

Intravenous (IV) complications and practice variations can lead to costly consequences for both the hospital and patients.

Catheter-related bloodstream infections

(CR-BSIs) are one of the most frequent, costly, and potentially life-threatening complications of central venous catheterisation.¹



Yet up to **90% of hospital in-patients require peripheral IV therapy**, putting many patients at potential risk of CR-BSIs.¹

Catheter related infections account for up to **20% of healthcare associated infections (HAIs)**, a potentially life-threatening complication from a routine procedure.²



HAIs are the most common cause of preventable harm in hospital, affecting one in twenty European patients,^{3,4} (3.2 million patients⁵), which results in triple the length of patient stays in hospital and almost doubles the rates of patient readmission.⁶

On average, **catheter-related bloodstream infections (CR-BSIs)** in intensive care units cost around **€8,000/£6,840 to €11,000/£9,406 per patient occurrence⁷**

Hospitals have been shown to experience vascular access **complication rates as high as 62%⁸** yet many IV complications are preventable.

Also multiple insertion attempts can be costly to hospitals, clinicians and patients.^{7,9,10}

Direct costs

CR-BSIs can increase patient length of stay up to 9–14 days⁷

Additional treatments¹¹ and lab testing

Medical or surgical procedures¹¹

Indirect costs

Demands on caregiver's time¹¹

Compromised patient care due to cancellation or delay of procedures¹¹

Impact on hospital performance and reputation

Increased cost has also been reported for other complications, including phlebitis, occlusion, dislodgement, thrombosis, infiltration and extravasation, and sepsis among others.¹¹



Both healthcare professionals training and the use of more advanced products are likely to contribute to a decline in insertion-related complications that lead to catheter failure.¹¹

You can provide benefit to your patients and staff and **ensure your hospital is running efficiently** by:

- ③ championing the compliance to evidence-based practice guidelines
- ③ improving vascular access practices, implementing streamlined processes
- ③ providing continuous training to clinical staff
- ③ emphasising patient safety and satisfaction
- ③ selecting advanced vascular access products¹¹

Champion of Change

Because you are a Champion of Change, you can advocate for best practice vascular access care in your hospital and you could help to reduce complications and associated costs of suboptimal practices.

Contact a BD representative to learn more about how BD can help your hospital support best practices and efficiencies in vascular access.

Contact a BD representative

References

1. Helm RE, Klausner JD, Klemperer JD, Flint LM, Huang E. Accepted but unacceptable: peripheral IV catheter failure. *J Infus Nurs.* 2015;38:189–203.
2. Gahlot R, et al. Catheter-related bloodstream infections. *Int J Crit Illn Inj Sci* 2014;4(2):162-7.
3. Boev C, Kiss E. Hospital-Acquired Infections. Current Trends and Prevention. *Crit Care Nurs Clin North Am* 2017;29(1):51-65.
4. Cassini A, et al. Burden of Six Healthcare-Associated Infections on European Population Health: Estimating Incidence-Based Disability-Adjusted Life Years through a Population Prevalence-Based Modelling Study *PLoS Med* 2016; 13(10):e1002150.
5. Kritsokatis EI, et al. Prevalence, incidence burden, and clinical impact of healthcare-associated infections and antimicrobial resistance: a national prevalent cohort study in acute care hospitals in Greece. *Infect Drug Resist* 2017;10:317-28.
6. Rahmqvist M, et al. Direct health care costs and length of hospital stay related to health care-acquired infections in adult patients based on point prevalence measurements. *Am J Infect Control* 2016;44(5):500-6.
7. Tacconelli E, Smith G, Hieke K, et al. Epidemiology, medical outcomes and costs of catheter-related bloodstream infections in intensive care units of four European countries: literature-and registry-based estimates. *Journal of Hospital Infection.* 2009;72(2):97-103.
8. XE.com convertor. <https://www.xe.com/currencyconverter>. Converted: €16/£14, €8,000/£6,840, €11,000/£9,406. Accessed July 6, 2021.
9. Oyler V, Nagar T, Nedbalek C, et al. Improving Vascular Access Outcomes for Patients, Healthcare Workers, and the Institution. Poster published by: University of Kansas Health System Health; 2017; Kansas City, KS.
10. Williams A. Catheter occlusion in home infusion: the influence of needleless connector design on central catheter occlusion. *J Infus Nurs.* 2018;41(1):52–57.
11. Platt V, et al. Improving Vascular Access Outcomes and Enhancing Practice. *J Infus Nurs.* 2018;41(6):375–382.
12. Morrell E. Reducing risks and improving vascular access outcomes. *J Infus Nurs.* 2020;43(4): 222-228.



Becton, Dickinson U.K. Limited, 1030 Eskdale Road, Winnersh Triangle, Wokingham, RG41 5TS

bd.com/en-uk

BD, and the BD Logo are trademarks of Becton, Dickinson and Company or its affiliates. All other trademarks are the property of their respective owners ©2021 BD. All rights reserved. BD-35688 (Sep-2021)