

# Implementation of patient safety centers and the healthcare-associated infections



*Implementação dos núcleos de segurança do paciente e as infecções relacionadas à assistência à saúde*

*Implementación de base de seguridad del paciente y las infecciones asociadas a la atención en salud*

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## ABSTRACT

**Objective:** To verify the implementation of the Patient Safety Center and its relation to the control of Healthcare-associated Infections in hospitals of Natal.

**Method:** Quantitative, cross-sectional study. The sample consisted of 28 infection control professionals from 12 hospitals. Data were collected between February and August 2017, through a semi-structured questionnaire.

**Results:** The Patient Safety Center was implemented in nine hospitals. Among the protocols implemented, the patient identification (66.70%), hand hygiene (50%) and fall prevention (50%) were the most important ones. Hospitals with the Center affirmed they develop patient safety training activities together with the professionals. 44.5% reported effective communication.

**Conclusion:** Although the actions implemented do not fully comply with the recommendations of the National Health Surveillance Agency, most of these actions are directly related to the control of infections in services.

**Keywords:** Patient safety. Delivery of health care. Infection control. Cross infection.

## RESUMO

**Objetivo:** Verificar a implementação do Núcleo de Segurança do Paciente e sua relação com o controle das Infecções Relacionadas à Assistência à Saúde nos hospitais de Natal.

**Método:** Estudo quantitativo, do tipo transversal. A amostra foi composta por 28 profissionais controladores de infecção de 12 hospitais. Os dados foram coletados entre fevereiro e agosto de 2017, por meio de questionário semiestruturado.

**Resultados:** Houve implementação do Núcleo de Segurança do Paciente em nove hospitais. Dentre os protocolos implantados, destacaram-se o de identificação do paciente (66,70%), o de higiene das mãos (50%) e o da prevenção de quedas (50%). Os hospitais com Núcleo afirmaram desenvolver atividades de capacitação em segurança do paciente com os profissionais. 44,5% afirmaram realizar comunicação efetiva.

**Conclusão:** Embora as ações implantadas não cheguem a cumprir integralmente as recomendações da Agência Nacional de Vigilância Sanitária, a maioria dessas ações tem relação direta com o controle das infecções nos serviços.

**Palavras-chave:** Segurança do paciente. Assistência à saúde. Controle de infecções. Infecção hospitalar.

## RESUMEN

**Objetivo:** Comprobar la implementación de la base de Seguridad del Paciente y su relación con el control de las Infecciones Asociadas a la Atención en Salud en los hospitales de Natal.

**Método:** Estudio cuantitativo del tipo transversal. La muestra estuvo compuesta por 28 profesionales controladores de infección de 12 hospitales. Se recolectaron los datos entre febrero y agosto de 2017, a través de una encuesta semiestructurada.

**Resultados:** Hubo implementación del Núcleo de Seguridad del paciente en 9 hospitales. Entre los protocolos implementados, se destacaron el de la identificación del paciente (66,70%), el de higiene de las manos (50%) y el de la prevención de caídas (50%). Los hospitales con Núcleo afirmaron desarrollar actividades de capacitación en seguridad del paciente junto a los profesionales. 44,5% afirmaron realizar comunicación efectiva.

**Conclusión:** Aunque las acciones implementadas no llegan a cumplir íntegramente las recomendaciones de la Agencia Nacional de Vigilancia Sanitaria, la mayoría de estas acciones tiene relación directa con el control de las infecciones en los servicios.

**Palabras clave:** Seguridad del paciente. Prestación de atención de salud. Control de infecciones. Infección hospitalaria.

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## ■ INTRODUCTION

Within the context of healthcare services, the reduction in the incidence of Healthcare-Associated Infections (HAIs)<sup>(1)</sup> is one of the main concerns related to patient safety and service quality. The HAIs are the infections caught during the healthcare in a hospital or another unit that provides health care and that were not present or incubated when the patient was admitted. These infections may appear during the hospitalization or after the hospital discharge<sup>(2)</sup>.

