

*The Infection Related to Health Assistance in the neonatal ICU at the high risk reference maternity of Rio Grande do Norte: a challenge to institutional managers.*

**A Infecção Relacionada à Assistência à Saúde na UTI neonatal da maternidade referência em alto risco do Rio Grande do Norte: um desafio aos gestores institucionais.**

*La infección hospitalaria en la unidad de cuidados intensivos neonatal de maternidad referencia con alto riesgo de Rio Grande do Norte: un reto para los gestores institucionales.*

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**RESUMO:** Este estudo buscou identificar a percepção e as práticas dos gestores de uma Maternidade situada em Natal, Rio Grande do Norte, no tocante ao relevante problema da Infecção Relacionada à Assistência à Saúde na Unidade de Terapia Intensiva Neonatal. Trata-se de um estudo de caso exploratório. O instrumento de coleta de dados foi o questionário. Os informantes foram os gestores com diferentes níveis de inserção e funções na Unidade de Terapia Intensiva Neonatal. Os resultados mostraram uma aproximação entre as respostas dos informantes, o que evidencia um conhecimento e prática em certa medida comum a todos, evidenciando um domínio do conhecimento e de práticas. Algumas diferenças observadas se reportam a função de conteúdo informado, e estão relacionados à função específica de cada gestor. Os informantes foram genéricos em seus discursos, e não caminharam para o plano

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operacional, detalhando suas práticas. A gestão mostrou-se com papel fundamental no que diz respeito à prevenção e controle das infecções.

Palavras-chave: Gestão em Saúde; Unidade de Terapia Intensiva Neonatal; Infecção hospitalar.

**ABSTRACT:** This study sought to identify the perceptions and practices of a maternity managers located in Natal, Rio Grande do Norte, in relation to the relevant issue of Infection Related to Health Care in the Neonatal Intensive Care Unit. This is an exploratory case study. The data collection instrument was a questionnaire. Informants were managers with different levels of integration and functions in the Neonatal Intensive Care Unit. The results showed a connection between the responses of informants, which shows a knowledge and practice to some extent common to all, showing a mastering of the knowledge and practices. Some differences relate to informed content function, and are related to the specific function of each manager. Informants were generic in their speeches, and they did not walk to the operational plan, detailing their practices. The management proved to have a key role with respect to the prevention and control of infections.

Keywords: Health Management; Neonatal Intensive Care Unit; Nosocomial infection.

**RESUMEN:** Este estudio trata de identificar las percepciones y prácticas de los gerentes de una maternidad situado en Natal, Rio Grande do Norte, en relación con el tema correspondiente de Infecciones Hospitalarias en la Unidad de Cuidados Intensivos Neonatales. Este es un estudio de caso exploratorio. El instrumento de recolección de datos fue un cuestionario. Los informantes fueron directivos con diferentes niveles de integración y funciones en la Unidad de Cuidados Intensivos Neonatales. Los resultados mostraron una relación entre las respuestas de los informantes, lo que demuestra un conocimiento y la práctica hasta cierto punto común a todos, mostrando un campo de conocimientos y prácticas. Algunas diferencias se relacionan con la función de contenido informada, y están relacionados con la función específica de cada administrador. Los informantes eran genéricas en sus discursos, y no anduvieron con el plan operativo que indique sus prácticas. La gestión resultó papel clave con respecto a la prevención y el control de la infección.

Palabras clave: Gestión en Salud; Unidades de Cuidado Intensivo Neonatal; Infección Hospitalaria.

## INTRODUCTION

This study identified the perception and practices of managers at the Maternity Hospital regarding the relevant issue of Infection Related to Health Care (IRHC) in the Neonatal Intensive Care Unit (NICU), taking into account the scarcity of studies to discuss the responsibility of

management in relation to this issue. It is worth noting that the different terms used, such as: management, manager, boss and director did not differ, they are considered as synonyms and are therefore used interchangeably as a substitute for others<sup>1</sup>.

When treating the institution as a research field, we clarify that the Maternity is presented as a reference unit for high-risk birth in the state of Rio Grande do Norte (RN). It is a state historical institution, inaugurated in 1950. It was crucial for the creation, in 1955, of the Faculty of Medicine at RN and soon after, in 1958, of the Federal University of Rio Grande do Norte (UFRN), which it is subordinated. In the early years its existence, the Maternity was seen as “visiting room of scientific medicine in RN”<sup>2</sup>. When the National Health System (SUS) was created (1998), it was already facing financial crises that have become chronic. With the population’s growing demand for obstetrical and gynecological services without the corresponding growth of the municipal and state services network, the operation of the Maternity became critical and the overcrowding, which adds risk to the patients’ safety, was reported frequently in media.

