**STANDARD PRECAUTIONS**

**Hand Hygiene** Hand hygiene is the single most important IPC precaution and one of the most effective means to prevent transmission of pathogens associated with health care services. Appropriate hand hygiene must be carried out upon arriving at and before leaving the health care facility, as well as in the following circumstances:

 Before and after performing any procedure between patients or on the same patient

 Before and after examining (coming in direct contact with) a client or patient

 Before putting on gloves

 After removing gloves

 After any situation in which hands might become contaminated, such as:

* Handling contaminated objects, including used instruments
* Diapering or toileting children
* Using the toilet, wiping or blowing one‟s nose, or performing other personal functions
* Touching mucous membranes, blood, body fluids, secretions, or excretions
* Coming in contact with a source of microorganisms

 Before preparing medication

 Before preparing, handling, serving, or eating food

 Before feeding a patient

*Note: Frequent hand washing and wearing gloves can irritate skin. Lotions can ease dryness from frequent hand washing and also help prevent dermatitis from frequent glove use.*

There are four types of hand hygiene:

 Routine hand washing

 Hand washing with an antiseptic

 Alcohol handrub

 Surgical hand scrub

**Routine Hand Washing**

The purpose of hand washing is to remove soil, blood and other organic material, and transient microorganisms from the skin. The three elements that are essential for effective hand washing are soap, clean running water,1 and friction.

Follow these steps in hand washing:

1. Remove all jewelry.

2. Thoroughly wet hands with running water. Do not dip hands into a basin that contains standing water, even with the addition of an antiseptic agent, because microorganisms can survive and multiply in these solutions. Use a comfortable water temperature. Washing your hands in hot water increases the risk of skin irritation and does not remove more microorganisms.

3. Apply a hand-washing agent (plain soap or detergent). Washing hands with plain water without soap is not effective.

4. Rub all areas of hands and fingers vigorously for 10 to 15 seconds, paying close attention to fingernails and areas between the fingers. Don‟t forget the wrists. Repeat each action five times. (See Figure 1.)

5. Remove debris from under the fingernails.

6. Rinse hands thoroughly with clean running water from a tap for 10 to 15 seconds.

7. Use a paper towel when turning off the water if the tap is hand-operated.

8. Dry hands with paper towels or air them dry. Avoid using common or shared towels, which might harbor microorganisms and contaminate hands even after proper hand washing or hand rubbing. To avoid sharing towels, use disposable paper, or single- use hand towels. Do not dry hands on personal clothes or on wet and soiled towels. Blow dryers are not recommended.

Patients and family members should be instructed on proper hand washing. Patients should wash their hands before eating, after toileting, and when hands are soiled, under running water with a soap approved by the health care facility. *1*

Hand-washing products should be handled according to these guidelines:

 For bar soaps, provide soap racks to allow the bar to stay dry, because microorganisms grow and multiply in standing water.

 Store liquid hand-washing products in closed, disposable containers. If reusable containers are used, clean thoroughly and dry them before refilling. Follow routine maintenance schedules and document them. Do not top off liquid-soap containers.

 Rotate the antimicrobial soaps that are used in order to prevent the development of resistant organisms.

 If a liquid hand-washing product requires dilution, have the pharmacy do it.

**Hand Washing with an Antiseptic and Running Water** The purpose of hand antisepsis is to remove soil and debris and to reduce both transient and resident flora on the hands. It removes transient microorganisms and kills or inhibits the growth of resident microorganisms. It may reduce infections in high-risk situations, such as the following:

 When there is heavy microbial contamination

 Before performing invasive procedures such as the placement and care of intravascular devices and indwelling urinary catheters

 Before contact with highly susceptible patients, such as premature infants; elderly patients; and individuals with immune defects such as AIDS, damage to the integumentary system (e.g., burns or wounds), and percutaneous implanted devices

Before and after direct contact with patients on contact precautions for hepatitis A or E, or who have infections with antimicrobial-resistant microorganisms, such as methicillin-resistant *Staphylococcus aureus* (MRSA)

