Annals of the University of Oradea, Fascicle: Ecotoxicology, Animal Husbandry and Food Science and Technology, Vol. XVI/B 2017

Analele Universitatii din Oradea, Fascicula: Ecotoxicologie, Zootehnie si Tehnologii de Industrie Alimentara, Vol.XVI/B 2017

MANAGEMENT OF THE INFECTIOUS RISK IN THE HOSPITAL BY RESPECTING THE FUNCTIONAL CIRCUITS

Daina Lucia Georgeta*, Cornea Meda Alina, Bonta Marinela*, Daina Cristian Marius***

*University of Oradea, Faculty of Medicine and Pharmacy, 10 P-ta 1 December Str., Oradea, Romania, e-mail: cristi_daina@yahoo.co.uk
** County Hospital of Oradea, Emergency Unit, 37 Republicii Str., Oradea, Romania

Abstract

Respecting functional circuits in a hospital is mandatory for both the medical staff and for the patients and their families and caregivers. The questionnaire we have applied to nurses in this study analyzed the way the risk for infections is managed in a hospital setting by this category of personnel. The procedures which refer to reducing the risk for infections are thus known and applied by the relevant staff. In order to prevent the risk of infection at hospital level, a series of cleaning and disinfecting measures are implemented through specific work protocols. The most utilized measure is the cleaning and disinfection schedule in risk areas at certain hours of the day, a measure that is very familiar to all hospital employees. The control operation undertaken by medical personnel part of the Service for Prevention and Elimination of Infections Associated with Medical Assistance is undertaken in accordance with the Self-Verification Plan which was instituted at the beginning of the year. As such, certain samples are harvested from surfaces, medical instruments and hospital aero-flora in order to be microbiologically tested. Informed consent forms are implemented at hospital level in order to carry out certain investigations or treatments. Managing the risk of infection is thus carefully respected by approximately 80% of respondents.

Key words: health card, patient, utilisation, computer system

INTRODUCTION

An important component in perpetually improving the quality and cleanliness of medical services is respecting the functional circuits within a hospital by the employed staff (medical and non-medical alike) (Guide Infection Control, Law 95/2006). The functional circuits need to facilitate an efficient hospital activity and to stop the contamination of the external environment by reducing the possibility of hospital-acquired infections to a minimum. The activity of preventing and fighting infections stemming from medical care is undertaken in an organized environment as a permanent obligation of each medical professional and caregiver, as part of the position's work sheet of responsibilities (JCI, Accreditation Standards for Hospitals). The process of quality management can have different approaches (Oprean, C., 2004). One of these is represented by the increase and improvement of quality based on erroneous processes and their

subsequent correction. In order for an organization to function efficiently, it has to identify and manage all of its numerous related activities.

MATERIALS AND METHODS

The main goal of this paper is to analyze the level of knowledge and adherence by employed hospital personnel of proper functional circuits, in order to get a better understanding of these concepts and improve the quality of medical services offered by the hospital. In undertaking this study all the requests imposed by the National Authority for Medical Quality Management were analyzed (www.anmcs.gov.ro). In order to perpetually improve the quality of medical services and the level of safety of the patient, certain standards need to be implemented at hospital level (Opincaru,C et al., 2004, Standard SR ISO 9004:1(2):1995). An important part of this process relates to evaluating these standards and the way they are put into practice by the employed hospital personnel.

A questionnaire was thus designed which contained the main socio-demographic data of the respondents as well as 6 specific items. It was structured in question form which required information related to managing the risk of infection at hospital level. The study is categorized as a prospective epidemiological research paper, descriptive in form, quantitative in nature, undertaken within the Clinical Emergency County Hospital in Oradea, Romania, between December 2016 and March 2017. Selecting the participants for the research segment was partially randomized. The target group was represented by 150 nurses and caregivers from various wards of the hospital and its medical laboratories. The medical personnel was asked to describe the way through which they complete a task in case one of their given answers was affirmative.

RESULTS AND DISCUSSION

Table 1

Distribution of answers of medical personnel categorized by profession, relating to their knowledge of ways to manage infectious risks in a hospital setting

	Nurses			Caregivers		
The hospital manages risk of infections	Yes	No	Don't Know	Yes	No	Don't Know
The degree of risk of infections is determined in all areas of medical activity	85	6	29	12	2	16
Specific measures for reducing risk of infections are implemented	96	3	21	14	1	15
Procedures which pose a risk of infecting are identified and measures are taken	106	5	9	16	1	13
Monitoring the prevention measures for risk of infections is organized and permanently undertaken	111	2	7	19	0	11
Sources of infection are identified and monitored	103	4	13	18	2	10

Patients are evaluated from an individual risk of infection standpoint before undergoing procedures	98	3	19	13	2	15

In order to apply specific measures for preventing the risk of infection, the Service for Prevention, Supervision and Control of Infections Associated with Medical Acts has the role of putting together a hospital-wide map of all the sectors which pose an epidemiological risk, which then need to make sure all the personnel is in compliance. Once this aspect is implemented we can obtain an accurate determination of infectious risk in all the areas where medical activity is undertaken. It is thus very important that the medical personnel knows the degree to which an area poses a risk for infections. 5.33% of the medical personnel states that the degree of risk of infection is NOT determined at hospital level, while 30% did not know how to answer this question. When it comes to sorting answers by professional category, more than half of caregivers did not know how to answer this question. Approximately 65% of personnel has given an affirmative answer, exemplifying the ways through which the degree of risk of infections is determined.

