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COVID-19: THE NURSING TEAM'S FACING

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Abstract: While the numbers of people infected and deaths caused by the new coronavirus grow daily, Brazil gradually stops and the population adopts the recommendations to contain the transmission of Covid-19, becomes aware of the seriousness of the situation and learns about the possible impacts of the pandemic, which started in December 2019 in China and arrived in the country in February 2020. The general objective of this study was to identify how health institutions were organized in the face of the pandemic in the municipality. And the specific objectives were to verify which Personal Protective Equipment (PPE) were used in the pandemic and to verify which difficulties they encountered during this period. It was a research with a qualitative and descriptive approach. The participants were professionals from the nursing team. Data were collected through semi-structured interviews. Data analysis was performed by analyzing the content of the subjects' statements. The guidelines of Resolution 466/12 were respected. In this study, it was possible to perceive that the health institutions organized themselves in some way at the beginning of the pandemic, such as, for example, acquiring PPE as much as possible, providing protocols and training. However, there was a need for more frequent practical training, as well as psychological or medical support for health professionals.

Keywords: Nursing team. Pandemic. Health institution.

INTRODUCTION

Coronaviruses cause respiratory and intestinal infections in humans and animals and most coronavirus infections in humans are caused by species of low pathogenicity, leading to the development of symptoms of the common cold, however, they can eventually lead to severe infections in at-risk groups, elderly and children. Prior to

2019, two highly pathogenic animal-derived coronavirus species (SARS and MERS) were responsible for outbreaks of severe acute respiratory syndromes. Regarding the human infection with the new coronavirus (2019-nCoV), the clinical spectrum is not completely described and the pattern of lethality, mortality, infectivity and transmissibility is not known. There is still no vaccine or specific drugs available, and currently the treatment is supportive and non-specific. However, one way to help is to guide the Health Care Services Network of the Unified Health System (SUS) to act in the identification, notification and timely management of suspected cases of Human Infection by the New Coronavirus in order to mitigate the risks of sustained transmission in the national territory, causing the dissemination to occur more slowly (BRAZIL, 2020). The Coronavirus, also known as COVID-19, emerged in Wuhan, China since the end of November 2019. Since then, it has been spreading on a large scale until today across the world. It is currently recognized as the most viral and severe epidemic in the world in the last twenty years, compared to Ebola 2014, MERS 2012 and SARS 2003.

Despite still being in the midst of the outbreak, there is an urgent need to understand the impact of COVID-19 (CARR, 2020). While the numbers of people infected and deaths caused by the new coronavirus grow daily, Brazil gradually stops and the population adopts Public health and collective health Core of knowledge and practices Chapter 6 41 recommendations to contain the transmission of Covid-19, raising awareness He learns about the seriousness of the situation and learns about the possible impacts of the pandemic that started in December 2019 in China and arrived in the country in February 2020.

As of April 1, 2020, the Sars-CoV-2 virus had spread to 180 countries, with 926

thousand registered cases and 46 thousand deaths. In Brazil, there have been 240 deaths so far and the number of cases has reached 6,800, doubling in one or two days and tenfold in a week, with the possibility of increasing even more rapidly from late April or early May, when the temperature drops and respiratory diseases such as Covid-19 spread more easily (FIORAVANTI et al., 2020).

The epidemic is spreading around the world partly because of the delay in testing suspects, giving the results and isolating them, and because of the failure to protect health professionals, which is also generating dissemination from health services. In addition, many contacts do not seek health services, as they develop a mild illness, which makes it difficult to identify cases and control the epidemic. China is managing to block the epidemic, probably because it is identifying and isolating at least 80% of contacts (SILVA, 2020). The importance of discussing and adopting official recommendations for the preservation and maintenance of care in public health services, the attitude of health professionals and the population in the face of the emergence of possible cases of the new coronavirus in the country were highlighted by the coordinator of the Epidemiology Center and Health Surveillance from Fiocruz Brasilia (NEVS) (MAIEROVITCH, 2020). The implementation of standard precautions is the main measure to prevent transmission between patients and healthcare professionals and must be adopted in the care of all patients. When professionals perform procedures with a risk of generating aerosols in patients with suspected or confirmed infection with the new coronavirus (2019-nCoV), they must use a respiratory protection mask (particulate respirator) with minimum efficiency in filtering 95% of particles up to 0.3 (type N95, N99, N100, PFF2 or PFF3).

