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ARTIGO ORIGINAL

HOSPITAL INFECTION CONTROL COMMITTEE ON PREVENTION OF VENTILATOR ASSOCIATED PNEUMONIA: CONTRIBUTIONS TO NURSING

COMISSÃO DE CONTROLE DE INFECÇÃO HOSPITALAR NA PREVENÇÃO DE PNEUMONIA ASSOCIADA À VENTILAÇÃO MECÂNICA: CONTRIBUIÇÕES PARA A ENFERMAGEM

COMISIÓN DE CONTROL DE INFECCIÓN HOSPITALARIO EN LA PREVENCIÓN DE NEUMONÍA ASOCIADA A LA VENTILACIÓN MECÁNICA: CONTRIBUCIONES PARA LA ENFERMERÍA

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ABSTRACT

Objective: to analyze the contributions of Hospital Infection Control Committee (HICC) for nursing care for nursing care in prevention of ventilator associated pneumonia. **Method:** exploratory research and qualitative approach, held in the months of April and May 2010, in the Regional Hospital Tarcísio de Vasconcelos Maia in Mossoró/RN. As data collection instrument, was used a semi-structured interview form. The research project has been approved by the Research Ethics Committee, under the CAAE nº 0065.0.428.000-09. **Results:** the Hospital Infection Control Committee operates under ordinance No. 2616/98, being highlighted the following actions: Epidemiological Surveillance, Permanent Education in Health, Antimicrobial Standardization Policy and Creation/Dissemination of Standardization of Behaviors Written, fundamental to subsidize the actions of prevention and control by the nursing staff. **Conclusion:** the Hospital Infection Control Committee acts contributing to the prevention and control of mechanical ventilation associated pneumonia by nursing staff. **Descriptors:** Mechanical Ventilation Associated Pneumonia; Nursing; Prevention and Control.

RESUMO

Objetivo: analisar as contribuições da Comissão de Controle de Infecção Hospitalar (CCIH) para a assistência de enfermagem na prevenção de pneumonia associada à ventilação mecânica. **Método:** pesquisa de caráter exploratório e abordagem qualitativa, realizada nos meses de abril e maio de 2010, no Hospital Regional Tarcísio de Vasconcelos Maia em Mossoró/RN. Como instrumento de coleta de dados, foi usado um formulário com entrevista semiestruturada. O projeto de pesquisa foi aprovado pelo Comitê de Ética em Pesquisa, sob o CAAE nº 0065.0.428.000-09. **Resultados:** A Comissão de Controle de Infecção Hospitalar funciona conforme a Portaria nº 2616/98, sendo destacadas as seguintes ações: Vigilância Epidemiológica, Educação Permanente em Saúde, Política de Padronização de Antimicrobianos e Criação/Divulgação de Padronização de Condutas Escritas, fundamentais para subsidiar as ações de prevenção e controle pela equipe de enfermagem. **Conclusão:** a Comissão de Controle de Infecção Hospitalar atua contribuindo para a prevenção e controle da pneumonia associada à ventilação mecânica pela equipe de enfermagem. **Descritores:** Pneumonia Associada à Ventilação Mecânica; Enfermagem; Prevenção e Controle.

RESUMEN

Objetivo: analizar las contribuciones de la Comisión de Control de Infección Hospitalario (CCIH) para la atención de enfermería en la prevención de neumonía asociada a la ventilación mecánica. **Método:** investigación de carácter exploratorio y abordaje cualitativo, realizada en los meses de abril y mayo de 2010, en el Hospital Regional Tarcísio de Vasconcelos Maia em Mossoró/RN. Como instrumento de recolección de datos, fue usado un formulario con entrevista semi-estructurada. El proyecto de investigación fue aprobado por el Comité de Ética en Investigación, sobre el CAAE nº 0065.0.428.000-09. **Resultados:** La Comisión de Control de Infección Hospitalario funciona conforme la Portería nº 2616/98, siendo destacadas las siguientes acciones: Vigilancia Epidemiológica, Educación Permanente en Salud, Política de Estandarización de Antimicrobianos y Creación/Divulgación de Estandarización de Conductas Escritas, fundamentales para subsidiar las acciones de prevención y control por el equipo de enfermería. **Conclusión:** la Comisión de Control de Infección Hospitalario actúa contribuyendo para la prevención y control de la neumonía asociada a la ventilación mecánica por el equipo de enfermería. **Palabras clave:** Neumonía Asociada a la Ventilación Mecánica; Enfermería; Prevención y Control.