Accordingly, surveillance, prevention, and control of the HAIs have become complex in the last decades due to the impact of the infections over hospital deaths, period of hospitalization, and costs. The increase in the life expectancy and in the conditions that induce the hospitalization of increasingly severe and immunocompromised individuals, the change in the epidemiologic profiles with new and emerging diseases, and the emergence of multi-resistant pathogens can be added to this scenario<sup>(3)</sup>.

The HAIs are a major public health problem that jeopardizes both the patient's safety and the employees directly or indirectly in the health care, and they may cause damages to everyone involved, as well as excessive expenditures to the healthcare system. Studies have shown that infection control and surveillance programs can be successful if they recognize the HAIs and implement intervention measures to reduce the infection rates, limiting their spread. Therefore, the surveillance of HAIs is a major challenge to healthcare services and they require effective actions from them<sup>(3-5)</sup>.

In the healthcare services, the patients' safety requires good healthcare practices, prevention and recognition of transmissible infections, and reduction in their effects. In Brazil, there are legal institutes regulating and demanding the presence of infection control professionals in these services, namely: Ordinance 2616 of 1998 of the Ministry of Health (MS – "Ministério da Saúde" in Portuguese language), and Regulating Rule N° 32 of the Ministry of Labor and Employment ("Ministério do Trabalho" in Portuguese language)<sup>(6)</sup>.

Since 2004 the Brazilian Health Surveillance Agency (ANVISA – "Agência Nacional de Vigilância Sanitária" in Portuguese language) inserted into its scope of work the actions set forth in the World Alliance for Patient Safety of the World Health Organization – WHO, to which Brazil belongs. Since then, ANVISA has intensifying its activities in the healthcare services in a partnership with the MS, the Pan American Health Organization – PAHO/WHO, and other entities of the National Health Surveillance System (SNVS – "Sistema Nacional de Vigilância Sanitária" in Portuguese language)<sup>(7)</sup>.

The surveillance and monitoring practices on the use of blood, cleaning products, materials, devices, equip-

ment, and medicines combine with the surveillance and control of adverse events (AE), including the HAIs, in a search for a qualified healthcare<sup>(1,7)</sup>. In 2013, the MS created the National Patient Safety Program (PNSP – "Programa Nacional de Segurança do Paciente" in Portuguese language) intended to contribute to improve the quality of the services and disseminate the safety culture within the healthcare services, in a search for a safer health care, promoting more safety to patients, healthcare professionals, and the healthcare environment<sup>(7)</sup>.

In this perspective, we can highlight the publication in 2013 of the Collegiate Board of Directors' Resolution (RDC – "Resolução da Diretoria Colegiada" in Portuguese language) No. 36<sup>(1)</sup>, establishing actions for the patient safety in healthcare services and making mandatory to implement the Patient Safety Center (NSP – "Núcleo de Segurança do Paciente" in Portuguese language) in these services. Therefore, the NSP is responsible for developing the actions and strategies set forth in the PNSP, and shall also play an essential rule throughout the implementation process of the Patient Safety Plan<sup>(1)</sup>.

In Brazil, the health surveillance actions directed to the safe use of healthcare technologies for safe care practices have been regulated in the last decades. The recommendations and laws and regulations for prevention and control of HAIs stand out between these actions. With the advent of the world alliance for patient safety, the prevention and control of HAIs conquered another strategy to strengthen its implementation. However, the need for efforts to integrate and articulate these actions to the purpose of enhancing the security in the healthcare system as a whole remains<sup>(1,7)</sup>.

In this context, pursuant to Ordinance 2616/1998 of the Ministry of Health<sup>(8)</sup>, the infection control professionals develop actions to prevent and control the infections in the hospital healthcare services and constitute a multidisciplinary team that develops activities in the Hospital Infection Control Commissions (CCIH – "Comissões de Controle de Infecção Hospitalar" in Portuguese language) in the fields of nursing, medicine, microbiology, pharmacy, and hospital management<sup>(8)</sup>.

Accordingly, considering the strategies proposed by the WHO to the effectiveness of the prevention of adverse events, such as the implementation of the NSP and the reduction in such events, the following questions are raised: Which hospital services implemented and executed the NSP and which is the role of the infection control in the decrease in adverse events? Thus, the purpose of the research was to verify the implementation of the Patient Safety Center and its relation to the infection control in hospital services in the city of Natal, State of Rio Grande do Norte, Brazil.

