

## Glyceryl Trinitrate (GTN) Infusion PROTOCOL

### Treatment for Angina

Patient Addressograph
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Consultant \_\_\_\_\_

Date \_\_\_\_\_

Ward \_\_\_\_\_

#### Nurse checklist:

IV Access in situ		Heart Rate	
12 Lead ECG		Respiratory Rate	
IV infusion pump		Blood Pressure	
Continuous monitoring		Oxygen Sats	

#### Prescription:

Please indicate in the medicine chart and administration record a Glyceryl Trinitrate Infusion Chart is being used. When prescribing dosage please write 'See GTN Chart'. Prescribing the infusion in this way authorises the designated nurses to adjust the infusion rate according to response.

Doctor's Name (Print)	Doctor's Signature	Date DD / MM / YYYY	Time
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#### Contra-indications:

The use of this protocol is exclusively for patients requiring treatment of symptomatic Angina. The use of Glyceryl Trinitrate infusion is contra-indicated if patient has the following co-morbidities:

1. Hypersensitivity to the active substance or other nitrates
2. Acute circulatory failure (shock, collapse)
3. Cardiogenic shock
4. Severe anaemia
5. Severe cerebral haemorrhage
6. Head trauma
7. Uncorrected hypovolaemia and hypotensive shock
8. Arterial hypoxaemia and angina caused by hypertrophic obstructive cardiomyopathy
9. Constrictive pericarditis
10. Pericardial tamponade

11. Toxic pulmonary oedema
12. During nitrate therapy, phosphodiesterase inhibitor type 5 (e.g. sildenafil, vardenafil, tadalafil) must not be used because PDE5 inhibitors may amplify the vasodilatory effects of Glyceryl Trinitrate resulting in severe hypotension
13. Conditions associated with an increased intracranial pressure
14. Myocardial insufficiency due to obstruction, aortic or mitral stenosis, hypertrophic obstructive cardiomyopathy or constrictive pericarditis

(Reference from: <https://www.medicines.org.uk/emc> accessed 14/09/2022)

