

3 Essential Factors for Reducing Vascular Access Infection Risk

By Pat Parks, MD, PhD

Healthcare leaders and care providers charged with the difficult task of preventing infections are no strangers to the incredibly unfortunate loss of life and staggering financial burden of healthcare-associated infections (HAI).

Some of the deadliest HAIs are central line-associated bloodstream infections (CLABSI) and catheter-related bloodstream infections (CRBSI). According to the Centers for Disease Control and Prevention (CDC), up to one in four people who contract CLABSI/CRBSI will die (CDC, 2011). Estimates show the average cost to treat CLABSI is more than \$45,000 per infection (Zimlichman, Henderson, et al., 2013).



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With the rollout of the Patient Protection and Affordable Care Act, reimbursement changes for preventable infections such as CLABSI have thrust HAI measurement into the spotlight more than ever—bringing much-needed attention to efforts to improve patient safety and infection prevention processes.

The CDC's most recent *National and State Healthcare-Associated Infections Progress Report (HAI Progress Report)* showed most infections measured have decreased compared to the national baseline. CLABSI rates showed some of the greatest reductions, with a 50% decrease within U.S. acute care hospitals between 2008 and 2014 (CDC, 2016).

Although significant progress has been made, there is more we can do to continue to draw down burdensome CLABSI rates.

Keys for successful CLABSI prevention

Many variables can contribute to bloodstream infections—including intrinsic risk factors related to the patient's age or underlying diseases, and extrinsic risk factors such as lack of maximal sterile barriers during insertion and multiple central venous catheters.

The most successful CLABSI reduction initiatives typically eliminate as many

variables as possible using a three-prong approach: people, standards, and technology. The three factors function like the legs of a stool, each equally important and dependent upon the others to support an effective infection prevention program. Here's a closer look at how these three factors work together:

- **Develop highly trained & committed people.** Infection prevention is everyone's responsibility, but clinical staff play an integral role. Staff not only need to be given proper training on consistently implementing best practices, but they also need to be educated on how their personal actions can make a difference in protecting their patients. A personal commitment to best practices is just as important as the facility's policies and procedures and the tools they're given to perform their job. Establishing and encouraging a culture where feedback is safely voiced and received from all staff members can foster a team mentality that helps hold each other accountable.
- **Incorporate industry standards.** Implementing clinical standards from well-respected governing bodies can help your facility operate using the most rigorously researched best practices. In order to implement these standards, you have to know when they're

updated and be able to identify what's new.

Early in 2016, the Infusion Nurses Society issued its revised *Infusion Therapy Standards of Practice* with prescriptive steps detailing the expanded use of chlorhexidine gluconate, passive disinfecting caps, and dressing securement to prevent dislodgement.

- **Use evidence-based technology.** Effective, scientifically-proven products can support your staff as they aim to reduce infections. Products that are easy to use and designed to help clinicians comply with industry best practices and standards should be given preference for crucial patient care tasks such as securing catheters and protecting IV lines from contamination. Explore the published research to identify products that have been clinically proven to help reduce infection risks.

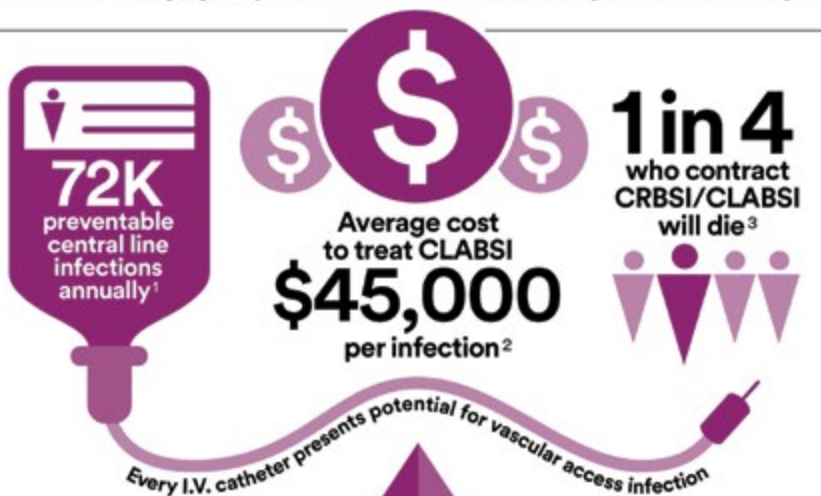
As with any infection prevention mission, there is no magic bullet. But using an integrated approach of training and supporting staff, following the most recent industry standards, and using modern technology will better position you and your facility for success. |

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- Centers for Disease Control and Prevention. (2016). 2014 national and state healthcare-associated infections progress report.
- Zimlichman, E., Henderson, D., et al. (2013) Health care-associated infections: A meta-analysis of costs and financial impact on the US health care system. *JAMA Intern Med.* Dec 9-23;173(22):2039-2046

Vascular Access Infections are a costly, yet preventable, threat to patient safety.*



3 Keys

to Reducing Infection Risk



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*For purposes of this infographic, the term "Vascular Access Infections" includes but is not limited to Catheter-Related Bloodstream Infections (CRBSI) and Central Line-Associated Bloodstream Infections (CLABSI).

1. <http://www.cdc.gov/hai/surveillance/index.html>

2. Zimlichman E, Henderson D, et al. Health Care-Associated Infections: A Meta-analysis of Costs and Financial Impact on the US Health Care System. *JAMA Intern Med.* 2013 Dec 9-23;173(22):2039-46. doi: 10.1001/jamainternmed.2013.6763.

3. <https://www.cdc.gov/vitalsigns/pdf/2011-03-vitalsigns.pdf>

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