ISSUE
05
Fall
2013

QUARTERLY
BULLETIN OF
the California Emerging
Infections Program

CEIP Sentinel

California Emerging
Infections Program
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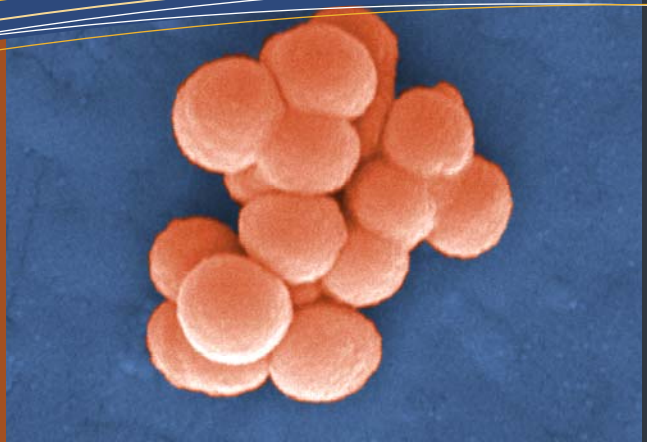

Group B *Streptococcus*, Public Health Image Library, ID# 10586

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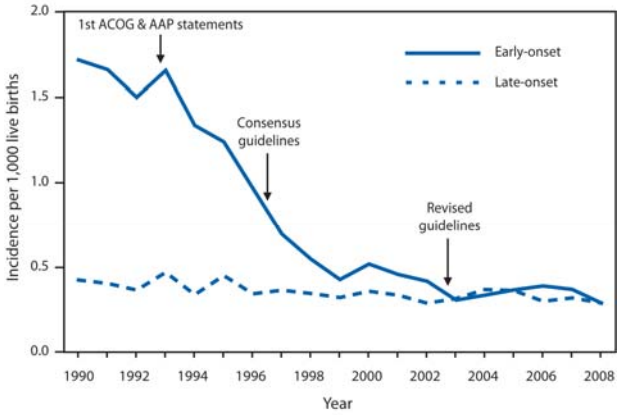
CDC with ASM Develops Standard Operating Procedures for Laboratorians for the Prevention of Neonatal Group B Streptococcal Disease

Group B *Streptococcus* (GBS) remains the leading cause of early-onset neonatal sepsis (<7 days old) in the United States, despite substantial progress in prevention of neonatal GBS disease since the 1990s.[1] Since 1998, the California Emerging Infections Program (CEIP) has conducted active surveillance for neonatal sepsis caused by GBS. [1] November, 2010 CDC published the updated version of the Guidelines for the Prevention of Perinatal Group B Streptococcal Disease. These were endorsed by the American College of Obstetricians and Gynecologists, the American Academy of Pediatrics, the American College of Nurse-Midwives, the American Academy of Family Physicians, and the American Society for Microbiology. [1] The 2010 GBS guidelines can be found at http://www.cdc.gov/groupbstrep/guidelines/guidelines.html.

In addition to the routine surveillance for GBS neonatal sepsis, the Emerging Infections Program sites participated in a trace back evaluation of early-onset GBS neonatal sepsis cases to characterize the remaining burden of disease and to refine and strengthen prevention efforts. The findings of the evaluation were intended to identify missed opportunities for prevention of early-onset GBS infections and guide efforts to improve implementation of the GBS prevention guidelines. During the trace back study, documents were gathered from laboratories that had processed prenatal screening specimens from the mothers of infants with early-onset disease; variability in laboratory practices was noted (data submitted for publication).

FIGURE 1. Incidence of early- and late-onset invasive group B streptococcal (GBS) disease — Active Bacterial Core surveillance areas, 1990–2008, and activities for prevention of GBS disease



Abbreviations: ACOG = American College of Obstetricians and Gynecologists and AAP = American Academy of Pediatrics.
Source: Adapted from Jordan HT, Farley MM, Craig A, et al. Revisiting the need for vaccine prevention of late-onset neonatal group B streptococcal disease. Pediatr Infect Dis J 2008;27:1057–64.
* Incidence rates for 2008 are preliminary because the live birth denominator has not been finalized.

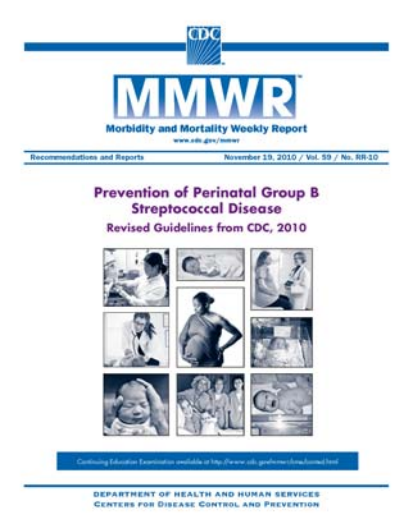
Continued on page 2

By: Lauren Pasutti, MPH

GBS Prevention SOPs for Laboratorians (Continued)

As a result of those activities, five standard operating procedures (SOPs) were developed by the American Society for Microbiology (ASM) and CDC's *Streptococcus* Laboratory to assist laboratorians in processing group B *Streptococcus* specimens. The SOPs are consistent with the recommendations in the 2010 GBS guidelines, but are tailored for use in different settings, depending on the procedures and assays used in each laboratory (e.g., pigmented or non-pigmented broth, sub-culture versus serologic or molecular methods, etc.).

