

# Supply Disruption Alert

SDA/2021/016

Issued: 21 December 2021

Advanz epoprostenol **0.5mg** and **1.5mg** powder and solvent (**pH10.5**) for solution for infusion vials – Supply Disruption

## Summary

- Advanz epoprostenol **0.5mg** powder and solvent (**pH10.5**) for solution for infusion is out of stock with resupply anticipated by end of February 2022 at the earliest, (exact date to be confirmed).
- Advanz epoprostenol **1.5mg** powder and solvent (**pH10.5**) for solution for infusion remains in stock, but as supply is very limited until the anticipated resupply date of end of February 2022; this stock has been ringfenced for use in paediatric homecare patients with pulmonary hypertension only.
- Alternative epoprostenol products remain available:
  - Epoprostenol **0.5mg** and **1.5mg** powder and solvent (**pH12**) for solution for infusion (Flolan®) can support an uplift in demand, however Trusts need to consider the implications of using a higher pH presentation (see advice on switching patients to alternative treatments below)
  - Epoprostenol **0.5mg** and **1.5mg** powder (**pH12**) for solution for infusion vials (Veletri®) is unable to meet any increase in demand.

## Action

All healthcare professionals in secondary or specialist healthcare services who prescribe or supply Advanz epoprostenol **0.5mg** and **1.5mg** powder and solvent (**pH10.5**) for solution for infusion should follow the below advice.

### NHS Trusts and Health Boards:

Clinicians, working with local pharmacy teams, nursing staff and the local Medicine Safety Officer should:

- review prescribing of Advanz epoprostenol **0.5mg** powder and solvent (**pH10.5**) for solution for infusion and consider use of Flolan® (epoprostenol **0.5mg** powder and solvent (**pH12**) for solution for infusion) for licensed indications taking into consideration the differing pHs of the product and whether staff training is required (see advice on switching patients to alternative treatments below);
- review off-label use of nebulised Advanz epoprostenol **0.5mg** powder and solvent (**pH10.5**) for solution for infusion and conduct local risk assessments, with the involvement of ICU clinicians (including pharmacists), to select an appropriate alternative nebulised therapy;
- review local stock holdings and let your regional procurement lead know if you have any excess stock that is no longer required

### Clinicians prescribing for patients under homecare services

Clinicians should:

- review all patients prescribed Advanz epoprostenol **1.5mg** powder and solvent (**pH10.5**) for solution for infusion and switch to Flolan® (epoprostenol **1.5mg** powder and solvent (**pH12**) for solution for infusion) where clinically appropriate; for paediatric patients who are unable to be switched to Flolan® (epoprostenol **1.5mg** powder and solvent (**pH12**) for solution for infusion), work with the homecare provider to secure sufficient stock for these patients until the anticipated resupply date (February 2022), further information below.

## Product details

Advanz Epoprostenol **0.5mg** powder and solvent (**pH10.5**) for solution for infusion vials  
Advanz Epoprostenol **1.5mg** powder and solvent (**pH10.5**) for solution for infusion vials

## Background

Advanz Pharma are out of stock of epoprostenol **0.5mg** powder and solvent (**pH10.5**) for solution for infusion with resupply anticipated end of February 2022. Advanz Pharma anticipate they will be out of stock of epoprostenol **1.5mg** powder and solvent (**pH10.5**) for solution for infusion vials from end of January 2022 until end of February 2022. Exact resupply dates have not yet been confirmed and there is a risk the supply issue will continue beyond February 2022.

## Advice on switching patients to alternative treatments

Working with SPS Medicines Information (MI), specialist pulmonary hypertension adult and paediatric pharmacists and consultant / specialist critical care pharmacists, the following supporting information has been prepared.

### Pulmonary Hypertension

Remaining stock of Advanz epoprostenol **1.5mg (pH10.5)** has been ringfenced for patients who are not suitable, at present, to be switched onto the available alternative Flolan® (epoprostenol **1.5mg (pH12)** for solution for infusion). Any switch to an alternative brand may require hospitalisation to ensure equivalent efficacy and tolerability are reached; this should be reviewed on a case by case basis.