**Alcohol Handrub without Water** The purpose of an antiseptic handrub is to inhibit or kill transient and resident flora. Use of a waterless, alcohol-based handrub product is more effective in killing transient and resident flora than antimicrobial hand-washing agents or plain soap and water. An antiseptic handrub is quicker and easier to perform and gives a greater initial reduction in hand flora. Handrub products also contain a small amount of an emollient such as glycerin, propylene glycol, or sorbitol that protects and softens skin. When the hands are visibly soiled or contaminated with blood or body fluids, do not use a handrub—wash hands with soap and water instead. Use an adequate amount (5 milliliters) of antiseptic handrub solution and follow these instructions for an appropriate and effective handrub: 1. Apply enough alcohol-based handrub to cover the entire surface of your hands and fingers.

Rub the solution vigorously into your hands, especially between the fingers and under the nails until dry. 3. Do not rinse the hands after applying the handrub. *Notes: Alcohol-based handrubs are appropriate for rapid hand decontamination between patient contacts. They are not a substitute for hand washing if hands are soiled. To reduce the build up of emollients on hands after repeated use of alcohol-based handrubs, wash hands with soap and water after every five handrubs.*

**Surgical Hand Scrub** Prior to performing any surgical procedure, all surgical personnel, including surgeons, anaesthesiologists, and nurses, must perform a surgical hand scrub to remove debris and transient microorganisms and to reduce resident flora on their hands. Hand washing with antiseptics before the surgical procedure helps prevent this growth of microorganisms and reduces the risk of transmitting infections to the patient if the surgeon‟s gloves develop holes, tears, or nicks during the procedure.

**Other Considerations** Health care workers should be aware of the following considerations:

 Health care workers should follow the guidelines for using gloves with hand hygiene. (See Figure 5.)

 To minimize and treat contact dermatitis related to frequent hand washing (more than 30 times per shift), the use of harsh detergents, and frequent exposures to antiseptic agents, HCWs may use hand lotions, creams, and moisturizing skin care products. Such products should be water- based and without fragrance.

 Cuts and abrasions on cuticles, hands, and forearms should be covered with waterproof dressings. If covering them in this way is not possible, surgical staff with skin lesions should not operate until the lesions heal.

 Health care workers who have open sores or cuts on their hands or forearms should not process instruments until the lesions are healed.

Long fingernails serve as possible reservoirs for gram-negative bacilli, yeast, and other pathogens; and tend to puncture gloves more easily.

 Hand washing cannot reduce the bacterial counts of HCWs with dermatitis. Health care workers with dermatitis carry high numbers of microorganisms and may be at increased risk of exposure to blood-borne pathogens. Intact skin is a major defense from infection.

**Personal Protective Equipment** Protective barriers and clothing are referred to as personal protective equipment, or PPE, and have been used for many years to protect clients from microorganisms present on HCWs in the health care setting. With the emergence of HIV/AIDS and HBV/HCV and the resurgence of TB, PPE has now become important for protecting HCWs as well as clients. PPE provides a physical barrier between microorganisms and the wearer, thereby preventing microorganisms from contaminating hands, eyes, clothing, hair, and shoes. PPE also prevents microorganisms from being transmitted to other patients and staff. PPE reduces, but does not completely eliminate, the risk of acquiring an infection. PPE must be used effectively, correctly, and whenever there is a risk of contact with blood and body fluids. Making PPE available and training HCWs to use it properly are essential. *Note: Use of PPE does not replace the need to follow basic IPC measures such as hand hygiene.*

**Principles for Using PPE** Health care workers should follow these guidelines for using PPE:

 Assess the risk of exposure to blood, body fluids, excretions, or secretions and choose items of PPE accordingly.

 Use the right PPE for the right purpose.

 Avoid any contact between contaminated (used) PPE and surfaces, clothing, or people outside the patient care area.