The sample SOPs can be found at http://www.cdc.gov/groupbstrep/lab/sops.html



[1] Jennifer R. Verani, MD, Lesley McGee, PhD, Stephanie J. Schrag, DPhil, Prevention of Perinatal Group B Streptococcal Disease. Revised Guidelines from CDC, 2010, *Recommendations and Reports,* November 19, 2010 / 59(RR10);1-32.

Update on Healthcare-Associated Community-Onset Methicillin-Resistant *Staphylococcus aureus* Risk Factor Study

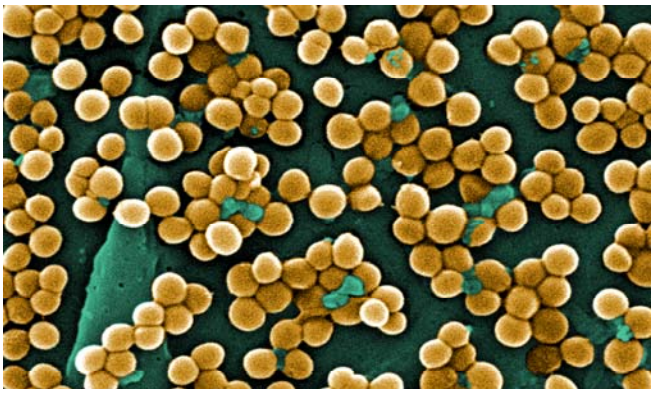
The California Emerging Infections Program (CEIP), in partnership with CDC and five other EIP sites, launched a Healthcare-Associated Community-Onset Methicillin-Resistant *Staphylococcus aureus* (HACO MRSA) study in June 2011. The study was a matched case-control study conducted at four acute care facilities in the CEIP catchment area. Patients who developed invasive MRSA infections as outpatients within twelve weeks of an acute care hospital discharge were identified as cases through CEIP's existing laboratory-based MRSA surveillance system. Controls were randomly selected from among individuals discharged from the same acute care facility within the same 30-day window and in the same age group as a case. A sub-study was also conducted, in which cases known to be colonized or infected with MRSA in the 12 months prior to onset of invasive MRSA disease were matched with controls also colonized or infected with MRSA in the same preceding 12 month period.

The primary objectives were to identify risk factors for invasive MRSA infection post-discharge and to identify types of patients who may benefit from targeted interventions. Data from the exposure window (the time of hospital discharge to the onset of the invasive MRSA infection) were collected, including but not limited to: invasive procedures, exposure to antimicrobial agents, chronic wounds and wound care, device use and maintenance, and functional status of the patient. The sub-study was a unique opportunity to understand better what factors, beyond MRSA acquisition, are associated with invasive disease among patients recently discharged from an acute care hospital.

The study methods included an interview and/or long term care facility medical record review and acute care medical record review. Data collection completed at CEIP in June 2013 when enrollment targets were met.

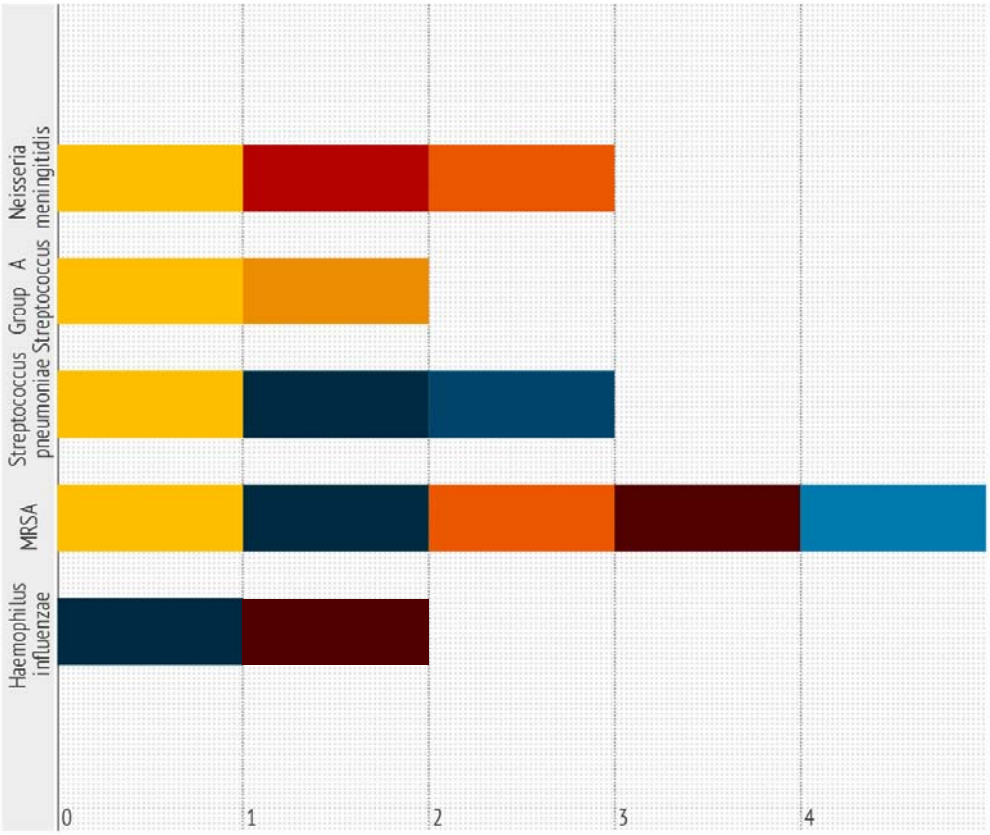
An abstract with preliminary analyses and findings will be presented at ID Week 2013 (a joint meeting of IDSA, SHEA, HIVMA, and PIDS) to be held in San Francisco in October.

