## **Infection Control F441: Preventing Spread of Illness Related to Multiple Drug Resistant Organisms**

The MDROs found in facilities include, but are not limited to MRSA, VRE, and clostridium difficile (C. difficile). Transmission-based precautions are employed for residents who are actively infected with multi-drug resistant organisms. Aggressive infection control measures and strict compliance by healthcare personnel can help minimize the spread of MDROs to other susceptible individuals.104

Staphylococcus is a common cause of infections in hospitals and nursing homes, and increasingly in the community. Common sites of MRSA colonization include the rectum, perineum, skin and nares.105 Colonization may precede or endure beyond an acute infection. MRSA is transmitted person-to-person (most common), and on inanimate objects.

The MRSA infection is commonly treated with vancomycin, which in turn can lead to increased enterococcus antibiotic resistance. Therefore, preventing infection with MRSA and the limited use of antibiotics for individuals who are only colonized can also help prevent the development of VRE. Enterococcus is an organism that normally occurs in the colorectal tract. VRE infections have been associated with prior antibiotic use.

C. difficile is a bacterial species of the genus clostridium, which are <u>gram-positive</u>, <u>anaerobic</u>, <u>spore</u>-forming rods (bacilli). The organism normally lives benignly in the colon in spore form. When antibiotic use eradicates normal <u>intestinal flora</u>, the organism may become active and produce a toxin that causes symptoms such as diarrhea, abdominal pain, and fever. More severe cases can lead to additional complications such as intestinal damage and severe fluid loss. Treatment options include stopping antibiotics and starting specific anticlostridial antibiotics, e.g., <u>metronidazole</u> or oral vancomycin. If a resident has diarrhea due to C. difficile, large numbers of C. difficile organisms will be released from the intestine into the environment and may be transferred to other individuals, causing additional infections.

Contact precautions are instituted for residents with symptomatic C. difficile infection. Thorough hand washing with soap and water after caring for the resident reduces the risk of cross-transmission. Another control measure is to give the resident his or her own toilet facilities that will not be shared by other residents.

The C. difficile can survive in the environment (e.g., on floors, bed rails or around toilet seats) in its spore form for up to 6 months. Rigorously cleaning the environment removes C. difficile spores, and can help prevent transmission of the organism.106 Cleaning equipment used for residents with C. difficile with a 1:10 dilution of sodium hypochlorite (nine parts water to one part bleach) will also reduce the spread of the organism. Once mixed, the solution is effective for 24 hours.

U.S. Department of Health & Human Services Centers for Medicare & Medicaid Services CMS State Operations Manual 100-07 Appendix PP –Guidance to Surveyors for Long term Care Facilities (F441) 42CFR483.65 Infection Control, Preventing Spread of Illness Related to MDROs p580, Rev.70, 01/07/11 http://cms.gov/manuals/Downloads/som107ap\_pp\_guidelines\_ltcf.pdf

