

INFECTIONS RELATED TO HEALTH ASSISTANCE UNDER THE VIEW OF NURSING IN ADULT INTENSIVE THERAPY

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ABSTRACT

Introduction: Studies on infections related to health assistance are important to patient safety and the quality of health services. **Objective:** To know the meaning attributed by the nursing team to the practices of prevention of infections related to health care. **Methods:** This is a qualitative study based on the National Patient Safety Program and content analysis. It was held in 2017 with nursing professionals from an intensive care center of a private hospital located in the south of Minas Gerais. Data were collected through a semi-structured interview, non-participant observation and field diary. **Results:** From the analysis, we constructed the central category, acquired and crossed hospital infection: responsibility of the environment and the patient, and as subcategories: Factors related to the environment and organization; Factors related to the patient and Factors related to the professionals. **Conclusion:** For the nursing professionals, the IRHA are acquired and cross-referenced, mainly related to the environment and the patient, which, in turn, exempts the responsibility of the professionals.

Keywords: Cross Infection. Intensive Care Units. Nursing.

INTRODUCTION

The Infections Related to Health Assistance (IRHA) are acquired after admission of the patient and are manifested during hospitalization or after discharge. These are the most frequent adverse events and the main potentially preventable causes of morbidity and mortality, with important repercussions in the lives of hospitalized people regarding the increase in hospitalization time, cost of treatment, safety and quality of health services^(1,2).

Hundreds of millions of patients are affected by IRHA each year around the world, leading to an increase in mortality rates and financial losses for health systems. It is estimated that for every 100 hospitalized patients, seven in developed countries and 10 in developing countries will acquire at least one IRHA⁽³⁾. According to data from the European Center for Disease Prevention and Control, approximately 20% to 30% of IRHA are considered preventable

through intensive control and hygiene programs⁽⁴⁾.

In this perspective, IRHA control and prevention measures, implemented through a Control and Prevention Program, are necessary in all health care establishments. However, for greater adherence to these practices, it is important that this be an active, structured and organized program. In addition, it is fundamental for the safety of the patients that the teams have knowledge about the impact of the infections in the health, and thus they can seek greater capacity to act in the Hospital Infection Control Services (HICS), with this will be a better performance of the professionals and, consequently, a reduction of up to 70% of infections⁽⁵⁻⁶⁾.

In this sense, attending a patient safely is the duty of every professional and right of the users of health institutions. However, injury-free care is a challenge, especially in intensive care^(1,7), because it is considered a state-of-the-art sector

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with a large number of critical patient support and monitoring equipment, which require multiple therapeutic interventions⁽⁷⁾.

Ordinance n. 529, dated April 01, 2013, establishes the National Patient Safety Program (NPSP) in Brazil, which aims to ensure the quality of health and safety services in patient care in the different areas of care, organization and management of services in national territory. Patient Safety is defined as the "minimally acceptable reduction of the risk of unnecessary harm associated with health care"^(8: 2).

In view of this context, the following question emerges: Are the safe practices in the prevention of IRHA significant for the nursing team? To answer the question, the study was developed with the objective of knowing the meaning that the nursing professionals of an Adult Intensive Care Center attribute to the practices for the prevention and control of the Infections related to Health Assistance.

METHODS

A study with a qualitative approach based on the National Patient Safety Program (NPSP)⁽⁸⁾ and the books of the Patient Safety and Quality of Health Services Series: Safe Care: a theoretical reflection applied to practice⁽¹⁾, Infection Prevention Measure Related to Healthcare⁽⁹⁾ and Content Analysis⁽¹⁰⁾ for the organization of the data. It should be noted that the ANVISA manuals used in this study were those in force at the date of collection.