For more information contact Lauren Pasutti, MPH at lpasutti@ceip.us.



MRSA bacteria; Public Health Image Library, ID# 10046.

How are CEIP Isolates Used?



The clinical isolates collected from our hospital laboratories are utilized in many ways:

- Vaccine development and effectiveness.
- Surveillance and investigation of antibiotic resistance.
- Further investigation of isolates with unusual resistance patterns.
- Monitoring changes in epidemiology in the post-vaccine era.
- Investigation of potential clusters of disease based on emm type.
- Testing new antimicrobial agents.
- Identification of new resistance genes and mechanisms.
- Description of the changing epidemiology of the MRSA genotypes USA100 (traditionally hospital-associated) and USA300 (traditionally community-associated).
- Typing and validation projects, such as spa typing and method development for Clinical and Laboratory Standard Institute (CLSI). (http://www.clsi.org/)
- Isolates submitted to Network on Antimicrobial Resistance in *Staphylococcus aureus* (NARSA) for use by researchers. Isolates in the ABCs MRSA bank are often requested. (http://www.narsa.net/content/aboutOurProgram.jsp)

For isolate questions please contact Mirasol Apostol MPH, mapostol@ceip.us
Or call the main line at (510) 451-1344

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Opportunities at CEIP

Please check the following websites for future postings:

www.phfe.org

www.ceip.us

The California Emerging Infections Program is a program of Public Health Foundation Enterprises Inc.

Upcoming Events

October 2013

ID Week 2013 - Joint Meeting IDSA/SHEA/HIVMA/ PIDS
October 2 to 6, 2013 in San Francisco, CA
www.idweek.org

November 2013

141st APHA Annual Meeting
November 2 to 6, 2013 in Boston, MA
www.apha.org

CEIP Presents Under Surveillance 2013
November 19, 2013 in Oakland, CA
www.ceip.us

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Recent and Upcoming CEIP Presentations

Erin P. Garcia, MPH, CPH[1]; Erin Parker, MPH[1]; Joelle Nadle, MPH[1]; Lisa G. Winston, MD[2] "*Clostridium difficile* Infection (CDI) Treatment Practices in San Francisco County, 2012." Infectious Diseases Week 2013 (Joint Meeting of Infectious Diseases Society of America (IDSA), Society for Healthcare Epidemiology of America (SHEA), HIV Medicine Association (HIVMA), and Pediatric Infectious Diseases Society (PIDS)), San Francisco, CA.

Sarah New, MPH[1]; Brittany Martin, MPH[1]; Pam Daily Kirley, MPH[1] "Factors Associated with Antiviral Treatment among Hospitalized Influenza Patients in California During Pandemic (2009–2010) and Post Pandemic (2010–2012) Seasons." Infectious Diseases Week 2013 (Joint Meeting of Infectious Diseases Society of America (IDSA), Society for Healthcare Epidemiology of America (SHEA), HIV Medicine Association (HIVMA), and Pediatric Infectious Diseases Society (PIDS)), San Francisco, CA.

Ashley Williamson, MPH[1]; Joelle Nadle, MPH[1]; Erin P. Garcia, MPH, CPH[1]; Erin Parker, MPH[1]; Lisa G. Winston, MD[2] "Characterizing Patients with both *Clostridium difficile* and Invasive MRSA Infections Identified by California Emerging Infections Program (CEIP) Surveillance, San Francisco County, 2010–2012." Infectious Diseases Week 2013 (Joint Meeting of Infectious Diseases Society of America (IDSA), Society for Healthcare Epidemiology of America (SHEA), HIV Medicine Association (HIVMA), and Pediatric Infectious Diseases Society (PIDS)), San Francisco, CA.

[1] California Emerging Infections Program, Oakland, California
[2] University of California, San Francisco/San Francisco General Hospital, San Francisco, California