PURPOSE:
To prepare Normal Saline Solution, Dakin’s Solution and 25% Acetic Acid when prepared solutions are not available.

CONSIDERATIONS:
1. Homemade solutions are prepared using sterile technique.
2. Leave written instructions in the home for caregiver to prepare needed solutions.
3. Preparing solutions in the home reduces cost to the patient.
4. Use single dose saline for small wounds, when possible.
5. Spray wound cleansers may be appropriate if patient/family unable to prepare solution. Obtain physician order.
6. DO NOT use private well water or seawater to prepare solutions.
7. Limit use of caustic solutions, i.e., Dakin’s, Betadine, Acetic Acid, Hydrogen Peroxide and debriding agents to infected and/or necrotic wounds.
8. For wounds requiring sterile technique, excess solutions must be discarded after each use. Refer to specific agency policy regarding saline use and storage.
9. Baking soda is added to Dakin’s to adjust pH.
10. Use at least 2 patient identifiers prior to administering medications.

EQUIPMENT:
Wide-mouth glass jar with lid, e.g., peanut butter jar, mason jar
Measuring spoons or cup
Large pan with lid
Non-iodized table salt for preparation of normal saline
White bleach (Sodium hypochlorite solution 5.25%) for preparation of Dakin’s solution. Do not purchase scented or concentrated bleach solutions.
White Distilled vinegar (Acetic acid, 5% by volume) for preparation of Acetic Acid solution
Baking soda for preparation of Dakin’s solution

PROCEDURE:
Normal Saline
1. Adhere to Standard Precautions.
2. Sterilize a large, clear jar that has a screw-top cap.
   a. Place open jar upside down and the cap in a pan of boiling water.
   b. Boil for 20 minutes.
   c. Dishwasher sterilization may be substituted for boiling.
3. Bring to a boil for 20 minutes one quart of water. [Note: Four cups is equal to one quart.]
4. Add two teaspoons of table salt, then cover container.
5. Let solution cool.
6. Pour solution into jar and cover with the clean cap, label contents and date.
7. When using solution, only handle the outside of the jar and cap. DO NOT leave cap off jar for long periods of time.

Dakin’s Solution (also known as sodium hypochlorite solution 0.5%)
1. Sterilize a large, clean jar that has a screw-top cap.
   a. Place open jar upside down and the cap in a pan of boiling water.
   b. Boil for 20 minutes.
   c. Dishwasher sterilization may be substituted for boiling.
2. Bring to boil one quart of water. [Note: Four cups is equal to one quart.]
3. Using a sterile measuring spoon, add 1/2 teaspoonful of baking soda to the boiled water.
4. Determine strength needed:
   a. Full Strength – Add 3 oz. (or 95 mL) of liquid bleach (such as Clorox, Purex, etc.).
   b. Half Strength – Add 3 Tablespoons + 1/2 teaspoon (or 48 mL) of liquid bleach.
   c. One-quarter Strength - Add 1 Tablespoon + 2 teaspoons (or 24 mL) of liquid bleach.
   d. One-eighth Strength – Add 2 1/2 teaspoons of liquid bleach.
5. Let solution cool.
6. Pour solution into jar and cover with a clean screw cap, label with contents and date. Store away from direct sunlight.
7. When using solution, only handle the outside of the jar and cap. DO NOT leave cap off jar for long periods of time. [Note: Dakin’s solution, Betadine, Acetic Acid, and Hydrogen Peroxide impairs fibroblasts. If possible, obtain physician order for petroleum jelly gauze or skin barrier to prevent irritation of surrounding skin. Limit the use of Dakin’s solution < 10 days.]

0.25% Acetic Acid Solution
1. Sterilize a large, clean jar that has a screw-top cap.
   a. Place open jar upside down and the cap in a pan of boiling water.
   b. Boil for 20 minutes.
   c. Dishwasher sterilization may be substituted for boiling.
2. Bring to boil 5 cups of water for 20 minutes.
3. Pour 5 cups of water into prepared jar; let cool.
4. Use a clean measuring spoon to add 4 tablespoons of white distilled vinegar.
5. Close lid and shake to mix.
6. Label with contents, date and store away from direct sunlight.
7. Prepare new solution every day.
AFTER CARE:

REFERENCES
(The Ohio State University Medical Center.) How to Make Dakin’s Solution. Department of Inpatient Nursing. Retrieved August 19, 2010 from http://doreen.mkbmemorial.com/NF/dakins.pdf
