

The Challenges of Vascular Access

Peripheral intravenous catheters (PIVCs) are used in one of the most frequently performed invasive procedures for:¹



Central vascular access devices (CVADs) are used for necessary clinical interventions and are indicated for:²



More than 400 million PIVCs are sold in the US each year³

Up to 50% of catheters require replacement before the completion of therapy¹

Up to 25% of central lines need to be removed prior to completion of therapy in pediatric patients⁴

More than 4 million CVADs are sold in the US each year³

Up to 90% of hospitalized patients receive a PIVC¹

Up to 1 in 4 patients who acquire a CLABSI will die⁵

Up to 28% of central line-associated blood stream infections (CLABSIs) are antimicrobial resistant in acute care settings⁶

Contributing factors to complications...



- Variation in policy, practice and training⁷
- Inappropriate device selection and placement⁷
- Variation in patients (>30% may be difficult intravenous access)⁸

Occlusions occur in up to 36% of long-term central venous catheters⁹

72% of CLABSIs occur more than 5 days after insertion¹⁰

On average, up to 82 patients acquire a CLABSI everyday¹¹

Vascular access complications cause substantial burdens

Economic



CLABSIs are estimated to cost the U.S. healthcare system \$45,814 per occurrence or ~\$1.9 billion every year.¹²



Unnecessary PIV restarts can cost a 200 bed hospital more than \$980,000 annually.¹

Patient



Multiple insertion attempts increase pain to the patient.¹³



CLABSI patients have been associated with **2.27x** greater risk of mortality than non-CLABSI patients.¹⁴

Clinical



Treatment of CRBSIs can extend a patient's length of stay.¹²

Quality assurance and performance improvement plans may include multidisciplinary functions and an integrated multimodal approach such as:

- Education and training of healthcare workers¹⁵
- Products that support and align to industry best practices¹⁵
- Surveillance and feedback¹⁶

Care and maintenance of catheters should be the focus of performance improvement and quality assurance¹⁶



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