Catheter-Related Bloodstream Infections Backgrounder

Intravascular catheters have become necessary components of inpatient hospital care, with their use increasingly on the rise. Hospitals and clinics purchase more than 150 million intravascular catheters every year for a myriad of uses including administration of IV fluids, nutrition and medications, and monitoring of hemodynamic status in an intensive care unit (ICU) setting. While indispensable to providing care, catheters increase a patient’s risk for infections which can be minor or life threatening. The overall incidence of bloodstream infections in the United States has tripled in the last three decades; they can also lead to devastating medical consequences for patients — making bloodstream infections a major, public health concern. To both improve patient outcome and to reduce the associated health care costs, the CDC recommends implementing multidisciplinary strategies to help reduce the incidence of these infections.2

Intravascular Catheters and CR-BSI Stats

- It is estimated that more than five million central intravascular catheters are inserted yearly.1
- Catheter-related bloodstream infections (CR-BSIs)* can lead to serious medical consequences for patients—the majority of which are associated with central intravascular catheters.1,4
- Approximately 80,000 cases of CR-BSIs occur in ICUs.2
- If entire hospitals are assessed, it is estimated that 250,000 CR-BSI cases occur in the United States.5

CR-BSIs and Their Economic Impact

- CR-BSIs are one of the most common, health care acquired infections and have serious medical consequences for patients, resulting in increased length of hospitalization, illness and death.6
- Increased costs associated with extended ICU stays are estimated to be $28,000–56,000 per infection2,7,8 and the total annual burden is estimated as high as $2.3 billion.1,9

The Importance of CR-BSI Prevention

- The density of skin flora at the catheter insertion site is a major risk factor for CR-BSI, and the majority of CR-BSIs originate from the patient’s own skin flora.10
- Transparent dressings allow continuous catheter site visualization, letting health care professionals detect any signs of infection around the catheter site—leading to less frequent changes compared to standard gauze and tape dressings.2
- To both improve patient outcomes and to reduce the associated health care costs, the CDC recommends implementing multidisciplinary strategies to help reduce the incidence of these infections.2
- Such strategies recommended include maximal barrier precautions during insertion of intravascular catheters/aseptic technique, quality improvement programs and specialized nursing teams.

Trends Supporting the Need for Preventing CR-BSIs

- For discharges occurring on or after October 2008, hospitals will not receive additional reimbursement from Medicare for CR-BSIs and certain other hospital-acquired conditions that were not present on admission.
- CR-BSIs are becoming harder to treat. Studies indicate that the types of bacteria causing CR-BSIs have been changing over time to predominantly include multidrug-resistant strains.11
- Increasing national attention to hospital infections and antibiotic-resistant bacteria, such as Methicillin-resistant Staphylococcus aureus (MRSA) and the new Medicare policy have raised public awareness of health care acquired infections such as CR-BSIs.

* 3M™ Tegaderm™ CHG Dressings have not been studied in a randomized clinical study as to their effectiveness in preventing CR-BSIs.

Referenced Articles

2. Centers for Disease Control and Prevention. Guidelines for the prevention of intravascular catheter-related infections. MMWR. 2002; 51(RR10);1-26h