This study was carried out with eight nursing professionals from the adult intensive care unit, who considered the following inclusion criteria: to integrate the staff of this sector and to have professional experience of at least six months. The data were collected by the principal researcher in 2017, from an interview with semi-structured script recorded in audio, non-participant observation and field diary. The selection of professionals was for convenience and there were no denials. The interviews were conducted individually with an average duration of eight minutes in a private room on the premises of the adult intensive care center from

the questions: Have you received guidance on hospital infection? Have you participated? What did you participate in, which theme? What is hospital infection for you? How do you develop your day-to-day activities to prevent hospital infection? The non-participant observation and the field diary were developed in the participants' work environment. For the observation, a script prepared by the researchers was used, based on the book number four of the ANVISA Patient Safety Series⁽⁹⁾. In order to carry out the observations, it was necessary to immerse the researcher in the field for five periods of six hours each.

The transcripts were stored in an electronic file of the Microsoft Office Word program. For organization and analysis, Content Analysis was adopted following the three steps proposed: pre-analysis; exploitation of the material; treatment of results, inference and interpretation⁽¹⁰⁾. After reading and analyzing the data, the recording units were extracted and according to the frequency analysis the categories⁽¹⁰⁾ were constructed.

The study was approved by the Ethics and Research Committee (ERC) of the Federal University of Alfenas (UNIFAL - MG), according to process n° 1.817.834, preserving the anonymity of the participants, and their names were replaced by fictitious names randomly chosen by the authors.

RESULTS

About the eight participants, the predominance of females, married, with a mean age of 36.5 years-old, mean number of children of 1.5; Catholics. Six were nursing technicians and two nurses. The mean training time was 10.88 years, mean time of experience in adult ICU of 8.12 years, time of experience in the surveyed institution of 5.98 years and four of the participants had another employment relationship.

After a percentage analysis of the registry units, according to the methodological framework, the following categories were constructed:

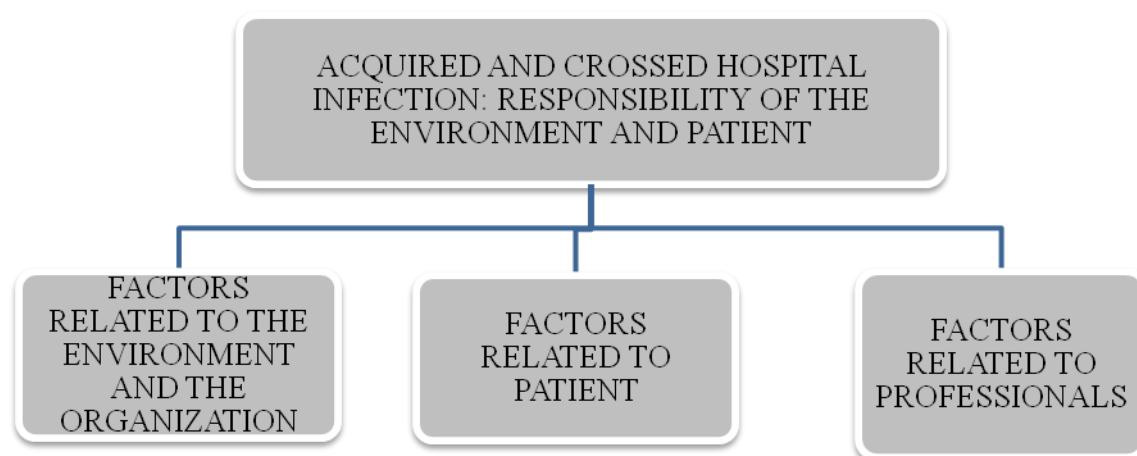


Figure 1. Presentation of the categories.

DISCUSSION

ACQUIRED AND CROSSED HOSPITAL INFECTION: RESPONSIBILITY OF THE ENVIRONMENT AND PATIENT

The predominant recording units extracted from the participants' speech were: "cross-infection", "acquired in the hospital", "patient-acquired" and "got from one to the other". Thus, participants associated health-care-related infection with the terms "acquired" and "crossed".

Hospital infection is an infectious process acquired in a hospital or other health care setting, which was not present or incubated at admission, and may affect patients during or after the care process, also perceived as acquired in the hospital through materials and equipment⁽¹⁾.