 Discard used PPE appropriately in designated disposal bags.

 Do not share PPE.

 Change PPE completely and thoroughly your wash hands each time you leave a patient to attend to another patient or another duty.

TheThe following individuals should use PPE:

 Health care workers who provide direct care to patients and who work in situations in which they might have contact with blood, body fluids, excretions, or secretions

 Support staff, including waste handlers, cleaners, and laundry staff, in situations in which they might have contact with blood, body fluids, excretions, or secretions

 Laboratory staff who handle patient specimens

 Family members who provide care to patients and could come in contact with blood, body fluids, excretions, or secretions

**Gloves** Gloves should be worn in addition to, not as a substitute for, hand washing. Hand hygiene coupled with the use of protective gloves is a key component in minimizing the spread of disease and maintaining an infection-free environment. Understanding when gloves are required and, equally important, *when they are not required*, can reduce costs and maintain safety for both patients and staff.

**Recommended Use**

When there is a reasonable chance of hands coming in contact with blood or other body fluids, mucous membranes, or nonintact skin Before performing invasive medical procedures, for example, when inserting vascular devices such as peripheral venous lines Before handling contaminated waste items or touching contaminated surfaces

Gloves are expensive irrespective of who is paying for them. They should not be worn when it is not necessary to do so. Gloves are not required if there is no anticipated contact with mucous membranes, blood, body fluids, secretions, or excretions (for example, for routine care activities in which contact is limited to a patient‟s intact skin, such as checking blood pressure, checking temperature, or giving IM injections). The appropriate type of gloves should be used for the appropriate reason (for example, use sterile gloves only for the necessary purpose).

The following types of gloves are available in Kenya:

 Sterile surgical gloves

 Disposable (single-use) examination gloves

 Utility or heavy-duty gloves (for use in cleaning instruments, equipment, contaminated surfaces, and while handling or disposing of contaminated waste)

When performing surgical procedures, always use sterile surgical gloves. Clean, nonsterile, disposable gloves (that is, nonsurgical gloves) are adequate in the following situations:

 When providing routine care for patients who have highly transmissible infections

 When there is a reasonable chance of hands coming in contact with blood or other body fluids, mucous membranes, or nonintact skin (when performing medical examinations and procedures, such as pelvic examinations)

 For contact with blood, body fluids, secretions, excretions, mucous membranes, draining wounds, or nonintact skin (open skin lesions or exudative lesions)

When handling items that are visibly soiled with blood, body fluids, secretions, or excretions

 When the HCW has nonintact skin on his or her hands

 Before performing invasive medical procedures, for example, inserting vascular devices such as peripheral venous lines

 Before handling contaminated waste items or touching contaminated surfaces

The general principles for using gloves are provided here:

 When indicated, put gloves on directly before contact with the patient or just before the task or

procedure that requires the gloves.

To prevent cross-contamination of body sites, change gloves between care activities and

procedures with the same patient after contact with materials that may contain high concentrations of microorganisms (after handling an indwelling urinary catheter or suctioning an endotracheal tube, for example).

 Remove gloves before moving to another patient.

 Wear

Wear gloves while handling laboratory specimens.

 Remove gloves immediately after completing care or a specified task, at the point of use, and

before touching clean environmental surfaces.

 Wash and dry hands immediately after removing gloves.

 Do not wash, decontaminate, and reuse single-use disposable gloves. They do not provide

adequate protection after reprocessing.

 Do not wear gloves while walking in corridors and riding in elevators.

 All staff should wear appropriate gloves prior to contact with blood, body fluids, secretions, or

excretions from any client or patient.

 Use a separate pair of gloves for each client to avoid cross-contamination.

