TITLE: CARE OF THE PATIENT REQUIRING CONTINUOUS FLOLAN INFUSION GUIDELINE

PURPOSE: To provide guidelines for the nursing care of the patient with a Flolan infusion delivered thru continuous infusion pump. This is a new Guideline.

APPLICABLE AREAS:

Patient Care Services, excluding the neonatal and pediatric units.

LEVEL OF RESPONSIBILITIES:

Only registered nurses (RNs) may administer and titrate a Flolan infusion.

COMPETENCIES:

This guideline is reviewed during the orientation period on units with Flolan infusions.

PATIENT OUTCOME:

Patient will be free of complications associated with Flolan delivered by continuous infusion.

SUPPORTIVE DATA:

1. Flolan directly dilates the pulmonary and systemic arterial beds. It is used in the treatment of Primary Pulmonary Hypertension (PPH).

2. Interruptions in the delivery of Flolan in as little as 2.5 – 6 minutes may result in rapid symptomatic deterioration.

3. Reduction in blood pressure caused by Flolan may exacerbate drugs that alter blood pressure, such as diuretics, anti-hypertensives, or vasodilators.
4. Side effects of Flolan include jaw pain, flushing, headache, hypotension, nausea, vomiting, and diarrhea.

5. Adverse events, many potentially related to the underlying disease, include dyspnea, fatigue, chest pain, right ventricular failure, and pallor.

6. Reconstituted Flolan is stable for only 48 hours if refrigerated and 8 hours at room temperature.

**NURSING CARE**

1. Flolan will be switched to a hospital infusion pump as soon as the medication is available from pharmacy.

2. Patient remains on hospital infusion pump until discharge.

3. An additional functioning infusion pump must be at the bedside at all times.

4. Patients who are **hemodynamically unstable** and requiring initiation and/or titration of flolan are admitted to the Intensive Care Unit (ICU)

   **Key Point:** In the event an obstetrical patient is in labor and requires titration, arrangements will be made for an RN trained in hemodynamic monitoring to assist in the patient's care while in Labor & Delivery.

5. Hemodynamically stable patients on an **established** dosage of Flolan may be transferred/admitted to an intermediate, telemetry **monitored** bed.

6. Pharmacy premixes all doses of Flolan during hospitalization. The exception is when Home Health Agency (HHA) is training a new patient to administer the Flolan via CAP.

7. The physician’s order for Flolan must include: concentration, dose, and patient’s dosing weight.
8. Dosage adjustments may be made while the patient is in intermediate care. Vital signs are taken per intermediate care area unit policy.

9. Vital Signs are every 15 minutes or as needed during active titration in the ICU.

**ASSESSMENT /PLANNING:**

1. Assess patient condition upon arrival.

2. Inspect the infusion site and dressing.

   **Key Point:** Flolan must be administered through a central venous access.

3. Scan new Flolan order to pharmacy immediately. Do not stop a patient’s home pump until Flolan infusion is available from pharmacy.

4. At least one extra bag of Flolan must be kept in refrigerator on the nursing unit at all times. Notify pharmacy as soon as the last dose is hung.

   **Key Point:** Flolan must be picked up from pharmacy due to the cost and medication instability.

**IMPLEMENTATION:**

1. Switch Flolan over to a hospital infusion pump as soon as the drug is available from pharmacy.

2. Change Flolan bag every eight hours.

   **Key Point:** After 8 hours at room temperature, Flolan is no longer stable.

3. Do NOT allow bag to empty completely.

   **Key Point:** **Never stop a flolan infusion.** Interruptions in the delivery of Flolan for as little as 2 ½ minutes may result in rapid hemodynamic deterioration.
4. Change tubing every 96 hours, according to Intravenous Therapy and Intravenous Medication Management Guideline.

5. Change dressings according to Care and Maintenance of Vascular Access Devices Guideline: every 7 days if a semi-permeable transparent dressing is used for coverage, or as needed for loose and/or soiled dressings.

**Key Point:** Routine flushing of Flolan infusions is not done due to its hemodynamic properties.

6. At time of discharge, patient will have two week supply of medication and supplies at home and be able to identify their home health agency (HHA).

**Key Point:** The HHA will provide all the medication and supplies for patients going home on ambulatory pumps.

**EVALUATION:**

Evaluate patient for any adverse reactions during Flolan infusion.

**DOCUMENTATION:**

Document in the EMR:

1. Type of the venous access.
2. Time Flolan is changed to a hospital infusion pump.
3. Time each bag of Flolan is hung.
4. Any signs or symptoms of Flolan toxicity or undesirable effects.
5. Condition of venous access every 2 hours for continuous infusion.

**PATIENT/SIGNIFICANT OTHER EDUCATION:**
1. Prior to discharge patient and family caregiver will be able to:
   
a. Demonstrate and verbalize the care and maintenance of the central venous catheter, medication preparation, and home infusion pump.

b. State the dosage and side effects of Flolan.

c. State the actions taken when side effects are present.

d. Verbalize how to reorder supplies, and the need of keeping a 2 week supply on hand.

2. Patient and family caregiver will have the toll free number to ACCREDO Therapeutics 1-800-878-7690 or 1-800-9Flolan. Or the number of the HHA providing their supplies.

QUALITY IMPROVEMENT:

1. Report any adverse drug reactions utilizing the Adverse Drug Reaction Form.

2. Report any pump malfunctions to Bio-Medical Engineering immediately and complete Risk Assessment Form.

REFERENCES:

MICROMEDEX ® Healthcare Services, 4/15/03 pp1 of 13

UHS Biomedical Engineering Policy Reference #9096-L

Care and Maintenance of Vascular Access Devices Guideline, Guideline Number: 2.0100

Intravenous Therapy and Intravenous Medication Management Guideline, Guideline Number 1.1100

OFFICE OF PRIMARY RESPONSIBILITY:

Patient Care Services at University Hospital.