It is inferred that the health professional does not relate his action with the possibility of causing infection related to health care among patients. They attribute the infection to the hospital environment.

[...] it is an infection that the client acquired inside the hospital, which is something that he did not have it and during hospitalization he acquired [...] we understand that it can be crossed? They got from one to another (Dayana).

[...] we know that sometimes it is from a bacterium, something that is already usual in the hospital. (Tiago).

[...] then, that's what I do not know to explain to you ... how did he get it? Where did that first

pseudomona came from? (Tiago).

From these insights, the definition of IRHA is related to that infection transmitted from one patient to the other, and it seems that there is no clarity among professionals that their (contaminated) hands may be the cause of the infection in the sector.

In this understanding, the participants assigned greater responsibility to the environment and the patient for the development of nosocomial infections than to professionals.

The understanding, meanings or representations attributed by the professionals to the IRHA become fundamental, in order to plan and to implement educational actions more effective for the control and prevention of these.

FACTORS RELATED TO THE ENVIRONMENT AND THE ORGANIZATION

It was found that the most frequent registration units in this category were: "hand washing (education)", "Education (large vehicle)", "classes given at CTI", "alcohol cleaning 70%)", "People are charged and have to be registered".

It is understood that these actions cited by professionals as preventive measures were also carried out as part of their daily work (FIELDWORD NOTEBOOK30/01, 02/02, 06/02, 07/02 and 09/02 of 2017).

The environment seems to be important for the occurrence of IRHA. In this understanding, 70% alcohol cleansing occurred concurrently

and terminally and was performed routinely in shifts. Disinfection occurred every 12 hours, more than established by ANVISA ⁽⁹⁾, and this routine can be attributed to the scale of daily activities and the mandatory registration.

[...] who arrives at night has to do the same procedure (disinfection of surface and equipment) ... there is already a scale and we have to follow it (Dayana).

[...] the environment that we work is a potentially contaminated environment, the surfaces also have those bacteria that are already theirs and for that, one of the routines in the daily work for the prevention of IRHA is the disinfection of surfaces (Tiago).

The study concluded that faucets, beds, monitors and keyboards are colonized by different types of microorganisms, increasing the chance of infection spread and the similarity of strains found on inanimate surfaces and in patients⁽¹¹⁾. The surfaces of the environment and the hands of professionals are likely sources of bacterial agents⁽¹²⁾.

Although the role of hand hygiene and the potential for pathogen transmission by surfaces in the environment are known among professionals, as can be seen from the following fragment:

[...] through the hands ... incorrect washing of the hands [...] we can transmit if we have contact with the patient without washing the hands" (Vitória).

It was observed that this knowledge was not properly implemented in practice. (FIELDWORD NOTEBOOK 30/01, 02/02, 06/02, 07/02 and 09/02, in 2017).

Similar results were found in the study in which the majority of the participants evaluated did not perform hand hygiene⁽¹³⁾.

Regarding organizational factors, it was observed that continuing education has prioritized "hand washing" and surface cleaning, as recommended by ANVISA⁽⁹⁾.

[...] classes given at the CTI of hand washing by supervisors (Dayana).

[...] supervisors charge a lot on this (hygiene of the surface and equipment), people are charged and have to be registered (Tiago).

On the other hand, it was noticed that many actions performed in the daily work and that are

important in the prevention of IRHA were little mentioned by the participants, according to the frequency analysis:

[...] nurse of HICS shows the graphs, discusses cases, participates in the passage on duty (Edileia).

[...] orientation of HICS regarding patients in isolation and dressings (Tiago).

[...] pamphlet/plaque guidance (caution) (Alice).

It is assumed that changes in behaviors towards the prevention of IRHA are related to the understanding of risk factors and the culture of professionals⁽¹⁾. Thus, in order for health education actions to be effective, it is necessary to create an institutional safety culture in which guilt and punishment are replaced by the opportunity to learn from failures and improve health care^(14:2).

