

Isolation Policies and Procedures for Referred Patients & Visits Policies



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Nowadays, hospitals are experiencing difficulties when patients are planned for transfer to their facility when little information is provided about the patient's infectious status. Hospital acquired infections have become a common problem, some of which are caused by MultiDrug Resistant Organisms (MDROs) or by other organisms that are highly transmissible in the hospital setting. Infection Control (IC) measures to be decided upon based include the specific precautions to be taken based on the assessment of the patient and the likelihood of exposure to MDROs or to infectious material. Such decisions are instrumental in minimizing the potential transmission of infections while at the same time reducing the costs associated with excessive isolation precautions.

Transfer centers have become an indispensable unit positioned in large hospitals. The role of this unit is to communicate with the sending facility and get accurate information about the transferred patient and the type of isolation needed based on the clinical status.

Disagreement between healthcare facilities regarding diagnosis of transmissible diseases, potential colonization with MDROs, may be expected. For example, placing a patient with suspected or confirmed mumps in an Airborne Infection Isolation Room (AIIR) rather than on

droplet precautions may be a controversial issue between facilities. Therefore, standardization of procedures is important. A national policy with standardized procedures that are based on updated isolation guidelines is essential to regulate and minimize disagreements between hospitals, institutions and centers. Such policies should include recommendations that reemphasize the importance of early diagnosis and isolation precautions for preventing infectious diseases and MDRO transmissions.

Isolation precautions are designed to assist hospitals in maintaining updated isolation practices to protect patients, visitors and healthcare workers from the transmission of communicable diseases and MDROs. Most medical centers and hospitals follow the updates and revisions of the "Guidelines for Isolation Precautions in Hospitals" that are published regularly by the Centers for Disease Control and Prevention (CDC). These guidelines are based on the latest epidemiologic information on transmission of infection in hospitals. The goal of preventing the transmission of infections in hospitals can be accomplished by adhering to the principles of epidemiology and disease transmission and by complying with the published recommendations to interrupt the spread of infection that are likely to be encountered in the hospital. This goal must be governed by policies and procedures pertinent to the transferring and receiving hospitals through the early recognition and anticipation of potential routes of transmissions of infections and organisms. Such policies should be simple and as user friendly as possible. In addition, scientific terminology should be unified to avoid confusion when communicating between hospitals.

Essentially, Standard Precautions (SP) are the minimum infection prevention practices that should be used in the care of all patients at all times, regardless of their diagnosis. These practices are designed to both protect the HealthCare Worker (HCW), and to prevent the HCW from spreading infections among patients.

Standard Precautions are designed to reduce the risk of transmission of microorganisms from both recognized and unrecognized sources of infection in hospitals. Successful infection control strategies depend on the proper implementation of SP that include adequate hand hygiene, safe injection practices, respiratory hygiene/cough etiquette, and the use of PPE such as gloves, gowns, masks when fluid splashes are expected. On the other hand, transmission-based precautions are used for patients known or suspected (until a diagnosis is made) to be infected or colonized with epidemiologically important pathogens that can be transmitted by airborne or droplet transmission or by contact with dry skin or contaminated surfaces. These modes of transmission are based on solid scientific research and may be combined for diseases that have multiple routes of transmission. When used either singularly or in combination, they are to be used in addition to standard precautions. Referred patients may transmit organisms by one or more routes, these being contact, droplet, and airborne transmissions.

Contact transmission: transmission through contact is the most and important frequent mode of transmission and may be divided into direct and indirect transmission, depending on whether there is an intermediary contaminated object such as unwashed hands. Inadequate implementation of contact transmission precautions may lead to the spread of MDROs and other infections in healthcare facilities, many studies have shown a reduction in transmission of MDRO such as MDR *Acinetobacter baumannii* with enhanced and enforced contact precautions. Contact transmission precautions are achieved through hand hygiene and use of gloves and gowns.

Droplet transmission: droplets are generated from the source patient during coughing, sneezing, and even talking, and when the HCW is conducting certain procedures such as suctioning and bronchoscopy. Droplets containing organisms from the infected patient are transmitted within a short distance (1 meter) through the air and deposited on the host's mucosa. A surgical mask with adequate hand hygiene are sufficient to prevent droplet transmission.

Airborne transmission: airborne dissemination of droplet nuclei ($\leq 5 \mu\text{m}$) containing microorganisms are able to remain suspended in the air for long periods of

time and represent a risk for disease transmission. Such aerosolized agents can be inhaled by a susceptible host within the same room or over a longer distance (carried by air currents) from the source patient; therefore, special air handling and ventilation are required to prevent airborne transmission. Microorganisms transmitted by airborne transmission include Mycobacterium tuberculosis and the rubella and varicella viruses. Airborne precautions include the use of N95 masks.

Transport and transfer of infected and colonized patients

- Transport: Limiting the movement and transport of patients infected with MDROs or communicable diseases reduces the opportunities for transmission of microorganisms in hospitals. However, when patient transport is unavoidable, it is important to adopt all appropriate barriers to reduce the opportunity for transmission of pathogens to other patients, HCWs, and visitors and to reduce contamination of the environment.
- Transfer: The receiving facility must be notified by the sending center when transferring patients. The needed precaution must be communicated to reduce the risk of transmission of infectious microorganisms. A standardized form is suggested here to serve as a means for communication between center on the needed precautions to be used for the transported patient.
- Patient education: patients must be informed about procedures needed to prevent the transmission of their infectious microorganisms to others. Limit the movement and transport of the patient from the room to essential purposes only.
- Patient-care equipment: the use of noncritical patient care equipment must be dedicated to a single patient and sharing of items between patients must be avoided. All items that are unavoidably used between such patients must be adequately cleaned and disinfected with the hospital approved detergents and disinfectants.
- Ambulance and patient transport vehicles: staff responsible for transporting patients must be adequately trained on basic infection control measures to avoid and reduce transmission of infections. All vehicles and equipment used during transport of patients must be properly cleaned and disinfected. In some instances, spraying the vehicle after patient transfer is needed when airborne infections are suspected.



Recommendations

1- The transfer of patients between hospitals should be a shared responsibility between the receiving and transferring institutions. Therefore, there should be sharing of information with the receiving institution prior to the transfer, preferably between the infectious diseases physicians taking care of the patient. This will serve to have complete information about the patient in order to provide the necessary care and prepare for the required infection control precautions, whether contact, droplet, or airborne precautions.

2- Hospitals should unify the list of organisms needing the various forms of isolation. For example, at the American University of Beirut Medical Center, only the following MDROs require contact isolation: methicillin-resistant *S. aureus* (MRSA), vancomycin-resistant streptococci (VRE), MDR *P. aeruginosa*, MDR Acinetobacter species, and carbapenem-resistant Enterobacteriaceae (CRE). Having discrepancy between hospitals as to which

organisms require isolation will result in confusion and inconsistent procedures between hospitals.

3- Patients should not be refused transfer solely based on their infection or colonization status if such a transfer is deemed necessary (i.e. moving to a more skilled facility when specialized care is needed that is unavailable at the original institution, or moving to a less skilled facility when such specialized care is no longer needed).

4- All patients admitted to the Intensive Care Unit should be placed on contact precautions until screening cultures prove that they are not colonized nor infected with MDROs.

5- Duplication of tests between referring and receiving hospitals should be minimized. An agreement should be made along with the third party payer about such costs.

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