Infection Prevention & Control Central Line-Associated Bloodstream Infection (CLABSI) Surveillance Information Sheet

Purpose

The aim of this document is to inform Interior Health (IH) healthcare staff on key concepts related to central line-associated bloodstream infection (CLABSI) surveillance.

Context

- Central lines can be important for the care of patients with complex severe illnesses, especially those in intensive care units; however, these lines disrupt the integrity of the skin, making bloodstream infections possible.
- Bloodstream infections associated with central lines can lead to increased mortality in patients and prolonged hospital stays. The rate of CLABSIs in critical care locations is an important measure of quality of patient care.
- Bundling multiple evidence-informed interventions can virtually eliminate CLABSIs and includes hand hygiene, safe central line insertion and maintenance practices, and daily review of line necessity.

Key Messages

- CLABSIs within critical care locations complicate and prolong hospital stays and impact resources and costs in the health care system.
- Monitoring CLABSI trends provides important information about the effectiveness of infection prevention and control strategies, including effective hand hygiene and safe patient care practices.
- There are many initiatives underway throughout IH to reduce CLABSIs. These include standardizing the insertion and maintenance of central lines, educating healthcare staff on proper aseptic techniques, and working with critical care staff to evaluate and improve the use of prevention bundles.
- Ongoing targeted surveillance provides timely data to clinicians and leaders to understand, monitor, and implement measures to improve patient care.

Methodology

- All patients who are admitted to an adult critical care unit at an IH acute care facility are included in surveillance.
- A CLABSI is defined as a laboratory-confirmed bloodstream infection in an admitted patient with a central line in place for greater than two (2) calendar days. The onset of this infection occurred either during their critical care stay, on the day of transfer, or the day after transfer out of critical care – refer to the CLABSI protocol for more information.
- Infection Preventionists (IP's) review the healthcare records of all admitted patients with a positive blood culture result to decide if the patient should be included as a surveillance case. All cases are communicated to the critical care unit's clinical staff.

Limitations and Explanations

- The presence of a central line does not automatically make a patient eligible to be a CLABSI case, as the central line must be in place for two calendar days to meet surveillance criteria.
- Determination of infection, as per National Healthcare Safety Network definitions, is completed according towhat is available in the patient's chart at the time of data entry and what has been documented by front-line healthcare workers.

Background Information about IPAC Surveillance Measures

Surveillance for healthcare-associated infections and for antimicrobial resistant organisms is a mandate for IPAC programs to establish baseline frequency of disease, identify risk factors, measure the impact of prevention initiatives, and provide information to inform and educate healthcare workers. Surveillance is most successful when it is comprehensive and linked to program objectives so that surveillance reports are timely and subsequent actions aremeaningful and addressed. IH IPAC surveillance indicators are chosen to monitor quality issues that may need further review and investigation. The data are used by healthcare providers to monitor trends and improve care, and by governments to monitor system performance and for public reporting.

The IPAC program in Interior Health conducts surveillance in every acute care facility in the region. Trained Infection Preventionists perform chart reviews and use the protocols to determine surveillance cases, and the IPAC Epidemiologist reviews all cases for data quality purposes. Surveillance is performed in a web-based app so that no duplicate cases are included, and to ensure complete case capture. The IPAC Data Quality Working Group provides oversight for the surveillance system, surveillance protocols and definitions, and ensuring minimal variability in practices across the health authority so that results are reliable.

Incidence indicators represent the proportion of patients with a new presentation of the condition/event of interest. The IPAC surveillance indicators are presented as a rate for a fiscal year, fiscal quarter, or fiscal period, and allow facilities to compare to their own performance over time.