



1400 Crystal Drive, Suite 900
Arlington, VA 22202
Phone: 202/789-1890
Fax: 202/789-1899
apicinfo@apic.org
apic.org

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Katherine Allen-Bridson, RN, BSN, MScPh, CIC
National Center for Emerging and Infectious Zoonotic Disease
Centers for Disease Control and Prevention
1600 Clifton Road, NE
Atlanta, GA 30329

Re: Docket No. CDC-2019-0007: National Healthcare Safety Network's Outpatient Procedure Component Surveillance Protocol and the Bloodstream Infection Surveillance Protocol; Request for Information.

Dear Ms. Allen-Bridson:

The Association for Professionals in Infection Control and Epidemiology (APIC) wishes to thank the Centers for Disease Control and Prevention for the opportunity to provide feedback on the National Healthcare Safety Network's Outpatient Procedure Component (OPC) Surveillance Protocol and the Bloodstream Infection (BSI) Surveillance Protocol. APIC is a nonprofit, multidisciplinary organization representing 16,000 infection preventionists (IPs) whose mission is to create a safer world through prevention of infection. Our members work to prevent healthcare-associated infections (HAIs) and educate healthcare providers and the public about patient safety.

APIC respectfully requests ongoing dialogue with CDC/NHSN on these protocols as CDC moves forward with the 2020 updates and maintenance work. This is especially important for the Blood Stream Infection module. The impact that Value-Based Purchasing has brought to the measurement environment requires that we use standardized definitions which consider true infection status as opposed to colonization or infections not able to be controlled by a healthcare organization.

Outpatient Procedure Component

APIC appreciates the development of the new OPC surveillance. Having a simpler, easily reproducible set of definitions which include the separation of breast surgery as a specific surveillance will enhance surveillance in this important area. The tool kit is helpful; however, in order to assist in the workflow of the IP, APIC suggests the creation of modifiable documents (pdfs) which may facilitate their use and allow for more rapid return of data from providers/outpatient sites to the infection prevention department.

Patient Safety Component Bloodstream Infection Module

- APIC proposes adding exclusion criteria to the bloodstream infection surveillance definition for infections that are due to a national outbreak resulting from contaminated products. Contamination of fluids through a central line is a recognized source of hospital bacteremia.¹ In many cases this contamination is the result of poor infection prevention practices during compounding at that institution. However, in some cases the contamination is the result of poor infection prevention practices at the compounding facility and, therefore, not controllable by



the institution. In addition, contaminated products have been known to result in bloodstream infections that match the national contaminated product outbreak strain.² Such events of BSI are clearly not catheter-related and are not preventable through normal hospital prevention bundles. APIC proposes the bacteremia associated with a national outbreak be defined as meeting the following criteria:

- Patient has one or more pathogens identified in a blood culture.

AND

- All of the pathogens match those linked to a national outbreak and no additional non-linked pathogens are identified in the same blood culture. Sources for the pathogens in the outbreak include: FDA, CDC, state or local health departments, or the manufacturer of the product.

AND

- The institution has purchased the lots of the product linked to the national outbreak and the patient has had that product administered within five calendar days of the positive blood culture.
- We recommend that NHSN use retrospective data to validate definition changes such as the repeat infection timeframe (RIT). Certain patient populations, such as immunocompromised patients, are unable to adequately clear infections within 14 days and continue to grow the same pathogen on Day 15 or after, but are now considered a “new” infection. It would be helpful for IPs to know if this is a national trend impacting an increase in CLABSI numbers and perhaps NHSN could use this data to determine appropriate cut-offs for repeat infections in unique patient populations.
- APIC strongly encourages the NHSN to pursue additional secondary definitions that are inclusive of unique patient populations such as pediatrics, patients with liver failure, short gut and/or necrotic bowel. We applaud NHSN for recognizing the significance of NEC in the occurrence of secondary bacteremia for pediatrics; however, it is absent in the adult protocol. We recommend that NHSN consider adding criteria for secondary bacteremia for necrotic/ischemic bowel when Mucosal Barrier Injury (MBI) pathogens are identified in adults.

