

Intrinsic Risk Factors for CLABSIs and Susceptible Populations

Intrinsic Risk Factors (Nonmodifiable Characteristics of the Patient)	Susceptible Populations
Age	<p>CLABSI rates are higher among children than adults, particularly in neonates.^{1,2} Except for adults in burn or trauma critical care units, pediatric intensive care units (ICUs) had the highest CLABSI rates, as reported in the most recent National Healthcare Safety Network device-associated module data summary report (5.3 and 2.6 CLABSIs per 1,000 catheter-days for burn and trauma ICU, respectively, versus 2.2 to 2.6 for pediatric cardiothoracic, medical, or medical/surgical ICUs per 1,000 catheter-days).</p> <p>Very low birth weight infants (weighing less than 750 grams) had a pooled mean CLABSI rate of 3.4 per 1,000 catheter-days.³</p>
Gender	Male gender has been identified as a factor associated with increased risk of CLABSI. ^{4,5}
Underlying Diseases or Conditions	Patients with hematological and immunological deficiencies, cardiovascular disease, and gastrointestinal diseases have been associated with an increased risk for CLABSI. ⁶⁻⁹

References

1. Zingg W, Cartier-Fässler V, Walder B. Central venous catheter-associated infections. *Best Pract Res Clin Anaesthesiol.* 2008 Sep;22(3):407–421.
2. Almuneef MA, et al. Rate, risk factors and outcomes of catheter-related bloodstream infection in a paediatric intensive care unit in Saudi Arabia. *J Hosp Infect.* 2006 Feb;62(2):207–213. Epub 2005 Nov 22.
3. Dudeck MA, et al. National Healthcare Safety Network (NHSN) report, data summary for 2009, device-associated module. *Am J Infect Control.* 2011 Jun;39(5):349–367.
4. Kritchevsky SB, et al. Evaluation of Processes and Indicators in Infection Control (EPIC) Study Group. The impact of hospital practice on central venous catheter associated bloodstream infection rates at the patient and unit level: A multicenter study. *Am J Med Qual.* 2008 Jan–Feb;23(1):24–38.
5. Zingg W, et al. Impact of a prevention strategy targeting hand hygiene and catheter care on the incidence of catheter-related bloodstream infections. *Crit Care Med.* 2009 Jul;37(7):2167–2173; quiz 2180.
6. Advani S, et al. Central line-associated bloodstream infection in hospitalized children with peripherally inserted central venous catheters: Extending risk analyses outside the intensive care unit. *Clin Infect Dis.* 2011 May;52(9):1108–1115.
7. Mollee P, et al. Catheter-associated bloodstream infection incidence and risk factors in adults with cancer: A prospective cohort study. *J Hosp Infect.* 2011 May;78(1):26–30. Epub 2011 Apr 2.
8. Wylie MC, et al. Risk factors for central line-associated bloodstream infection in pediatric intensive care units. *Infect Control Hosp Epidemiol.* 2010 Oct;31(10):1049–1056.
9. Safdar N, Kluger DM, Maki DG. A review of risk factors for catheter-related bloodstream infection caused by percutaneously inserted, noncuffed central venous catheters: Implications for preventive strategies. *Medicine (Baltimore).* 2002 Nov;81(6):466–479.