The mask must be properly adjusted to

the face and must never be shared between professionals. Gloves for non-surgical procedures must be used when there is a risk of contact between the professional's hands and blood, body fluids, secretions, excretions, mucous membranes, non-intact skin and contaminated articles or equipment, in order to reduce the possibility of transmission of the new coronavirus (2019-nCoV) to the health worker, as well as from patient to patient through the hands of the professional (BRAZIL, 2020). Goggles or face shields must be used when there is a risk of exposing the professional to blood spatter, body secretions and excretions. They must be used exclusively by each professional responsible for the assistance, being necessary the correct hygiene after use (BRAZIL, 2020).

The cloak or apron must be impermeable and used during procedures where there is a risk of splashing blood, body fluids, secretions and excretions, in order to avoid contamination of the professional's skin and clothing. They must have long sleeves, knitted or elasticated cuffs and a back opening. In addition, it must be made of good quality, non-allergenic and resistant material; provide an effective antimicrobial barrier, allow you to perform activities comfortably and be available in various sizes. Dirty gown or apron must be removed and discarded after performing the procedure and before leaving the patient room or care area. After removing the coat, hand hygiene must be immediately carried out to avoid the transmission of viruses to the professional, patients and environment. Health professionals who work in direct assistance to suspected or confirmed cases must be organized to work only in the isolation area, avoiding circulation to other areas of assistance (BRAZIL, 2020). Nursing professionals are usually the first to identify patients with respiratory symptoms, or suspected cases with symptoms or inconclusive

laboratory results for 2019-nCoV. Thus, this research is justified, since all patients who seek health services (Primary Health Care, Emergency Care Unit, Emergency Room, Mobile Pre-Hospital Care and Hospitals) must undergo clinical screening, carried out by the nursing staff, which includes early recognition of a suspected case and, if necessary, immediate referral to an area separate from others that contains respiratory and hand hygiene supplies. Thus, this study has the general objective of identifying how the institutions were organized in the face of the pandemic in the municipality and the specific objectives of verifying which Personal Protective Equipment (PPE) was used during the pandemic and verifying the difficulties they encountered during the pandemic period.

METHOD

This is a research with a qualitative and descriptive approach (MINAYO, 2010), carried out in health environments in a city in the interior of Rio Grande do Sul. The participants were professionals from the nursing team, from a municipality in the interior of Rio Grande do Sul, who are working in health environments, whether in primary care, the Emergency Care Unit (UPA), hospital or Mobile Emergency Care Service (SAMU). Inclusion criteria were: to be working during the pandemic period. As exclusion: being away during the data collection period. Data were collected through semi-structured interviews that were carried out in reserved places. In order to respect the anonymity of the participating subjects, they were identified by numbering, according to the order in which the interviews were carried out, plus RH (for those who work in public health and collective health Nucleus of knowledge and practices Chapter 6 43 in the hospital network), RB (for those working in the basic network),

SM (SAMU) and UP (UPA). In this context, the investigation technique is composed of a significant number of questions to which the subjects can answer without any restrictions and aims at knowing opinions, beliefs, feelings, expectations, situations experienced, etc. Data analysis was performed by analyzing the content of the subjects' statements (MINAYO, 2010). For the development of this research, the regulatory guidelines and norms for research with human beings, of Resolution 466/12 of the National Health Council (BRAZIL, 2012) were respected. The subjects were informed of the objective of the study, as well as the right to participate or not in this research, and with a free decision to withdraw if they so wished, with their participation or refusal not resulting in a minimal risk to their condition as participants in the research. Before participating in the study, a Free and Informed Consent Form was presented to the subjects about the objective of the research. The Declaration of the Co-Participating Institution was sent to the municipal secretary of health and to the directors of the hospitals, requesting authorization to carry out the same. Data were only collected after approval by the Ethics Committee of ``Instituto Federal Farroupilha``, under opinion number 4,101,596.

RESULTS AND DISCUSSION

Of the ten participants, five were nursing technicians and five nurses. Four working in hospitals, two in SAMU, two in UPA and two in UB. Next, the categories obtained in the study will be exposed, as well as the discussion with the literature. Personal protective equipment to face the pandemic The first case of Covid-19 in Brazil was reported on February 26, 2020. A patient returning from a trip from China to São Paulo, after showing symptoms, was immediately admitted to a private hospital after presenting the symptoms. From that

date, surveillance among health authorities was intensified, as the spread of the SARS-COV-2 virus would only increase (ACOSTA et al., 2020). On March 20, 2020, Legislative Decree No. 6 was published, which recognized the state of public calamity in the country. The number of cases and deaths reported by Covid-19 skyrocketed daily. 71,886 cases and 5,017 deaths were reported in April, which gives a case fatality rate of 7.0% (ACOSTA et al., 2020). Concern for protection and infection with health professionals who were on the front line became imminent. For protection and because it is a respiratory transmission virus, the use of personal protective equipment (PPE) was essential in facing this pandemic.

