purpose

The Standard Operating Procedure (SOP) has been written to: Enable Radiology Nursing Assistant Practitioners to prepare medication and contrast under the supervision of a Registered Nurse or Radiographer and on occasion to administer these under the direct supervision and instruction of the Radiologist or Surgeon when they are unable to do so themselves due to on-going intervention, in accordance with the NDHT Medicines Policy for Skilled Not-Registered Staff.

Implementation of this procedure will ensure that:

- The person preparing the medication and contrast is trained and aware of the potential risks to the patient and is able to carry out the task competently and effectively.
- The correct patient is identified for the procedure.
- All medication and contrast is checked, prepared and administered safely to the correct patient.
- Contraindications to the use of contrast agents will be recognised and acted upon appropriately
- Risks to the patient's well-being are minimised

- Supervision of the task is undertaken by Registered Staff.

### 3. Scope

This Standard Operating Procedure (SOP) relates to the Radiology Nursing Assistant Practitioners only.

Only Radiology Nursing Assistant Practitioners that have received the Trust training in Cannulation and the administration of medication training, as outlined in the Medicines Policy for Skilled Non-Registered Staff, may perform this task. Staff undertaking this procedure must be able to demonstrate continued competence as per the organisations policy on assessing and maintaining competence.

The scope of practice in this standard operating procedure is specific to the Radiology department only and APs moving area will not be able to fulfil the same tasks without additional training and competencies.

The Line Manager in Radiology is responsible for ensuring that this procedure (and all related Trust procedures such as Hand washing /Patient Identification/ Venepuncture and Cannulation) are also observed.

### 4. Location

This Standard Operating Procedure relates only to practice within the Radiology department, NDDH only; this includes the Interventional room, Ultrasound and CT however might also extend to radiology procedures undertaken in Theatre and elsewhere within the radiology department.

Staff undertaking this procedure must be able to demonstrate continued competence as per the organisations policy on assessing and maintaining competence.

### 5. Equipment

- Prescription Chart
- Sterile Trolley (already laid up for procedure)
- Sharps Bin
- Sterile gloves and gown
- Syringes and needles for drawing up local Anaesthetic, Anticoagulant and other drugs
- Quills for drawing up contrast for hand injections
- Emergency Drugs
- Resuscitation Trolley available
- Oxygen
- Suction

If using the Angioplasty Injector Pump:

- Medrad Interventional Mark V ProVis®
- Medrad Mark V ProVis® Syringe
- Load the Angioplasty injector pump as per Standard Operating Procedure:

<G:\radiology\XRAY\PROTOCOLS AND GUIDELINES\Interventional\Draft SOP for Loading and using the Angioplasty Injector Pump.docx>

## 6. Contrast and Medications

- **Contrast agent (Used for Angioplasty, ERCP, PTC, Nephrostomy):**
  - Iohexol Solution (as Omnipaque ®)
  - Iodixanol (eg Visipaque ®)Appropriately loaded into pump injector or drawn up into syringe for hand injection. Check name and expiry date with Supervising Registered Nurse or Radiographer.
- **Local Anaesthetic (Used for all interventional procedures except ERCP):**
  - Lidocaine 1% or 2%Appropriately drawn up into syringe for hand injection. Check name and expiry date with Supervising Registered Nurse
- **Anticoagulant (Used for Angioplasty):**
  - HeparinAppropriately drawn up into syringe for hand injection. Check name and expiry date with Supervising Registered Nurse

In exceptional circumstances it might be necessary for the Assistant Practitioner to also draw up other medication when, due to the complexity of the procedure once under way, the Radiologist or Surgeon and the Registered Nurse are unable to physically do this due to using sterile equipment, the endoscope or preserving the patient airway, however will provide direct supervision; the Assistant Practitioner will **never do this without the direct supervision and instruction** from the Radiologist or Surgeon.

- **Benzodiazepine (Used for ERCP, PTC, Nephrostomy):**
  - MidazolamAppropriately drawn up into syringe for hand injection. Check name and expiry date with Supervising Radiologist, Surgeon or Registered Nurse
- **Opioid (Used for ERCP, PTC, Nephrostomy):**
  - FentanylAppropriately drawn up into syringe for hand injection. Check name and expiry date with Supervising Radiologist, Surgeon or Registered Nurse
- **Antispasmodic drugs (Used for ERCP):**
  - Hyocine Butylbromide
  - GlucagonAppropriately drawn up into syringe for hand injection. Check name and expiry date with Supervising Radiologist, Surgeon or Registered Nurse
- **Sympathomimetic drugs (Used for ERCP):**
  - AdrenalineAppropriately drawn up into syringe for hand injection. Check name and expiry date with Supervising Radiologist, Surgeon or Registered Nurse.

