

Effect of executive programs of infection control committees on the prevalence of nosocomial infections in Kermanshah's Hospitals (2010-2011)

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Abstract:

The aim of this study was to investigate the effect of executive programs of infection control committees on the incidence of nosocomial infections in hospitals affiliated with the Kermanshah University of Medical Sciences (Kermanshah, Iran) during 2010 and 2011. The numbers of patients admitted in 2010 and 2011 were 8084 and 7166, respectively, and the average prevalence of nosocomial infections in 2010 and 2011 was 0.8 and 1.9 infections per 100 patients, respectively. In 2010, the mean scores obtained by hospital for regular Infection Control Committee meetings, regular gatherings, registration of program information analysis, and regular follow-up meetings were 19, 31, 30.5, and 41.7 (out of 100), respectively. In 2011, they were 20.2, 36.4, 38.1, and 50, respectively. The results of this study indicated that executive programs of infection control committees had no effect on the incidence of nosocomial infections; therefore, the experts who assess hospitals should pay more attention to the systems that are used to conduct surveillance of nosocomial infection control programs.

Keywords: nosocomial infection, Infection Control Committee, Kermanshah, prevalence

Additional Information for citing this article:

Title of Journal: Electronic physician; Abbreviated title of journal: Electron. Physician

doi: 10.14661/2014.768-770

Editorial information:

Type of article: Brief report

Received: October.10.2013

Revised: 1st revision: November.06.2013, 2nd revision: November.10.2013, 3rd revision: November.20.2013

Accepted: December.10.2013

Published: February.01.2014

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Nosocomial infections seriously affect the quality of healthcare and they are among the main causes of adverse outcomes in the treatment of patients (1). Nosocomial infections increase the length of patients stay in the hospital. They may also lead to need for additional treatments for patients, increased mortality and morbidity, increased hospital costs, and reduced health levels in society (2). Such infections can occur during the patient's stay in the

hospital or after the patient has been discharged from the hospital (3). Nosocomial infections can also affect the hospital's staff and visitors (4). These infections are the eleventh leading cause of death in the United States, and they have been estimated to cost \$6.45 billion per year; however, no data is available on the study population of our research (5). The results from a study conducted on 55 hospitals in 12 countries showed that 8.7% of patients admitted to hospitals develop nosocomial infections (6). Although very little research has been done in Iran concerning this issue, the available research indicates that this shocking statistic also is applicable to Iran's hospitals and that the infection rate ranges from 3.6% to 20% (7-9). These results indicate both the magnitude of the disaster and the need for immediate action in order to reduce the risk of such infections. A key step that has proven to be effective in controlling nosocomial infections is the formation of an infection control committee to establish guidelines for hospitals to follow and to implement actions to ensure compliance. Such a committee in the hospital is responsible for planning all matters related to infection control and evaluating compliance and results (10). Correct operation of the executive programs by the committee can effectively lead to the prevention of nosocomial infections.

Data were collected by using checklists and by using recorded data from the office of the Chancellor of Health at Kermanshah Medical Sciences University. The numbers of patients admitted in 2010 and 2011 were 8084 and 7166 patients, respectively, and the average rates of nosocomial infections were as 0.8 and 1.9 infections per 100 patients, respectively. In 2010, the mean scores obtained by hospital in terms of its regular Infection Control Committees meetings, regular gatherings, registration of program information analysis, and regular follow-up meetings were 19, 31, 30.5, and 41.7 (out of 100), respectively. In 2010, these numbers were 20.2, 36.4, 38.1, and respectively.