The Neonatal Intensive Care Unit is a Maternity sector that demand special attention of institutional managers, since it is a space where debilitated newborn patients are assisted.

In NICU Infections Related to Health Care are recognized as one of the most important causes of morbidity and mortality in hospitalized neonates<sup>3</sup>. It requires a “proactive management rather than reactive,” which includes a focus on security risk management policy of patients and the prevention of incidents that may cause adverse events<sup>3</sup>.

The risk management is a central element in the strategic planning of hospitals. In this process, planning should be continuous, seeking to identify and analyze methodically the risks inherent in their respective activities, in order to develop actions or measures that allow prevent and/or reduce the risk, take advantage of improvement opportunities for patient safety and equate the fight for the occurrence of infections Related to Health Care<sup>3</sup>.

Taking into account the significant risks to the health of users of the hospitals represented by IRHC, their prevention and their control measures involve qualification of hospital care, continuing education and evaluation of the performance of the professionals to the desired success.

In turn, the control of these involves great collective effort, persistent and systematic multidisciplinary work<sup>4</sup>. The availability of inputs and the allocation of resources for use in activities related to the prevention and combating IRHC are able to provision by the manager without which the actions will become compromised.

The social and economic points of view demonstrate that reducing infection rates Related to Health Care means shorter hospital stay of patients, increased turnover of beds and increased availability of vacancies in ICUs<sup>4</sup>, also enabling a reduction in hospital spending

Taking into account the challenges and responsibilities of the Maternity managers regarding the Neonatal Intensive Care Unit is who sought to know what they think and how to proceed in relation to IRHC.

This study hopes to contribute to the reflection on the management of the NICU, from the ongoing experience at the Maternity, adding new elements to the debate and possible changes that the results raise.

## **METHODOLOGY**

This is a qualitative study that interprets relations of meanings of the phenomena as reported by individuals who experience the problem on the spot and/or have knowledge about<sup>5</sup>.

It can be characterized as a case study, since its object of study is a specific health service, the Maternity, through the NICU, focusing on a particular problem, namely the Related Infection in Health Care and the challenge of for the manager. The case study can be conducted to one of the three basic purposes: explore, describe or explain. It is the most appropriate strategy when you want to analyze, as says Yin (1994, p. 32), cited by Lyra; Gomes; Jacovine, a “contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly defined”<sup>6</sup>. This study is also exploratory considering that does not exist similar work at the Maternity.

The source of information was primary. ten (10) key informants have been identified, among them: managers and members of the Hospital Infection Control Commission (HICC), considered as managers, but do not appear in the institution’s hierarchy as such, taking into account, as considered by Hinrichsen<sup>3</sup>, still that is the general hospital management advisory body, the HICC can decide on matters that directly or indirectly, are guided to the prevention and control of infections related to the Health Care in the hospital. In the Search field phase only seven (07) respondents were willing to participate.

The research technique used was the questionnaire with semi-open questions, conducted by signing the Instrument of Consent. This was handed over to the informers with the explanations due as standardization of the Ethics Committee. The study was approved by the Ethics Committee of Onofre Lopes University Hospital, Presentation Certificate for Ethics Assessment (CAAE) N°: 18264913.2.0000.5292. It is noteworthy that all informants met the inclusion criteria for

the study, which consisted of permanence in office/function for more than three months.

The analysis method used was the Collective Subject Discourse (CSD)<sup>7</sup> which consists of identifying the speeches summaries, key expressions, more expressive passages that have the same central idea and anchoring. These speeches were categorized for analysis. The data were classified starting from the questions of the questionnaire and organized and selected in order to articulate the events in relation to management practices.

Through documentary and bibliographic research theoretical basis was obtained for the identification and analysis of the research question. The literature review allowed the search for elements of confrontation with the concepts studied in other studies.

## **RESULTADOS E DISCUSSÃO**

In general, we find that the answers for each informant (I) are articulated and differ slightly in substance, which shows a knowledge and practice, to some extent, common to all.

Analyzing the set of questionnaires in relation to keywords, informants of the Hospital Infection Control Commission (HICC) about the management position held, the words cited were: search, prevention and control. While other managers have highlighted the words: organization, knowledge and planning. The organization and planning are functions of management highlighted by numerous authors, such as Fayol, Urwick, Gulick, Koontz and O'Donnell, Newman, Dale, Wadia, Miner<sup>8</sup>.