It is understood that the supervising nurses and the person in charge of SCHI have the knowledge that permanent education is necessary for the prevention of IRHA. It was observed that the nurse responsible for HICS visits the sector on a daily basis, including participating in the shift, reinforcing conduct, sharing updates and promoting capacity building (FIELDWORD NOTEBOOK 30/01, 02/02, 06/02, 07/02 and 09 / 02 of 2017).

A study shows that 82% of nurses had sufficient knowledge about permanent education and 88% understood lifelong education as the main controlling factor of IRAS (15).

It is understood that infections are directly related to the environment and to the organization, and it is possible to design a cycle of transmission of pathogens between environment, surface and patient. The organization is a decisive factor for the implementation of prevention measures, being more effective when there is establishment in the work process, tools such as scales, delegations and log book, linked to health education. Sensitization of the use of PPE's and hand sanitization on contact with surfaces should also be done in order to demystify the impression that surfaces are not as risky as body fluids or procedures.

FACTORS RELATED TO PATIENT

The most frequent registry units were "We

already have the bacteria and in case of an immune-depression, it can appear" and "the patient is full of open doors", "the patient already had it (infection) and inside the hospital it was exacerbated".

[...] we already have our bacteria that in the case of an immune-depression... in the suppression, it may appear [...] or he (patient) already had this infection and inside the hospital it was exacerbated (Dayana).

[...] the patient is full of open doors (Maria).

The patient's responsibility as an important agent in the transmission of pathogens is perceived because he is the carrier, and during their hospitalization these pathogens can be activated and trigger the infectious process.

IRHA are categorized into three areas, namely: iatrogenic (invasive procedures); organizational (the contaminated air-conditioning system, contaminated water system, insufficient human resources (nurse-patient relationship) and physical design of the service (very close beds); or related to patients (severity of the disease, immunosuppression and length of stay)⁽¹⁾.

IRHA is multifactorial and is influenced by independent variables. Factors related to the patient, length of hospital stay, invasive procedures, comorbidities and virulence may increase the risk of infections⁽¹⁶⁻¹⁷⁾.

It is understood that in the perception of the participants, the IRHA are related to the environment, the organization and the patient, so that the professionals exempt from this responsibility. It was verified that the cleaning and disinfection of surfaces and materials and the hygiene of the hands, mainly after the care of the patient, were incorporated as routine in the work process (FIELDWORD NOTEBOOK30/01, 02/02, 06/02, 07/02 and 09/02 of 2017).

FACTORS RELATED TO THE PROFESSIONAL

It was found that the registry units, "we transfer", "lead, pass it to the patient", "you take from one to the other", "use of PPE's", "hand washing", "hand washing before" were the most frequent.

Although the causality is mainly related to

the environment and the patient, it is perceived that some participants put themselves as agents of transference of IRHA:

[...] we may transfer this infection to the patient (Vitória).

[...] you take this infection from one to the other (Alice).

[...] we pass infection to the patient (Elen).

It has been found that professionals can be considered agents in the transmission chain, that is, taking a pathogen from a contaminated patient to the other, and this transfer can occur by the hands:

[...] by invasive procedures or by the vehicle which is our hands [...] and incorrect washing of hands ... we can communicate if we have contact with the patient without hand washing (Vitória).

It is inferred that for them hand hygiene is an important measure in the prevention of IRHA, although it has observed that the professionals lose the chance to perform hand hygiene during the care, as recommended by the five moments by ANVISA (FIELDWORD NOTEBOOK30 01/02/02, 06/02, 07/02 and 09/02 of 2017).

These results are in line with the conclusions of a systematic review, mentioning that practitioners "are aware of the benefits that simple handwashing can bring; however, when they seek practice, there are high rates of non-adherence, a gap between what is done and what is spoken"⁽¹⁸⁾.

As for the five moments of hand hygiene, the greater frequency is related before the care and after the contact with the body fluids.

[...] he was exposed to feces, changed his gloves, and washed his hands (Rafael).

