

Conference Call: November 6, 2006

**FINAL REPORTING CONSENSUS
HOSPITAL-ACQUIRED CENTRAL LINE-ASSOCIATED BLOODSTREAM
INFECTIONS**

Consultants: D.Wirtschafter, J. Pettit

**Item # 1: REPORTING PROCESS FOR CENTRAL LINE-ASSOCIATED
BLOODSTREAM INFECTION (CLABSI) EVENTS:**

The California Children's Hospital-CCS Nosocomial Infection Prevention Initiative has adopted the CDC-NHSN conventions for defining and reporting events with several exceptions as noted below (*italized and underlined*).

NUMERATOR (DIAGNOSIS):

CDC National Nosocomial Infection Surveillance (NNIS) Definition of Primary Bacteremia (Garner Am J Infect Control 1988) updated/incorporated into the CDC's revamped National Healthcare Safety Network (NHSN)-Patient Safety Protocol/Patient Safety Monthly Reporting Plan/Device Associated Module (release date 5/17/2006).

- NHSN Home page: <http://www.cdc.gov/ncidod/hip/nhsn/members/members.htm>
- NHSN device safety document (in which CLABSI is described in detail): <http://www.cdc.gov/ncidod/hip/nhsn/members/PSProtocolsMay06.pdf>

Central Line-Associated Bloodstream Infection (CLABSI) Event

- **Definition of applicable lines:** “Central line: An intravascular catheter that terminates at or close to the heart or in one of the great vessels which is used for infusion, withdrawal of blood, or hemodynamic monitoring”...explicitly describes umbilical arterial and venous lines as being applicable lines.
- **Definition of reporting time:** A device-associated infection is one that has occurred within the 48 hour period before the onset of infection (pg 65 op cit)
- **CLABSI events are defined either by using Laboratory-confirmed or, solely in the case of infants < 1 year, Clinical Sepsis (CSEP) criteria.**

Laboratory-confirmed bloodstream infection (LCBI)

- **LCBI diagnostic criteria may be used for all patients.**
- **LCBI must meet one of the following three criteria:**

- **Criterion 1: Patient has a recognized pathogen cultured from one or more blood cultures and organism cultured from blood is not related to an infection at another site.**

- **Criterion 2: Patient has signs of generalized infection:**
 - **Elevated temperature (> 38 C⁰) or chills or hypotension (at least one) AND**
 - **No other infectious focus (“and signs and symptoms and positive laboratory tests not related to an infection at another site”) AND**
 - **AT LEAST ONE OF THE FOLLOWING:**
 - **Common skin contaminant# cultured from two or more blood cultures on separate occasions.**
 - **Common skin contaminant# cultured from at least one blood culture AND the patient has an intravascular line in place AND the physician instituted appropriate antimicrobial therapy**
 - **~~positive antigen test on blood or urine (e.g., H. influenzae, S. pneumoniae, N. meningitidis, or Group B Streptococcus).~~ *Note: item specifically omitted.***

- **Criterion 3: Patient is < 1 year of age AND**
 - **Patient has signs of generalized infection**
 - **Elevated temperature (>38 C⁰) or hypothermia (temperature < 37 C⁰)**
Notes: 1. While the CDC specifies rectal temperatures, none of the collaborating NICUs perform these measurements for a variety of good reasons; 2. in their place, axillary or equivalent measurements will be accepted; and 3. Because of the variability in temperature readings, the presence of an elevated or hypothermic temperature will only be termed confirmed if there have been at least two consecutive abnormal measurements.
 - **or apnea or bradycardia (at least one) AND**
- **No other infectious focus (“and signs and symptoms and positive laboratory tests not related to an infection at another site”) AND**
- **AT LEAST ONE OF THE FOLLOWING:**
 - **Common skin contaminant# cultured from two or more blood cultures on separate occasions.**
 - **Common skin contaminant# cultured from at least one blood culture AND the patient has an intravascular line in place AND the physician instituted appropriate antimicrobial therapy**
 - **~~positive antigen test on blood or urine (e.g., H. influenzae, S. pneumoniae, N. meningitidis, or Group B Streptococcus).~~ *Note: item specifically omitted.***

Common skin contaminants defined: e.g., diphtheroids, *Bacillus* sp., *Propionibacterium* sp., coagulase-negative staphylococci, or micrococci.

ELIMINATE “CLINICAL SEPSIS” FROM OUR SELF-REPORTS OF PRIMARY BACTEREMIA FOR THE PURPOSE OF THIS INITIATIVE. (Therefore the CSEP definition has not been included above.)

DENOMINATOR:

All line days (be they umbilical, PICC, Broviac, Hickman—but not PIVs or Peripheral Arterial Lines; note multiple lines in a patient simultaneously count only as *one* line day) enumerated once daily,

Stratify by birth weight categories in accordance with the NHSN reporting conventions:

- <750 gm;
- 751-1000 gm;
- 1001-1500 gm
- 1501-2500 gm
- > 2500 gm

Beginning on January 1, 2007.

Pre- and Post-intervention comparisons will be solely in terms of the aggregated cohort <1000 gm, since few units have data from 2006 disaggregated below and above 750 gm birth weight.

ADOPT THE NHSN REPORTING CONVENTION—BEGINNING IN 2007- OF DIFFERENTIATING UMBILICAL LINE DAYS FROM OTHER DEEP LINE DAYS. (*Note: the NHSN reporting format suggests the use of columns to tabulate umbilical line days separately from other line days. Only one of the 13 participating hospitals has yet to implement this differential reporting in 2006; therefore, the group should only report on the aggregate line days, while encouraging members to adopt the 2006 standard beginning on January 1, 2007.*)

BASELINE REPORTING PERIOD:

Use 1/1/06 through 9/30/06 as the baseline.