

# ACTIONS OF THE HOSPITAL INFECTION CONTROL COMMITTEE IN FRONT OF THE NEW CORONAVIRUS

## AÇÕES DA COMISSÃO DE CONTROLE DE INFECÇÃO HOSPITALAR FRENTE AO NOVO CORONAVÍRUS

### ACCIONES DEL COMITÉ DE CONTROL DE INFECCIONES DEL HOSPITAL CONTRA EL NUEVO CORONAVIRUS

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**Objective:** to report the experience of the executing nurses of the hospital infection control committee, in a public hospital, in the combat of the new coronavirus. **Method:** This is an experience report on prevention and control measures against the new coronavirus in light of the recommendations of the National Health Surveillance Agency, carried out from March to May 2020. **Results:** changes in practices, standards and routines are evident throughout the health care team aimed at the quality and safety of patient care, as well as the protection of health services workers. **Conclusion:** the current scenario required the hospital infection control committee to develop competencies and actions to confront the new coronavirus and to implement a contingency plan in the hospital environment. The co-participation of the interdisciplinary team was fundamental for the realization of the new work process in face of the pandemic.

**Descriptors:** Coronavirus. Hospital infection. Worker's Health. Patient Safety.

*Objetivo:* relatar a experiência vivenciada por enfermeiros executores da comissão de controle de infecção hospitalar, em um hospital público, no combate ao novo coronavírus. *Método:* trata-se de um relato de experiência sobre as medidas de prevenção e controle ao novo coronavírus à luz das recomendações da Agência Nacional de Vigilância Sanitária, realizado no período de março a maio de 2020. *Resultados:* evidenciam-se mudanças de práticas, normas e rotinas por toda a equipe de saúde que visam a qualidade e segurança da assistência à saúde ao paciente, bem como a proteção aos trabalhadores dos serviços de saúde. *Conclusão:* o cenário atual exigiu da comissão de controle de infecção hospitalar desenvolver competências e ações para o enfrentamento do novo coronavírus e a implementação de um plano de contingência no ambiente hospitalar. A coparticipação da equipe multidisciplinar foi fundamental para efetivação do novo processo de trabalho frente à pandemia.

*Descritores:* Coronavírus. Infecção Hospitalar. Saúde do Trabalhador. Segurança do Paciente.

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*Objetivo: relatar la experiencia de las enfermeras ejecutoras del comité de control de infecciones hospitalarias, en un hospital público, en la lucha contra el nuevo coronavirus. Método: Se trata de un relato de la experiencia sobre las medidas de prevención y control del nuevo coronavirus a la luz de las recomendaciones de la Agencia Nacional de Vigilancia Sanitaria, realizado de marzo a mayo de 2020. Resultados: son evidentes los cambios en las prácticas, normas y rutinas en todo el equipo de atención de la salud con miras a la calidad y la seguridad de la atención al paciente, así como la protección de los trabajadores de la salud. Conclusión: el escenario actual ha requerido que el comité de control de infecciones hospitalarias desarrolle competencias y acciones para enfrentar el nuevo coronavirus e implementar un plan de contingencia en el ambiente hospitalario. La coparticipación del equipo interdisciplinario fue fundamental para la puesta en marcha del nuevo proceso de trabajo ante la pandemia.*

*Descriptores: Coronavirus. Infección hospitalaria. Salud del trabajador. Seguridad del paciente.*

## Introduction

The control of Health Care Related Infections (HCRI), conceptualized as infections that are acquired during the assistance in the care process in hospitals or health care units, has always represented a great challenge for these institutions<sup>(1)</sup>. The quality of health services associated with HCRI is an issue that continues to attract attention. It is a biological, historical and social event, which has a direct impact on the safety of care and hospital costs, due to the length of stay, morbidity and mortality of patients.

In this context, as a way to minimize the incidence and seriousness of HCRI, Law n. 9.431 was created in 1997<sup>(2)</sup>, which obligatorily establishes the Hospital Infection Control Program (HICP) through the Hospital Infection Control Committee (HICC), which is responsible for supervising norms and routines, training employees and professionals, rationalizing the use of antimicrobials, providing epidemiological information and minimizing the rate of HCRI. The data collected and analyzed make it possible to develop strategies and actions for prevention and control specific for each hospital reality.

However, the limited resources of materials, structural inadequacies and few specialized professionals for the control of IRAS in public health services have always been considered relevant adversities for the implementation of the good health practices recommended by the Brazilian Health Regulatory Agency (Anvisa)<sup>(3)</sup>. In regard to the behavior of health professionals, the adherence to the actions of permanent education in service and the recommended

practices in the field of patient safety and the Regulatory Norm for Safety and Health at Work in Health Services (NR32)<sup>(4)</sup> are also challenging, making this a problem of global magnitude. In addition, it is observed low adherence to safety protocols and inadequate use of Personal Protective Equipment (PPE) by health professionals. The result perhaps of not knowing the harmful potential of micro-organisms when one or more of these infectious agents invade the organism and multiply.

