Critical Care Guidelines
FOR CRITICAL CARE USE ONLY

Epoprostenol (Flolan pH12)

PRESENTATION:	500mcg powder and solvent for infusion
INDICATION:	Inhibitor of platelet aggregation in haemofiltration circuit. Use when intravenous heparin is not suitable or is contraindicated. e.g. patient is HIT positive, patient is at risk of bleeding from heparin, platelets less than 50 x 10^9/l. (please refer to CVVH anticoagulation guidelines on the intranet)
DOSE AND ADMINISTRATION:	• Withdraw 10mls of the solvent into a sterile syringe. Inject the 10mls into the vial containing 500micrograms epoprostenol. Shake vial gently to ensure contents have completely dissolved. • Draw up the resulting epoprostenol solution into a syringe. Inject the entire contents into the vial containing the remaining solvent. Mix well. **This is now the concentrated solution – 10,000 nanograms/ml**. **This solution has a 12 hour expiry, and should be stored at room temperature (25°c).** • Withdraw 15mls of the concentrated solution (10,000nanograms/ml) into a 20ml syringe. Attach the 0.22micron filter provided*. Withdraw 35mls of sodium chloride 0.9% into a 50ml syringe. Filter the 15mls of concentrated solution into the 50ml syringe containing 35mls of sodium chloride 0.9% over approximately 20 seconds. Mix well. This will produce a concentration of **3000 nanograms/ml**. *Use a separate 0.22micron filter each time a syringe of 3000 nanograms/ml epoprostenol is prepared.
CONCENTRATION:	Final solution 3000 nanograms/ml
STABILITY:	**Both 3000 nanograms/ml and 10,000 nanograms/ml solutions are stable for 12 hours at room temperature (25°c).** Due to 12 hour expiry of both solutions two vials of epoprostenol 500mcg will be required for a 24 hour period regardless of infusion rate.

ADDITIONAL INFORMATION:

Due to the high pH (12), epoprostenol (Flolan pH 12) MUST be administered through a dedicated lumen of a central line. It must never be given peripherally or through the anticoagulant port of the CVVH machine.

- Epoprostenol dose is titrated against the patient's blood pressure, to maintain a systolic or mean pressure as dictated by clinical targets.
- Starting dose is 1 nanogram/kg/min i.v. during the priming period, increased by 1 nanogram/kg/min every 5-10 mins, up to **4 nanograms/kg/min**.
- If the filter clots on 4 nanograms/kg/min consider increasing to 5 nanograms/kg/min after consultation with medical staff.
- If priming is required to ensure adequate circulating volumes of epoprostenol, commence the infusion centrally for 15-30 minutes prior to CVVH starting.

Infusion Guidelines

Infusion rate may be calculated using the following:

Infusion rate (ml/min) = Dosage (nanogram/kg/min) x body weight (kg)

Concentration of infusion (nanogram/ml)

Epoprostenol 3000 nanograms/ml (diluted solution)								
Body weight (kg)								
Dosage nanograms/kg/min	30	40	50	60	70	80	90	100
1	0.60	0.80	1.00	1.20	1.40	1.60	1.80	2.00
2	1.20	1.60	2.00	2.40	2.80	3.20	3.60	4.00
3	1.80	2.40	3.00	3.60	4.20	4.80	5.40	6.00
4	2.40	3.20	4.00	4.80	5.60	6.40	7.20	8.00
5	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
	Infusion rates in ml/hour							

Monitoring

- Monitor blood pressure. Hypotension may occur. If excessive hypotension occurs during administration, senior medical advice should be sought and the dose may need to be reduced or the infusion discontinued.
- Monitor heart rate. Epoprostenol may either increase or decrease heart rate.

Common side effects include:

- Facial flushing, warm sensation, headaches, abdominal discomfort, nausea, vomiting thrombocytopenia, jaw pain, de-saturation.

	References 1. Summary of Product Characteristics –Flolan 0.5mg Powder and Solvent for Solution for Infusion (with pH 12 solvent). www.medicines.org.uk. Accessed 28/08/20 2. Injectable Medicines Guide: Epoprostenol (Flolan and non-proprietary products). Accessed 28/08/20 3. Personal communication from Neville Stebbings. Westcott Medical Ltd. Sent 12th March 2017.

Title: Epoprostenol	
ID:	Authors: Fiona Clarke
Category:	Document Version: 5
Status Draft/Final: DRAFT	Review Date: October 2022
Authoriser: Lothian Critical Care Editorial Board	Authorisation Date: October 2020
Date added to Intranet	October 2020
Key Words Comments	