PURPOSE:
To provide accurate and safe administration of pentamidine isethionate in the home setting.

CONSIDERATIONS:
1. First doses of pentamidine should not be given in the home setting. Infusions should be given using an infusion control pump.
2. Due to the severity of the adverse reactions, intravenous pentamidine isethionate should be given only to patients with documented Pneumocystis carinii.
3. A responsible and capable caregiver must be present during and after the infusion to monitor the patient for the development of adverse reactions (severe hypotension, cardiac arrhythmias, hypoglycemia, Stevens-Johnson syndrome).
4. The home must have a working telephone.
5. Instructions to patient/caregiver should include:
   a. Actions to be taken should adverse reactions occur.
   b. Procedure for blood glucose testing, as ordered, following medication administration and thereafter until stable.
   c. Nutritional needs in response to hypo- or hyperglycemia.
6. Due to the possibility of severe hypotension, the patient should be supine during drug administration. The patient's blood pressure should be monitored during administration of the drug and thereafter until stable.
7. A drop in systolic pressure greater than 20 mm Hg should be reported to the physician; may require stopping infusion and administering IV fluids as ordered by physician, i.e., Lactated Ringers injection IV at 200 mL/hour for a total volume of 1000 mL.
8. Blood glucose levels should be monitored during infusion of pentamidine. (See Blood Glucose Monitoring with Blood Glucose Meter.) Blood glucose test results lower than 40 mg should be reported to the physician.
9. The following laboratory work should be ordered prior to initiation of treatment, and also on a regular basis during therapy to monitor for toxicity:
   a. Daily blood urea nitrogen (BUN) and serum creatinine.
   b. Daily blood glucose.
   c. Complete blood count (CBC) with differential and platelet count.
   d. Liver function test, including bilirubin, alkaline phosphatase, SGOT (AST), and SGPT (ALT).
   e. Serum calcium.
   f. Electrocardiograms at regular intervals.
10. Other reactions may include nausea, decreased appetite, bad taste in mouth and fever.
11. Local reaction, pain and slight irritation at the IV/injection site are common, thrombophlebitis has occurred rarely.
12. For peripheral IV administration, select a large vein away from joints.
13. Pentamidine should be reconstituted with Sterile Water for Injection, USP, or 5 percent Dextrose Injection, USP. DO NOT use normal saline. The calculated dose of pentamidine should then be further diluted in 50-250 mL of 5 percent Dextrose Injection, USP.
14. The diluted IV solution containing pentamidine isethionate should be infused over a period of 60 to 90 minutes.
15. An anaphylaxis kit should be available in the home.
16. Use at least 2 patient identifiers prior to administering medications.
17. Per Joint Commission recommendations, all tubes and catheters should be labeled to prevent the possibility of tubing misconnections. Staff should emphasize to all patients the importance of contacting a clinical staff member for assistance when there is an identified need to disconnect or reconnect devices.

EQUIPMENT:
Infusion set
D_{5}W 25-50 mL, or as ordered
IV fluids; Lactated Ringers, D_{5}/.45NS, as ordered
Heparin flush (100 units/mL, or as ordered)
Syringe with needle or needle less adaptor
Medication
Blood glucose meter
Tape
Alcohol wipes
2x2 gauze or transparent, adhesive dressing
Sterile water (vial)
Stethoscope
Sphygmomanometer
Gloves
Impervious trash bag
Puncture-proof container
Anaphylaxis kit

PROCEDURE:
1. Adhere to Standard Precautions.
2. Identify patient and explain procedure and follow-up care to patient/caregiver.
3. Assemble equipment and supplies. (See Intravenous Therapy Administration.)
4. Place patient in a supine position.
5. Take and record baseline vital signs: Temperature, pulse, respiration and blood pressure.
6. Take and record baseline blood glucose, if indicated.
7. Assess venous access. If no central line, start peripheral IV according to procedure. (See Intravenous Therapy Administration.)

8. Reconstitute pentamidine isethionate. Calculate dose as ordered and add to D5W if not prepared by pharmacy.


10. Set infusion rate as ordered by physician to infuse medication over 60 to 90 minutes.

11. Observe infusion site frequently for redness, swelling and/or pain.

12. Monitor and record blood pressure and blood glucose every 30 minutes during the infusion, or as ordered.

13. Monitor for sudden appearance of allergic skin reactions or any signs of adverse reaction.

14. When infusion is complete, flush access device with 3-5 mL of D5W, then with saline and heparin (amount appropriate for type of device). If peripheral IV, follow Administration of Intravenous Therapy in the Home for removal guidelines.

15. Discard soiled supplies in appropriate containers.

AFTER CARE:

1. Document in patient's record:
   a. Medication administered, dose, time, rate and route.
   b. Type and appearance of venous access site.
   c. Patient's response to procedure, side effects and management.
   d. Vital signs and blood glucose level.
   e. Instructions given to patient/caregiver.
   f. Communication with physician.