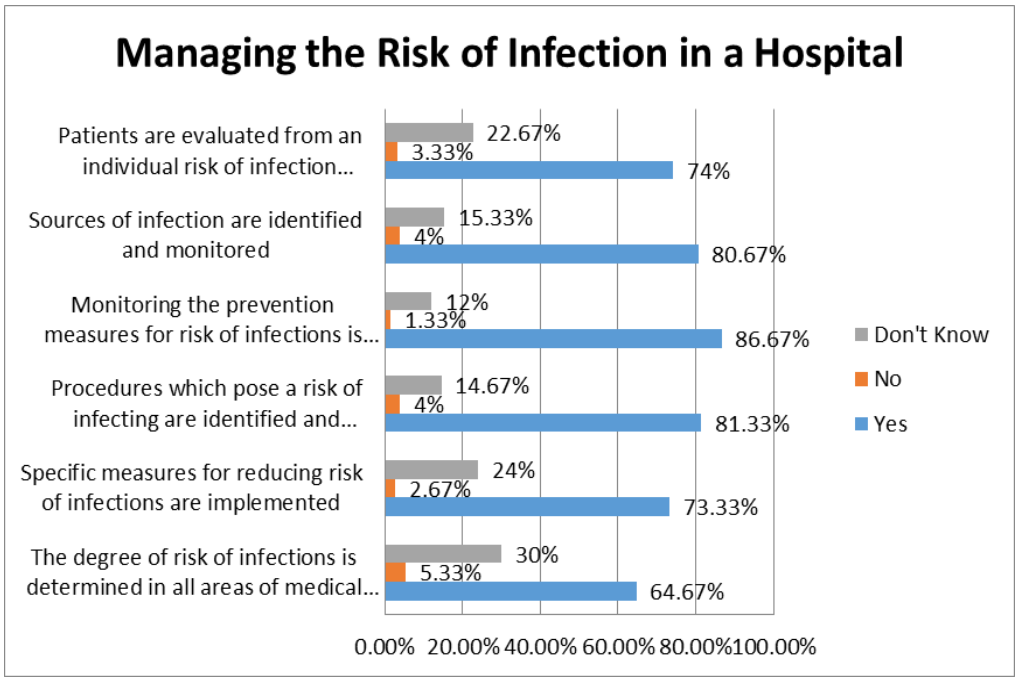

Fig. 1. The share of answers of medical personnel regarding their knowledge of ways to manage risk of infections in a hospital setting - (Refer Above)

In order to prevent the risk of infection at hospital level it is important to establish a series of hygiene and disinfection guidelines through

elaborating and implementing of specific work protocols. The most utilized measure is the hour-based cleaning and disinfection schedule in areas of risk, a measure which needs to be known by all hospital employees. Thus, the question "Are there specific measures for reducing the risk of infections implemented?" 73,33% (110 people) responded affirmatively, while 24% (36 people) did not know how to answer and 4 people (2,67%) stated that there are no such measures. The negative answers were mostly observed in personnel with less than 1 year of work experience within the hospital.

Another question tackled the identification of procedures which pose a risk for infection and the measures of prevention available. 81,33% (122 people) responded affirmatively and indicated to the use of specific work protocols for some of the care techniques. Caregivers (16 people) identify as an example for affirmative answers their own cleaning and disinfection plan which is specific for each ward. 22 people do not know how to answer this question (14,67%) and 6 people (4%) declare that they are not aware of procedures which pose an infectious risk (5 nurses and 1 caregiver), all of them being employed by the hospital within the last 6 months.

The following question, "Is monitoring the prevention measures for risk of infections organized and permanently undertaken?" the medical personnel identifies the following:

- Daily checks undertaken by the Service for Prevention, Supervision and Control of Infections Associated with Medical Acts
- Unannounced checks
- Recording of proceedings regarding hygiene and sanitary status
- Daily checks undertaken by the ward chief doctors and chief nurses.

