

## The survey of nosocomial infections in Yazd clinical settings during 2016

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### ABSTRACT

In this study, we aimed to survey the health care in public hospitals in 2016 in three public hospitals in Yazd, since the level of hospital hygiene plays an important role in the incidence of nosocomial infections in patients admitted to hospital. The method of data collection was a form of the hygiene national program of public hospital assessment. Data was analyzed on SPSS version 18 using T-test with P-value  $\leq 0.05$ . The results showed the average scores in infectious diseases ward and emergency ward of Shahid Sadoughi hospital, were 578 and 431, respectively. Also the average scores in dialysis ward and emergency ward of Shahid Rahnamoon hospital, were 553 and 350, respectively. According to the results, hospitals with poor level of health require more attention to improve their health status.

**Keywords:** Hygiene, clinical settings, Yazd, infectious diseases

### INTRODUCTION

Health education is necessary in every Society. Wellbeing education is an

arrangement of aptitudes in perusing, basic leadership and the capacity to apply these abilities to wellbeing circumstances [1].

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Administration of social insurance squander is a vital piece of cliniccil cleanliness and disease control. Pathogenic microorganisms can cause defilement and offer ascent to infectious diseases [2]. These pathogens are operators of nosocomial contaminations and putting the strength of healing center staff, and patients, at risk [3].

The source of an outbreak of nosocomial infection may be a health worker who is infected or colonized [4, 5]. The manifestations of forthright contamination will make the capability of transmission obvious to the wellbeing specialist as well as to administrative staff, and tainted work force are normally rejected from quiet care obligations [6-10]. In the health sector, it is increasingly apparent that the daunting challenges involved in improving the overall health status of communities and population groups will require new models of collaboration among hospitals, public health agencies, and other parties [11].

In a human services office, the wellsprings of disease, might be the staff, the patients, or the lifeless condition [12].

The hospital environment can be contaminated with pathogens. *Salmonella* or *Shigella* species *Escherichia coli* O157:H7 or other pathogens may be present in the food and cause an outbreak of disease [13-17].

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The objective of the present study was to investigate status of hygiene in public hospitals in Yazd city.

**MATERIALS AND METHODS**

This study was a descriptive cross-sectional study conducted in government hospitals in Yazd, from January to December in 2016. The target population of this study was the governmental hospitals in Yazd, three hospitals including Shahid Sadoughi, Afshar and Shahid Ranamoon. Data was collected as the census using checklist of the health schedule of the national assessment program of the public hospitals in Iran, which is developed by the Ministry of health and medical education. The checklist consisted of 68 questions and examined the status of the health of the hospital environment in terms of the mission of the hospital, patient health and infection control, hospital waste, water health and sanitation, occupational health and other matters related to the environmental health of the hospital.

The information of the hospitals was analyzed using SPSS, version 18. The results were descriptive indexes (mean, median, and standard deviation) and frequency distribution tables were analyzed by t- test. P-value  $\leq 0.05$  was considered as significant.

**RESULTS**

In this study, total score was 800. Score of less than 60 % (<480) of total score, between 60-80 % (480-640) of total score and more than 80 % (> 640) of total score were divided into three groups: weak, moderate and good. The results of our study on the score mean of

health in Shahid Sadoughi hospital in Yazd showed that infectious diseases ward with the score mean of 578 had the highest score and the emergency part with a score mean of 431 had lower scores. Average of total score of Shahid Sadoughi hospital was  $522.1 \pm 33.9$  (Table 1).

**Table 1.** Frequency distribution of score mean of health in wards of Shahid Sadoughi hospital

Ward	Number	Mean
Infectious Diseases	1	578
Endoscopy	1	535
General Surgery	1	535
Radiology	1	534
Operation Room	1	533
Pathology	1	533
ICU	1	528
CCU	1	526
Pediatrics	1	514
Emergency	1	431
Total	17	522.1± 33.9

**Table 2.** Frequency distribution of score mean of health in wards of Shahid Rahnamoon hospital

Ward	Number	Mean
Dialysis	1	553
ICU	1	528
Operation Room	1	528
Laboratory	1	527
Nerves Surgery	1	504
Urology	1	504
General Surgery	1	498
CCU	1	453
Emergency	1	350
Total	13	498.5 ± 50.8

In this study, the score mean of health of Shahid Rahnamoon hospital in Yazd also showed that the dialysis section with the score mean of 553 had the highest score and the emergency ward with a score mean of 350 was lowest. Average of total score of the Shahid Rahnamoon hospital was  $498.5 \pm 50.8$  (Table 2).

The results indicated that the angiography section of Afshar hospital with the score

mean of 559 had the highest score and the men orthopedic ward with a score mean of 487 had lowest score. Average of total score of the hospital of Afshar was  $529.7 \pm 20.6$ . The comparison of the average of the three hospitals health scores with t- test demonstrated that there was a significant difference between the scores mean of health of Shahid Rahnamoon and Afshar hospitals with 0.02 P-value.

## DISCUSSION

According to findings in this study, it could be concluded that the emergency wards in public hospitals require more attention and restructure to improve their health status.

Maintaining, expanding and promoting of the health in human societies were considered except the most basic policies for social justice in countries [15]. The way to deal with advancing the general wellbeing of given groups and populaces, better interchanges and cooperation among wellbeing conveyance associations, the general wellbeing part, and other key group partners are basic [16, 17].

There is extensive evidence of disparities in access, cost, and quality of health care services and a growing recognition within the public and private sectors that our health delivery system focus on the treatment of individual patients, while that greater attention must be devoted to environment health approaches [18].

Typically, lower health causes repeated and unnecessary referrals to doctors and longer hospital stays, which in turn increases the medical costs and also wastes health budget [19]. The results in a previous study showed that hospital hygiene conditions in maternity wards of public hospitals in Lubumbashi are

not good [20], but in the present study, emergency wards in public hospitals and also in Shahid Rahnamoon hospital had poor level of health.

## CONCLUSION

Despite the concern of hospital managers and all attempts at improvement, many health-care establishments are unable to achieve adequate levels of prevention. Continuous improvement is necessary in both public health and health care today.

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