## 7. Emergency Equipment

- The following equipment must be in the examination room and must be checked each morning:
- Oxygen – in working order with tubing and mask attached and ready for use
- Suction - machine in date and in working order if no built in apparatus available
- Emergency Drugs box – all drugs contained within should be in date and checked regularly
- In addition, the Resuscitation Trolleys and Defibrillators in Radiology A must be checked daily to ensure that they are in correct working order. All vital equipment must be present and in date. Oxygen cylinders attached to the trolleys must be checked daily to ensure supply.

## 8. Patient Group Directives (PGDs)

Assistant Practitioners are not able to work under PGDs as they are not registered professionals and the PGD cannot be delegated to them by the registered Nurse or Radiographer.

However under the Medicines Policy for Skilled Not-Registered Staff the Assistant Practitioners are able to draw up and administer contrast and some medications under the Patient Specific Direction (PSD) or with a Prescription from the Medical Practitioner/Radiologist or non-medical prescriber.

This prescription will be completed by the Medical Practitioner/Radiologist or non-medical prescriber prior to the examination as part of the consenting process with the patient.

## 9. Procedure

### 9.1. Drawing up Local Anaesthetic, Anticoagulant Drug (Heparin) and Contrast Media

- Work in line with the trust policy for The Administration of Injectable Medicines
- The type of contrast media to be used will be indicated on the appropriate protocol according to the patients eGfr blood result.
- **If there is no specific protocol, prescription or PSD then the Assistant Practitioner should not draw up drugs or contrast under any circumstances.**
- The drugs and contrast agent should only be drawn up and administered by the Assistant Practitioner according to the prescription and PSD and under supervision from a Registered Practitioner.
- Make sure the appropriate Contrast Administration Form is filled in correctly

- Using the Contrast Administration Form check the patient has no contraindications to contrast administration or other medications and obtain their signature. If the patient has allergies, other contraindications or questions discuss with the Supervising Nurse or Radiographer.
- Ensure that the emergency drugs are in date and present in the room (see Sections 5 & 6 above).
- Use aseptic non-touch technique when preparing and administering injectable medicines.
- Draw up the Local Anaesthetic (Lidocaine 2% or 1%) according to protocol for the examination observing aseptic/sterile technique.
- Draw up the Anticoagulant (Heparin) according to protocol for the examination observing aseptic/sterile technique.
- Draw up the contrast agent into syringes observing aseptic/sterile technique; these syringes must be labelled, and not decanted into gallipots or other types of container such as plastic procedure trays, in accordance with Trust policy for Administration of Medications <http://ndht.ndevon.swest.nhs.uk/wp-content/uploads/2017/12/Administration-of-Medicines-SOP-v4.0-APPROVED-BY-DTC-20-09-18.pdf> .  
This is also in line with patient safety alerts [https://improvement.nhs.uk/documents/301/NHSI\\_Patient\\_Safety\\_Alert\\_-\\_Restricted\\_use\\_of\\_open\\_systems.pdf](https://improvement.nhs.uk/documents/301/NHSI_Patient_Safety_Alert_-_Restricted_use_of_open_systems.pdf)
- Alternatively load the Angioplasty Injector pump as required (See SOP for Loading and using the angioplasty injector pump).
- Check the batch number and expiry date of all drugs and contrast agent.
- Ask the Supervising Nurse or Radiographer to check the name, expiry date and batch number of the drug or contrast agent which has been drawn up; the supervising nurse or radiographer must counter sign as the second signatory confirming that this has been checked and recorded.
- All other medications should be drawn up and administered by Registered Professionals according to NDHT PGDs.

## 9.2. Giving the injection

### Using contrast for ERCPs:

- The Assistant Practitioner may be asked by the Radiologist or Surgeon to connect the contrast syringe to the endoscope; however the Radiologist or Surgeon will be the one who administers the contrast to the patient.

### Using the injector pump:

- For injections using the pump injector, please refer to the Radiology SOP for loading the angioplasty Injector Pump and connecting it to the patient.
- The Angioplasty Injector Pump and its settings must be checked to make sure that it is correctly set before being connected to the patient.
- The Assistant Practitioner may be asked by the Radiologist to connect the contrast to the angioplasty catheter during the procedure; however the Radiologist will be the one responsible for administering the hand injection or pump injection of contrast.