**Caps** Use caps to keep the hair and scalp covered during surgery in order to prevent flakes of skin and hair from shedding into a patient‟s wound and to prevent your hair from coming into contact with patient‟s blood, body fluids, secretions, or excretions. Caps should be large enough to cover all hair. Do not reuse disposable caps. **Footwear** Wear closed shoes to protect your feet from injury by sharps or heavy items or from contact with blood or body fluids. Wear rubber boots in areas where indicated, for example, in operating theatres and mortuaries. Clean and disinfect reusable boots.

**Surgical Masks** Surgical masks protect the mucous membranes of the nose and mouth during procedures and patient care activities. A surgical mask should be worn in circumstances where splashes of blood, body fluids, secretions, and excretions are likely, or when the patient has a communicable disease that is spread via the droplet route. A mask should be large enough to cover the HCW‟s nose, lower face, jaw, and all facial hair.

*National* The purpose of the mask is to protect the patient from moisture droplets that are expelled as HCWs speak, cough, or sneeze; and to protect the HCW by preventing accidental splashes of patient‟s blood or other contaminated body fluids from entering the HCW‟s nose or mouth. Unless the mask is made of fluid-resistant materials, it is not effective in preventing either of these. There are two types of surgical masks:

 *The tie-back mask*, which has four ties to fasten the mask around the mouth and nose. The flexible metal tab is placed above the bridge of the nose to help secure the mask and minimize air escape from the sides (venting).

 *The ear-loop mask* is similar to the tie-back mask except that it has two elastic bands used for hooking behind the ears.

Surgical masks with attached face shields that provide a protective barrier against splashes and spatters of blood or other potentially infectious material are also available. These masks are fluid- resistant, lightweight, and adequate for most procedures and isolation precautions in which the use of a mask is indicated. The correct procedures for putting on and removing surgical masks are described in Figure 7 and Figure 8 on the following pages. **Protective Eyewear (Goggles, Visors, and Face Shields)** Protective eyewear includes clear plastic goggles, safety goggles, and face shields. Health care workers should wear protective eyewear to protect the mucous membranes of their eyes during procedures and patient care activities that could generate splashes or sprays of blood, body fluids, secretions, and excretions. The following guidelines apply:

Use protective eyewear that is appropriate for the particular procedure.

 Discard disposable eyewear appropriately.

 If they are reusable, decontaminate them according to the manufacturers‟ instructions.

 Masks and eyewear should be worn when performing any task where an accidental splash into the face is likely to occur. If face shields are not available, goggles or glasses and a mask can be used together.

*32* **Respirator Masks** An N95 mask protects HCWs from inhaling respiratory pathogens that are transmitted via the airborne route. This helps prevent the spread of infectious diseases such as TB. All of the following individuals should wear a respirator mask:

 Health care workers attending to a patient who has a communicable disease that is spread via the airborne or droplet route

 Visitors to a patient who has a communicable disease that is spread via the airborne or droplet route

 Patients who have communicable diseases that are spread via the airborne or droplet route and are being transferred to other departments or hospitals

These masks are for single use only and should be discarded after four to six hours of use. They should not be stored in bags and reused, shared, or hung around neck. If a mask is splashed wet, it should be changed using clean gloves and strict hand washing.

**Gowns** Wear gowns to protect uncovered skin and to prevent soiling of clothing during procedures and patient care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions. Impermeable gowns are preferable. Gowns should not be worn outside the area for which they are intended, and soiled or wet gowns should be removed as soon as possible. Generally, if both a gown and gloves are worn, the gown should be put on first. See Figures 9 and 10 for the correct procedures for putting on and removing a surgical gown.

**Plastic Aprons** Mackintoshes or plastic aprons are used to protect clothing or surfaces from contamination. Plastic aprons are recommended for procedures during which splashes or spillage of blood, body fluids, secretions, or excretions are likely, for example, when delivering babies. An apron could be worn beneath the gown. Aprons made of rubber or plastic provide a waterproof barrier along the front of the HCW‟s body and provide protection from exposure to blood, body fluids, secretions, and excretions. Launder gowns and aprons appropriately if they are reusable. Do not reuse disposable gowns and aprons.

