Infection control means preventing the spread of disease from one person to another. All we ever needed to know about it we learned as children. There is no reason to be afraid of germs or of infectious disease. Disease is spread in simple ways, and control is relatively simple, if you understand some basic principles. The entire science of infection control can be summed up as separation of "clean" and "dirty."

Items or areas which have (or might have) come in contact with human bodily secretions since cleaning are "dirty," and should not come in contact with areas or items which are clean. Just as Mom said, used linen, used dishes, and bedrooms and or bathrooms are dirty. The kitchen and areas where food, utensils and linens are stored are clean. Hands should always be washed between dirty and clean items or areas.

The following general principles will guide you in effective approaches. If you have concerns or questions about a specific disease, contact your local health department.

- To be effective, infection control methods must be applied at all times, not just when persons are known to be infected.
- Many organisms capable of causing disease (germs) are present all the time in healthy human beings.
- Most people who harbor the germs that cause such diseases as AIDS or Hepatitis have no symptoms and have not been diagnosed as having the disease.
- Persons coming down with diseases are often highly contagious before symptoms develop.

In general, surfaces that appear clean and dry will not contribute to the spread of disease.

- Germs are relatively easy to kill.
- They can only survive outside the body in some kind of moisture. Drying will kill them.
- Soap and water, household cleaners, and bleach are effective germ killers.

In order to get from one person to another, germs must "hitch a ride."

- Germs can't walk, crawl, jump or fly. They swim.
- The most common method of transmission is for germs to be carried from one person to another on the hands or clothing. Since they require moisture to survive, the hands or clothing must have come in contact with a moist substance containing germs.
- Another mode of transmission is by droplet. A droplet is a drop of moisture containing germs. Droplets must have some force to propel them, such as when a person coughs or sneezes, or when dirty linen is sorted or rinsed. Droplets are usually considered to have a range of up to four feet.
- The source of disease-causing organisms is any human being. In order for the disease to spread, organisms must leave the body of the host and enter the body of another person.
• Since germs require moisture to survive, they must leave the host in a moist substance. Moist substances, which are of concern are BM, urine, vomit, secretions from the mouth and nose, blood and wound drainage. (Sweat and tears have never been implicated in the spread of disease.)

The transfer of disease from one person to another can be prevented by some very simple measures, provided that they are carried out at all times, and for all persons.

• Handwashing, a brief rubbing together of lathered hands, followed by rinsing under running water, is the single most effective control measure. Hands should be washed after touching a contaminated substance. (BM, urine, sputum, nasal secretions, blood or any open wound.)
• Hands should always be washed before contact with food or medicine.
• Household gloves should be worn for contact with any contaminated substance, and hands should be washed after gloves are removed.
• If clothing should become soiled with contaminated substance, it should be changed before contact with another person or food or medicine.

The principles and procedures for blocking transmission of any infectious agent are no different than they ever have been. If the person is dependent and unable to manage his/her secretions and excretions, certain precautions should be practiced by the caregiver.

HAND WASHING
Thorough hand washing with soap and water is essential in controlling the spread of infectious organisms. Intact skin is the body's natural barrier to infectious agents. Soap should be available at all times. Hand washing should occur before or after patient care, after contact with contaminated items, and when preparing or eating food. Adequate education of all caregivers in the proper hand washing techniques should be incorporated into the service plan. (See handout, which follows.)

GLOVES
Gloves provide an additional barrier especially in the presence of open skin areas and should be worn in the following situations:
• When handling secretions and excretions; if a person has rectal or genital lesions; when the person has been incontinent or has vomited; and when handling soiled diapers, linens or clothing. Gloves should be worn during blood contact that may occur during wound, nose or mouth care, and during phlebotomy or caring for a woman during normal menstrual or post-parietal bleeding. Hands should be washed after removing gloves. Gloves are not needed for general care or during casual contact such as bathing of intact skin, assisting with ambulation, or feeding the person. In the absence of running water, gloves should be worn in preference to using antiseptic foams since they do not kill all organisms or provide a means of physical removal.

SOIL
Generally speaking, good cleaning with household detergents is appropriate for washing floors, furniture, and items that do not have direct contact with mucous membranes or internal organs of the body. Where soiling occurs, hot soapy water should be used to remove secretions and excretions before disinfecting. A solution of one part household bleach to nine parts water is adequate to disinfect the area to kill organisms. Since applying bleach directly to soiled areas can cause the release of noxious fumes, it is important to clean the area before disinfecting with bleach solutions. This solution can be used to disinfect counters, toilet bowls, or floors. One cup of bleach can be added to hot soapy water in the washing machine to
disinfect soiled linens. Bedpans and commodes should be cleaned on a regular basis. If only one patient is using the bedpan or commode, cleaning on a regular basis with household detergent should be adequate. If the bedpan or commode is shared, special precautions are unnecessary unless diarrhea, herpes lesions, or incontinence are a problem. Then, cleaning and disinfecting with bleach should occur after each use.

If large amounts of soiling are expected, the caregiver may feel most comfortable wearing a smock or protective clothing to keep a uniform clean. This is not necessary, however, as a method to prevent disease transmission. If soiling occurs, regular laundering is adequate to clean the caregiver's clothes.

**DISPOSAL**

Disposable items such as gloves, diapers, under pads, tissues, paper towels, and dressings should be put in a heavy duty plastic bag, tied shut, and then placed in a second plastic bag before discarding. Needles and other sharp items should be placed into puncture-resistant containers. Removal of these items should be in a matter consistent with local regulations for solid waste disposal. The normal trash pickup by the city or county is generally an appropriate and adequate disposal mechanism.

In the adult family home, a basic level of good hygiene is essential, and living quarters should be well ventilated. Counters, sinks and floors in the kitchen should be kept free from food particles and cleaned regularly. Washing dishes with hot soapy water and drying them is sufficient cleaning after use. Sponges used to clean counters and dishes should not be used to clean the floor, or to clean bathroom spills. The interior of the refrigerator should be cleaned with soap and water to control molds, and old food should be disposed of regularly.

The floor, toilet bowl, tub, shower, floor and sink should be cleaned weekly to prevent the growth of fungi. These areas can be maintained regularly with common household detergents. If a spill of urine or other body fluids has occurred, mopping or wiping up the soiled area first with hot soapy water and then disinfecting with bleach as described previously will adequately clean the area of contaminated fluids. Sponges and mops used to clean up spills from bodily fluids in the bathroom or bedroom should not be rinsed out in the kitchen sink or used where food preparation occurs. Dirty mop water should be poured down the toilet.

Pets are of concern because some may carry organisms not well tolerated by some people. If the person wishes to keep a pet, care should be taken to maintain its good health. A veterinarian should treat any illness. Infectious organisms may be found in animal wastes, birdcages, cat litter boxes and fish tanks, so they should be well maintained.