Infection Control in the Home

Carole Wegner RN, MSN
Lori Leiser CRT

Topics
- Standard Precautions
- Colonization of Bacteria
- Respiratory Infections
- Cleaning Equipment

Standard Precautions
- Good hand washing is the key to infection control
- Disposable gloves should be worn if contact with body fluids is expected
**So Why All the Fuss About Hand Hygiene?**

Most common mode of transmission of pathogens is via hands!

- Infections acquired in healthcare
- Spread of antimicrobial resistance

---

**Indications for Hand Hygiene**

If hands are not visibly soiled, use an alcohol-based handrub for routinely decontaminating hands.

---

**Indications for Hand Hygiene**

When hands are visibly dirty, contaminated, or soiled.

Wash with non-antimicrobial or antimicrobial soap and water.

---

Guideline for Hand Hygiene in Health-care Settings. MMWR 2002; vol. 51, no. RR-16.


Retrieved from: http://pubs.caes.uga.edu/caespubs/pubcd/B693.htm
Multidrug Resistant Organisms

Multidrug resistant organisms are bacteria that are resistant to one or more classes of antimicrobial agents and are resistant to all but one or two commercially available antimicrobial agents.

Most common multidrug resistant organisms outside of the health care setting are MRSA (methicillin resistant staphylococcus aureus) and VRE (Vancomycin resistant enterococci).

Colonization of Bacteria

- Colonization occurs when bacteria adheres to the tissue and forms colonies
- Many of the children with tracheostomies are colonized with bacteria
  - (not infectious, becomes normal part of flora)
- Pseudomonas is a common bacteria which is colonized in children with tracheostomies
Home Precautions

Caregivers wash hands with soap and water after physical contact with the child.

- Towels for drying hands should be used only once.
- Disposable gloves worn with contact with body fluids.
- Linens and patient environment should be cleaned routinely and when soiled with body fluids.
- Notify doctors and other healthcare personnel who provide care for the patient that the patient is colonized/infected with a multi-drug resistant organism.

Source: Division of Healthcare Quality Promotion, National Center for Preparedness, Detection, and Control of Infectious Diseases. www.cdc.gov

Home Precautions

- Any irritant can decrease the cleansing action of the cilia.
- Avoid smoke from any source.
- Maintain a clean home free of irritants.


Respiratory Infections

- Most respiratory infections are viral.
- Young children can have 6-8 per year.
- Difficult to determine if viral or bacterial.

Retrieved from: http://www.firstfreerockford.org/childrens.htm
Respiratory Infections

Signs/Symptoms include:
- Colored/purulent secretions
- Color change
- Presence of fever
- Increased work of breathing,
- Increased respiratory rate
- Cough
- Child acting ill
- Increased Peak Inspiratory Pressure (PIP)

Prevention of Respiratory Infection

- Good Hand Washing
- Limit visitors & exposure to crowds

- Good oral care
- Immunizations for child
- Annual influenza vaccination for child and all caregivers
Treatment of Respiratory Illness

Treatment dependent on:
- Symptoms
- Laboratory tests/xrays
- Underlying diagnosis/child's history

Treatment of Respiratory Infection

Airway Clearance
- Bronchial hygiene modalities
- Humidification
- Bronchodilators

Antibiotics
- Oral/enteral antibiotics
- Aerosol antibiotics; such as Tobramycin
- If multiple aerosol medications, give in following order:
  - Bronchodilator/Inhaled steroid
  - Mucolytic
  - Antibiotic
Cleaning of Equipment

- Clean equipment to avoid infections
- Variety of approaches and schedules
- Clean suctioning technique used in the home

How to Suction:

Clean Technique

- Clean suction technique in the home setting: nurses wash hands & wear gloves. Parents may or may not wear gloves.
- Clean suction catheter according to hospital procedure
- May reuse suction catheter up to 8 hours or as prescribed by MD
- Allow catheter to dry and store in dry container

Cleaning of Tracheostomy Tubes

- Uncuffed tracheostomy tubes
- Bivona tight to shaft tracheostomy tubes can be recleaned
- Cuffed tracheostomy tubes cannot be recleaned
Cleaning Trach Tube

- Check trach and discard if any signs of cracks or breaks in tube or stiffness of tube.
- Clean according to manufacturer's recommendations or procedure from hospital.
- Make sure tracheostomy tube is completely dry before placing in clean container.
- If water droplets appear in the container or on the tracheostomy tube, the tube is contaminated and must be re-cleaned.

Cleaning Equipment

Wash permanent equipment weekly with liquid soap:
- Dove
- Ivory

These leave the least filmy residue.

Cleaning and Disinfecting

- Wash
- Rinse
- Disinfect
- Rinse
- Air dry
- Assemble
- Store
Disinfecting Equipment

- Use one of two solutions:
  - Control III and Water
  - Vinegar (acetic acid) and Water

Retrieved from: http://www.southwestmedical.com/Personal_Care/Disinfectants_Preps/716c0

Disinfecting Equipment

- Control III and water not always covered by insurance
- Kills Gram negative and positive bacteria
- Mix 1 ounce with a gallon of water
- Good for 14 days once mixed
- 3 Weeks worth of disinfecting

Retrieved from: http://www.southwestmedical.com/Personal_Care/Disinfectants_Preps/716c0

Disinfecting Equipment

- Vinegar (acetic acid) and water not covered by insurance.
- Kills gram negative bacteria and is not effective in hard water
- Mix one quart with a gallon of water
- Good for 7 days once mixed
- 2 Weeks worth of disinfecting

Key Points: Infection Control

- Good hand washing key to infection control
- Tracheostomies are colonized with bacteria
- Most respiratory infections are viral
- Cleaning equipment prevents infection