Dear Colleague

This letter authorises the extended use of the following PGD until 1st February 2021:

**Patient Group Direction For The Administration Of Glyceryl Trinitrate Tablets By Radiographers Working Within NHS Grampian, Version 1**

The review of this PGD is currently underway in collaboration with NHS Highland and NHS Western Isles using the Specialist Pharmacy Service and Royal College of Radiographers national PGD templates. This letter provides permission to continue using the PGD to a new expiry date of 1st February 2021, and should be kept with the PGD records and brought to the attention of the individual radiographers who operate under the PGD currently.

If you have any queries regarding this please do not hesitate to contact the Pharmacy and Medicines Directorate.

Yours sincerely

Lesley Coyle  
Chair Medicines Guidelines and Policies Group
Patient Group Direction For The Administration Of Glyceryl Trinitrate Tablets By Radiographers Working Within NHS Grampian

Lead Author: Specialist Radiographer
Consultation Group: See relevant page in the PGD
Approver: NHSG Medicines Guidelines and Policies Group

Signature: [Signature]

Identifier: NHSG/PGD/GTNRadio/ MGPG910
Review Date: September 2019
Date Approved: September 2017

NHS Grampian have authorised this Patient Group Direction to help patients by providing them with more convenient access to an efficient and clearly defined service within the NHS Board. This Patient Group Direction cannot be used until Appendix 1 & 2 are completed.

Uncontrolled when printed

Version 1
Revision History:

<table>
<thead>
<tr>
<th>Date of change</th>
<th>Approval date of PGD that is being superseded</th>
<th>Summary of Changes</th>
<th>Section heading</th>
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<tbody>
<tr>
<td>August 2017</td>
<td>New PGD</td>
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NHS Grampian Identifier: NHSG/PGD/GTNRadio/MGPG910
Replaces: New PGD
Keyword(s): Patient group direction PGD glyceryl trinitrate tablets registered radiographers GTN

Policy Statement: It is the responsibility of individual radiographer and their line managers to ensure that they work within the terms laid down in this PGD and to ensure that staff are working to the most up to date PGD. By doing so, the quality of the services offered will be maintained, and the chances of staff making erroneous decisions which may affect patient, staff or visitor safety and comfort will be reduced. Supervisory staff at all levels must ensure that staff using this PGD act within their own level of competence.

The lead author is responsible for the review of this PGD and for ensuring the PGD is updated in line with any changes in clinical practice, relevant guidelines, or new research evidence.

Review date: The review date for a PGD needs to be decided on a case-by-case basis in the interest of patient safety. The expiry date should not be more than 3 years from the date the PGD was authorised.

Document: Drafted: August 2017
Completed: September 2017
Approved: September 2017 (published – November 2017)
Organisational Authorisation

This PGD is not legally valid until it has had organisational authorisation.

<table>
<thead>
<tr>
<th>NHS Grampian</th>
<th>Designation</th>
<th>Name</th>
<th>Signature</th>
<th>Date Signed</th>
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<td></td>
<td>Medical Director</td>
<td>Nick Fluck</td>
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<tr>
<td></td>
<td>Director of Pharmacy</td>
<td>David Pfieger</td>
<td>![Signature]</td>
<td>13/11/2017</td>
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<td></td>
<td>Director of Nursing, Midwifery and Allied Healthcare Professionals</td>
<td>Amanda Croft</td>
<td>![Signature]</td>
<td>08/11/2017</td>
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Management and Monitoring of Patient Group Direction

PGD Consultative Group

The consultative group is legally required to include a medical practitioner, a pharmacist and a representative of the professional group who will provide care under the direction.

Name: Frances Adamson
Title: Medicines Management Specialist Nurse

Name: Dr Lesley Gomersall
Title: Radiologist

Name: Janet Hasell
Title: Pharmacist: ITU Pharmacist

Name: Lorna Main
Title: Lead Author: Specialist Radiographer

Name: Dr Awan Noman
Title: Cardiologist

Name: Suzanne Ross
Title: Specialist Radiographer

Name: Dr Shonagh Walker
Title: Medical Professional: Unit Clinical Director

Name: Dr Struan Wilkie
Title: Radiologist
Clinical indication to which this PGD applies

| Definition of situation/condition | This Patient Group Direction (PGD) will authorise radiographers working within Computed Tomography (CT) to administer Glyceryl Trinitrate (GTN) tablets to patients to promote vasodilation and accuracy of CT angiography. The use of GTN for this indication is outside the terms of the marketing authorisation and constitutes an off-label use of GTN.