#### **For adult patients:**

There is no clinical rationale for the specific use of Advanz epoprostenol **1.5mg** powder and solvent (**pH10.5**) in adults over other licensed alternatives. Hence although it is not routine clinical practice, in the event of a shortage, epoprostenol brands could be used interchangeably for intravenous use. If epoprostenol is currently being administered as a continuous infusion via a Smiths Medical CADD® ambulatory infusion device, then there is no need to switch to an alternative type of pump if changing brands.

#### **For paediatric patients:**

The Advanz product is preferred as it contains two vials of solvent to allow the product to be diluted to the desired concentration. Remaining stock of Advanz epoprostenol **1.5mg** powder and solvent (**pH10.5**) has been ringfenced for these patients. Homecare companies will be provided with the contact details of the person managing the ringfenced stock at Advanz Pharma and the ordering process will be shared accordingly.

### Renal Replacement Therapy

Epoprostenol can be used to prevent blood clotting on contact with the filter membrane therefore increasing efficacy of the process, increasing filter life, and reducing blood loss due to circuit changes. Epoprostenol is not a first line choice and is normally used only where other options, such as heparin and/or regional citrate anticoagulation, have failed or are contra-indicated

There have been some reports of incompatibility of Flolan® (**pH12**) with Renal Replacement Therapy (RRT) circuit connectors on Prismaflex machines due to the high pH causing these components to degrade and leak. There is practical, although limited, experience with use of Flolan® in Fresenius Medical Care RRT systems and with polyethylene tetraphthalate glycol (PETG) containing circuits and connectors without any reported issues.

Where issues with leakage have occurred, consider continuing to administer the epoprostenol infusion intravenously rather than switching the infusion onto the arterial inlet of the dialyser. This infusion would ideally be administered via a central line. When administering intravenously, systems should be put into place to ensure that the infusion is discontinued when RRT is discontinued. Further information can be found on the NHS England and NHS Improvement [clinical guide](#) for renal replacement therapy options in critical care during the coronavirus pandemic.

### **Off-label use for acute respiratory distress syndrome and for hypoxia in ICU**

Advanz epoprostenol **0.5mg** powder and solvent (**pH10.5**) has been used off-label for patients with acute respiratory distress syndrome (ARDS) via inhalation and more recently in the same way in ICU settings for COVID patients prior to extracorporeal membrane oxygenation (ECMO). There is some experience with use of nebulised Flolan® despite a higher **pH of 12** without any adverse effects reported. ICU clinicians (including pharmacists) should conduct local risk assessments on use of the alternative available epoprostenol presentation Flolan®.

It is advised that affected patients are not switched to nitric oxide as an alternative as there is a shortage of nitric oxide delivery devices. ICU clinicians, after conducting a thorough risk assessment, may consider the use of glyceryl trinitrate or milrinone via inhalation however there is very limited experience with this and will require specialist advice and evidence search to support use; SPS MI will provide guidance via the SPS website.

## **Distribution**

### **Trusts (NHS boards in Scotland)**

CAS and SABs (NI) liaison officers for onward distribution to all relevant staff including:

- A&E consultants
- A&E departments
- A&E nurses
- All departments
- Cardiologists
- Cardiology departments
- Cardiology nurses
- Cardiothoracic surgeons
- Cardiothoracic surgery directors
- Cardiothoracic departments
- Chief pharmacists
- Clinical governance leads
- Clinical Procurement Specialists
- Emergency Preparedness and Response officer
- Hospital pharmacies
- Hospital pharmacists
- Intensive care medical staff
- Intensive care nursing staff (adult)
- Intensive care units
- Intensive care, directors of
- Medical directors
- Pharmaceutical advisors
- Pharmacists
- Risk managers

### **Independent distribution**

#### **Establishments registered with the Care Quality Commission (CQC) (England only)**

- Hospitals in the independent sector
- Independent treatment centres
- Nursing agencies
- Private medical practitioners

## **Enquiries**

Send enquiries about this notice to the DHSC Medicines Supply Team, quoting reference number SDA/2021/016

Email: [DHSCmedicinesupplyteam@dhsc.gov.uk](mailto:DHSCmedicinesupplyteam@dhsc.gov.uk)