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INTRODUCTION

Given the magnitude of the hospital infections in the country in recent decades Ministerial ordinances were created in order to deploy control committees of hospital infections and standardize the actions of prevention and control.¹

However, the frequency of infections in intensive Care Unit (ICU) still represents great epidemiological significance within the context of health care, particularly the ventilator associated pneumonia (VAP), which possesses great prevalence in the industry.¹⁻²

The VAP is a complex pathogenesis defined as infection of the lung parenchyma that occurs between 48 hours after intubation, which was incubated during the patient's admission, and 72 hours after extubation.³

The incidence varies according to the diagnostic methods used, of the hospital, ICU type and of population studied, being estimated at 9 to 40%.⁴⁻⁶ The mortality rate seems to be associated with the involvement of high-risk pathogens or in situations where the initial antibiotic therapy is not appropriate for the causal agent and may vary between 20% and 70%.⁷

Among the most common agents include VAP related *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Moraxella catarrhalis*, gram-negative bacillus and gram-positive coccus. Among the latter, we highlight the *Staphylococcus aureus*.⁸

However, the pathogenesis is considered preventable because it is related to "use of invasive devices and/or specific procedures, introducing, in its origin, any event possibly changeable".⁸

Because of infections being linked to factors related to the patient and the procedure, the multi-professional team plays a fundamental role with regard to prevention of infections within hospitals, which requires health team taking preventive measures, training in service, changes of attitudes and continuing education in the health care process.⁹

Indeed, it suggests the possibility of prevention of VAP on the provision of skilled care to patients, in which health professionals pay attention to careful failures in health care process.

However, because it is an infectious disease of inaccurate diagnosis and multicausal, it is often associated with large differences regarding diagnosis, treatment and preventive measures, resulting in several practices and often not based on literature

data.¹⁰ Thus, the strategies for the control and prevention of the infection should be carried out by means of standardized behaviors and specific for each ICU.⁶

The Center for Disease Control and Prevention (CDC), lists proven effective measures for prevention of VAP, which involve four fundamental issues, namely: the education of health professionals on the prevention and control of VAP and other respiratory infections; surveillance and notification of diagnosed cases of infection, prevention of transmission of microorganisms and the reduction of risk for infection.³ These measures are related to the main activities of the HICC, regulated in Brazil through the ordinance 2616/98 of the Ministry of Health.⁷

The HICC is responsible for planning and standardization of hospital infection control actions, through the elaboration, implementation, maintenance and evaluation of Hospital Infection Control Program, which involves epidemiological surveillance activity (collection, analysis and dissemination of data); standards for rational use of antimicrobial, germicidal and hospital medical supplies; procedures for prevention of transmission of micro-organisms; standards and technical operational routines; standardization of measures of prevention and control of nosocomial infection and continuing education for professionals.⁸ These actions provide subsidies that favor the nursing care, once that culminate with the formulation of measures with evidence of effectiveness in the prevention, control and treatment of infections to the epidemiological reality of the institution.

The objective of this study is:

- To analyze contributions from Hospital Infection Control Committee for nursing care in prevention of ventilator associated pneumonia.

METHOD

Article elaborated from the monograph << Prevention of ventilator associated pneumonia: performance of nursing staff and Hospital Infection Control Committee >>, presented to the Undergraduate Program in Nursing, of the State University of Rio Grande do Norte (UERN), Mossoró/RN, Brazil, 2010.

Empirical-analytic research with exploratory and qualitative character has been carried out. We used as data collection instrument the semi-structured interviews carried out with three professionals in the HICC, represented by I1, I2, I3, of Tarcisio de

Vasconcelos Maia Regional Hospital, located in the municipality of Mossoró/RN, Brazil.

The inclusion criteria for the selection of the subjects of the research were: to be part of the team at HICC for over a year; not be license for health treatment, maternity leave or bonus leave.

The interviews took place in April and May of 2010 and were recorded in MP4 device, through the authorization of the subjects involved by signing the Free Informed Consent (FIC).

The organization of data obtained was through the analysis of content by category.¹¹ It was held to strict transcription of the taped interviews, reading and preparing the material to be worked, identification of cores of senses by the goal mapped out, coding, and finally, construction of the category.

The research project was approved by the Ethics Committee of the State University of Rio Grande do Norte with Protocol No 072/09 and CAAE nº 0065.0.428.000-09, in accordance with the criteria of the resolution 196/96 of the National Council of Health/Ministry of Health (Brazil, 1996), who thinks researches with human beings.