## METHODS

It is a quantitative, cross-sectional study carried out in twelve public, private, and philanthropic hospitals located in the city of Natal/Rio Grande do Norte – RN. These scenarios were chosen in order to enable the understanding of the work process studied in different financing and management contexts. This study arose from the research “The interface between prevention and control of infections in healthcare services, and the patient and the employee safety” (“A interface entre a prevenção e o controle de infecções nos serviços de saúde, a segurança do paciente e a segurança dos trabalhadores” in Portuguese language), approved by the Office of the Pro-Rector for Research of the Federal University of Rio Grande do Norte (UFRN – “Universidade Federal do Rio Grande do Norte” in Portuguese language).

Natal, capital city of Rio Grande do Norte, located in the Brazilian northeast, has 20 hospitals provided with In-

tensive Care Unit – ICU and CCIH, of which 12 accepted to participate in the study through a letter of consent. The inclusion criterion was to verify the hospitals provided with operating CCIH/SCIH; and the exclusion criterion was the hospital service without ICU. Data were collected between February and August 2017 through a questionnaire with the professionals working in the CCIH of each hospital institution that was part of the study. The collection instrument was previously tested in a hospital that was not part of the study aiming at potential adjustments.

Data collected in the questionnaires were organized and analyzed based on descriptive statistics. The following variables were contemplated by the quantitative research instrument to characterize the participants: sex, age, education, workplace, period they worked in the institution and in the sector, number of jobs, occupation, employment bond in the institution, their position in the CCIH. The variables related to the implementation of the NSP can be found below (Chart 1).

Variables
Implementation of the Patient Safety Center.
Presence of patient safety protocols.
Presence of mechanisms to identify, evaluate and correct problems in the procedures.
Presence of mechanisms to identify, evaluate and correct problems in the use of equipment, medicines, and supplies.
Development of training activities regarding patient safety and quality healthcare services together with the professionals.
Collaboration of the nursing team regarding risk surveillance and management.
Risk management actions according to healthcare services provided in each institution, set forth in the Patient Safety Plan.
Notices of damages/adverse events to ANVISA.

**Chart 1**– Description of the variables regarding the Implementation of the Patient Safety Center Natal/RN, 2017

Source: Research data, 2017.

This research followed the guidelines and rules for researches involving human beings of the National Health Council, regulated by Resolution 466/2012, and was approved by UFRN’s Research Ethics Committee, Certificate of Presentation for Ethical Consideration No. 62825316.7.0000.5537.

## RESULTS

12 hospitals participated in the study, seven of them had a public management model, three, a private management model, and two were philanthropic hospitals. With respect to the interviewees, 28 healthcare infection control practitioners answered the questionnaire, being 23 wom-

en (82%) and five men (18%) with the average age of 41 years old. Regarding their occupation, there were 15 nurses (53%), two administrative technicians (7%), five nursing assistants (18%), four physicians (14%), one pharmaceutical care practitioner (4%), and one physical therapist (4%).

As for the education, five completed high school (18%) and 23 had higher education (82%). Among them, 15 were specialists or specialized and seven have Master’s degree or were Master’s students. Among the *lato sensu* postgraduate courses studied by the 15 specialists, 11 were in areas related to their field, namely: infectious diseases, hospital infection control, epidemiology, risk management, and patient care safety. The others graduated in the fields of public administration, neonatal intensive care, and STD/AIDS care.

With respect to employment bonds, 15 participants stated they had only one job (54%); nine stated they had two jobs (32%); one, three jobs (4%); one, four jobs (4%); and two did not answer to the question (7%). Among them, 13 were hired in the Consolidated Labor Laws (CLT – “Consolidação das Leis Trabalhistas” in Portuguese language) (46%) and 15 were under the public workers statute (54%).

Regarding the period they work in the institution, three participants work for less than one year (11%); 14 have been working for one to four years (50%); seven, for six to ten years (25%); two have worked there for more than 10 years (7%); six, for more than 20 years (21%); and one participant did not answer to the question (4%). As for the period they

have worked in the sector, 10 participants are there for less than two years (32%); 13, between two to 10 years (46%); three, from 13 to 31 years (11%); and one participant did not answer to the question (4%). In the question related to their occupation in the SCIH/CCIH, six participants stated they worked as coordinators and/or consultants and/or executives. The others answered according to their education field (nurse, nurse assistant, etc.).