In acquiring and training health professionals on the proper use and handling of this equipment, as well as providing ethical and humane care to infected patients, it has become essential. The correct technique for dressing and undressing is an effective way to avoid contamination among health professionals (OLIVEIRA, 2020).

Personal Protective Equipment (PPE) is essential in any activity in healthcare environments. They are the individual use devices used by the worker, intended to protect against risks capable of threatening their safety and health. All participants in this survey reported that their institutions organized themselves in early February for the pandemic, as it was from March 19 that the municipality declared a state of pandemic:

- *"From March we changed the waiting room, with distancing between patients... We work with windows and doors open (even in winter), using PPE."* (1, RB) - *"Covid Tent."* (7, UPA)

- *"... there has always been concern about preventive care and in addition to adopting PPE, we carry out routine examinations on all of them."* (9, SAMU)

It is the duty of the company to provide all the necessary PPE, according to the activity to be performed by the worker. One of the interviewees (6, HR) reported that the amount of PPE offered by the institution is insufficient at this time when they are constantly being changed. In this sense, it is important that health services, in addition to providing PPE in sufficient quantity, train all professionals who will have or may have contact with people infected with the new coronavirus:

- *"Protocols, continuing education and training."*(4, RH)

It is necessary that training on the correct practice of PPE minimize technical errors, as the training traditionally used, through demonstrations of the technique, does not guarantee that the professional can properly dress and undress (OLIVEIRA, 2020). Infection prevention and control measures must be implemented by professionals working in health services to avoid or reduce the transmission of microorganisms during any given health care. Regarding the supply of PPE:

- *"At the beginning of the pandemic, they were restricted, we used the masks for more days, but in the first month we received them in quantity: masks, caps, aprons, face shields, goggles, gloves. All within the expiry date."* (1, RB).

- *"Disposable masks at ease, gloves. PFF2 masks with exchange every seven days or if necessary. Safety glasses and face shield."* (3, HR)

- *"PFF2 masks, overalls, face shield, goggles, gloves."* (7, UPA)

- *"Caps, procedure gloves, apron, masks, goggles and face shield for public health and collective health Core of knowledge and practices Chapter 6 45 use at each service."* (10, SAMU)

The precautions that professionals must

take are based on the transmission of pathologies and in the case of COVID-19, the three main routes are: contact transmission, droplet transmission and aerosol transmission (CENTER FOR DISEASE CONTROL AND PREVENTION, 2020). The use of a PFF2 mask is indicated when providing care to patients with a suspected or confirmed diagnosis of COVID-19, in procedures that generate aerosols, such as, for example, manual ventilation before intubation, collection of nasotracheal secretions, bronchoscopy, among others. Gloves, for non-surgical procedures, but in situations where the professional has contact with blood or secretions, non-sterile gloves are indicated, as a standard precaution (BRAZIL, 2020). For the face, a face shield is indicated where there is a risk of exposure to blood spatter and secretions, which must cover the front and sides of the face.

The disposable apron, also called overcoat, is one of the PPE recommended in Precautions for Droplets and Aerosols and Contact and is indicated for health professionals in the care of a suspected or confirmed case of COVID-19. The cap must be made of disposable material and discarded after use, being the last PPE to be put on, as it protects the places that will be touched when removing the face shield, goggles and mask (BRAZIL, 2020). The difficulties of the nursing professional and the measures to face COVID-19.

