EPIDEMIOLOGY AND TRENDS OF IMPORTANT PEDIATRIC HEALTHCARE-ASSOCIATED INFECTIONS AT SIRIRAJ HOSPITAL, THAILAND

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Abstract. There is limited data about the epidemiology of pediatric healthcare-associated infections (HAIs) in Thailand. The aim of this retrospective study was to evaluate the incidence and trends in pediatric HAI over a 5-year period at Siriraj Hospital, a tertiary care center in Bangkok, Thailand, in order to guide preparation for and management of HAI in this population. The study was conducted from 2009 to 2013. All episodes of HAI defined by the National Healthcare Safety Network (NHSN) were included in the study. During the study period, 1,685 episodes of HAI occurring among 1,482 patients were recorded. The incidences were: ventilator-associated pneumonia (VAP) 6.33/1,000 ventilator-days; central line-associated bloodstream infections (CLABSI) 5.06/1,000 catheter-days; hospital-acquired pneumonia (HAP) 2.02/1,000 patient-days; blood stream infection without intravenous catheter (BSI) 1.24/1,000 patient-days; and gastroenteritis (GE) 0.9/1,000 patient-days. The most common organism found in GE infections was rotavirus (76.9%). One-third (30.8%) of HAP were caused by viruses, with RSV identified as the causative pathogen in 45% of all respiratory virus infections. Acinetobacter baumannii and Stenotrophomonas maltophilia were the most common bacterial causes of VAP and HAP, respectively, while coagulase negative Staphylococci was the major cause of BSI and CLABSI. Most HAIs occurred in children aged < 1 year. Neonatal wards had a 2-fold and 4-fold decreasing trend for BSI and CLABSI, respectively, but a 5-fold increasing trend for rotavirus GE. No changes in incidences were seen in any other wards during the study period. The data from this study show the changes in pediatric HAI and point out the need to improve infection control strategies and compliance with policies.

Keywords: epidemiology, healthcare-associated infection, pediatric, Thailand