Among the 12 hospitals researched, nine are provided with an operating Patient Safety Center – NSP, in which the professionals of the CCIH/SCIH work in the NSP. Considering the ones that do not have a NSP, two of them are bound to the public sector and the other is a philanthropic institution.

Hospital	Management bond	Organization of the NSP*	Participants members of the NSP	Patient Safety Protocols created (n=9)	Notices of adverse events to ANVISA (n=8)
H1	Public	No	-	-	-
H2	Philanthropic	No	-	-	-
H3	Public	Yes	Physicians, nurses, pharmaceutical care practitioners, nurse assistants, work safety technician	Yes	Yes
H4	Private	Yes	Physicians, nurses, nurse assistants, technical board, systems analyst	Yes	Yes
H5	Public	Yes	Physician, nurse, physical therapist, pharmaceutical care practitioner, social worker	Yes	Yes
H6	Public	Yes	Nurse, nursing technician, physical therapist, pharmaceutical care practitioner, biochemist, social worker	No	Yes
H7	Philanthropic	Yes	Nurse, managers, nursing manager, CCIH, pharmaceutical care practitioners	Yes	Yes
H8	Public	Yes	Nurses, physical therapists, pharmaceutical care practitioner, technical management	Yes	No
H9	Public	Yes	Nurse, physical therapist, and pharmaceutical care practitioner	Yes	Yes
H10	Private	Yes	Nurse and nursing technician	Yes	No
H11	Private	Yes	Physician, nurse, physical therapist, nutritionist, pharmaceutical care practitioner, and clinic engineer	Yes	Yes
H12	Public	No	---	Yes	Yes

**Chart 2** – Description of the variables regarding the Implementation of the Patient Safety Center according to the hospital, Natal, RN, Brazil, 2017

Source: Research data, 2017.  
 Note: \*Patient Safety Center

Regarding the implementation of Patient Safety Protocols, only the participants forming part of the CCIH in a hospital provided with NSP claimed they failed to institute the protocols in the service, due to the lack of material resources to do so (Chart 2). Regarding the patient safe-

ty protocols in the services (n=12), the participants stated they implemented several protocols, as verified in Table 1. In this case, the total amount of hospitals was considered since one hospital, even without the NSP, managed to implement the hand hygiene protocol.

**Table 1** – Protocols implemented by the Patient Safety Center in the 12 hospitals according to the management bond, Natal, RN, Brazil, 2017

Protocols implemented	Public	Private	Philanthropic	Total	
				N	%
Patient identification	4	3	1	8	66.7
Hand hygiene	4	1	1	6	50.0
Surgical safety	2	2	1	5	41.7
Safety in drug prescription, use, and administration	3	1	0	4	33.3
Patient fall prevention	2	3	1	6	50.0
Prevention of pressure ulcers	2	2	1	5	41.7
Others	2	2	1	5	41.7

Source: Research data, 2017.

It is possible to note that the patient identification protocol was the one with the highest incidence (66.70%), followed by the hand hygiene protocol (50%), and the patient

fall prevention (50%). Of the ones provided with NSP (n=9), the activities developed based on patient safety plan were the following ones (Table 2).

**Table 2** – Distribution of the activities developed in the Patient Safety Center of 9 hospitals, according to the management bond, Natal, RN, Brazil, 2017

Activities developed in the NSP*	Public	Private	Philanthropic	Total	
				N	%
Professional training activities regarding patient safety and quality health services.	5	3	1	9	100.0
Mechanisms to identify, evaluate, and correct problems in the procedures	4	2	1	7	77.8
Mechanisms to identify, evaluate, and correct problems in the use of equipment, medicines, and supplies	3	2	1	6	66.7
Active participation of the nurses in risk surveillance and management	2	2	1	5	55.6

Source: Research data, 2017.

