PURPOSE:
To administer intravenous antifungal agents in the home in a safe manner.

CONSIDERATIONS:
1. Intravenous administration of antifungal agents is never initiated in the home. The patient must be stabilized on dosage and frequency prior to going home. A caregiver must be educated in the procedure and possible adverse reactions and be present during and after the infusion.
2. The need for a homecare registered nurse to be present for the administration of Amphotericin B will be determined by physician’s order and the homecare team.
3. Antifungal agents shall be infused by means of an infusion control pump.
4. Antifungal agents are generally light sensitive and require special handling:
   a. Fluconazole: DO NOT remove unit from overwrap until ready to use.
   b. Amphotericin B: Refrigerate vials. Reconstituted solution may be stored at room temperature for 24 hours or kept refrigerated and used within one week. Reconstitution must be done with sterile water; bacteriostatic agents or saline cannot be used.
   c. There are new formulations of antifungals (i.e. liposomal). Refer to specific drug information related to handling of these drugs.
5. Amphotericin B is not compatible with normal saline. Access device should be flushed with 3-5 mL of D5W prior to beginning and at end of infusion. Then, flush with heparin.
6. Due to incidence of thrombophlebitis, antifungal agents are best administered via a central line.
7. Febrile reactions, shaking, chills, flushing, headache, malaise, anorexia, generalized body pains, nausea, vomiting, abdominal pain/cramps and diarrhea are common side effects of intravenous antifungal agents.
8. Laboratory work should be ordered on a regular basis to monitor for toxicity: hypokalemia, hypomagnesemia, proteinuria, nephrotoxicity, hepatotoxicity, thrombocytopenia, normocytic/normochromic anemia and bacterial supration.
9. Recommended laboratory studies are:
   a. Baseline and weekly CBC, creatinine, BUN, electrolytes and liver function.
   b. Baseline and twice-weekly potassium, calcium and magnesium.
10. Monitor intake, output and weight on a regular basis. Renal insufficiencies are typically reversible by discontinuing the medication.
11. Generally, severe reactions can be mitigated by giving aspirin or acetaminophen, antihistamines, or anti-emetics prior to administration of antifungal agents.
   a. Intravenous adrenal corticosteroid administered prior to or during Amphotericin B infusion may decrease febrile reactions.
   b. Meperidine has been used to relieve shaking chills and fevers.
12. The rate of infusion is frequently dictated by the ability of the patient to tolerate the therapy. Amphotericin B should not be infused in less than 1 hour.
13. Under no circumstances should a total dose of 1.5 mg/kg be exceeded. Amphotericin B overdoses can result in cardio-respiratory arrest.
14. Use at least 2 patient identifiers prior to administering medications.
15. 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 with needle or needle less adaptor
D5W 25-50 mL, or as ordered
Antifungal agent
Medications to control side effects, as ordered:
Aspirin or acetaminophen
(Prochlorperazine) Compazine
(Trimethobenzamide) Tigan
(Diphenhydramine) Benadryl
Anaphylaxis kit
5 mL syringe
3 mL syringe
Tape
Alcohol prep pads
2x2 gauze or transparent, adhesive dressing
Sterile saline (vial)
Heparin flush (100 units/mL, or as prescribed)
Gloves
Impervious trash bag
Puncture-proof container
Commercial spill-kit

PROCEDURE:
1. Adhere to Standard Precautions.
2. Identify patient and explain procedure.
4. Take and record vital signs: temperature, pulse, respiration and blood pressure.
5. Pre-mEDIATE patient, if ordered.
6. Assess patency of venous access.
7. Assemble infusion set with antifungal agent and initiate infusion.
8. Set infusion rate per physician orders.
9. Monitor vital signs every 30 minutes during infusion and upon completion.
10. If side effects occur the usual medical/and or nursing management includes:
   a. Fever and headache: Aspirin or acetaminophen.
   b. Shaking and chills: Warm blankets, meperidine may be required.
   d. Phlebitis or extravasation: Discontinue the infusion and apply warm compresses to the area.
11. When infusion is complete, flush venous access device with 3-5 mL of D5W, then with saline and heparin (amount appropriate for type of device). (See No. 5 of Considerations.)
12. 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. All vital signs.
   e. Instructions given to patient/caregiver.
   f. Communication with the physician, as needed.