This PGD should be used in conjunction with the recommendations in the current British National Formulary (BNF) and individual Summary of Product Characteristics (SPC). |
| Inclusion criteria | All patients 16 years and over attending for a CT coronary angiogram.

Prior to the examination, all patients will be asked a series of questions from the Radiology Patient Identification Protocol. The checklist will be scanned into the Radiology Information System (RIS) as a record following the procedures outlined in the PGD. |
| Exclusion criteria | Patients excluded from taking GTN tablets under this PGD:

- Have had a previous reaction to GTN.
- Are taking phosphodiesterase type 5 inhibitors (e.g. sildenafil, vardenafil, tadalafil).
- Have angina caused by hypertrophic obstructive cardiomyopathy as it may exaggerate outflow obstruction.
- Have possible increased intracranial pressure (e.g. cerebral haemorrhage or head trauma).
- Have closed angle glaucoma.
- Have marked anaemia.
- Severe hypotension (systolic blood pressure below 100mm Hg).
- Have rare hereditary problems of galactose intolerance, lapp lactase deficiency or glucose-galactose malabsorption. |
- Currently prescribed heparin.
- Currently prescribed ergot alkaloids medications, e.g. Migril as this may oppose the coronary vasodilatation of nitrates.
- Moderate or severe aortic stenosis (this will include all Transcatheter Aortic Valve Implantation (TAVI) referrals).
- Congenital heart disease especially if cyanotic or associated with pulmonary hypertension.
- Moderate or severe pulmonary hypertension secondary to lung disease.

### Precautions and special warnings

Caution is necessary in patients with severe hepatic or renal impairment, hypothyroidism, hypoxaemia, hypothermia or a recent history of myocardial infarction and malnutrition.

GTN should be used with caution in patients with cerebrovascular disease since symptoms may be precipitated by hypotension.

GTN may worsen hypoxaemia in patients with lung disease or cor pulmonale. Arterial hypotension with bradycardia may occur in patients with myocardial infarction; this is thought to be reflexly mediated.

The use of GTN could theoretically compromise myocardial blood supply in patients with left ventricular hypertrophy associated with aortic stenosis because of the detrimental effects of tachycardia and decreased aortic diastolic pressure.

### Referral criteria

Patients who fall into the categories detailed in the exclusion criteria.

### Action if excluded from treatment

Medical advice should be sought – refer to General Practitioner/Consultant (relevant medical practitioner).

The reason why the patient was excluded under the PGD will be documented in the appropriate patient record.

### Action if patient declines treatment

Advice should be given to the patient about the potential consequences of declining the administration of GTN, this should be documented on the RIS.

Refer to the radiologist for discussion with the patient’s consultant.
Record outcome in Patient Medication Record if appropriate, or relevant patient record.

| Consent | Prior to the administration of the drug, valid consent must be obtained. Consent must be in line with current NHSG Consent Policy. |

### Description of treatment available under the PGD

<table>
<thead>
<tr>
<th>Name of medicine</th>
<th>Glyceryl Trinitrate (GTN) Tablets.</th>
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<tbody>
<tr>
<td>Legal status</td>
<td>GTN in tablet form is a Pharmacy (P) only medicine.</td>
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<tr>
<td>Form/Strength</td>
<td>White uncoated tablets with each tablet containing 500micrograms GTN BP.</td>
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<tr>
<td>Route/Method of administration</td>
<td>GTN tablets must be placed under the tongue (administered sublingually) and retained in the mouth until dissolved.</td>
</tr>
</tbody>
</table>
| Dosage/Total Dose | Single 500microgram dose  
Maximum dose allowed under this PGD is 500micrograms. |
| Duration of treatment | N/A |
| Storage requirements | Store below 25°C in a dry place and protect from light.  
Add date when opening the packaging.  
Close the cap tightly after removing a tablet.  
Discard unused tablets after 8 weeks from opening. |
| Follow-up (if applicable) | N/A |
**Advice to patient (Verbal)**  
Advice should be given on what to expect and what to do for major and minor reactions.