Notes: \*Patient Safety Center

Among the activities developed in the NSP, the development of professional training activities regarding patient safety and quality health services (100%) is highlighted. Regarding the active participation of the nurses in risk surveillance and management, the negative statements (44.4%) and the fact that they are still implementing the safety culture in the institutions and still working to make these professionals aware call the attention.

Table 3 shows the strategies established by the Patient Safety Plan for risk management according to the professionals' statements in the hospitals with the NSP (n=9).

According to data on Table 3, among the strategies being implemented in the healthcare services, risk identification, analysis, evaluation, monitoring, and communication in the healthcare service in a systematic manner (77.8%), as well as prevention and control of adverse events in

healthcare services, which are directly related to patient safety (66.7%), are highlighted, which evidences the inter-

face between the CCIH and the NSP present in the hospitals with the service.

**Table 3** – Distribution of the Patient Safety Plan’s strategies according to the hospital management, Natal/RN, 2017

Strategy created by the patient safety plan	Public	Private	Philanthropic	Total	
				N	%
Identification, analysis, evaluation, monitoring, and communication of the risks in the healthcare service, in a systematic manner	4	2	1	7	77.8
Safety in the prescription, use and administration of blood and components of the blood	2	2	1	5	55.6
Safety in the use of equipment and materials	2	1	0	3	33.4
Maintenance of an adequate record of the use of orthoses and prostheses when such procedures happen	0	2	0	2	22.3
Prevention and control of adverse events in healthcare services, including infections related to health care	3	2	1	6	66.7
Safety in enteral and parenteral nutritional therapies	1	3	1	5	55.6
Encouragement to the participation of patients and their families in the care	2	0	0	2	22.3
Effective communication between the healthcare professionals and between the healthcare services	3	1	0	4	44.5

Source: Research data, 2017.

On the other hand, keeping the adequate record of the use of orthoses and prostheses when these procedures happen was reported by only two services (22.3%), however, for this strategy, such result does not mean the Patient Safety Plan failed, as certain strategies, such as the above mentioned strategy, will be implemented according to healthcare institution’s profile and its need for patient safety, being the NSP responsible for using the strategies or not.

Another strategy little contemplated by the hospitals was the effective communication between the healthcare professionals and the healthcare services (44.5%), implemented only by four hospitals with the NSP, showing that the communication is an essential point that must be worked in order to improve the care quality.

## ■ DISCUSSION

The implementation of the NSP in healthcare organizations has become mandatory after publication of RDC 36 of 2013, with the main goal to improve the patient healthcare focused on safety<sup>(1)</sup>.

This problem began in 2008, when the judicial demands regarding medical error increased in alarming rates,

showing that the healthcare services were losing their focus, especially regarding care<sup>(9)</sup>.

Following the publication of RDC No. 36<sup>(1)</sup>, a 120-day deadline was provided in order to establish the NSP and create the Patient Safety Plan – PSP. NSP’s function is implementing, disclosing, and keeping the PSP updated, as well as keep data updated in ANVISA<sup>(1)</sup>. However, creating a center focused on promoting a safe care and training the professionals with respect to the orientation provided to patients, family members, and persons accompanying hospitalized patients has become a challenge.

The presence of a pre-established culture in the healthcare services, directed to treatment and rehabilitation, hinders the emergence of activities directed to prevent diseases and secure health. Moreover, there are structural obstacles, such as lack of equipment, supplies, and scarce or inadequate materials, human resources who are insufficient and/or lack the skills to promote the patient’s safety. Such factors turn the implementation of patient safety protocols and strategies into a slow and daily activity for the professionals in charge<sup>(10-11)</sup>.

Creating preventive actions and strategies to reduce adverse events, securing risk management, articulating the intersectoral communication, and sharing the patient

safety plan are important tools in a safe care process. The commitment of all healthcare practitioners, management and the user itself, the patients, and family members can be added to these needs. Therefore, to corroborate the efficacy of implantation and implementation of the PNSP, the cooperation of the several components involved is extremely important to overcome the challenges and promote necessary and proper safety measures for a safe care<sup>(9)</sup>.