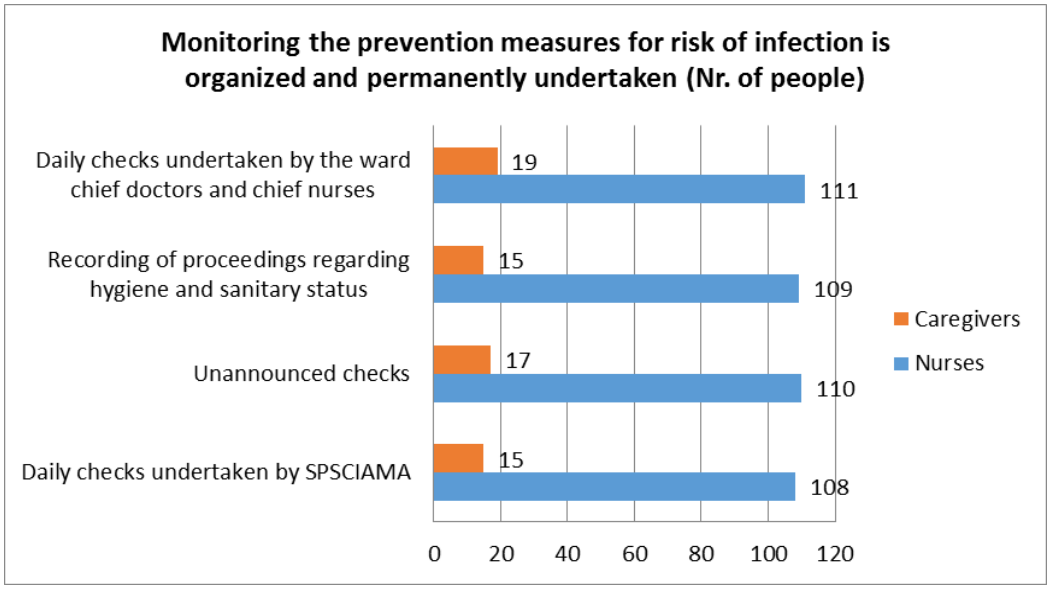

Fig. 2. Distribution of medical personnel's answers regarding the identification of prevention measures for risk of infections

Thus, 86,67% of people offer affirmative answers to this question (130 people, 111 nurses and 19 caregivers) while 12% do not know what to answer and 1,33% (2 people) state that there are no specific measures for preventing risk of infections within the hospital (both working in the hospital for only 2 months). Identifying and monitoring sources of infection were targeted in the next question. The self-verification undertaken by medical personnel within the Service for Prevention and Elimination of Infections Associated with Medical Assistance is done in accordance with the Self-Verification Plan created at the start of the year. As such, samples are harvested from surfaces, instruments and from the hospital's aero-flora in order to be analyzed from a microbiological perspective. 80,67% of people (103 nurses and 18 caregivers) respond affirmatively and 6 persons (4%) respond negatively. A significantly high number of medical personnel did not know how to answer this question (15,33%, 13 nurses and 10 caregivers). The negative answers were offered by staff with different degrees of work experience within the hospital (for example, 2 people had been working in the hospital for over 30 years).

The last question regarding the identification of ways to manage infectious risk had the patient as a reference: "Are the patients evaluated from an individual risk of infection standpoint before undergoing procedures?". In order to meet this criteria, informed consent forms are implemented hospital-wide before undertaking any medical procedures (surgeries, endoscopy, angiography, anaesthesia, biological sampling, etc.) by the doctors or nurses, on a case-by-case basis. 74% or 111 people (98 nurses and 13 caregivers) answer positively and exemplify this consent form, with 26% of people answering negatively or not knowing how to answer the question. After completing the questionnaire and being asked if informed consent forms are applied in their respective wards, all the people answered affirmatively.

CONCLUSIONS

Managing the risk of infections in a hospital is thus undertaken by approximately 80% of questionnaire respondants. Stemming from the direct evaluation of their answers in this category of questions we can observe that through the shaping of the questions (tracing the effect obtained by doing the necessary attributions in their work sheet and not the activities that these categories of personnel are usually busy with), some of the respondents

(approximately 20%) either did not know how to answer or answered negatively.

REFERENCES

1. Gestion preoperatoire du risque infectieux – 2013
2. Ghid de management al infecțiilor nosocomiale, 2013
3. Guide Infection Control in the Hospitals 5 th edition – 2014
4. Joint Commision International, Accreditation Standards for Hospitals 5th edition-2013, Secţiunea II – International Patient Safety Goals / Secţiunea III – Prevention and Control of Infections
5. Legea 95 din 14.04.2006 privind reforma în domeniul sănătăţii
6. Opincaru,C., Găleţescu,M., Imbri,E. Managementul calităţii serviciilor în unităţile sanitare.Editura C.N.I.Coresi, Bucuresti, 2004
7. Oprean, C. Managementul calităţii. Editura Universităţii Lucian Blaga din Sibiu, Sibiu, 2004.
8. Ordinul nr. 1096/2016 privind modificarea și completarea Ordinului ministrului sănătății nr. 914/2006 pentru aprobarea normelor privind condițiile pe care trebuie să le îndeplinească un spital în vederea obținerii autorizației sanitare de funcționare
9. Standardul SR ISO 8402:1995. Managementul calității și asigurarea calității. Vocabular
10. Standardul SR ISO 9004:1:1995. Managementul calității și elementele sistemului calității. Partea I – Ghid
11. Standardul SR ISO 9004:2:1995. Managementul calității și elementele sistemului calității. Partea I – Ghid pentru servicii
12. www.anmcs.gov.ro