RESULTS AND DISCUSSION

HICC is a deliberative organ that performs activities related to Infection Control Healthcare (ICH), and program development skills of Hospital Infection Control (HIC), which is characterized as a set of developed actions, deliberate and systematized to reduce the incidence and severity of ICH.¹²

Through the reports of the subjects it was possible to identify the activities implemented by the HICC at the institution, which feature contributions relevant to the nursing care, particularly with regard to the prevention and control of VAP, being they: Epidemiological Surveillance, Standardization of Written Procedures, Permanent Health Education and Standardization Policies of Antimicrobials.

◆ Epidemiological Surveillance

Epidemiological Surveillance can be regarded as the set of actions that provides the knowledge, the detection or prevention of any change in determining factors and individual or collective health restrictions, in order to recommend and adopt measures for the prevention and control of disease or aggravation.¹²

These actions are characterized as one of the central purposes of the HICC, particularly in preventing the VAP, because through it is possible to obtain data to determine the epidemiological reality and the determination

of acceptable parameters, to identify outbreaks of the infection, to evaluate the efficacy and effectiveness of preventive measures applied, to determine areas, situations and risk services and assess factors that may be associated with the increase or decrease in the occurrence of the event. These assignments characterize the Epidemiological Surveillance with the goal and by prevention and control actions, since it is from the data generated which starts the planning of interventions.

In this sense, the data from the Epidemiological Vigilance are fundamental to nursing staff, because from it the nurse has to formulate a plan of individualized nursing care based on epidemiological evidence of the institution itself, supporting the prevention and control of VAP.

To make feasible Epidemiological Vigilance in intensive care, the study institution uses HICC as an instrument the map of vigilance, which serves as a guide for analyzing daily control and prevention measures that are being applied and the risk factors to which patients are exposed.

The contribution of Epidemiological Vigilance, through the vigilance map, for the prevention of VAP is referred to by subject:

[...] in the ICU, vigilance itself already contributes to the prevention of VAP, because one of the guidelines that is very important is exactly the high headboard. Our map of ICU vigilance includes exact observation of that daily. (I3)

Epidemiological vigilance actions are noticeable mainly in patients admitted to the ICU and in post-surgical patients, justified by the higher frequency and the higher susceptibility of patients of these sectors to infections.

The focus is primarily the ICU, because they are more severe patients, patients who spend more time hospitalized, which are more exposed, which are more invaded and, therefore, are theoretically targets of infection. (I1)

In this sense, the actions of epidemiological vigilance developed by HICC have as a priority the ICU, where as one of the relevant strategies emphasizes the map of vigilance, conducted by HICC nurse that by inserting in the sector, while at the same time performs data collection, observes deviations of conduits and performs guidelines, particularly for strengthening the nursing staff the need for ducts with a focus on prevention and control of VAV.

◆Standardization of Written Procedures

In addition to the actions of epidemiological vigilance, the HICC also establishes measures of prevention and control that are used with the aim of reducing the risk of infection in the hospital environment, through the standardization of written procedures (protocols).

This strategy contributes to the nursing staff to have knowledge regarding the most appropriate methods for implementing technical procedures.

We realize the team recognition about the importance of the existence and dissemination of this instrument to the health team.

[...] there are protocols that were first placed one in each sector. [...] It is an instrument to be kept of all access, because if not, it ends up not achieving the goals [...] that is a source of full-time research, it's supposed to be! (I2)

However, only the existence of manuals of standardization of preventive measures cannot guarantee the implementation of such measures in each unit. It is necessary that there is supervision for assessment of what was standardized.¹

We have the technical visits in which we go to the sector assess whether those standards that we are recommending is being obeyed, what is the problem that are having, then we do the redirection or a notice of non-conformity. (I3)

In order to assist in supervising and enforcing the measures of prevention of VAP/HIC advocated by HICC, in addition to the technical visits which is one of the actions implemented are currently being organized an evaluation protocol to assess these preventive actions in a space of three months.

In addition to the standardized protocols technical manuals, HICC seeks to work with exhibition of banners by various sectors of the hospital in order to show the importance of prevention professionals of ICH/VAP.

