Compared with American hospitals, GNPs that Stenotrophomonas maltophilia infections in hospitals.

Mean colonization pressure at the unit level is known to be a risk factor for CDI. However, by incorporating spatially granular notions of distances between patients in our analysis, we were able to demonstrate that the true source of CDI pressure at the UIHC is almost exclusively attributable to roommates and patients in adjacent rooms.

Presentation Type:
Poster Presentation

Hospital Infections by Stenotrophomonas maltophilia: Results in Five Years of Multicentric Study

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Background: Stenotrophomonas maltophilia is an emerging pathogen responsible for high morbidity and mortality rates. Hospital infections caused by this bacteria, especially in intensive care centers, are concerning for the health system, given that the microorganism is multidrug resistant to most antimicrobials available. Objective: Therefore, the present study is built from an analysis of the variables related to nosocomial infections caused by S. maltophilia in hospitals in Brazil, to display points of major concern. Methods: We used the data collected by the Infection Prevention and Control Service to clarify the incidence rate of Stenotrophomonas maltophilia in Brazilian hospitals as well as the gross lethality of these infections and the profiles of infected patients. We collected and analyzed epidemiological data from 10 hospitals in Brazil for the period July 2014 to June 2019 according to the CDC NSHN protocol. Results: In 5 years, 93 Stenotrophomonas maltophilia infections were diagnosed in the hospitals analyzed. Overall, 61 occurred in men (66%) and 32 occurred in women (34%). Furthermore, 47 cases (51%) occurred in adult ICUs; 19 cases (20%) followed vascular surgery; 9 (10%) cases occurred in the neonatal ICU; 7 (8%) cases were from the medical clinic; and 11 (12%) were from other clinics. The incidence rate was 1.2 cases for 10,000 hospitalizations, ranging from 0.0 to 2.8 (Fig. 1). Patients' ages ranged from 0 to 90 years, with a mean of 55 years (SD, 26 years) and a median of 64 years. Time between admission and diagnosis of infection was 1 to 102 days, with a mean of 24 days (SD, 21 days) and a median of 17 days. The gross lethality for S. maltophilia infection was 43 of 93 (46%) (95% CI, 35.8–56.9%). The frequencies of specific infections were as follows (Fig. 2): pneumonia, 26 (28%); tracheobronchitis, 22 (24%); primary bloodstream infection, 18 (19%); skin and soft-tissue infection, 13 (14%); local infection, 7 (8%); vascular access infection, 3 (3%);
urinary tract infection, 2 (2%); gastrointestinal infection, 1 (1%); and eye, nose, throat, and mouth infections, 1 (1%). **Conclusions:** *Stenotrophomonas maltophilia* infection is a rare and highly lethal event that usually occurs after 2 weeks of hospitalization. The most affected region is the respiratory tract, with a higher incidence in patients aged >60 years or in the ICU. Early and accurate investigations of multiresistant microorganisms in a hospital setting are needed to reduce patient morbidity and mortality.

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### Hospital Outbreak of Respiratory Syncytial Virus in Neonatal Intensive Care Unit: The Risk of Admitting External Patients

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**Background:** Acute viral bronchiolitis caused by respiratory syncytial virus (RSV) may be a manifestation of high severity in neonatal-ICU (NICU) patients, with high risk of in-hospital cross transmission and outbreaks. During the epidemic seasonal period, intense viral circulation occurs in community; thus, transmission in the NICU is difficult to control. **Objective:** We describe an outbreak that occurred in a NICU in a public hospital in São Paulo state, Brazil. We also discuss the role of admitting external newborns with community-acquired virus in the incidence of these outbreaks in the NICU. **Methods:** In 2017 in Campinas, an RSV epidemic occurred during the seasonal period, resulting in an outbreak at the Campinas maternity hospital. A retrospective investigation was performed, and patients were analyzed for clinical and epidemiological characteristics and for risk factors for poor prognosis. We included neonates admitted in NICU with positive nasal lavage for RSV from April to July 2017. Statistical analysis were performed with $\chi^2$ test for the categorical variables and the Student $t$ test for the continuous variables comparing the newborn group from the community (external) with infected newborns in the hospital (internal). $P < .05$ was considered significant.

**Results:** Of 44 neonates with RSV during this period, 32 were external and 12 were internal (Fig. 1). The mean gestational age of the external neonates was 38 weeks and 2 days, whereas the mean gestational age of the internal neonates was 29 weeks and 1 day ($P < .001$). The hospitalization time was higher in the internal group ($P < .001$). Table 1. One death associated with infection occurred in the internal group. Community neonates (external group) were mostly term-born, with no comorbidities, and they had a more favorable clinical course. In the literature, neonates infected with RSV at the hospital have several risk factors for poor prognosis, with a 13.5% mortality rate. **Discussion:** RSV outbreaks have great relevance in hospital settings, especially in the NICU, where there are a large number of vulnerable patients and a high