

## **Examining the frequency and co-occurrence of hospital infections in Ardabil city in 2021-2022**

### **Abstract**

**Background:** Today, hospital infection is considered one of the biggest treatment problems, because it increases the duration of the patient's hospitalization and increases the cost of treatment. Other problems resulting from these infections are their transmission from people in the hospital to other people in the community and the spread of infection in The community level can be mentioned.

**Aim:** Determining the frequency and co-occurrence of hospital infections in Ardabil city in 2021-2022

**Materials and methods:**The present study is a cross-sectional descriptive study. Patients who were diagnosed with nosocomial infection in Ardabil hospitals from March 21, 2021 to March 20, 2022 (totally 3536 patients) were registered in the hospital infection registration portal system based on the data that includes gender, type of pathogen causing infection, and inpatient department. The patient was analyzed using statistical software.

**Results:** Based on the findings of this study, a total of 3536 cases of nosocomial infections have occurred in Ardabil province, and considering the population of the province, the incidence of nosocomial infections was 283.58 per 100,000 people. Most cases of nosocomial infection by city have occurred in Ardabil city (with a frequency of 76.6 percent). The most cases of hospital infection are in the age group of 65 years and older (32.8 percent). The most cases of hospital infection are related to Fatemi Hospital (with a frequency of 27.8 percent) and then Imam Khomeini Hospital (with a frequency of 23.3 percent). and in terms of department distribution, the most cases of hospital infection occurred in the surgical department (with a frequency of 15.9%). The most frequent microorganism identified was *Escherichia coli*. Among the cases, 318 cases died, which is equivalent to 9% of the total cases. Gender distribution in the study was 54.5% male and the rest were female.

**Conclusion:** Based on the results of our study, the incidence of nosocomial infections in Ardabil hospitals is lower than other places (about 2%).

Among the total cases, 318 cases had died, which is equivalent to 9% of the total cases. Also, various variables such as age, sex, duration of hospitalization and hospitalization department and the type of microorganism had a significant effect on death caused by hospital infections. The results of our research lead us to the importance of increasing the level of awareness of hospital employees, compliance with health principles by employees and taking necessary measures to prevent the spread of hospital infections.

**Keywords:** Hospital infection, prevalence, special care, Ardabil.