### Preparation of Infusion:

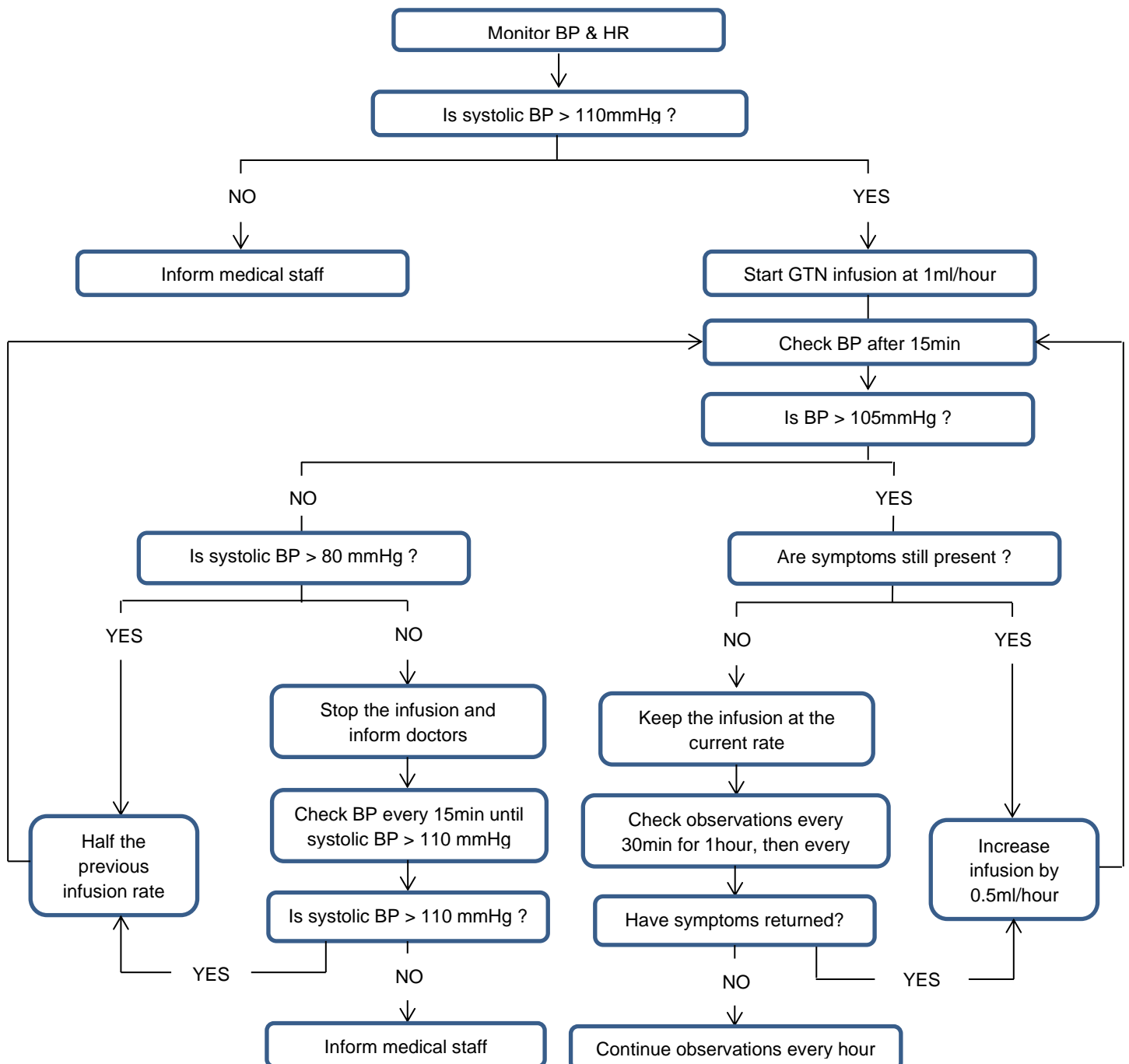
1. Prepare the infusion solution by drawing up a 50ml syringe of Glyceryl Trinitrate (50mg in 50ml – ready mixed and undiluted). **The infusion should be discarded after 24h of preparation.**
2. The initial infusion rate is **1mg (1ml) per hour.**

Commence infusion at <b>1mg (1ml) per hour</b>			
Given by:	Signature:	Date DD / MM / YYYY	Time
Checked by:	Signature:	Date DD / MM / YYYY	Time

*Observe the patient for the first 5min to watch for signs of sensitivity (↓BP, pale, faint, dizzy, unwell)*

## Guidelines for Administration

1. GTN infusion must be administered from a 50ml syringe using a syringe infusion pump.
2. Record baseline observations of blood pressure (BP) and heart rate (HR).
3. The initial infusion rate should be set at **1ml/hour** unless otherwise instructed by the medical staff.
4. Adjust the infusion rate according to the guidance in the flowchart below.
5. Re-check observations and symptoms (chest pain and/or increased shortness of breath) 15min after starting the infusion and after each infusion rate change.
6. If infusion rate is not changed, re-check observation and symptoms (chest pain and/or increased shortness of breath) every 30 min for the first hour and then every hour.
7. If the infusion rate is reduced or stopped due to a low BP and the patient is still showing symptoms (chest pain and/or increased shortness of breath), inform medical staff
8. Check the residual (volume remaining in the syringe) at least every hour
9. **Inform medical staff if systolic BP falls below 80mmHg.**
10. When the infusion is to be discontinued, reduce the rate by 1ml/h every hour until stopped.



**Observation and Administration record**

<b>DATE</b>	<b>TIME</b>	<b>BP (mmHg)</b>	<b>HR (bts/min)</b>	<b>Symptoms Y / N</b>	<b>GTN rate (ml/hour)</b>	<b>Residual volume (ml)</b>	<b>Nurse signature</b>