**Policies for Patient-Care Equipment** Patient care involves the use of many kinds of equipment. Some equipment is used for surgical procedures and is either disposed of or sterilized. Some equipment is used for noninvasive procedures, but it is sanitized as a precautionary method. Heat sterilization is used on metal equipment. Patient-care equipment should be handled according to the following orders:

 Clean and reprocess reusable equipment and linen that have been in contact with a patient

before using them in the care of another patient.

 Decontaminate and clean patient-care equipment that has been soiled with blood or body fluids

to prevent transferring microorganisms to other individuals and the environment.

 Clean items that are routinely shared between patients.

Clean any equipment that is being sent for repair or service with an approved disinfectant.

 Decontaminate and disinfect bedpans and urinals between patient uses.

 Clean toilets and commodes regularly and when soiled.

 Handle soiled patient-care equipment in a manner that prevents exposing skin and mucous

membranes and contaminating clothing and the environment.

 Do not reuse disposable patient-care equipment.

Do not share patient-care supplies, such as soap, lotion, and creams, between patients.

 Discard or decontaminate, as appropriate, clothing, books, board games, arts and crafts and magazines that are visibly soiled with blood, body fluids, or other potentially infectious material.

 Disinfect toys in playrooms and clinic areas that are made of nonporous, impervious, smooth- surface materials. Toys that cannot be washed should not be allowed.

**Safe Handling of Sharps** Sharps (needles, scalpels, etc.) must be handled with extreme caution to avoid injuries during use or disposal. **General Policies for Sharps** All health care providers should handle sharps according to the following orders:

 Do not pick up a handful of sharp instruments simultaneously.

 Position the sharp end of instruments away from self and others.

 Exercise caution when rotating instruments are in use.

 Wear heavy-duty or strong utility gloves while decontaminating, cleaning, and disinfecting instruments.

 Dispose of used sharps immediately in designated puncture- and leak-proof containers labelled with a biohazard symbol.

 Prevent access to used needles and syringes, and other sharps while awaiting transport for final disposal.

 If injured by sharps, contact the supervisor immediately.

**Safe and Appropriate Injections and Use of Needles and Syringes** A safe injection is an injection that does not harm the recipient, does not expose the provider to any avoidable risk, and does not result in any waste that is dangerous for other people. WHO estimates that at least 50 percent of all injections are unsafe. This poses serious health risks to recipients, HCWs, and the public. In many developing countries, injection overuse and unsafe practices account for a substantial proportion of new infections with HBV, HCV, and HIV. For example, for the year 2000, WHO estimated that injections with contaminated needles or syringes accounted for 30 percent of new HBV infections, 41 percent of new HCV infections, and 5 percent of new HIV infections (21 million new HBV infections, 2 million new HCV infections, and 260,000 new HIV infections). In a national cross-sectional survey on injection-safety practices in Kenya in 2003, over-prescription of injections, and improper disposal of injection-related waste were identified as some of the most prominent factors for unsafe injection practices in the country. Injections should be administered safely and only when they are medically indicated. Eliminating unnecessary injections is the best way to prevent injection-associated infections. These best practices have been determined through scientific evidences or expert consensus to most effectively protect patients, providers, and communities.

*National Infection*

***Prevent Injuries to HCWs*** Before administering an injection or any skin-piercing procedure, ensure that the following precautions are observed, depending on the types of procedure:

 Anticipate and take measures to prevent sudden patient movement during and after the injection.

 Avoid recapping and otherwise manipulating needles by hand. When recapping is unavoidable, such as when using dental needles, the single-hand-scoop method should be used. (See Figure 11.)

 Discard all used syringes and needles or any other sharps as a unit at the point of use in an

enclosed sharps container that is puncture- and leak-proof, placed within arm‟s reach, and less than three-quarters full.

 Use disposable gloves only if excessive bleeding is anticipated.

