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Category: OPER
Policy 15: Infection Control

Applies: Policies for All Staff

Purpose: Reduce the risk of transmission of infection

Policy: Sound principles of infection control shall be integrated into all procedures, processes, techniques, and methods utilized in direct and indirect patient care.

Procedure: Practices and Strategies - Employees must do the following:

- Read **ADMIN Policy 6: Exposure Control Plan** (Contents: Bloodborne Pathogens, Exposure Occurrence and Universal Precautions)
- Read **HR Policy13: Hand washing**
- Complete **Safety and Infection Control Competency Exam**
- Complete **Safety and Infection Control Incident Log chart** entry, if an incident was to occur.
- Wear gloves, gowns, masks and protective eyewear, mouth pieces (e.g. CPR), when applicable.

Personnel Health

No healthcare worker who has lesions or weeping dermatitis should perform or assist in invasive procedures or other direct client care activities or handle equipment used for client care until the condition resolves completely. All healthcare workers with evidence of any illness that may compromise their ability to adequately and safely perform invasive procedures should be evaluated medically to determine whether they are physically and mentally competent to perform invasive procedures. All necessary vaccinations are required.

Identification and Investigation

1. Clinical staff identifying a client with symptoms of communicable disease will immediately report this to the Clinical Director who is responsible for the management of the client at that time.
2. If there is a suspicion that the illness may be, or may become part of an outbreak (e.g. food poisoning), the nurse in charge of the area should immediately inform the appropriate staff and decide the appropriate action to be taken.
3. In the case of staff illness thought to be due to food poisoning or any communicable disease, the illness should be reported to the Clinical Director.
4. After the outbreak has been controlled, a meeting with the Clinical Director and a member of the Board of Directors should be held to:
 - a. Review the action taken by all participants and to identify any areas for future improvement.
 - b. Recommend, if necessary changes which would reduce the risk of a recurrence of the outbreak.

Sources of infection

- Nosocomial infections -Include: Hospitals house large numbers of people who are sick and whose immune systems are often in a weakened state; Increased use of outpatient treatment means that people who are in the hospital are sicker on average; Medical staff move from patient to patient, providing a way for pathogens to spread; Many medical procedures bypass the body's natural protective barriers; Routine use of anti-microbial agents in hospitals creates selection pressure for the emergence of resistant strains. Thorough hand washing and/or use of alcohol rubs by all medical personnel before each patient contact is one of the most effective ways to combat nosocomial infections. More careful use of anti-microbial agents, such as antibiotics, is also considered vital.
- Home Acquired- The rationale and strategy for use of precautions in home care differ substantially from those applied in hospitals. The use of gowns, gloves, and masks in the care of homebound clients are recommended to protect the health-care provider and the clients. Homecare patients known to have a multidrug-resistant organism should be cared for through use of appropriate barriers. Reusable equipment such as stethoscopes and blood pressure cuffs should remain in the home.

- **Professional Exposure-** Much of the responsibility for infection control rests on the shoulders of the clinical staff providing care at the bedside. Because nurses are close to the patient physically, they are able to prevent the spread of infection, but they can also be a means of transmitting infection. Therefore, they need to foster compliance with infection control policies to ensure a high quality outcome for the clients. Infection control practices should have a positive effect on not only the clinical staff, but the clients as well.

