**Transmission-Based Precautions**

**Date Implemented:**

**Review/Updated Date:**

**Definitions**

Airborne Contact occurs when pathogen carrying particles, which can remain suspended in air and travel over long distances, are inhaled by a susceptible individual.

Alcohol-Based Hand Rub is a 60-95% ethanol or isopropyl alcohol-containing preparation base designed for application to the hands to reduce the number of viable microorganisms.

Antibiotic Resistance is the ability of bacteria to resist the killing effects of antibiotics. Antibiotic resistance bacteria include MRSA (methicillin resistant staphylococcus aureus); VRE (vancomycin resistant enterococcus); ESBL (extended spectrum beta-lactamase enterobacteriaceae); CRE (carbapenem resistant enterobacterales); MDR (multidrug resistant pseudomonas aeruginosa)

Cohorting is grouping of residents together who are colonized or infected with the same pathogen to one location to prevent transmission of pathogens to other residents.

Direct Contact occurs when pathogens are transferred from one person to another without an intermediate object or person.

Droplet Contact occurs when respiratory droplets carrying pathogens travel directly from the respiratory tract of an infectious individual to mucosal surfaces of a susceptible recipient.

Hand Hygiene is a general term that applies to hand washing, antiseptic hand wash, and alcohol-based hand rub.

Handwashing is the vigorous, brief rubbing together of all surfaces of hands with plain (such as antimicrobial) soap and water, followed by rinsing under a stream of water.

Indirect Contact occurs when the transfer of pathogens is through a contaminated intermediate object or person.

Modes of Transmission are methods in which pathogens travel from one person to another. Modes of transmission include direct, indirect, droplet and airborne.

Personal Protective Equipment are protective items or garments worn to protect the body or clothing from hazards that can cause injury and to protect residents from cross-transmission.

Transmission-Based Precautions are applied when standard precautions, alone, may not be sufficient to prevent pathogen transmission. There are 3 categories of transmission-based precautions including contact, droplet and airborne.

**Policy**

The health care industry is continually identifying new pathogens that present an inherent risk to other individuals when spread. These pathogens may include bacteria that are difficult to treat or cure, highly contagious, present inherent risks such as hospitalization, severe complications and/or death. When these pathogens are identified, specialists in infection control such as the Centers for Disease Control or Departments of Health issue guidance related to caring for individuals in a healthcare setting that are infected with these pathogens. Generally, standard precautions, alone, are not enough mitigation to prevent transmission from one person to another. In these circumstances, transmission-based precautions are implemented to further protect the health care provider and others that the individual or health care provider may encounter following treatment of the infected individual.

**Sources of contamination of these harmful pathogens include:**

* People who are actively infected, in the incubation period and are not aware they are infected or colonized and not showing any signs of active infection.
* Environment such as inanimate sources that are contaminated such as items in the room, or equipment that was utilized on a person that was infected and did not undergo appropriate disinfection.
* Endogenous organisms

**Procedures**

Transmission-based precautions must be used when a resident develops signs and symptoms of a transmissible infection, arrives at a nursing home with symptoms of an infection (pending laboratory confirmation), or has a laboratory confirmed infection and is at risk of transmitting the infection to other residents.

The diagnosis of many infections is based on clinical signs and symptoms, but often requires laboratory confirmation. However, since laboratory tests (especially those that depend on culture techniques) may require two or more days to complete, transmission-based precautions may need to be implemented while test results are pending, based on the clinical presentation and the likely category of pathogens.

**Contact Precautions:**

* Contact precautions are used to prevent transmission of infectious agents spread by direct or indirect contact from individual to individual. Contact precautions should also be implemented when a resident has excessive secretions or excretions that place an increased potential for extensive environmental contamination.
* Types of infections that require contact precautions include multi-drug resistant organisms such as MRSA, VRE, ESBL, CRE, MDR, and Clostridioides Difficile (previously Clostridium difficile) (c-diff).
* The extent of contact precautions varies depending on:
	+ Type of bacteria the resident is infected with. Residents with certain bacteria, such as c-diff, may be asked to remain in their room during the duration of the illness; however, residents with shingles may be allowed to exit their room depending on additional circumstances.
	+ Location of bacteria such as a resident that is infected with MRSA in their urine, but is continent of urine, is less likely to transmit bacteria to other individuals than a resident that has c-diff and is incontinent of stool.
	+ Amount of drainage such as a resident with a MRSA infected wound that does not have a large amount of secretions from the wound and the wound can be covered would be considered at a minimal change for transmission compared to a resident with a MRSA infected wound that has excessive secretions that cannot be contained in a dressing.
* The extent of contact precautions varies depending on:
	+ The Infection Preventionist along with the interdisciplinary team should determine the extent of contact precautions based on the resident’s circumstances. The extent of contact precautions should direct:
		- If a resident should be contained to a private room (such as a resident that is infected with c-diff and has a roommate that also utilizes the toilet).
		- If a resident is allowed to leave their room, what mitigation measures need to be in place to prevent transmission (such as assuring the resident’s dressing is intact and secretions are not seeping through the dressing). What PPE is required for staff to enter the room (is all PPE required just to enter the room or can specific PPE only be used to enter the room).
		- What PPE is required for staff to provide care to the resident and what circumstances (for example the nurse completing the dressing change should utilize gowns, gloves, and face protection because of the amount of secretions, but someone delivering mail to the resident should not touch the resident items and complete hand hygiene upon exiting).
		- Are there special precautions that need to be implemented in addition to PPE (such as not utilizing ABHR for residents infected with c-diff).
		- Discontinuation of contact precautions requires **[enter facility specific procedures for discontinuation of contact precautions]**.

