

Isolation precaution



**ASSIGN
BUSTER**

Infection Prevention Infection control is one of the important issues in healthcare settings. Many of the normal flora organisms in our body system react to antibiotics, which makes these organisms resistant to antibiotic treatment. Teaching infection control through learning of isolation precaution can decrease the spread of infection in critical care units.

The goal of this project is to ensure each person understands the different isolation precautions and practices to minimize the spread of these bacteria to staff, visitors and other patients in this unit. Nurses can educate and reinforce protocols to those individuals who need further teaching regarding isolation. The overuse of antimicrobial agents is one of the major factors in the development and spread of drug resistance in organisms, as well as in colonization and infection by drug-resistant organisms.

Treatment regimens for all infections should be based on susceptibility test results when available. There are bacteria that require contact precautions such as Methicillin-resistant Staphylococcus Aureus (MRSA), vancomycin resistant enterococci(VRE), extended-spectrum beta-lactamses(ESBL), Acinetobacter baumannii, Clostridium difficile (C-diff), carbapenemase-producing enterobacteriaceae (CRE), and multidrug-resistant bacteria (MDR). We will focus on commonly found organisms such as MRSA and C-Diff.

One of the commonly seen bacteria in critical care units is MRSA, which is a type of staph bacteria that is resistant to certain antibiotics called beta-lactams that includes antibiotics such as oxacillin, penicillin and amoxicillin. Commonly patients who contract this bacterium are those with surgical wound infections, urinary tract infections, bloodstream infections and

pneumonia. (CDC, 2010) Another common bacterium seen in critical care units is *Clostridium difficile* which is a bacterium that causes inflammation of the colon, known as colitis.

People, who have other illnesses or conditions requiring prolonged use of antibiotics and the elderly, are at greater risk of acquiring this disease (CDC, 2010). The bacteria are found in the feces. People can become infected if they touch items or surfaces that are contaminated with feces and then touch their mouth or mucous membranes. In an action to minimize the spread of this nosocomial infection, nurses and medical staff should enforce practice for those who come to visit the unit, which includes staff and visitors. There are many different ways that medical staff can ensure that each individual follows contact isolation precautions. Visitors should report to the nurse's station before entering and medical staff, including administrative personnel can assist with simple 3 step instructions. Educating visitors with what to wear prior to entering an isolation room, to remove gowns in the room, disposing of it in the appropriate waste basket and cleaning hands by either washing hands or the use of hand sanitizer after removing personal protective equipments before leaving patient's room.

I have supplied a small card size quick reference for visitors and staff on contact isolation that includes what to wear, remove and hand hygiene. When visitors are interested in learning about contact isolation and the infected organisms, there are pamphlets available for education purposes. Study has shown “ There is some evidence that cessation of single room isolation and cohorting of MRSA patients does not increase nosocomial MRSA

transmission when hand-washing compliance and standard precautions are maintained” (Halcomb, Griffiths & Fernandez , 2008).

Although there are studies conducted that show spread of transmission can be controlled by practicing isolation precaution solely and shown success doing so. The low level of hand hygiene compliance reported in the literature suggests that staff compliance with isolation practices is a significant factor in evaluating any infection-controlled intervention in the clinical setting. While staff compliance data are conflicting, regular audit and feedback of performance may improve compliance. The low compliance in following isolation precautions can contribute to the spread of this infection.

The effectiveness of contact isolation practice falls in the hands of nurses and staff. Although visitors are able to follow simple contact precaution directions, it is the hands of medical staff to reinforce proper contact isolation precautions. By doing self-assessment, having a dedicated and effective medical staff teaching visitors is one way that goal can be achieved. There has been success in recent years controlling the spread of these infections there is still more work to be done to minimize transmission.

A study analyzing data from the Center for Disease Control that found rates of MRSA bloodstream infections occurring in hospitalized patients fell nearly 50% from 1997 to 2007 (Deron, Burton, Edwards, Horan, Jerningan and Fridkin, 2009). Nurses need to be knowledgeable on infection control issues. There is protocol being practiced in this hospital, but there always room for improvement by reinforcing isolation precaution to staff and visitors who come in contact with infected patients.

Continual monitoring and updating of practice must be done as new studies are conducted and knowledge is available to continue to limit the spread of these infections. References Deron C. Burton, D. C. , Edwards, J. R. , Horan, C. T. , Jernigan, J. A. , and Fridkin, S. K. (2009). Methicillin-Resistant *Staphylococcus aureus* Central Line- Associated Bloodstream Infections in US Intensive Care Units, 1997-2007. *The Journal of the American Medical Association*. 301(7): 727-736. doi: 10. 1001/jama. 2009. 153 Center for Disease Control and Prevention. (2010).

MRSA infection : definition of MRSA. Retrieved on October 20, 2011 from <http://www.cdc.gov/mrsa/definition/index.html> Halcomb, E. J. , Griffiths, R. , & Fernandez, R. (2008). The role of patient isolation and compliance with isolation practices in the control of nosocomial MRSA in acute care. *International Journal Of Evidence-Based Healthcare*, 6(2), 206-224. doi: 10. 1111/j. 1744-1609. 2008. 00089. xCenter for Disease (2010). Healthcare-Association Infection (HAIs) *Clostridium difficile* infection (CDI, C. diff) http://www.cdc.gov/HAI/organisms/cdiff/Cdiff_infect.html