

## CLABSI : Central Line-Associated Blood Stream Infection

CLABSI is associated with significant increases in patient morbidity, mortality, and associated healthcare costs. ICU patients are at an additional risk of CLABSI, as 48% of all ICU patients have an indwelling central venous catheter, which amounts to 15 million central line days per year. Annually, complications arising from CLABSI result in:

- 84,551-203,916 preventable infections,
- 10,426-25,145 preventable deaths, and
- \$1.7-21.4 billion in additional costs.



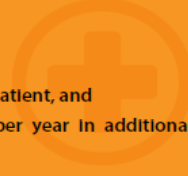
### CLABSI Reduction tools:

- Hand hygiene
- CHG Bathing
- CL dressing kits with Biopatch
- Line necessity and prompt removal
- DO NOT draw blood from CL

## CAUTI : Catheter Associated Urinary Tract Infection

CAUTIs are among the most common of healthcare-associated infections, and it is estimated that approximately 50%-70% of all CAUTIs may be prevented. Nearly one quarter of all hospital patients have an indwelling urinary catheter placed during their hospital stay, a significant portion of which are placed without appropriate indications. Complications as a result of CAUTI include:

- 2-4 additional LOS days,
- patient discomfort,
- additional \$1,300-\$1,600 cost per patient, and
- an estimated \$340-\$450 million per year in additional costs (throughout the US)



### CAUTI Reduction tools:

- Hand hygiene
- CHG Bathing
- Use of Stat Lock
- Nurse-driven Foley protocol
- Catheter necessity and prompt removal

## FY 2017 : C. difficile Infection

According to a study published in the New England Journal of Medicine, nearly 65.8% of all occurrences of C. difficile infections studied were healthcare-associated, with 24.2% being hospital-onset. Study results concluded that healthcare-associated infections of C. difficile are higher than community-associated. The national estimated incidence of healthcare-associated C. difficile infections are 95.3 per 100,000 population, resulting in an estimated 293,300 healthcare-associated cases annually, with 104,400 being an estimated hospital-onset.



### C diff Reduction tools:

- Hand washing with soap and water
- Following contact isolation precaution.
- C diff policy
- Use of bleach for cleaning & disinfection
- Judicial use of antibiotics

## SSI : Surgical Site Infection

SSIs account for an estimated 20% of all hospital-acquired infections, with an estimated 290,485 SSIs per year. Nearly 11% of all deaths occurring in ICUs each year are associated with SSI. Additionally, SSIs result in:

- 8,205 deaths per year,
- \$25,546-\$34,670 in additional costs, per SSI, and
- \$7-\$10 billion annually.



### SSI Reduction tools:

- Skin prep with Chloraprep
- Administration of prophylactic antibiotics no sooner than 30 mins prior to incision
- Weight-based antibiotic dosing
- CHG bathing prior to surgery.

## MDROs: Multi-drug Resistant Organisms

Hospital- acquired invasive MRSA (Methicillin-resistant Staph aureus) infections declined by 54% in recent years. Prevalence of VRE (Vancomycin- resistant enterococcus) isolates from hospitalized patients have increased from <1% to 15%. *Pseudomonas aeruginosa* resistance to fluoroquinolone antibiotics increased from 23% to 29.5%. 53% of *A. baumannii* strains exhibited resistance to Carbapenem. Infections caused by CRE (Carbapenem resistant enterobacteriaceae) are associated with high mortality rates, up to 50%.

## MDRO Reduction tools:

- Hand hygiene before and after
- Following contact isolation precaution
- Judicial use of antibiotics.
- Clean and disinfect surfaces & equipment with disinfecting wipes.



## References:

- <http://www.ahrq.gov/professionals/quality-patient-safety/hais/tools/cauti-hospitals/index.html>
- <http://www.ahrq.gov/professionals/education/curriculum-tools/clabsitools/index.html>
- <http://www.ahrq.gov/research/findings/final-reports/ssi/ssiapu.html>
- <http://www.nejm.org/doi/full/10.1056/NEJMoa1408913#t=articleResults>
- <http://www.cdc.gov/mrsa/healthcare/>