The preparation of care and procedural protocols are measures of high impact on cost reduction and damage mitigation to the patients, since it standardizes the work process and decreases unreasonable waste<sup>(9)</sup>. Accordingly, the data analysis made it possible to get to know in the healthcare practitioners' perspective the obstacles faced by each hospital institution in implementing the NSP and the strategies adopted in order to change the patient safety culture of the hospitals that already have a NSP.

According to ANVISA<sup>(12)</sup>, as a result of the strategic nature of the patient safety protocols, it is recommended periodic meetings and that the NSP's members are directly connected to the institution's management. Thus, the NSP must be constituted by healthcare professionals (physicians, nurses, physical therapists, nurse assistants, social worker, nutritionist, pharmaceutical care practitioner, microbiologist, among others) and professionals not related to the healthcare (engineering, systems analyst, sales, hygiene and cleaning services, management, among others).

There are also commissions that could support the NSP, but they are not formally organized (deaths, medical reports, ethics), which hinders and weakens the patient's safety. It is possible to note that many professionals that could contribute to patient safety, once they were inserted into the healthcare services, most of the times are not included in the NSP's official formation<sup>(10)</sup>.

Data collected in the research confirmed the above mentioned authors, since, in some hospital institutions of the study, structural problems were identified such as: shortage of professionals to constitute the commissions; work overload for the employees part of the CCIH; lack of equipment and supplies; unwillingness of the professionals to accept the changes interfering directly in patient care quality and safety, resuming to the understanding that many factors that encourage patient safety are related to institutional decisions<sup>(9)</sup>.

A study that exposed the weaknesses in the hospital institutions' situation regarding patient safety indicated that even with the implementation of the NSP, some protocols were not integrated to the work processes, teams were not created, and the employees' training did not promote significant changes in care in several hospital insti-

tutions. Therefore, the author concludes that compliance with rules, laws and regulations, such as the requirement of implementation of a safety center, does not result in the greater purpose of its existence, which is the effective patient safety<sup>(10)</sup>.

According to the MS, the basic patient safety protocols are defined as instruments directed for each process based on scientific evidence, in order to provide to the patients a safer care by using specific flows, indicators, and procedures. For this, protocols were created in order to guide the NSP's professionals regarding themes such as: hand hygiene, safe surgery, pressure injury prevention, patient identification, fall prevention, drug prescription, use, and administration safety<sup>(12)</sup>.

The study showed that, even though the obstacles faced in the participating hospitals are present, it was still possible to implement the basic protocols through patient safety plan strategies, or at least those related to patient identification and hand hygiene. This last protocol was established together with infection control professionals, since their activities related to raising awareness and monitoring healthcare professionals are essential to reduce damages to the patients.

As for the implementation of patient safety protocols, a study showed that the delay in implementing safe healthcare goals caused some employees to feel disappointed. However, for others, the possibility to participate in the process to implement these goals and, thus, offering a safe healthcare, both to the patient and the professional, caused a feeling of satisfaction<sup>(13)</sup>.

The Safety protocol regarding drug prescription, use, and administration was implemented by 33.3% of the services studied. This result is disturbing considering that the risks arising from drug administration errors are well-known. A study that evaluated the actions taken by the nursing team before, during, and after intramuscular drug administration in the pediatrics sector pointed the presence of flaws during the administration process, especially regarding the actions before the procedure, that did not have a satisfactory result<sup>(14)</sup>.

The strategy of encouraging the patient's and family members' participation in the healthcare was noted in 22.3% of the cases, i.e., in only two services studied. A study carried out to find out the family members' and caregivers' perception regarding patient safety in pediatric hospitalization units reinforced the need and relevance to raise awareness among the employees to include the family members and develop a partnership with them in order to promote a safe healthcare. The study also highlighted the importance for the managers to support the inclusion and

visibility of the accompanying persons and family members in the strategies to promote safety<sup>(15)</sup>.

It is also emphasized that, among the patient safety strategies, the effective communication between practitioners and healthcare services was not quite observed in the hospitals studied. The communication flows between the teams may reduce service quality and cause errors and potential damages to the patients<sup>(16)</sup>. Thus, it was identified the need for the institutions (as well as the healthcare practitioners) to ethically undertake to improve the communication as an institutional goal, consequently ensuring safety, integrity, and respect to the rights of patients, co-workers, and their own, as practitioners and citizens<sup>(17)</sup>.

