2309. Epidemiology of Meningitis and Encephalitis in Infants and Children in the United States from 2011 to 2014

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Background. Large epidemiological studies evaluating the etiologies, management decisions and outcomes of infants and children with meningitis and encephalitis in the United States (US) are lacking.

Methods. Infants (<1 year old) and children (1–17 years) with meningitis or encephalitis who were hospitalized (91.1% vs 76.3%; P < 0.001; physical health 87.50 vs. 100.00, P < 0.001; psychosocial health 79.06 vs. 91.30, P < 0.001) were more likely to be admitted in infants than in children and the use varied by etiologies. Adjunctive steroids were utilized more frequently in children than in infants (42.4% vs 21.7%, P < 0.001) were more likely to be hospitalized (91.1% vs 76.3% P < 0.001; Table 1). The median length of stay in infants and children was 3 and 2 days, respectively; the longest duration was seen in those infants and children with HIV (20 days/6.5 days), and with bacterial meningitis (1 days/10 days), respectively. Overall, inpatient mortality and readmission rates were low (<1% in both infants and children).

Conclusion. The survivors of pediatric BM endure a clearly suboptimal quality of life compared with siblings and other control children. HRQOL can be measured reliably among BM patients in developing country setting.

Disclosures. All authors: No reported disclosures.

2311. Visitor Restriction Policies and Practices in Children's Hospitals: Results of an Emerging Infections Network Survey

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Background. Balancing the prevention of infections in pediatric healthcare settings with family-centered care is challenging. Visitor restriction policies (VRP) are difficult to implement and enforce. The purpose of this study was to delineate the timing, indications for, and assessment of VRP in pediatric facilities.

Methods. The Infectious Diseases Society of America Emerging Infections Network surveyed 334 pediatric infectious disease consultants via an electronic survey. Descriptive analyses were performed.

Results. One hundred and seventy (51%) of eligible respondents completed a survey between 12 July and 15 August 2016. Of these, 44 (27%) reported not knowing if their facility had a VRP and 17 (10%) reported having a policy but were unfamiliar with details; both groups were excluded from further analyses. 104 (61%) reported being somewhat familiar with the details of their VRP and 92 (58%) had a VRP in all inpatient units. Age-based VRP were reported by 77/104 (74%), symptom-based by 101 (97%), and outbreak-specific by 78 (75%). VRP were also implemented in the emergency department by 5 (5%), outpatient clinic by 9 (9%), day surgery by 6 (6%), or radiology by 3 (3%). Symptom-based VRP were seasonal in 24 (24%) of facilities, with 71 (70%) implementing year-round. Communication of VRP to families occurred at admission by 230 (90%) and through signage in care areas by 65 (64%). Communication of VRP to staff occurred by email for 79 (77%), by meetings for 56 (55%) and by signage in staff only areas for 50 (49%). Enforcement was the responsibility of nursing (82, 80%), registration (59, 58%), unit clerks (54, 53%), the infection prevention team (32, 31%), or clinicians (16, 16%). The effectiveness of VRP was assessed by 63 (62%) through active surveillance of hospital acquired respiratory infections; 29 (28%) used active surveillance of healthcare worker exposures and 30 (29%) used patient/family satisfaction.

Conclusion. VRP vary in scope, implementation, enforcement, and physician awareness in pediatric facilities. Prospective multi-site evaluation of outcomes would facilitate the adoption of uniform guidance.

Disclosures. All authors: No reported disclosures.

2310. Quality of Life Following Childhood Bacterial Meningitis in Luanda, Angola

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Session: 251. Pediatric Potpouri
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Background. Survivors of childhood bacterial meningitis (BM) from low-income countries are at increased risk of sequelae. How BM survivors’ daily life is affected in infants and children and are treated with antibiotic therapy in the majority of cases.

Methods. A total of 6,665 patients with meningitis or encephalitis were identified; 3,030 (45%) infants and 3635 (55%) children. Infants were more likely than children to be hospitalized (91.1% vs 76.3% P < 0.001; Table 1) and with bacterial meningitis cases. The significant decrease was primarily driven by decreasing births to 1.7 cases/1000 live births over the study period (<0.001, Figure 1) which may be attributed to decreasing antibiotic use in lower-income countries.