**Managing Sharps and Sharps Containers Safely** Prevent access to used needles and syringes and other sharps by disposing of them immediately after use in a designated puncture- and leak-proof container. Make sure that sharps containers are appropriately placed and easy to see, recognize, and use:

 Put sharps containers as close to the point of use as possible and practical, at a convenient height, and ideally within arm‟s reach.

 Attach containers to the walls or other surfaces if at all possible.

 Label sharps containers clearly with a biohazard symbol so that people will not unknowingly use them as a garbage or trash container.

 Keep sharps containers in the area where sharps are being used.

 Do *not* place containers in high-traffic areas, such as corridors outside patient rooms or procedure rooms, where people could bump into them or be stuck by someone carrying sharps to be disposed of.

 Do *not* place containers on the floor

**ADDITIONAL (TRANSMISSION-BASED) PRECAUTIONS**

Additional or transmission-based precautions are used for patients who are known or suspected to be infected or colonized with highly transmissible or epidemiologically important pathogens. Transmission-based precautions are based on the modes of transmission, such as air, droplet, and contact, and are designed to reduce the spread of related infections in health care facilities. In all situations, the additional, transmission-based precautions must be used in conjunction with the standard precautions.

**Airborne Precautions** In addition to standard precautions, use airborne precautions for patients known or suspected to have serious illnesses that are transmitted by airborne particles 5 micromiters or less in size and that can remain in the air for several hours and be widely dispersed. These precautions are effective in preventing many infections, including TB, measles, and varicella (including disseminated zoster). The components of airborne precautions are described in the following subsections. **Patient Placement and Transport** Patients that are known or suspected to have serious illnesses that are transmitted by air should be cared for in a private room, with the door kept closed. The room air should be exhausted to the outside (negative air pressure) using fans or another filtration system. (See Figure 12.) If a private room is not available, place the patient in a room with other patients that are actively infected with the same disease, but have no other infection (cohorting). The staff on duty should check all visitors for susceptibility before allowing them to visit. Children should not be allowed to visit such patients. Limit the transport of these patients to essential purposes only. When transport is required, the patient must wear a surgical mask. Notify the area receiving the patient. ***Figure 12: Negative-pressure ventilation room***

Direction of airflow

*National Infection*

**Respiratory Protection for HCWs** Health care workers should wear appropriate masks when caring for patients who have illnesses that are transmitted by air. For TB, HCWs should wear respirator masks (N-95 masks) and patients should wear surgical masks. (See Figure 13.) Health care workers should remove their respirator masks after leaving the room and hang them in a well-aerated place for reuse. Surgical masks should not be reused. In cases of chickenpox or measles, immune persons do not need a mask. Susceptible persons

**Droplet Precautions** In addition to standard precautions, use droplet precautions for patients who are known or suspected to have serious illnesses that are transmitted by large particle droplets. These precautions reduce the risks for transmitting pathogens that are spread wholly or partially by droplets larger than 5 micrometers in size. Droplet precautions are simpler than airborne precautions, because particles remain in the air for a short time and travel only a few feet. These precautions are effective in preventing infections such as the ones listed below:

 Invasive *Haemophilus influenzae*-type diseases, including meningitis, pneumonia, and epiglottitis

 Invasive *Neisseria meningitidis* diseases, including meningitis, pneumonia, and sepsis.

 Other serious bacterial respiratory infections that are spread by droplet transmission, such as:

Diphtheria (pharyngeal)

Mycoplasma pneumonia

Pertussis

Streptococcal (group A) pharyngitis, pneumonia, or scarlet fever in infants and young children

 Serious viral infections that are spread by droplet transmission, such as:

Adenovirus (might require more than one type of precaution)

Influenza

Mumps

*44 National*

**Patient Placement and Transport** Patients that are known or suspected to have serious illnesses that are transmitted by droplets should be cared for in a private room, but the door can be left open. If a private room is not available, place the patient in a room with other patients who are actively infected with the same disease, but with no other infection (cohorting). If neither option is available, maintain a separation of at least 1 meter between patients. Limit the transport of these patients to essential purposes only. When transport is required, the patient must wear a surgical mask. Notify the area receiving the patient. **Respiratory Protection for HCWs** Wear a mask if within 1 meter of the patient.

