

Québec ICU CLABSI surveillance shows declining CLABSI rates in adult ICUs. The absence of a decrease in CLABSI rate in NICUs and PICUs highlights the need for continued surveillance and analysis of factors contributing to higher rates in these populations” Li et al (2016).

Abstract:

BACKGROUND: Following implementation of bundled practices in 2009 in Quebec and Canadian intensive care units (ICUs), we describe CLABSI epidemiology during the last 8 years in the province of Québec (Canada) and compare rates with Canadian and American benchmarks.

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METHODS: CLABSI incidence rates (IRs) and central venous catheter utilization ratios (CVCURs) by year and ICU type were calculated using 2007-2014 data from the Surveillance Provinciale des Infections Nosocomiales (SPIN) program. Using American and Canadian surveillance data, we compared SPIN IRs to rates in other jurisdictions using standardized incidence ratios (SIRs).

RESULTS In total, 1,355 lab-confirmed CLABSIs over 911,205 central venous catheter days (CVC days) were recorded. The overall pooled incidence rate (IR) was 1.49 cases per 1,000 CVC days. IRs for adult teaching ICUs, nonteaching ICUs, neonatal ICUs (NICUs), and pediatric ICUs (PICUs) were 1.04, 0.91, 4.20, and 2.15 cases per 1,000 CVC days, respectively. Using fixed SPIN 2007-2009 benchmarks, CLABSI rates had decreased significantly in all ICUs except for PICUs by 2014. Rates declined by 55% in adult teaching ICUs, 52% in adult nonteaching ICUs, and 38% in NICUs. Using dynamic American and Canadian CLABSI rates as benchmarks, SPIN adult teaching ICU rates were significantly lower and adult nonteaching ICUs had lower or comparable rates, whereas NICU and PICU rates were higher.

CONCLUSION: Québec ICU CLABSI surveillance shows declining CLABSI rates in adult ICUs. The absence of a decrease in CLABSI rate in NICUs and PICUs highlights the need for continued surveillance and analysis of factors contributing to higher rates in these populations.

Reference:

Li, L., Fortin, E., Tremblay, C., Ngenda-Muadi, M. and Quach, C. (2016) Central-Line-Associated Bloodstream Infections in Québec Intensive Care Units: Results from the Provincial Healthcare-Associated Infections Surveillance Program (SPIN). Infection Control and Hospital Epidemiology. July 19th. .

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