**Droplet Precautions:**

* Droplet precautions are used to prevent transmission of infectious agents that are spread within respiratory droplets over short distances. Respiratory viruses can enter the body via the nasal mucosa, conjunctivae and less frequently the mouth
* Types of infections that require droplet precautions include but are not limited to influenza, mycoplasma pneumoniae and COVID-19.
* Residents should be placed in a single room. If a single room is not available, residents and their roommates should maintain at least 3 feet of spatial separation and drawing the privacy curtain between the resident beds is especially important at all times.
* Staff entering residents rooms should use a facemask upon entry (N95 or higher level respirator for COVID-19). If substantial spraying is anticipated, gloves and gowns as well as goggles (or other approved eye protection) should be worn.

**Airborne Precautions:**

* Airborne precautions are used to prevent transmission of infectious agents contained in particles suspended in air that remain infectious overtime and over a longer distance.
* Types of infections that require airborne precautions include but are not limited to tuberculosis.
* Residents should ideally be placed in an airborne infection isolation room (AIIR). If an AIIR is not available, the resident’s room should be closed at all times and the resident should be transferred to a facility with an AIIR available. The resident should wear a facemask when transferring out of the facility.
* Staff entering resident’s rooms on airborne precautions must utilize an N95 or higher-level respirator, eye protection, isolation gown and gloves at all times.

**Relevant Procedures to All Types of Transmission-Based Precautions:**

* Signage should be placed outside of the resident’s room that is are on transmission-based precautions. Signage should be dignified and should not identify any protected health information, however, should be detailed enough and in a location to educate staff on what precautions need to be taken to care for the resident.
* Generally, residents placed in transmission-based precautions should be placed into a single-person room. However, if this is not available, residents should be cohorted with another resident that has the same bacteria/infection to prevent additional spread of infection or determine the risk to the resident’s roommate. For example, a resident that has shingles is in a room with a resident that is totally dependent on care and the infected resident does not interact with any of the roommates person or belongings, would likely be safe to maintain their roommate.
* Residents in transmission-based precautions shall have all laundry placed in a red biohazard bag, handled, and laundered appropriately per the laundry management policies and procedures.
* Garbage from the resident’s room shall be placed in a red biohazard bag and placed into a biohazard container for appropriate disposal.
* Transmission-based precautions for all residents should be the least restrictive as possible for the shortest duration possible.
* Transmission-based precaution measures will be placed in the resident’s care plan, including the type of precautions implemented, the reason for implementation and the additional mitigation measures implemented to protect staff and other residents.
* Staff should take measures to reduce or minimize any potential psychosocial negative effects from isolation for whom transmission-based precautions are being used including prevention of boredom, anger, withdrawal or depression. Measures to reduce negative effects from isolation will be placed in the resident’s care plan.
* Care items required for the resident should be dedicated to that resident. If equipment is required to be removed from the residents room during periods of transmission-based precautions, the equipment should be sanitized or disinfected appropriately prior to use with another resident.
* The resident’s environment should be cleaned and sanitized appropriately, particularly high-touch surfaces such as door knobs, hand rails, bed rails/assist bars with an EPA-registered disinfectant for healthcare.
* All residents and/or their representatives should be educated on transmission-based precautions and offered opportunity to ask questions.
* If a resident is placed on transmission-based precautions awaiting laboratory confirmation, if the laboratory report is negative for an infection that would require transmission-based precautions, transmission-based precautions should be discontinued as soon as possible.

**Personal Protective Equipment (PPE)**

* Shall be placed outside of the resident’s room or in a readily accessible area that is near the residents room. All PPE should be donned prior to entry into the resident’s room and doffed prior to exiting the resident’s room. Doffing PPE should occur as close to the resident’s room door as possible for the safety of the staff.

**Resources**

CMS. (2017, Nov. 2). *State Operations Manual, Appendix PP – Guidance to Surveyors for Long Term Care Facilities, F880*. <https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/GuidanceforLawsAndRegulations/Downloads/Appendix-PP-State-Operations-Manual.pdf>

CDC. (2020, June 10). *Infection Prevention Training | LTCF*. <https://www.cdc.gov/longtermcare/training.html>