**Contact Precautions** In addition to standard precautions, use contact precautions for patients who are known or suspected to have serious illnesses that are easily transmitted by direct patient contact or by contact with items in the patients‟ environment and patient-care equipment. Contact precautions are effective in preventing infection from patients with wet or draining infections that might be contagious, such as draining abscesses, herpes zoster, impetigo, conjunctivitis, scabies, lice, and wound infections; and other illnesses such as those listed below:

 Gastrointestinal, respiratory, skin, or wound infections or colonization with multi-drug-resistant

bacteria of clinical and epidemiological significance.

 Enteric infections with a low infectious dose or prolonged environmental survival, such as these:

Clostridium difficile

Entero-haemorrhagic *Escherichia coli* 0157:H7,

**Patient Placement and Transport** Patients that are known or suspected to have serious illnesses that are transmitted by contact should be cared for in a private room, but the door can be left open. If a private room is not available, place the patient in a room with other patients who are actively infected with the same microorganism, but with no other infection (cohorting). Limit the transport of these patients to essential purposes only. When transport is required, ensure that precautions are maintained to minimize the risk of transmitting organisms during transport. Notify the area receiving the patient. **Hand Hygiene and PPE**

 Practice hand hygiene and wear clean, nonsterile examination gloves when entering the patient‟s room. Wash hands with an antimicrobial agent, or use an alcohol handrub after removing gloves.

 Do *not* touch or allow clothing to touch potentially contaminated surfaces or items before leaving the room.

 Change gloves after contact with infectious materials, such as wound drainage or fecal material, and practice hand hygiene. Remove gloves before leaving patient room and practice hand

Change gloves after contact with infectious materials, such as wound drainage or fecal material, and practice hand hygiene. Remove gloves before leaving patient room and practice hand hygiene.

 Wear a clean, nonsterile gown when entering the patient‟s room if patient contact is anticipated or if the patient is incontinent or has diarrhea, an ileostomy, colostomy, or wound drainage that is not contained by dressing.

 Remove the gown after leaving the patient‟s room. **Patient-Care Equipment**

Reserve noncritical patient-care equipment for use with a single patient if possible, otherwise process the equipment appropriately. Decontaminate, clean, and disinfect any equipment that has been or is being shared among infected and noninfected patients after each use.

*46* **ISOLATION**

Isolation is the creation of a barrier—mechanical or spatial—to prevent the transmission of infectious diseases to or from a patient and to reduce the risk of transmission to other patients, HCWs, and visitors. Isolation is used to prevent the transmission of infectious diseases that are spread by both contact and airborne routes. All persons accessing the isolation area should practice standard precautions. **6.1 Roles**

**Roles of Health Care Providers** Health care providers should collaborate in the timely and appropriate application of isolation. Nursing personnel should be responsible for the following:

 Informing the patient‟s clinician when a patient‟s condition warrants isolation

 Verifying the clinician ‟s order to institute isolation

 Explaining procedures and the need for isolation to the patient and family

 Preparing a well-ventilated room or area for isolation with all the necessary equipment

 Notifying the IPC lead person of the patient in isolation within 24 hours of the suspicion or confirmation of an infectious disease

 Displaying a STOP sign clearly in the patient‟s isolation area

The clinician is responsible for instituting isolation. In the absence of a clinician, the nurse-in-charge institutes isolation.

**Rules Pertaining to Isolation Patients** The following rules and guidelines apply to patients in isolation:

 Patients should be informed of ways in which they can help prevent the transmission of their infectious microorganisms to others.

 Patients in isolation should not share items that could serve as a vehicle for the transmission of microorganisms.

 Patients may leave the isolation area only for essential purposes.