[...] We have a job to be executed for the dissemination of standards with banners, posters, with indicative ... [...] We are working in that direction now: to visualize as much as possible, the actions of prevention. (I1)

These actions used by HICC have great relevance, since it enables the nursing professionals can refer to the way in which technical assistance procedures must be performed in order to promote the prevention of VAP in the daily routine of work.

◆ Permanent Health Education

Despite the existence of manuals that standardize procedures, it is still essential to

guarantee the spread of this knowledge for all professionals, which becomes effective through the actions of Permanent Education in Health (PEH).

The EPS is a strong strategy to transform health actions in the prevention and control of VAP, because it relies on meaningful learning, which promotes the modification of the professional practices by critical reflection on practices and real problems within the context of professionals working in the health services network.¹³

However, the lines of the subjects reveal that educational activities are the most difficult to be kept at the hospital. Even so, the recognition of the importance of these practices for the control of infection is noticeable:

[...] the educational part is the most difficult, but it is the most important. If we have all to work and not have the heads of the people working for it is futile. (I1)

One of the subject justifies this difficulty to mention:

[...] the big problem here is to bring professional into a classroom, [...]. Because when the person is off, she's not off, it's off of here, but she's in another hospital, in College in another activity. (I3)

Despite the difficulties encountered, we realized that the HICC has implemented these activities in the work routine of HRTVM professionals, as referred to in I2:

CCIH here conducts seminars for the professional to improve more and more. (I2)

The query is a spontaneous activity performed constantly by the HICC Coordinator, enabling professionals to ask questions during routine daily activities, such as in reports I3:

[...] the people here have the spontaneous consultation, there's usually someone who comes here to take questions or ask for guidance, so that spontaneous demand we also meets. (I3)

So, we realized that the educational activities constitute an action employed by HICC prevention of VAP, but it is noticeable that the difficulties encountered by the multi professional team to deploy it in the routine of the institution are focused on little availability of professionals participate in them, in virtue of patient treatment activities carried out by them.

However, this activity held by the HICC has particularly relevant contributions within the nursing care, as it allows for the reflection of the reality of the institution or labor sector in order to generate an action with a focus on transformation of reality.¹⁴ This enables

nursing go beyond playing practices, formulating evidence-based strategies that promote the prevention of VAP promoting professional autonomy in nursing within the control and prevention of ICH.

♦ Standardization Policies of Antimicrobials.

The use of manuals and educational actions is also inserted into the HICC routine in search for reorientation of the use of antimicrobials and implementation of antimicrobial standardization policy, because it is the inappropriate use of antimicrobials is collaborating to the emergence of multidrug-resistant microorganisms, which makes the VAP increasingly difficult to treat and cure. Thus, one of the important actions of HICC refers to the inclusion of Standardization policy of Antimicrobials. On the subject, 12 emphasizes that:

[...] There is a line of standard antibiotics for each case. Doctors are instructed to work inside of what is established by the team of microbiology and infectious diseases at the hospital. (12)

However, various obstacles are encountered in the implementation of the use of antimicrobials because require professionals responsible for prescribing a better awareness and commitment to standardized norms for HICC, i.e. participate in moments of trainings conducted by the commission.

In this sense, we note that the use of standardized antimicrobials by HICC in a hospital ambit is a desired action by members of the commission, however, it is noticeable that the standardization of antibiotics needs to be better disseminated by the medical profession, to making them aware of the importance of this action for the control and prevention of ICH.

CONCLUSION

The study provided an understanding of the contributions of HICC for nursing care in prevention of ICH, but specifically on VAP, object of our study.

Deployed according to what advocates Ordinance 2616/98, HICC stands out for its expertise in epidemiological vigilance activities, educational activities, standardization of antimicrobials and elaboration of protocols, introduced direct influence on the quality of nursing care, since it provides instruments to subsidize the actions of control and prevention of VAP in health institutions.

In HRTVM, the HICC has sought over the years to act on a permanent basis in order to deploy and control measures of prevention of ICH and the VAP in the ICU. However, we observe that are found various obstacles in the implementation of the actions of permanent education in health, making them difficult to be achieved due to low availability of free time for professionals to participate in these activities, which is hindering the control of infections.

However, we realize that the HICC has been showing relevant action on institution, subsidizing the activities of nursing in the control and prevention of VAP.

Finally, we believe that this study can enable further discussions regarding the qualification of the hospitals attention practices and collaborate for creating educational strategies by the nursing staff in ICU, provided by HICC, which may contribute to increasingly incisive for the qualification of the assistance provided by the professionals of the area in evidence in this study.

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