Further investigation is necessary to develop effective infection reduction strategies for ambulatory PHO patients with central lines” Bundy et al (2016).

Abstract:

BACKGROUND: Pediatric hematology/oncology (PHO) patients are at high risk of bloodstream infections (BSI). The burden of BSI in PHO patients in the ambulatory setting has not been well documented.

METHODS: The Children’s Hospital Association leads the Childhood Cancer and Blood Disorders Network, a multicenter United States quality improvement collaborative, working to reduce the incidence of inpatient and ambulatory Central Line-Associated BSI (CLABSI) among PHO patients. Positive blood culture events (+BCE) were adjudicated as CLABSI, single positive blood cultures (SPBC) with potential commensals, or secondary BSI (attributed to source other than the central line) following standardized National Healthcare Safety Network definitions. Our study investigated the prevalence of +BCE among all centers with 90% complete monthly reporting of both +BCE and central line days (CLD) for at least one year (n=25) between January 2012 and September 2014. Ambulatory and inpatient BSI rates and 95% confidence intervals (CI) were calculated as the number of +BCE per 1,000 CLD per month.

RESULTS: A total of 1,747 +BCE and 4,883,413 CLD were reported among our target ambulatory population, whereas 1,095 +BCE and 353,259 CLD were reported among our corresponding inpatient population. While the CLABSI and SPBC rates were significantly lower in the ambulatory setting compared to inpatient (p<0.001), the total number of ambulatory CLABSI and SPBC events was 2.0 and 1.6 times higher than inpatient events, respectively.

CONCLUSIONS: Our findings from a large multicenter collaborative demonstrate the burden
of BSI among ambulatory PHO patients and identify benchmarks for future quality improvement work. Further investigation is necessary to develop effective infection reduction strategies for ambulatory PHO patients with central lines.

Reference:


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