**Advice to patient (Written)**  
The Patient Information Leaflet (PIL) contained in the medicine(s) should be made accessible to the patient, parent, guardian, or person with parental responsibility. Where this is unavailable, or unsuitable, sufficient information should be given in a language that they can understand.

Copies of PIL and SPCs for medicines can be found at [http://www.medicines.org.uk](http://www.medicines.org.uk) or [http://www.mhra.gov.uk/spc-pil/index.htm](http://www.mhra.gov.uk/spc-pil/index.htm)

**Concurrent Medications/Drug Interactions**  
Treatment with other agents with hypotensive effects (e.g. vasodilators, antihypertensives, beta-blockers, calcium channel blockers and neuroleptics, tricyclic antidepressants and sapropterin) may potentiate the hypotensive effect of GTN tablets.

N-acetylcysteine may potentiate the vasodilator effects of GTN tablets.

There is a potential for drugs that cause dry mouth (e.g. anticholinergic, antimuscarinics, tricyclic antidepressants) to reduce the effectiveness of sublingual nitrates.

An enhanced hypotensive effect with sublingual apomorphine may occur as a result of concomitant administration with GTN tablets.

**Identifying and managing possible adverse reactions**  
GTN Tablets may cause the following side effects;

<table>
<thead>
<tr>
<th>Common</th>
<th>Rare</th>
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<tbody>
<tr>
<td>Headaches</td>
<td>Facial flushing</td>
</tr>
<tr>
<td>Dizziness</td>
<td>Fainting</td>
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<tr>
<td>Drowsiness</td>
<td>Localised feeling of discomfort in the mouth or tongue, blistering or ulcers</td>
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<tr>
<td>Tachycardia</td>
<td>Nausea and vomiting</td>
</tr>
<tr>
<td>Hypotension</td>
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<tr>
<td>Asthenia</td>
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</table>

This list is not exhaustive. Please also refer to current BNF/BNFC and manufacturers SPC for details of all potential adverse reactions.
Both the referring clinician and the radiologist need to be informed of all rare adverse reactions. The following documents must be completed:

- A DATIX incident form.
- For adverse reactions the yellow card documentation must be completed.

Report the reaction to the MHRA using the Yellow Card System. [https://yellowcard.mhra.gov.uk/](https://yellowcard.mhra.gov.uk/)

### Facilities and supplies required

The following should be available at sites where the medication is to be administered:

- Appropriate storage facilities.
- An acceptable level of privacy to respect patient’s right to confidentiality and safety.
- Resuscitation equipment.
- Immediate access to Epinephrine (Adrenaline) 1 in 1000 injection.
- Access to medical support (this may be via the telephone).
- Approved equipment for the disposal of used materials.
- Clean and tidy work areas, including access to hand washing facilities.
- Copies of the current PGD for the medicine specified in the PGD.

### Characteristics of staff authorised to administer medicine under PGD

**Professional qualifications**

Registered Radiographers as recognised by the Health and Care Professions Council (HCPC) and working within CT departments in NHS Grampian.
### Specialist competencies

- Be competent to assess the patient’s capacity to understand the nature and purpose of the administration in order for the patient to give or refuse consent.

- Has undertaken the appropriate departmental training as set out in the CT training guide to carry out clinical assessment of patients, including IV cannulation course.

- Be aware of current treatment recommendations and be competent to discuss issues about the drug with the patient.

- Be competent in the administration of the drug.

### Ongoing training and competency

- Have attended basic life support training which is required to be updated annually.

- Have undertaken the NHS e-anaphylaxis training session (and annual updates) which covers all aspects of the identification and management of anaphylaxis. This can be accessed via eKSF, or the AT Learning® tool/LearnPro.

- Maintain their skills, knowledge and their own professional level of competence in this area according to their Code of Professional Conduct.