Types of Infection: Criteria for inclusion in definitions of home-care-acquired infection:
Site of infection: Clinical data
Catheter-related UTI(b): Change in characteristics of urine, fever, pain
Postoperative pneumonia.....Change in character of sputum, decreased breath sounds, increase in rales and rhonchi, fever, shortness of breath, pain
Catheter-related bloodstream: Fever with chills and rigors, infection redness, tenderness, or pain at insertion site, purulent drainage at site
Skin and soft tissue infection.....Pain, swelling, tenderness at site, inflammation and warmth, purulent drainage, fever
Endometritis in postpartum.....Uterine tenderness and abdominal patients pain, purulent vaginal drainage (lochia), foul-smelling lochia, fever
Site of infection.....Laboratory data
Catheter-related UTI(b).....Elevated serum leukocytes, evidence of UTI in urinalysis, evidence of leukocytes in urine dipstick test, positive urine culture (> [10.sup.5] CFU of a single organism per ml urine)
Postoperative pneumonia..... Elevated serum leukocytes, sputum Gram-stained smear with evidence of respiratory infection, positive sputum culture, positive chest X ray
Catheter-related bloodstream.....Elevated serum leukocytes, positive infection blood culture, positive catheter culture (after catheter removal)
Skin and soft tissue infection.....Gram-stain smear with leukocytes and organisms, positive culture, elevated serum leukocytes
Endometritis in postpartum.....Positive Gram-stain smear of patients lochia, positive culture of lochia, remarkably elevated serum leukocytes

Modes of Transmission of Infection

There are four types of infection control precautions. The type required is determined by the way the infection is transmitted. They include:

Standard- Use Standard Precautions, or the equivalent, for the care of all clients.

Standard Precautions apply to 1) blood; 2) all body fluids, secretions, and excretions except sweat, regardless of whether or not they contain visible blood; 3) non-intact skin; and 4) mucous membranes. Standard Precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in hospitals.

Contact- Direct-contact transmission involves skin-to-skin contact and physical transfer of microorganisms to a susceptible host from an infected or colonized person, such as occurs during client care activities that require physical contact. Direct-contact transmission also can occur between two clients (e.g., by hand contact), with one serving as the source of infectious microorganisms and the other as a susceptible host. Indirect-contact transmission involves contact of a susceptible host with a contaminated intermediate object, usually inanimate, in the client’s environment.

Droplet- Droplet transmission involves contact of the conjunctivae or the mucous membranes of the nose or mouth of a susceptible person with large-particle droplets (larger than 5 µm in size) containing microorganisms generated from a person who has a clinical disease or who is a carrier of the microorganism. Droplets are generated from the source person primarily during coughing, sneezing, or talking and during the performance of certain procedures such as suctioning and bronchoscopy. Transmission via large-particle droplets requires close contact between source and recipient persons, because droplets do not remain suspended in the air and generally travel only short distances, usually 3 ft or less, through the air. Because droplets do not remain suspended in the air, special air handling and ventilation are not required to prevent droplet transmission.

Airborne Precautions- Airborne transmission occurs by dissemination of either airborne droplet nuclei (small-particle residue of evaporated droplets that may remain suspended in the air for long periods of time) or dust particles containing the infectious agent. Microorganisms carried in this manner can be dispersed widely by air currents and may become inhaled by or deposited on a susceptible host within the same room or over a longer distance from the source client, depending on environmental factors; therefore, special air handling and ventilation are required to prevent airborne transmission.

Contributing Causes of Infection

- Needle stick injury
- Break in skin caused by a potentially contaminated object
- Splash of blood or other potentially infectious material onto eyes, mucous membranes, or non-intact skin
- Mouth-to-mouth resuscitation without pocket mask/one-way valve
- Other exposure that the member may feel is significant
- Smoking
- Compromised immune systems

Reporting - Accurate and complete disease reporting is essential to the community health. Health care providers are required to report communicable disease for several reasons. The most common reasons are listed as follows:

1. To identify outbreaks and epidemics. If an unusual number of cases occur, local health authorities must investigate to control the spread of the disease.
2. To enable preventive treatment and/or education to be provided.
3. To help target prevention programs, identify care needs, and use scarce prevention resources efficiently.
4. To evaluate the success of long term control efforts.
5. To facilitate epidemiologic research to uncover a preventable cause.
6. To assist with national and international disease surveillance efforts. For some diseases that are unusual in Michigan, we are part of a national network that the federal government depends on to determine whether national or international investigations are needed.

Michigan health care professionals and laboratories are also authorized to report any condition, disease, or infection judged by them to indicate that the health of the public is threatened. S.S. Travel Division employees: Discuss any concerns with the Travel Division Liaison.

