Frequency of Hospital Infections, its Related Factors and Antibiotic Resistance Pattern in Children's Hospital of Dr Sheikh Mashhad in 1395

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**ABSTRACT**

**Introduction:** Hospital infections worldwide, as a major public health problem, have a significant burden on patients and the health care system, causing complications and serious problems. This study aimed to determine the frequency of hospital infections and its antibiotic resistance pattern in Dr Sheikh Children's Hospital in Mashhad.

**Materials and Methods:** This is a descriptive-analytical study that was conducted on a retrospective survey on 16566 children admitted to the Dr Sheikh Pediatric Hospital in Mashhad. Data were collected using a questionnaire designed for the National Institutes of Internal Medicine Infection Monitoring System (INIS) to detect the prevalence of major hospital infections (blood, urinary, respiratory and burn), and all hospitalized patients were monitored for clinical signs and if they were suspected of being infected, they were confirmed by an infectious expert on the basis of clinical and laboratory symptoms.

**Results:** In the present study, a total of 16566 patients admitted during the year 1395, 60 cases of hospital infection (0.36%) were observed. The most common type of infection is respectively 0.19%, pneumonia 0.102%, urinary tract infection 0.036%, and eye infection 0.030%. The most common bacterial agents in the most commonly reported type of hospital infection in children undergoing infections are *Staphylococcus aureus* (53.22%). The highest microbial infections caused by *Klebsiella* are 19.35% and the lowest is *Candida Albicans* 1.61%.

**Conclusion:** The results of this study show a lower proportion of hospital infection in this center than the country’s statistics one of the reasons for this is the effect of observing handwashing by mothers of children in adolescents and staff, the effectiveness of health education to employees and mothers, as well as the proper use of disposable items. In this study, the highest incidence of infection related to blood infection, 32 cases, due to the fact that patients admitted to hematology and oncology departments are immunocompromised due to their individual circumstances and the nature of the disease; identifying the causes of these infections and the weaknesses in the care of patients admitted to this section is of great importance.