Linked to this reality, on 30 January 2020, the World Health Organization (WHO) declared a public health emergency of international importance due to the dissemination of the COVID-19<sup>(5)</sup>. The COVID-19 is a disease caused by the new coronavirus (SARS-CoV-2) that arrived in Brazil at the end of February 2020 and its transmission has been progressively expanding, accounting for thousands of deaths in people, among them health professionals<sup>(6)</sup>. The experience in this current pandemic has been causing significant impasses for the members of the HICC, by the need to build flows and protocols, as well as the immediate and adequate decision making in order to enable the control of the dissemination of the virus and also to protect all professionals involved in the front line of this new reality.

The scientific evidence<sup>(6-9)</sup> highlights the various forms of dissemination of SARSCoV-2, through the respiratory droplets of infected individuals, which may present symptoms or not, or through aerosol-generating technical

procedures, besides direct or indirect contact with contaminated persons, objects or surfaces. However, the information speed in digital media has also contributed to the disclosure of false or no theoretical basis in the hospital environment, generating disorders for the control of the disease. For the HICC team, the current scenario of COVID-19 meant the need for a real understanding of how fragile the health team and the health network structure of the Unified Health System (SUS) were in Brazil. Also, it required effectively monitoring, stimulating and re-signifying the measures to minimize exposure and protect individual workers.

It is noteworthy that COVID-19 is of immediate compulsory notification by both public and private services. Suspected and/or confirmed cases must be registered in the official system of the Ministry of Health<sup>(10)</sup>. Regarding the exercise of work in private services, where the professional is contaminated by the new coronavirus, the social security and labor notification must be made through the Labor Accident Communication (LAC)<sup>(11)</sup>. For public workers, it must be observed the laws governing the professional bond.

Thus, this study aims to report the experience of CCIH executing nurses in combating the new coronavirus, in a large-scale public hospital.

## Method

This is an experience report, in the light of the recommendations of ANVISA<sup>(3)</sup> for the prevention and control of the pandemic caused by SARSCoV-2. The experience was conducted by HICC executing nurses from a large, public, hospital referral in trauma, neuroclinical emergencies and burn injuries in the city of Recife, Pernambuco, Brazil, from March to May 2020.

Therefore, to initiate the actions, it was recommended to elaborate and implement a Contingency Plan contemplating strategies and policies necessary to face the SARSCoV-2 pandemic, along with human and material resources management. The practical actions

implemented were: specific triage for the attendance of suspect patients and confirmed before admission into the service; offer of surgical masks to patients and accompanying persons; surveillance and management of infected professionals, with diagnostic tests available at the same service; implementation of clinical protocols and workflows covering the door entrance of adults and children emergency. It was also created cohort sectors with specific teams and internal communication of the changes implemented for all professionals of the institution, made available by booklets, posters, video monitors in the social areas of the hospital and online through institutional tools.

It was carried out the training and dissemination of new scientifically proven protocols, using a realistic simulation room, with the active participation of the Nursing Residents of the institution. It was reinforced the adequate use of PPE, according to the activity, involving the sectors of pharmacy and warehouse, establishing criteria of reuse, time of use and correct techniques of utilization and discards; monitoring of professionals regarding the adherence to the implemented actions, with the realization of daily visits to the cohort sectors of care for infected patients. Furthermore, in order to identify the quality and quantity of supplies dispensed related to the pandemic, it was carried out daily monitoring.

## Results and Discussion

In the practical experience of intra-hospital work to combat COVID-19, the health team has been showing signs of physical and mental illness, probably due to overwork and fear of the unknown. Also observed are the emerging changes in the working process of health professionals. There are reports that in China<sup>(12)</sup> the main contamination of workers has been due to inadequate protection as a result of lack of knowledge about the virus, prolonged working hours and exposure time during the assistance of suspected or contaminated patients. In addition, it was mentioned the possible lack of PPE to

professionals. These experiences were reflected during the new working process of health professionals who began to comply with good health practices, standards and routines aimed at the quality and safety of patient care and also at the protection of health service workers.

Hand hygiene, for example, is contemplated in the international goals of patient safety, officialized in assistance protocols as an essential and effective barrier for the protection of patient and health worker. Considering this perspective at the present time, it can be observed that the worker started to notice when there is a lack of essential inputs to this practice, such as damaged sinks and taps, or if the dispensers of alcohol gel, soaps and paper are empty. Monitoring among co-workers was also experienced in performing the correct hand hygiene technique, since the dissemination of SARSCoV-2 also reached the entire interdisciplinary team. Promoting hand hygiene is essential to minimize transmission of SARSCoV-2 and other diseases, so it is essential to save lives. Hands are one of the most frequent forms of transmission and contagion by the coronavirus, and when contaminated, they can touch the mouth, nose and eyes, and transfer the virus from one surface to another<sup>(13)</sup>.