Our research was the first study of the effect of executive programs of infection control committees on the incidence of nosocomial infections in the area. The results indicated that executive programs of infection control committees in hospitals affiliated with Kermanshah University of Medical Sciences had no effect on the incidence of nosocomial infections. However, the results of Toulabi et al.'s study (2004) indicated that infection control procedures, such as the availability of resources and facilities and their comprehensive monitoring and control, were effective in controlling nosocomial infections (11). Also, it was found in another study that management and data collection in connection with nosocomial infections can be effective in controlling nosocomial infections (12). The results of Coskun and Aytac's study (2007) indicated that the type of hospital, the type of pathogen, the existence of an infection control strategy, and conducting periodic studies in hospitals were all effective in reducing the rate of nosocomial infections (13). The results of these studies are not consistent with the results of recent research that indicated that infection control committees in the hospitals that were studied were not very effective and that the committees should have greater control over their own programs. Faroukifar et al. stated in their study that the nurse team underperforms in hospital infection control (14). Also, the results of the study on levels of knowledge, attitudes, and practices of nurses regarding nosocomial infections in Golestan Province, Iran, indicated that nearly 27% of the nurses had poor knowledge of the issue and that 69.3% of them had an average level of knowledge (15). Thus, it would seem that the quality assessment experts in hospitals should pay more attention to surveillance and quality control measures regarding the manner in which preventive program are conducted.

Acknowledgements:

The authors, hereby, express their thankful regards to the personnel of hospitals of Kermanshah University of Medical Sciences due to their cooperation in conducting this research

Conflict of Interest:

There is no conflict of interest to be declared.

Authors' contributions:

All of authors contributed to this project and article equally. All authors read and approved the final manuscript.

References:

1. Hudack CM, Gallo BM. Critical care nursing. 6th ed. Philadelphia: JB Lippincott company; 1994.
2. Ancheril AL. Evaluation of a program implemented to reduce surgical wound infection in an acute care hospital in India. Admission to the degree of doctor of philosophy, university of technology, Sydney, 2004.
3. Potter P, Perry A. Basic nursing: Theory and Practice. 3th ed. Philadelphia: Mosby Company.; 2000.

4. Bennett J, Brachman PS. Hospital Infection.4th ed. Philadelphia: Lippincott-Raven; 1998.
5. Taylor C, Lillis C. Fundamental of nursing: The art and science of nursing care. 3th ed. New York: Lippincott; 2001.
6. Ayliffe GAJ, Babb JR. Hospital acquired infection. 4th ed. Oxford: Butterworth Heinemann; 2004.
7. Elahi Amin A. Prevention of nosocomial infections in ICU patients.proceedings of the 9th Iranian congress on infectious diseases and tropical medicine; Jan 2000; Tehran; 2000.
8. Zargarizadeh A. A Survey on Post-Operation Nosocomial bacterial infections. Proceedings of the 9th Iranian congress on infectious diseases and tropical medicine Jan 2000; Tehran; 2000.
9. Asgarian M. Effect of nosocomial infections on the length of hospitalization. Proceedings of the 9th Iranian congress on infectious diseases and tropical medicine 2000 Jan; Tehran; 2000.
10. Ebadi A. The Role of management to control the nosocomial infections. Baghiatallah med uni J 2001; 1(1): 50-5.
11. Toulabi T, Amini F, Pyamny SH. Evaluation of the general principles of prevention of nosocomial infections in hospitals of Khorramabad 84-1383. YJMS 2006; 8 (3): 37-46.
12. Linage ch, Egbu ch. Controlling healthcare associated infections (HAI) and the role of facilities management in achieving “quality” in healthcare: a three-dimensional view. Facilities 2005; 23(2): 194-215.
13. Coskun D, Aytac J. Evaluation of nosocomial infections following cardiovascular surgery. Anadolu Kardiol Derg 2007; 7:164 -8.
14. Farokhifar M, Qafari SH, Yazdanpanah S. Assessment of level of knowledge, attitude and practice of nursing student's to nosocomial infection in nursing and midwifery college of medical science. Rahavard Danesh 2001; 5(3). 42-8.
15. Abdollahi AA, Rahmani H, Khodabakhshi B, Behnampour N. Assessment of level of knowledge, attitude and practice of employed nurses to nosocomial infection in teaching hospitals of Golestan University of Medical Sciences (2000). J Gorgan Uni Med Sci 2003; 5 (1): 80-6.