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QUARTERLY BULLETIN OF the California Emerging Infections Program

CEIP Sentinel

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MRSA http://www.flickr.com/photos/niaid/8436193898/in/photostream/

Factors Associated with Antiviral Treatment among Hospitalized Influenza Patients in California During Pandemic (2009-2010) and Post Pandemic (2010-2012) Seasons

In October 2013, CEIP presented a poster summarizing active population-based surveillance data collected regarding antiviral treatment among hospitalized influenza patients from CEIP catchment area counties. The analysis characterized antiviral treatment practices during influenza seasons between 2009 and 2012. A case was defined as a resident hospitalized with laboratory-confirmed influenza. Medical charts were reviewed for demographic and clinical information. Associations between risk factors and antiviral treatment were evaluated using chi-square and p-trend tests.

Of 2,192 cases identified, 1,755 (80.9%) received antiviral treatment. Women received antiviral treatment more frequently than men (82.2% vs. 77.8%, p=.039). Patients with ≥1 underlying medical condition received antiviral treatment more frequently than patients with no underlying medical conditions (83.8% vs. 75.7%, p=.0002). Pediatric patients received antiviral treatment less frequently than adults (64.5% vs. 86.2% p<.0001). Patients ages 1-4 years received antiviral treatment less frequently than all other age groups for all seasons. Compared to adults, patients ages 5-17 years old received treatment less frequently across every season. When all ages were combined, there was a significant trend in declining antiviral treatment from pandemic to post pandemic seasons (p-trend =.0012), especially in ages 1-4 years (p-trend=.001) and 5-17 years (p-trend

<.0001).

Despite recommendations for antiviral treatment of all hospitalized influenza patients, there were significant differences in treatment depending on gender, age, underlying conditions, and season. Most notably, pediatric patients were treated less frequently than adults. We found a significant trend in declining use of antiviral treatment for pediatric patients during successive post pandemic seasons.

The full poster is available for download on the CEIP website:http://ceip.us/wordpress/wp-content/uploads/2014/03/BMSN_FluIDWeek2013.pdf







Evaluation of the Effectiveness of Tdap Vaccination Strategies at Preventing Infant Pertussis

In partnership with the California Department of Public Health (CDPH), the Centers for Disease Control and Prevention (CDC), and five other Emerging Infection Program sites, the California Emerging Infections Program (CEIP) is conducting a case-control study to evaluate the effectiveness of the maternal immunization strategy in preventing pertussis in infants. Case infants 0 to 6 months of age with confirmed, suspected, or probable pertussis are enrolled with three age and hospital matched controls. Mothers of cases and controls are interviewed to obtain vaccination history and risk factor information.



CEIP study staff interviewed all eligible cases ages 0 to 6 months with onset dates in 2011 and 2012. As of January 31, 2014, parents or guardians of 250 case infants and 577 control infants were interviewed. 207 case infants and 478 control infants were enrolled. In addition, 233 case and 569 control mothers were interviewed and 185 case and 446 control mothers were enrolled. Currently, 132 case-control sets have been completely enrolled (i.e., completion of all interviews including vaccine history follow-up). Enrollment activities will continue throughout 2014. Analyses of results will be conducted after data collection has been completed by the CDC.

For questions regarding the Evaluation of the Effectiveness of Tdap Vaccination Strategies at Preventing Infant Pertussis Study please contact Project Coordinator, Pam Daily, at 510-451-1344.

http://www.ratepublic.com/wp-content/uploads/2012/11/PRinc_rm_SEM_of_whooping_cough_bacteria_in_cilia1.jpg

By Lauren Pasutti, MPH and Sarah New, MPH

Early-Onset Group B Streptococcal Disease in the United States: Potential for Further Reduction

In 2010, ten Emerging Infections Programs (EIP) investigated early-onset Group B Streptococcus cases that occurred during 2008 and 2009 to identify missed opportunities for prevention of early-onset GBS infections. Data were collected from medical records, prenatal providers, and laboratory reports. The data were aggregated and evaluated by the CDC for errors in prenatal screening, laboratory methods, communication of results, and intrapartum antibiotic prophylaxis.

Among 309 cases, 179 (57.9%) had one or more implementation errors. The most common error types in term and preterm case-patients were failure to implement prenatal screening (80 of 222 [36.0%]) and intrapartum prophylaxis (46 of 85 [54.1%]). We estimated that under optimal implementation, cases of early-onset GBS disease could be reduced by 26-59%, with the largest benefit from a single intervention coming from improved use of intrapartum prophylaxis (16% decrease).

Further reduction of early-onset GBS disease burden is possible by utilizing current prevention strategies, particularly with improved implementation of antibiotic prophylaxis. The article abstract is available at <u>http://journals.lww.com/</u> <u>greenjournal/Abstract/2014/04000/Early_Onset_Group_B_Streptococcal_Disease in the.16.aspx</u>

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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

Save the Date

Under Surveillance 2014

November 4th, 2014

Elihu Harris State Office Building 1515 Clay Street Oakland, CA 94612



This seminar will highlight recent emerging infectious diseases and issues in the San Francisco Bay Area, including those under surveillance by CEIP.

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Assessing the Effectiveness of Tetravalent Meningococcal Conjugate Vaccine among Persons Aged 11-21 Years

In January 2005, the Food and Drug Administration licensed a tetravalent (A, C, Y, W-135) meningococcal conjugate vaccine (MCV4) for prevention of invasive meningococcal disease among persons aged 11-55 years. In February 2005, the Advisory Committee on Immunization Practices (ACIP) of the CDC recommended routine use of MCV4 among adolescents aged 11-12 years, before high school entry for those who were not previously vaccinated with MCV4, college freshmen living in dormitories, and others in the population at increased risk (i.e. members of the military; travelers to areas where meningococcal disease is endemic and patients with asplenia or terminal complement deficiency). This case control study assessed the effectiveness of the vaccine against meningococcal disease caused by serogroups A, C, Y, W-135. Eligible cases were persons \geq 11 years old and born on or after January 1, 1986 identified as having inva-

sive meningococcal disease caused by a vaccine preventable serogroup. Controls were matched to cases by age and geographic area. Study enrollment began on January 1, 2006 and ended on August 31, 2013. Six out of ten eligible cases were enrolled. Only one case had matched controls. The study protocol specified that cases would identify friend controls. Most cases refused to provide control names and contact information. Among the six enrolled cases, five were serotype C and one was serotype Y. The four non-enrolled cases were also either serotype C or Y. Data analysis will be conducted at CDC and results are expected to be published in 2014.

For questions regarding the MCV4 study please contact the Project Coordinator, Mirasol Apostol, at 510-451-1344.



By Mirasol Apostol, MPH

http://www.bioquell.ie/technology/microbiology/neisseria-meningitidis/