### Administering Adrenaline:

- During an ERCP examination if it is necessary to use Adrenaline it is the Assistant Practitioner, assisting the Radiologist or Surgeon with the scope, who is the person who actually administers the Adrenaline to the patient down the cannula under the strict supervision and instruction of the Radiologist or Surgeon.

### **9.3. Following the interventional procedure**

- Two members of staff must remain in the immediate vicinity whilst the medication and contrast is administered and for 10 minutes following the injection in case of any adverse reaction; generally the examination takes longer than this, however if the procedure is prematurely aborted then the patient must be observed.
- Ensure the batch numbers and expiry dates of contrast have been recorded on the back of the Contrast Administration Form which will then be scanned onto the patient's attendance episode on CRIS (this should be done by the Radiographer).
- Dispose of the sharps and syringes according to the waste/sharps policy.
- Ensure all waste is disposed of in the correct provided containers and all sharps bin lids are left half closed.
- Provide the patient with post contrast leaflet, 'Information sheet for patients who have had an intravenous injection of contrast medium'.

### **9.4. Infection Control**

- Procedure should observe aseptic/sterile precautions
- Avoid contaminating needles and equipment when drawing up drugs and contrast agents.
- Wash hands before and after patient contact
- Keep all cuts and grazes covered
- Keep nails short and clean

### **9.5. Complications**

- Reaction to contrast/drugs given.
- Extravasation.
- Needle-stick injury.
- In an attempt to reduce the risk of complications observe the injection site during the injection where possible and observe the patient for signs of reaction, e.g rash, itching, sneezing etc.
- Report any concerns immediately to the Supervising Nurse or Radiographer

### **9.6. Needle-stick Injuries**

For needle-stick injuries follow hospital protocols but typically:-

- Follow hospital protocol for Management of Inoculation Injuries <https://www.northdevonhealth.nhs.uk/2019/05/management-inoculation-injuries-policy/> but typically;
- Allow the area to bleed if relevant. Do not suck or squeeze the affected area
- Wash the affected area with soap and running water or rinse the area with copious amounts of water whichever is most appropriate.
- Cover affected area with waterproof plaster, if appropriate.

- Report the incident to the person in charge (Senior Radiographer / Radiology Sister / Radiologist/ Doctor) at the time
- Contact Inoculation Injury Advice line:
  - Northern Locality Occupational Health Team - 01271 341529
- Complete an incident report (Datixweb) within the remaining period of the shift in which the injury occurs
- In high risk patients - blood samples from the donor and recipient should be taken immediately

### **9.7. Safety considerations when administering contrast and medication**

It is a Trust requirement that all medications and contrast must be checked by another registered healthcare professional according to current competencies.

It is essential that the second checker understands their role and has the necessary experience and competence to detect any problem, challenge and intervene as necessary. If this is not the case, the second checker may decline to carry out the task of second checking, stating their reasons.

When completing the second check, it is best practice for the second checker to begin the process by assuming that an error has been made and then carry out sufficient checks to ensure that no error exists.

Trust requirements for a second check are as follows:

- Controlled drugs, according to and following the Trust Controlled Drugs Policy and Standard Operating Procedure.
- Injectable medicines, according to and following the Trust Injectable Medicines Policy and Standard Operating Procedure.
- Administration of medicines to in-patients who are under 18 years of age.

Medicines prepared but subsequently not administered to a patient must be disposed of correctly. Medicines must not be returned to the container from which they were removed.

Administration of medication via Patient Specific Direction (PSD) must be undertaken in accordance with and following the relevant PSD.

All medicines to be administered via the injectable route must be drawn directly from their original ampoule or container into syringes, and then either administered immediately or, if they are not for immediate use, the syringe is labelled by the person who prepared them and checked before later use. Only one unlabelled medicine must be handled at one time to avoid the potential for confusion / medication error.

Other than in embolization procedures, where embolic agents need to be mixed and prepared openly during a procedure, the use of 'open systems' (decanting of injectable medication into gallipots or other types of open container such as moulded plastic procedure trays), cannot be justified, due to the risk posed by unidentifiable solutions in the 'open system'. Patient safety alert NHS/PSA/D/2016/008 clearly states that "the use of 'open systems' in any situation, other than that described above, is an indefensible practice", so must not be used.

**The implications of administering the wrong medication or contrast to a patient should be rigorously understood and all staff must adhere to the Trust policies for administration of medicines and injectable medicines.**

## 9.8. Incident Reporting

In the event of an incident or near miss involving medication or contrast, immediate action must be taken to prevent or minimise the impact on the patient, acting in the patient's best interest where necessary.