In this sense, it is extremely important to establish an effective communication starting from identification of critic risk or accident, from the least severe to the most severe, and avoiding adverse events and the damages resulting from them, which is directly related to patient safety<sup>(17)</sup>. It is important to note that not only should the notice of severe adverse events be encouraged, but also of the risks, their causes, and the strategies implemented. Under this bias, managers and leaders have the mission to promote an effective communication/integration with the direct healthcare practitioners in order to plan and develop integrated actions of shared management for the service quality as a whole<sup>(17)</sup>.

In this regard, a study identified strategies to promote patient safety within the hospital context and, in this direction, listed strategies developed by healthcare nurses, with emphasis to those related to identification of the risks to which the patients are exposed during the nursing healthcare, incorporation of good practices in the direct and/or indirect healthcare, and identification of obstacles and opportunities to promote safety in the institution<sup>(17)</sup>. These good practices relate, especially, to the nurses' concern regarding the frequent fall risk, the transmission of healthcare associated infections, and adverse events related to surgical procedures in their work environment. These findings show the concern with the development of practices based on evidence in their field of operation<sup>(17)</sup>. The practitioners' concern regarding the errors and the suggestions to explain them show the willingness to provide a quality, safe, free of error healthcare<sup>(18)</sup>.

Confirming the findings presented in this research, attention is called to the study carried out in three Brazilian public hospitals, where the safety culture level found was below the ideal, emphasizing also that the management actions were considered the main contributing factor to the fragility of the safety culture in the services studied<sup>(19)</sup>.

Thus, the practitioners' effort to improve the healthcare, the records, and the implementation of the protocols

was observed. However, to build a safer patient care, it is important that, in addition to all healthcare practitioners, management and even the own user participate actively in this practice. In order to corroborate the effective implementation and implementation of the NSP, the cooperation of several components involved is essential to overcome the obstacles and promote adequate safety measures.

Therefore, ensuring patient safety does not rely only in creating policies and establishing rules, but also in offering the structure required for interventions in the practitioners' practices and in the patient care process. In this context, preventing HAIs comprises different segments, such as quality and safety management and the resource use, to ensure conditions and work processes consistent with the safety desired<sup>(20)</sup>.

## ■ CONCLUSION

It was possible to get to know through the research how the Patient Safety Center was implemented and its relation to the infection control in the perspective of the infection control practitioners of the hospital services in Natal/RN. The control and prevention of HAIs was present in the NSP studied, considering that the CCIH/SCIH practitioners are in touch with the NSP's members. This knowledge may contribute to management and assistance of the healthcare services involved in the research, as well as with the other services aiming at implementing the safety culture.

With respect to the strategies implemented, two of them stood out, the patient identification (66.7%) and the hand hygiene (50%). The notice of damages/adverse event to ANVISA has happened in 66.7% of the hospitals studied. The nursing team has collaborated with risk surveillance and management in 55.6%. Accordingly, although the actions and strategies implemented do not follow ANVISA's recommendations, most of the strategies implemented have a direct relation to the prevention and control of HAIs.

The results showed the obstacles in the hospital services regarding implementation of patient safety, which makes the patients more vulnerable to risks and adverse events. Some of the hospitals studied are considered reference to the city/state and carry out therapeutic procedures and make several highly complex diagnoses. In this regard, they should establish a service safety culture, implementing the strategic recommendations of patient safety.

It is highlighted that, although the data collection instrument did not clarify the entire context of implementation of the NSP, it was developed based on the laws and regulations directed to patient safety, RDC 36 of



2013. As a limitation on the study, the number of participants is indicated. In spite of that, it is important to clarify that the objective of this work was not representing the professionals, but the actions developed in the services where they work. Through this study, it was possible to contribute with the discussion of the theme among the participants, in addition to providing a diagnostic of the services investigated.

Then, the attention is called to the need for other studies revealing and evaluating strategies that are effectively being implemented and how they are changing healthcare practices and structural conditions that jeopardize the patient's safety. Therefore, the results presented may contribute to new researches and to the development of teaching methods directed to patient safety.

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