On the matter of how the HICC works, informants have highlighted the daily active search by members of the Commission, notification of cases, monthly reports of infection rates, investigation, outbreak control and development of protocols for invasive procedures. The I.2 informant highlighted the functioning of HICC, the importance of training and training aimed at preventing infection, which corroborates the view Hinrichsen<sup>3</sup>, which highlights the management actions (planning, implementation, data analysis and dissemination) and education as basic to develop an infection control model.

It was observed that the responses of informants on how the management proceeding, regarding the NICU, not walked to the operational plan, remained in the general plan. Therefore, impossible to penetrate the daily practice of these. Except for the speech I4:is

*“It requires rigorous standards of care due to the high degree of complexity of patients and monitoring of specific indicators, assessment in relation to morbidity parameters daily, quality improvement for action.”*

Regarding HICC member liability in regard to hospital, informants unanimously have cited the infection control as on their charge. It is worth emphasizing that the quote I.1 highlights the dissemination of epidemiological data, the pathogens transmission control and the antibiotics usage control.

Regarding the fight against Infections Related to Health Care, all informants acknowledged the management as an important role in combating to the IRHCs. Here are some of the information relating to infection control as informants:

I.1: *“Create subsidies in order that infection control standards can be followed throughout the institution.”*

I.2: *“Actively participate in interventions proposed by HICC, providing inputs and material and human resources necessary for the prevention and treatment of neonatal infections.”*

I.3: *“Collaborating with HICC the measures taken to control the HI and treatment thereof, adopt when necessary barrier measured in the unit”.*

I.4: *“Keep trained team for comprehensive care to the newborn and neonatal ICU.”*

Faced with the question related to the prevention and infection control related to Health Care, informants have considered as basic: the handwashing, barrier measures, the professional team training and the adequacy of the physical structure. Therefore, hand hygiene in hospitals to configure a priority and solving practical when it comes to reducing the rates of transmission of microorganisms infections.

The literature on infectious processes is lavish in defense of handwashing as a simple measure, and emphasize the use of personal protective equipment (PPE), environmental cleaning and the rational use of antimicrobials<sup>9, 10, 11</sup>

Responses were different when it comes to considering whether the hospital has adequate conditions for the control of IRHC. It is worth noting that overcrowding is the factor highlighted as aggravating for those who consider that there are working conditions as speech below:

I.1: *“competent and well trained human resources, but inadequate and overcrowded space.”*

I.2: *“The number of professionals, materials, supplies and equipment is sufficient for the number of beds, but there is a constant overcrowding to be a reference service, which leads to breaking down barriers and inadequate care” (...)* *“we know when there is overcrowding in the*

*NICU, breaking barriers happen, mainly and also when basic training are often spaced, such as hand hygiene “*

The speeches also showed that the respondents are concerned about the lack of attention for some care that can lead to contamination by breaking down barriers and inadequate care, important risk factors for acquiring hospital infections.

Regarding professional training, informants said that there was a training in the last year, which indicates that managers seek to keep the team updated.

However, a common testimony from informants was the fact that the Maternity is an educational institution with high turnover of students, which is a risk factor for the IRHC.

As for the main safety standards for the NICU, informants again referred to the importance of hand washing and attributed the increase in infections related to Health Care to the lack of guidance, training and technical preparation of professional/staff, which shows it is dissonant with the previous answers concerning the realized training

Considering the question of how to see the practice of health professionals in relation to safety standards, the answers signaled that changes are needed with regard to awareness of simple behaviors. For them, poor hygiene, the input of many people in the sector and the inadequacies of the physical space contribute to the occurrence of IRHC in the NICU. Also cited was the training / orientation of staff and hand washing as challenges to combat the infections Related to Health Care in the NICU, which shows the need to work more in the Maternity these points to positions that need constant training. HICC could cooperate with the training and continuing education of the professionals in these<sup>12</sup> points of simple intervention.

Important to note that this work contains the relevant limitations on the refusal to participate by some informants, whose alleged reason was the lack of time to answer the data collection instrument.

## **FINAL CONSIDERATIONS**

This study of managers allowed us to analyze the role they play within the institution. Indeed, the management showed up with key roles with regard to the prevention and control of infections related to Health Care.

However, regarding the study of the responses of the informants, the result did not walk to the operational plan, detailing the practices, as were the initial expectations. In this sense, it

has not been identified the existence of plans that pointed to the actions or aright changes for improvements to be achieved.

As noted above, the answers for each informant have proven to be articulated, showing a knowledge and practice to some extent common to all.

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