With regard to NR32<sup>(2)</sup>, although little valued, workers must be guaranteed the provision of PPE appropriate to their function, and in sufficient quantity for the safe development of work tasks, as well as ensure their continuous training. Nevertheless, it is known that complying with this standard is also challenging, both for organisations and for workers. In this sense, before the pandemic, continuing education courses, updates and training were implemented through motivational campaigns, but with little adherence. It was observed that the “invisible”, represented by the new coronavirus, was able to “raise awareness” in a surprising way among professionals of the adherence to the goals desired by the HICC. Professionals are currently attentive and concerned about minimum standard precautions in the care provided to patients. Several examples of this accentuated concern were observed: the techniques of

paramentation and de-paramentation, the questions about the time of wearing masks, changing cloaks and gloves during procedures, the consumption of sanitizers and disinfectants for surfaces, the processing of health products, and the reprocessing of products considered disposable.

Standard precautions are basic measures to prevent the transmission of infections during the care of all patients and in all care environments, as well as to protect the professional from environmental risks. These include, in addition to hand hygiene, the correct use and disposal of PPE (gloves, apron, mask, goggles and/or face shield)<sup>(14)</sup>. A study conducted in the Federal District revealed a deficit in the knowledge and adherence of nurses to the use of standard precautions, and that knowledge about how and when to use PPE did not necessarily mean adherence to the correct measures of standard precautions<sup>(15)</sup>.

Another situation that has always presented itself frequently among health professionals, is the transit from hospital to home and vice-versa with the work uniforms, even knowing that jackets and uniforms are transmission vehicles contaminated by the care or for assistance to patients. In addition, many professionals wash their uniforms at home. With the arrival of SARSCoV-2, there is an institutional effort to provide laundry and the use of private uniforms. This action promotes more charging and valorization of this PPE, because the jackets and uniforms, besides serving as a vehicle for the transmission of pathogens, provide an environment for the exchange of genetic material between microorganisms<sup>(16)</sup>, further aggravating the situation of the current pandemic.

As for the use of ornaments, prohibited in the hospital environment<sup>(2)</sup>, they are finally staying more at home. No more venous access without gloves is punctured, each patient is given a new apron, and care not to touch the nose and mouth has required the uninterrupted use of goggles and masks. The current change in the professional's behavior when caring for the patient and also in their own protection reflects how much they

were exposed to acquire diseases that could lead them to death in the long term, such as acquired immunodeficiency syndrome (SIDA), hepatitis B, tuberculosis, among others. But SARSCoV-2 was different, because it brought the fear of exposure due to the speed of spread and the high mortality rates in a short time.

The fear of this new virus is driving changes in health care behavior and practices. These behaviors will be important legacies that promote more solidarity, in addition to care for the patient, the co-worker and the family at home. James Reason's Swiss cheese theory is put into practice, in which the loopholes that may promote the adverse event to SARSCoV-2 are monitored, and changes in workers' behaviour are effective, so that they do not hit the patient and the professional themselves<sup>(17)</sup>.

It is important to emphasize that there was a need to recruit newly graduated professionals due to the high rate of medical leave and absence, as well as the acquisition of new equipment and medication to face this new scenario. This entire process has required greater risk management for patient and professional safety. In normal times, problems with patient safety have been frequent; in abnormal times, they may increase. According to the National Health Service (NHS) England and the NHS Improvement<sup>(18)</sup>, the impacts on the SARSCoV-2 epidemic and patient safety are immeasurable. In partnership with the hospital safety core, HICC needs to monitor adverse events that may arise due to excess patients and procedures, in addition to adapting to new work processes.

## Conclusion

The changes in behaviour, norms and routines in the hospital work environment caused by the pandemic are expected to produce permanent behaviours that can qualify the care provided to the population, ensuring the protection of patients and health workers.

The prevention and control measures of SARSCoV-2 encompasses three levels of action of the nurses: care, management and the HICC,

that inter-related and synergistic seek the best evidence to be implemented. For the HICC team, the protection of patients and staff is their institutional responsibility. A difficult and challenging task due to the multi-factorial nature of so many events, never before experienced, represented by a new microorganism.

The effectiveness of public policies to address the epidemic is essential, not only for the general population or the group at risk, but must include health professionals and hospital institutions, potential sources of exposure to the virus. In this sense, in-depth discussions on the conditions and organization of work are necessary, as well as updates and dissemination of scientifically proven information that can bring safety to professionals and patients in the preservation of health in an integral manner.

## Collaborations:

1 – conception, project, analysis and interpretation of data: Elizandra Cassia da Silva Oliveira and Feliciale Perreira da Silva;

2 – writing of the article and relevant critical review of the intellectual content: Emanuela Batista Ferreira e Pereira and Regina Célia de Oliveira;

3 – final approval of the version to be published: Elizandra Cassia da Silva Oliveira, Feliciale Perreira da Silva, Emanuela Batista Ferreira e Pereira and Regina Célia de Oliveira.

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