 Stuffed toys for children in isolation should be discouraged. Soft plastic toys should be suggested as an alternative. These plastic toys must be disinfected before discharge.

**Visitors to Patients in Isolation** The following rules and guidelines apply to visitors of patients in isolation:

 Only two persons at a time are allowed to visit and only during visiting hours.

 Visitors must observe the STOP sign and report to the nurse-in-charge prior to entering the isolation area.

Visitors should not bring in items that could harbour potentially harmful microorganisms.

 Visitors should understand the necessary precautions they must take to prevent the spread of infection to family, friends, and the community.

 Visitors must wash their hands before entering and after leaving the room.

 Visitors must wear PPE (for example, gloves, masks, or gowns) if requested to.

 Visitors must practice standard precautions.

**Transporting Isolation Patients** When patient transport is necessary, the patient should use appropriate barriers, such as masks and barrier-proof dressings, to reduce the transmission of pertinent microorganisms to other patients, staff, and visitors, and to reduce contamination of the area. Personnel in the area to which the patient is to be taken are notified of the impending arrival of the patient and of the precautions that need to be taken. The vehicle used for transporting the patient should be decontaminated, cleaned, and disinfected.

**Handling Medical Equipment** Medical devices and patient-care equipment that have been used in the treatment of patients in isolation must be treated appropriately to reduce the risk of transmission of microorganisms to other patients:

 Contaminated, reusable critical medical devices or patient-care equipment (equipment that

enters normally sterile tissues or through which blood flows) must be sterilized.

 Semi-critical medical devices or patient-care equipment (equipment that touches mucous

membranes) must be sterilized or disinfected (reprocessed). The article and its intended use, the manufacturers‟ recommendations, the health care-facility policy, and any applicable guidelines and regulations determine the type of reprocessing.

 Noncritical equipment (equipment that touches the skin) that becomes contaminated with blood, body fluids, secretions, or excretions must be decontaminated, cleaned, and disinfected after use, according to the policy of the health care facility.

 Contaminated disposable (single-use) patient-care equipment must be handled

Contaminated disposable (single-use) patient-care equipment must be handled and transported in a manner that reduces the risk of transmission of microorganisms and environmental contamination in the health care facility. The equipment shall be disposed of appropriately.

**6.6 Handling Utensils** No special precautions are required for glasses, cups, and eating utensils. Follow standard procedures for handling utensils. For example, wash them with soap and hot water or 0.5 percent chlorine solution (5000 ppm). Soak them in solution for 10 minutes, and then rinse. Reusable dishes and utensils can be used for isolation patients and can be washed in hot soapy water or disinfected with 0.01 percent sodium hypochlorite solution

**Housekeeping** The following standard, routine cleaning procedures should be strictly adhered to:

 Decontaminate, transport, and launder soiled linen in a manner that avoids transferring microorganisms to patients, personnel, and environment.

 Perform terminal decontamination, cleaning, and disinfection when the patient no longer occupies the room.

 Clean the room, or area, and bedside equipment of patients on transmission-based precautions using the same procedures that are used for patients on standard precautions, unless the infecting microorganism(s) and the amount of environmental contamination indicates special cleaning.

 In addition to thorough cleaning, adequately disinfect bedside equipment and environmental

surfaces (bedrails, bedside tables, carts, doorknobs, faucet handles, etc.) if indicated for certain pathogens, especially enterococci, which can survive in the inanimate environment for prolonged periods of time.

Decontaminate all waste before disposal.

**Requirements for Isolation** Make the following provisions for patients in isolation:

 Provide accommodation for the suspected or confirmed patient in a room or area designated for infectious diseases.

 Ensure that adequate personnel are assigned to the area.

 Ensure that appropriate equipment and supplies are on hand.

 Establish a schedule for the daily routine cleaning and maintenance of the isolation area.

 Educate HCWs, patients, and family members regarding the illness and the precautionary measures it requires.

 Keep the patient‟s chart and records outside of the patient‟s room.