[...] we can transmit if we have contact with the patient without washing the hands (Vitória).

And, less frequently, the following registration units:

[...] washing of the hands when the bath is over and going to do the dressing (Dayana).

[...] wash your hands in any technique, any manipulation (Edilea).

Hand hygiene should be performed in five moments for health care, namely: (1) before contact with patient; (2) prior to performing an

aseptic procedure (such as insertion of catheters or administration of intravenous medications); (3) after exposure to bodily fluids (such as blood, saliva or sweat); (4) after contact with patient and/or (5) after contact with the areas close to the patient (furniture, knobs, infusion pumps or any surface in the vicinity of the patient⁽¹⁹⁾).

It was verified that most of the participants mentioned the moments of hand hygiene, but in a fragmented way, and the moment was not mentioned, after the contact with the areas close to the patient. The surfaces of non-critical environments and equipment may be contaminated by infectious agents and favor the transmission of infection through health professionals⁽²⁰⁾. With this focus, a study with professionals of a CTI showed that the lower percentage of HH was before the contact with the patient, followed by aseptic procedure⁽²¹⁾.

It was observed that during the care, in performing procedures that involved the change of sites, such as body hygiene, perineal hygiene and dressing, hand hygiene have not preceded the exchange of gloves (FIELDWORDNOTEBOOK 06/02, 07/02 and 09/02 of 2017).

In addition to hand hygiene, the use of PPE was considered a measure of prevention of HI.

[...] do not go to the patient without gloves (Rafael).

For some participants, the use of PPE was considered a priori a safety measure for themselves, and later as a barrier to avoid contamination of the patient.

[...] precaution that I take with respect to the mask, with respect to the cape ... this is for my protection [...] without glove I will be contaminating myself and then contaminating another patient (Alice).

In another aspect it was observed that some professionals have not adequately carried out the prevention measures due to lack of time due to the overload of work.

[...] the technique... I will not be hypocritical to say that we follow it at all times, because we do not follow it, we can't [...] it is due to the amount of service, sometimes it is a service which needs to be fast, so I think it would be more of a sequel to that, too. Time factor. (Tiago)

Accordingly, the result of a systematic review indicated that workload is a risk factor for the development of adverse events such as: infections, pressure injury, falls and medication error⁽²²⁾.

The responsibility of the work dynamics and the professional's perception about the service developed contrasts with their expectations and forms of recognition⁽²³⁻²⁴⁾. It is inferred that the fact that the professional does not feel valued and as an important part of the health care process influences the way in which one perceives himself as a member responsible for the quality of the service.

Although it was evidenced in the statements that the prevention measures are basically summarized in hand hygiene, in the use of PPE's and in the disinfection of surfaces, it was observed that in the work routine, the professionals performed much more activities that contributed to the prevention of IRHA, but it does not seem to be associated with important prevention measures, such as: raising the head of the bed between 30 and 45°, keeping the vesical drainage system closed and sterile, keeping the urine flow unobstructed in the drainage system, emptying of the urine collecting bag regularly, exchange of the infusion system in a determined time with identification of date of exchange (FIELDWORD NOTEBOOK 30/01, 02/02, 06/02, 07/02 and 09/02 of 2017). It is inferred that these activities are routine and they possibly do not have a meaning in the prevention of IRHA; however, they are important measures that contribute to the decrease of adverse events thus guaranteeing the safety of the patient.

It is evident that managing the control and prevention of IRHA is not a simple but extremely necessary assignment for clean and risk-free health care. Nurses are responsible for planning, managing, implementing, evaluating and encouraging professionals to ensure patient safety and quality of care.

FINAL CONSIDERATIONS

In the participants' perception, hospital infection is an acquired or crossed infection, which "catches" from one patient to another. The environment and the patient are the main risk factors for the development of IRHA, which

seems to exempt the responsibility of professionals in the chain of transmission of pathogens.