Possible addition of hospital onset bacteremia (HOB)

APIC recognizes the potential value of expanding bloodstream infection surveillance beyond those patients with central lines and/or that have methicillin-resistant *Staphylococcus aureus* (LabID Event).

The following comments are based on the supposition that this proposal, to expand surveillance to ‘HOB’, would be similar to the Lab ID Event methodology, and not increase the burden on IPs through chart review.

- HOB should stand for hospital-onset bloodstream infection (vs. bacteremia) in order to potentially encompass fungemia/candidemia. Suggested acronym: HOBSI (hospital-onset bloodstream infection).
- The majority of the data will be uninterpretable and unusable without further surveillance or analysis. The exception to this may be *Staphylococcus aureus* HOBSI. Many of these positive HOBSI will be secondary to other sources, and the majority of the gram-negatives will be



secondary to respiratory, urine, gastrointestinal, and intraabdominal infections that are community-onset.

- It will be necessary to have the Community-Onset (CO) and the Hospital-Onset (HO) distinctions. Ratios will be necessary and of great benefit for analysis.
- APIC believes that more data is not always better, particularly when faced with large amounts of non-specific data. The quality of the data should be considered over the quantity of the data. Therefore, we would encourage the CDC to be thoughtful in their approach to wanting **all-organism HOBSI** based on what amount of this data will be actionable. For example, *Staphylococcus aureus* (SA) HOBSI may be of value since it could speak to issues with peripheral intravenous (PIV) infections,^{3,4} and high rates of HO candidemia may speak to issues with total parenteral nutrition (TPN).^{5,6} As stated previously, organisms such as *Pseudomonas* and *E. coli* are likely to represent primary infections such as pneumonia, urinary tract infections, and abdominal infections. These infections may generate interest and questions from within the institution, causing the IP to spend non-value-added time investigating and explaining while distracting focus from actionable data and preventable harm.
- APIC also recommends that the CDC consider how HOBSI would be distinguished from the already existing mandatory reporting of primary bloodstream infections (without a central line) and secondary bloodstream infections that are required in certain states. For states that are required to report all NHSN infections as well as notify patients of their acquisition of an infection, this would increase reporting redundancies and potentially cause confusion for patients receiving letters of notification for both surveillance definitions.

Thank you for the opportunity to provide comments on the NHSN OPC and BSI modules. APIC appreciates your careful review and consideration of our proposed changes and we look forward to continuing to work with NHSN staff on updates and improvements to the system.

Sincerely,

A handwritten signature in black ink, appearing to read "Katrina Crist", written over a light blue horizontal line.

Katrina Crist, MBA, CAE
Chief Executive Officer

¹Macias AE, Huertas M, de Leon SP, et al. Contamination of intravenous fluids: a continuing cause of hospital bacteremia. *Am J Infect Control* 2010;38:217–21. [10.1016/j.ajic.2009.08.015](https://doi.org/10.1016/j.ajic.2009.08.015).

² Marquez L, Jones KN, Whaley E and Koy TH. An outbreak of *Burkholderia cepacia* complex infections associated with contaminated liquid docusate. *Infect Control Hosp Epidemiol* 2017;38:567-73. [10.1017/ice.2017.11](https://doi.org/10.1017/ice.2017.11)

³ Mermel LA. Short-term peripheral venous catheter-related bloodstream infections: a systematic review. *Clin Infect Dis* 2017;65(10):1757-1762. 10.1093/cid/cix562.

⁴ Saliba P, Hornero A, Cuervo G, et al. Interventions to decrease short-term peripheral venous catheter-related bloodstream infections: impact on incidence and mortality. *J Hosp Infect* 2018; 100(3):e178-e186. 10.1016/j.jhin.2018.06.010.

⁵ Aljeboori Z, Gorelik A, Jenkins E, et al. Risk factors for candidaemia and their cumulative effect over time in a cohort of critically ill, non-neutropenic patients. *Crit Care Resusc* 2018;20(4):313-319.

⁶ Guducuoglu H, Gultepe B, Otlu B. et al. *Candida albicans* outbreak associated with total parenteral nutrition in the neonatal unit. *Indian J Med Microbiol* 2016; 34(2): 202-7. doi: 10.4103/0255-0857.180303.