- The practitioner must be familiar with the SPC for all medicines administered in accordance with this PGD.

### Professional managers/Lead Nurses will be responsible for:

- Ensuring that the current PGD is available to staff providing care under this direction.

- Ensuring that staff have received adequate training in all areas relevant to this PGD and meet the requirements above.

- Maintain up to date record of all staff authorised to administer drug specified in PGD.

### Documentation

### Authorisation of administration

Radiographers working in CT Departments within NHS Grampian can be authorised to administer the drug specified in this PGD by their Unit Clinical Director or Radiologist.
All authorised staff is required to read the PGD and sign the Agreement to Administer Medicines Under PGD (Appendix 1). This should be held in the individual practitioners records, or as agreed locally.

A Certificate of Authorisation (Appendix 2) signed by the authorising doctor/manager and staff working to the PGD, should be held as agreed locally.

<table>
<thead>
<tr>
<th>Record of administration/supply</th>
<th>An electronic or paper record for recording the screening of patients and the subsequent administration of the drug specified in this PGD must be completed in order to allow audit of practice. This should include as a minimum:</th>
</tr>
</thead>
</table>
|                                 | • Date and time of administration  
                                 | • Patients name  
                                 | • Patient Date of birth and/or CHI if available  
                                 | • Details of parent/guardian, or person with parental responsibility where applicable  
                                 | • Exclusion criteria, record why the drug was not administered  
                                 | • Consent to the administration (if not obtained elsewhere)  
                                 | • Signature and name in capital letters of practitioner who administered the drug  
                                 | • Record of any adverse effects (advise patient’s doctor). |

| Audit                           | All records of the administration of the drug specified in this PGD will be filed with the normal records of medicines in each practice/service. The superintendent radiographer within the CT department will be responsible for auditing completion of drug forms and collation of data. Each radiographer must complete a bi-yearly audit and present to the Unit Clinical Director. |

| References                      | The Royal College of Radiologists [https://rcr.ac.uk](https://rcr.ac.uk)  
Scientific leaflet for Glyceryl Trinitrate tablets– Actavis UK Ltd
Date of revision of text August 2015, accessed 31/07/2017

British National Formulary
[https://www.medicinescomplete.com/mc/bnf/current/](https://www.medicinescomplete.com/mc/bnf/current/) accessed 31/07/17
Appendix 1

Health Care Professional Agreement to Administer Medicines Under Patient Group Direction

I: ________________________________ (Insert name)

Working within: ________________________________ e.g. H&SCP, Practice

Agree to administer medicines under the direction contained within the following Patient Group Direction

Patient Group Direction For The Administration Of Glyceryl Trinitrate Tablets By Radiographers Working Within NHS Grampian

I have completed the appropriate training to my professional standards enabling me to administer medicines under the above Patient Group Direction. I agree not to act beyond my professional competence nor out with the recommendations of the Patient Group Direction.

Signed: ______________________________________

Print Name: ______________________________________

Date: ________________________________

Professional Registration No: ________________________________
Health Professionals Authorisation to Administer Medicines Under Patient Group Direction

The lead nurse/professional of each clinical area is responsible for maintaining records of their clinical area where this PGD is in use, and to whom it has been disseminated.

The manager who approves a healthcare professional to supply and/or administer medicines under the patient group direction, is responsible for ensuring that he or she is competent, qualified and trained to do so and for maintaining an up-to-date record of such approved persons in conjunction with the Head of Profession.

The healthcare professional who is approved to supply and/or administer medicines under the direction is responsible for ensuring that he or she understands and is qualified, trained and competent to undertake the duties required. The approved person is also responsible for ensuring that administration or supply is carried out within the terms of the direction, and according to his or her code of professional practice and conduct.

**Patient Group Direction For The Administration Of Glyceryl Trinitrate Tablets By Radiographers Working Within NHS Grampian**

Local clinical area(s) where these healthcare professionals will operate under this PGD:

<table>
<thead>
<tr>
<th>Name of Healthcare Professional</th>
<th>Signature</th>
<th>Date</th>
<th>Name of Manager</th>
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