Although they explained the importance of preventive measures, the dissonance between discourse and practice was verified, mainly in relation to the five moments of hand hygiene. Failure to comply with these measures can be attributed to the workload, the understanding about the chain of transmission, its appreciation in the health care process, which contributes to not feeling so important in the quality of health care.

It becomes of paramount importance permanent education based on a problematic methodological approach and the valuation of the professional so that the proposed actions can sensitize it and produce the empowerment and the reconstruction of new meanings on IRHA.

The organization and work process standardized by the institution have

demonstrated the potential to ensure that prevention and control measures are carried out, contributing to minimize infection rates. Although these actions express an obligation, they were incorporated into the professional's doing.

As limitations of the study acknowledged the sample for convenience and the fact that the interviews were carried out during working hours to enable the participation of the majority. However, the results may lead to the reflection of the participants on the preventive measures developed in their daily work, in addition to subsidizing chiefs, coordinators and control committees of IRHA to propose educational actions more participatory and problematizing.

Future investigations could use larger samples with professionals from other sectors of the hospital.

INFECÇÕES RELACIONADAS À ASSISTÊNCIA À SAÚDE SOB A ÓTICA DA ENFERMAGEM EM TERAPIA INTENSIVA ADULTO

RESUMO

Introdução: As infecções relacionadas à assistência à saúde são pontos chave para a segurança do paciente e à qualidade dos serviços de saúde. **Objetivo:** Conhecer o significado atribuído pela equipe de enfermagem às práticas de prevenção de infecções relacionadas à assistência à saúde. **Métodos:** Trata-se de um estudo com abordagem qualitativa fundamentado no referencial do Programa Nacional de Segurança do Paciente e na análise de conteúdo. Realizado em 2017 com profissionais de enfermagem de um centro de terapia intensiva de uma instituição hospitalar privada localizada no sul de Minas Gerais. Os dados foram coletados por meio de entrevista semiestruturada, observação não participante e diário de campo. **Resultados:** Da análise, construiu-se a categoria central, Infecção hospitalar adquirida e cruzada: responsabilidade do ambiente e do paciente, e como subcategorias: Fatores relacionados ao ambiente e organização; Fatores relacionados ao paciente e Fatores relacionados aos profissionais. **Conclusão:** Para os profissionais de enfermagem, as IRAS são adquiridas e cruzadas, relacionadas principalmente ao meio e ao paciente, o que por sua vez, isenta a responsabilidade dos profissionais.

Palavras-chave: Infecção hospitalar. Unidade de terapia intensiva. Enfermagem.

INFECCIONES RELACIONADAS A LA ATENCIÓN A LA SALUD BAJO LA ÓPTICA DE LA ENFERMERÍA EN CUIDADOS INTENSIVOS ADULTOS

RESUMEN

Introducción: las infecciones relacionadas a la atención a la salud (IRAS) son aspectos clave para la seguridad del paciente y a la calidad de los servicios de salud. **Objetivo:** conocer el significado atribuido por el equipo de enfermería a las prácticas de prevención de infecciones relacionadas a la atención a la salud. **Métodos:** se trata de un estudio, con abordaje cualitativo fundamentado en el referencial del Programa Nacional de Seguridad al Paciente y en el análisis de contenido, realizado en 2017 con profesionales de enfermería de un centro de cuidados intensivos de una institución hospitalaria privada ubicada en el sur de Minas Gerais-Brasil. Los datos fueron recolectados por medio de entrevista semiestruturada, observación no participante y diario de campo. **Resultados:** del análisis, se construyó la categoría central, Infección hospitalaria adquirida y cruzada: responsabilidad del ambiente y del paciente, y como subcategorías: Factores relacionados al ambiente y a la organización; Factores relacionados al paciente y Factores relacionados a los profesionales. **Conclusión:** para los profesionales de enfermería, las IRAS son adquiridas y cruzadas, relacionadas principalmente al medio y al paciente que, a su vez, exenta de responsabilidad a los profesionales.

Palabras clave: Infección hospitalaria. Unidad de cuidados intensivos. Enfermería.

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