Results. Descriptive comparisons were made between infants and children.

Conclusion. One hundred and seventy (51%) of eligible respondents completed a survey between 12 July and 15 August 2016. Of these, 44 (27%) reported not knowing if their facility had a VRP and 17 (10%) reported having a policy but were unfamiliar with details; both groups were excluded from further analyses. 104 (61%) reported being somewhat familiar with the details of their VRP and 92 (58%) had a VRP in all inpatient units. Age-based VRP were reported by 77/104 (74%), symptom-based by 101 (97%), and outbreak-specific by 78 (75%). VRP were also implemented in the emergency department by 5 (5%), outpatient clinic by 9 (9%), day surgery by 6 (6%), or radiology by 3 (3%). Symptom-based VRP were seasonal in 24 (24%) of facilities, with 71 (70%) implementing year-round. Communication of VRP to families occurred at admission by 230 (90%) and through signage in care areas by 65 (64%). Communication of VRP to staff occurred by email for 79 (77%), by meetings for 56 (55%) and by signage in staff only areas for 50 (49%). Enforcement was the responsibility of nursing (82, 80%), registration (59, 58%), unit clerks (54, 53%), the infection prevention team (32, 31%), or clinicians (16, 16%). The effectiveness of VRP was assessed by 63 (62%) through active surveillance of hospital acquired respiratory infections; 29 (28%) used active surveillance of healthcare worker exposures and 30 (29%) used patient/family satisfaction.

Conclusion. VRP vary in scope, implementation, enforcement, and physician awareness in pediatric facilities. Prospective multi-site evaluation of outcomes would facilitate the adoption of uniform guidance.

Disclosures. All authors: No reported disclosures.

2312. Epidemiology of Serious Bacterial Infections in a Cohort of Infants in the Military Health System from 2005 to 2015

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Session: 251. Pediatric Potpouri
Saturday, October 7, 2017: 12:30 PM

Background. Management of suspected serious bacterial infection (SBI) in infants less than 3 months old is a challenge faced by all who care for neonates. Understanding the epidemiology of SBI is required to help guide management decisions. Recent publications have challenged the previously accepted distribution of infection by specimen source and identified pathogens.

Methods. We conducted a retrospective analysis of the Department of Defense (DOD) Military Health System (MHS) database to identify SBI cases among term infants less than 90 days of age born between January 1, 2005 and September 30, 2015. We defined an SBI case as any infant with positive cultures for an accepted pathogen from blood, urine or cerebrospinal fluid (CSF). Infants with multiple positive cultures represent a single case.

Results. There were 678,214 live births during the study period. Out of 3496 infants with positive cultures, 1963 were excluded based on nonpathogenic isolates, and ICD-9 codes. Of the 1533 episodes of SBI there were 278 episodes of bacteremia, 57 of meningitis, and 1427 of urinary tract infection (UTI). The study period incidence was 2.3 cases/1000 live births. There was a significant trend down from 3.4 cases/1000 live births to 1.7 cases/1000 live births over the study period (< 0.0001, Figure 1) which was primarily driven by decreasing Escherichia coli (E. coli) UTI. The most common pathogens were E. coli (52.1%), Group B Streptococcus (GBS) (8.0%), and Enterococcus (16.3%). E. coli accounted for 60.1% of UTIs, 10.5% of meningitis, and 19.8% of bacteremia. GBS accounted for 32.7% of bacteremia, 22.8% of meningitis, and 27.2% of UTIs. There were no cases of Listeria.

Conclusion. In this retrospective review of SBI in a large cohort of infants, the case incidence was found to be 2.3/1.000 live births. The most common pathogens were E. coli and GBS. Consistent with recent studies we found no cases of Listeria, however, GBS accounted for a higher percentage of bacteremia and meningitis cases. The significant trend down incidence in the study period warrants further investigation to assess possible ways to protect infants from this common source of morbidity and mortality.

Disclosures. All authors: No reported disclosures.

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