Any incident occurring during administration must be reported according to Northern Devon Healthcare Trust incident reporting procedure and the Trust Standard Operating Procedure for Medication Incidents (Managing and supporting staff following a medication incident) followed.

<https://www.northdevonhealth.nhs.uk/2019/07/medication-incidents-standard-operating-procedure-managing-and-supporting-staff-following-a-medication-incident/>

## 10. References

Department of Health (2011) Enabling Excellence Autonomy and Accountability for Healthcare Workers, Social Workers and Social Care Workers. Available from:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/216580/dh\\_124374.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216580/dh_124374.pdf)

Ionising Radiation (Medical Exposures) Regulations 2017. Statutory Instruments 2017 No 1322

[http://www.legislation.gov.uk/ukxi/2017/1322/pdfs/ukxi\\_20171322\\_en.pdf](http://www.legislation.gov.uk/ukxi/2017/1322/pdfs/ukxi_20171322_en.pdf)

National Patient Safety Agency (NPSA) (2007) Promoting safer use of injectable medicines, Multi professional safer practice standards for: prescribing, preparing and administering injectable medicines in clinical areas.

[www.npsa.nhs.uk/health/alerts](http://www.npsa.nhs.uk/health/alerts)

National Patient Safety Agency Alert 2007: Promoting safer use of Injectable Medicines NPSA/2007/20

<https://webarchive.nationalarchives.gov.uk/20171030124202/http://www.nrls.npsa.nhs.uk/resources/?entryid45=59812&p=14>

## 11. Associated Documentation

Northern Devon Healthcare NHS Trust Policies for:

- Medicines Policy for Skilled Not-Registered Staff – to be linked once on BOB
- Medicines Policy <https://www.northdevonhealth.nhs.uk/wp-content/uploads/2018/09/Medicines-Policy-FINAL-3-0.pdf>
- Controlled Drugs Policy <http://ndht.ndevon.swest.nhs.uk/controlled-drugs-policy/>

- Controlled Drugs SOP <https://www.northdevonhealth.nhs.uk/wp-content/uploads/2016/10/Controlled-Drugs-SOP-v4-0-Jan-2019-APPROVED-DTC.pdf>
- Administration of Medicines Standard Operating Procedure <http://ndht.ndevon.swest.nhs.uk/wp-content/uploads/2017/12/Administration-of-Medicines-SOP-v4.0-APPROVED-BY-DTC-20-09-18.pdf>
- Injectable Medicines Policy <https://www.northdevonhealth.nhs.uk/wp-content/uploads/2016/08/Injectable-Medicines-Policy-FINAL-v3.0-APPROVED-BY-DTC-15-11-18.pdf>
- Standard Operating Procedure for Medication Incidents (Managing and supporting staff following a medication incident) <https://www.northdevonhealth.nhs.uk/2019/07/medication-incidents-standard-operating-procedure-managing-and-supporting-staff-following-a-medication-incident/>
- G:\Radiology Clinical Governance\IRMER\IR(ME)R Procedures - Standard Operating Procedures\IR(ME)R Procedures SOP Identification of Patients in Radiology (V2.0 Updated).pdf
- [CT/MRI/Fluoroscopy protocols](#)
- [Infection Control Policy](#)
- [Radiology Dept Contrast questionnaire](#)
- <http://ndht.ndevon.swest.nhs.uk/prevention-of-inoculation-injuries-policy/>
- <https://www.northdevonhealth.nhs.uk/2017/11/management-inoculation-injuries-policy/>

## 12. Appendix A

<b>List of medications permitted to be administered by APs working on the Radiology Nursing Team</b>	
<b>Approved medications</b>	<b>Permitted routes of administration</b>
Adrenaline 1:10,000	Via Endoscopic Injection Needle under consultants direct supervision
Hyocine Butylbromide	Prepare for Consultants ONLY
Fentanyl	Prepare for Consultants ONLY
Glucagon	Prepare for Consultants ONLY
Heparin	Prepare for Consultants ONLY
Lidocaine 1% & 2%	Prepare for Consultants ONLY
Midazolam	Prepare for Consultants ONLY
Iohexol Solution (as Omnipaque®)	Prepare for Consultants and via Endoscopic Accessories under consultants direct supervision
Paracetamol	PO/IV
Sodium Chloride 0.9%	IV
Iodixanol Solution (eg Visipaque®)	Prepare for Consultants and via Endoscopic Accessories under consultants direct supervision