

## **To determine the influence of the definition on the rate of central line-associated bloodstream infection (CLABSI) and compare the clinical characteristics of MBI versus non-MBI LCBI cases” Torres et al (2016).**

### Abstract:

**BACKGROUND:** The US National Healthcare Safety Network has provided a definition of mucosal barrier injury-associated, laboratory-confirmed bloodstream infection (MBI-LCBI) to improve infection surveillance. To date there is little information about its influence in pediatric oncology centers in low- to middle-income countries.

**OBJECTIVES:** To determine the influence of the definition on the rate of central line-associated bloodstream infection (CLABSI) and compare the clinical characteristics of MBI versus non-MBI LCBI cases.

**METHODS:** We retrospectively applied the National Healthcare Safety Network definition to all CLABSIs recorded at a pediatric oncology center in Tijuana, Mexico, from January 2011 through December 2014. CLABSI events were reclassified according to the MBI-LCBI definition. Clinical characteristics and outcomes of MBI and non-MBI CLABSIs were compared.

**RESULTS:** Of 55 CLABSI events, 44% (24 out of 55) qualified as MBI-LCBIs; all were MBI-LCBI subcategory 1 (intestinal flora pathogens). After the number of MBI-LCBI cases was removed from the numerator, the CLABSI rate during the study period decreased from 5.72-3.22 infections per 1,000 central line days. Patients with MBI-LCBI were significantly younger than non-MBI-LCBI patients ( $P = .029$ ) and had a significantly greater frequency of neutropenia (100% vs 39%;  $P = .001$ ) and chemotherapy exposure (87% vs 58%;  $P = .020$ ) and significantly longer median hospitalization (34 vs 23 days;  $P = .008$ ).

**CONCLUSION:** A substantial proportion of CLABSI events at our pediatric cancer center met the MBI-LCBI criteria. Our results support separate monitoring and reporting of MBI and non-MBI-LCBIs in low- to middle-income countries to allow accurate detection and tracking of preventable (non-MBI) bloodstream infections.



Reference:

Torres, D., González, M.L., Loera, A., Aguilera, M., Relyea, G., Aristizabal, P. and Caniza, M.A. (2016) The Centers for Disease Control and Prevention definition of mucosal barrier injury-associated bloodstream infection improves accurate detection of preventable bacteremia rates at a pediatric cancer center in a low- to middle-income country. American Journal of Infection Control. January 5th. .

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