A report must contain the following information recorded on a **Communication Form: HR Form 39**:

- The client's full name
- The patient's residential address, including street, city, village or township, county, and zip code
- The client's telephone number
- The client's date of birth (or age) and sex
- The name of the disease, infection, or condition reported and date of onset if known
- The specific laboratory test (if tested), date performed, where performed, and results
- The name and address of the reporting facility

To the extent that the information is readily available, a report of an unusual occurrence, outbreak, or epidemic of a disease, infection, or other condition shall include all of the following information:

- The nature of the confirmed or suspected disease, infection, or condition
- The approximate number of cases
- The approximate illness onset dates
- The location of the outbreak

The presence or suspected presence of all reportable diseases, infections, and conditions are required to be reported to the appropriate local health department. The "appropriate local health department" means:

- The local health department that has jurisdiction where an individual who has a disease or condition that is required to be reported resides. or
- The local health department of the county in which your service facility is located.

The relevant sections of the Michigan Public Health Code and Administrative Rules are:

Sec. 333.5111 (1) b – Requirements for reporting communicable and serious communicable diseases. R 325.173 – Administrative rules detailing the reporting of communicable and serious communicable diseases. Sec. 33.9207 – Establishment of the Michigan Childhood Immunization Registry R.325.163 – Administrative rules requiring the reporting of immunizations administered to children to the Department.

In-service Education for Staff (excluding S.S. Travel Division) - On an annual basis, the staff will be informed on the policy of Infection Control and new/current procedures to promote the prevention and control of infections. Dates, times, curriculum outline of training content and record of staff attendance must be documented.

Client and/or Family Education (For Private Duty) - In a community infection control includes maintaining healthy habits that keep disease from spreading between family and community members. Educational material will be enclosed in the home folder of each client. The material will be reviewed with the client upon admission.

Staff Personal Protective Equipment

Gloves: Wear gloves (clean, non-sterile gloves are adequate) when touching blood, body fluids, secretions, excretions, and contaminated items. Put on clean gloves just before touching mucous membranes and non-intact skin. Change gloves between tasks and procedures on the same patient after contact with material that may contain a high concentration of microorganisms. Remove gloves promptly after use, before touching non-contaminated items and surfaces, and before going to another patient, and wash hands immediately to avoid transfer of microorganisms to other clients or environments.

Mask, Eye Protection, Face Shield: Wear a mask and eye protection or a face shield to protect mucous membranes of the eyes, nose, and mouth during procedures and client care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, and excretions.

Gown: Wear a gown (a clean, non-sterile gown is adequate) to protect skin and to prevent soiling of clothing during procedures and client care activities that are likely to generate splashes or sprays of blood, body fluids, secretions, or excretions. Select a gown that is appropriate for the activity and amount of fluid likely to be encountered. Remove a soiled gown as promptly as possible and wash hands to avoid transfer of microorganisms to other patients or environments.

Client-Care Equipment: Handle used client care equipment soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures, contamination of clothing, and transfer of microorganisms to other clients and environments. Ensure that reusable equipment is not used for the care of another patient until it has been cleaned and reprocessed appropriately.

Ensure that single-use items are discarded properly.

Environmental Control: Ensure that adequate procedures are in place for the routine care, cleaning, and disinfection of environmental surfaces, beds, bedrails, bedside equipment, and other frequently touched surfaces, and ensure that these procedures are being followed.

Linen: Handle, transport, and process used linen soiled with blood, body fluids, secretions, and excretions in a manner that prevents skin and mucous membrane exposures and contamination of clothing, and that avoids transfer of microorganisms to other clients and environments.

Occupational Health and Blood-borne Pathogens: Take care to prevent injuries when using, cleaning, and disposing of sharp instruments.

Accepted Hand Hygiene Techniques:

Hand Washing and Gloves:

- Hands are washed using the approved germicide before and after client contact, as well as after using the rest room and after eating.
- New gloves are to be worn during interactions with each client. If gloves become soiled, dispose of them in the proper container; do not attempt to wash them.