Person-to-person transmission of COVID-19 occurs through self-inoculation of the virus into mucous membranes (nose, eyes, or mouth), as well as through contact with contaminated inanimate surfaces. One of the most important and at the same time the simplest and least costly measures to prevent contamination of people is hand washing (BRAZIL, 2020). In this sense, it is important that all professionals, whether own or outsourced, be trained to prevent the transmission of infectious agents and trained

in the correct use of PPE. The Ministry of Health (MS) offered training to all health professionals at the beginning of the pandemic, through Ordinance 639, with the aim of updating health services based on national and/or international technical and scientific evidence; prevent transmission of the virus to healthcare workers and close contacts; provide guidance on conduct towards close contacts, among others (BRAZIL, 2020). Five of the participants in this research said they had taken the training offered by the MS:

- *"To strengthen and clarify guidelines on the management of symptomatic patients and on the use of PPE, which was passed on to the team."* (2, RB)

- *"The training was extremely important to understand the virus and, in the face of Public Health and collective health Core of knowledge and practices Chapter 6 46 pandemic better qualify the care provided."* (9, SAMU)

However, one of those five participants stated that they had done it, but:

- *"It was not useful, I learned on a daily basis."* (6, HR)

Another research has shown that professionals who do not practice their techniques end up having their skills stagnant or with deviations in them over time (GONZALEZ, L.; KARDONG-EDGREN, 2017). Thus, it is necessary to carry out training that performs the practice of the proper technique among all professionals, to reduce technical errors and risk of contamination (OLIVEIRA, 2020). Professionals who did not undergo training through the Ministry of Health stated:

- *"Training was carried out at the institution."* (10, SAMU)

- *"I had a lot of training at the institution."* (7, UPA)

One of the measures to face the pandemic is training, which must even undergo a

theoretical review. However, practical in-service training is what gives professionals confidence when carrying out a procedure in an emergency situation, in the sense of protecting themselves and dressing correctly, as well as hand hygiene. In this sense, the entire team needs to be trained and qualified to be aligned and provide a much more efficient and safe service:

- *"There was a lack of courses and training, making it difficult to understand the disease."* (8, UPA)

Healthcare professionals are especially susceptible to infection. In Brazil, as in other countries, many of these professionals had to be removed from their activities because they had acquired the infection and many died as a result of COVID-19 (MEDEIROS, 2020). Health professionals on the front line of care for COVID-19 cases may experience difficulties in decision-making and anxiety, either because of the risk of becoming infected and transmitting it to their family members, or because of the loss of work colleagues and friends. When asked about their reactions to working during the pandemic, they reported:

- *"At first it was scary..."* (7, UPA)

- *"Fear, anxiety, but with time and training it passed."* (4, RH) - *"I was scared, apprehensive."* (5, HR)

- *"Fear of passing it on to the family."* (8, UPA)

- *"I was afraid."* (6, HR)

In addition to the risk of contracting the disease and passing it on to their family members, healthcare workers often feel frustrated at not being able to save lives, they also have to face ethical dilemmas such as, for example, choosing the treatment of some patients, in to the detriment of others, in a context of scarce resources. This scenario can result in suffering and disorders that may even appear after the pandemic (KANDRI, 2020;

NOAL et al., 2020). Regarding personal care:

- *"When I get home, I leave my shoes outside, I go straight to Public health and collective health Center for knowledge and practices Chapter 6 47 shower, put my clothes in the wash. I just don't wear a mask."* (8, UPA)

- *"Take a shower when I get home. Shoes are outside the house."* (10, SAMU)

- *"I take a bath at the hospital with chlorhexidine, then at home I take another bath, I wash my clothes separately from the rest."* (HR, 5)

While the calls for people to stay at home are reinforced every day, health professionals are preparing to do exactly the opposite, as they are, therefore, the most precious resources that require maximum protection and support in the fight against the pandemic. In addition, they are likely to suffer stigma even among family members, as they can be "carriers" of the coronavirus. For this reason, many chose to move away from family life, going to live alone during the pandemic, which can worsen the feeling of loneliness and veiled psychic suffering. Thus, it is important for these professionals to have medical assistance and psychological support, as well as to quickly perform diagnostic tests on symptomatic patients. In this study, all participants have tested more than once, and all tested negative for COVID-19.

CONCLUSION

The disease called COVID-19 is potentially fatal and is highly transmissible by droplets and contact, particularly indoors and environments. Healthcare workers are particularly susceptible to infection. The major challenges are to reorganize care, expand beds in the intensive care unit, supply individual protection equipment and have trained professionals. In this study, it was possible to see that health institutions organized

themselves in some way at the beginning of the pandemic, such as installing distancing, tents for COVID-19 care, acquiring PPE as far as possible, providing protocols and training. However, the need for more frequent practical training was observed. In addition, professionals are or were afraid of acquiring and passing on the disease to their family

members, requiring psychological or medical support. This way, with the speed at which the disease advances and still with few resources, there is a need for the conscious adoption of precautionary measures against Covid-19, because in this pandemic scenario, the collaborative effort of all is important: public authorities, families and citizens.

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