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EXPERIENCE REPORT

Management of resources in a federal emergency hospital during the COVID-19 pandemic

Gestão de recursos em um serviço hospitalar de emergência federal diante da pandemia de COVID-19

Gestión de recursos en un servicio de urgencia en hospital federal delante la pandemia de COVID-19

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ABSTRACT

Objective: To describe actions taken by the organizational management of an emergency service due to the COVID-19 pandemic, determined according to the prevalence of cases of infection by the coronavirus, severe acute respiratory syndrome, and flu-like illnesses. **Methods:** Experience report based on a retrospective analysis of the attention for respiratory syndromes in the first semester of 2019 and 2020, in addition to an analysis of documents from the institutional protocols of a federal emergency service. **Development:** An increase in the number of attendances was observed, representing 7.25% and 19.4% of cases in 2019 and 2020, respectively. This was due to the creation of the Crisis Office, including a multidisciplinary team created to elaborate the plan of action, changes in the physical structure and in the work processes, and training sessions. **Final considerations:** It became clear that the planning, coordination of actions based on the decisions of the Crisis Office, and the dissemination of reliable information, taking into consideration a focal point, were essential for the organization, management of the emergency service, and protection to the workers. **Descriptors:** Pandemics; Coronavirus Infections; Resources Management; Nursing; Emergency Service, Hospital.

RESUMO

Objetivo: Descrever ações de gestão organizacional de um serviço de emergência decorrentes da pandemia de COVID-19, definidas com base na prevalência de casos de infecção por coronavírus, síndrome respiratória aguda grave e síndromes gripais. **Métodos:** Relato de experiência baseado na análise retrospectiva dos atendimentos de síndromes respiratórias no primeiro semestre de 2019 e de 2020, além de análise documental dos protocolos institucionais de um serviço de emergência federal. **Desenvolvimento:** Observou-se aumento dos atendimentos, representando 7,25% e 19,4% dos casos de 2019 e 2020, respectivamente, devido à formação do Gabinete de Crise, com equipe multidisciplinar responsável pela construção do plano de ação com mudanças na estrutura física, processos de trabalho e treinamentos. **Considerações finais:** Evidenciou-se que planejamento, coordenação das ações pautadas nas decisões do Gabinete de Crise e divulgação de informações confiáveis mediante um ponto focal foram essenciais para organização, gestão do serviço de emergência e proteção aos trabalhadores.
Descritores: Pandemia; Infecções por Coronavírus; Gestão de Recursos; Enfermagem; Serviço Hospitalar de Emergência.

RESUMEN

Objetivo: Describir acciones de gestión organizacional de un servicio de urgencia resultantes de la pandemia de COVID-19, definidas basadas en la prevalencia de casos de infección por coronavirus, síndrome respiratoria aguda grave y síndromes gripales. **Método:** Relato de experiencia basado en análisis retrospectivo de atenciones de síndromes respiratorias en el primer semestre de 2019 y 2020, junto análisis documental de protocolos institucionales de servicio de urgencia federal. **Desarrollado:** Observado aumento de atenciones, representando 7,25% y 19,4% de los casos de 2019 y 2020, respectivamente, debido la formación del Gabinete de Crisis, con equipe multidisciplinar responsable por la construcción del plan de acción con cambios en la estructura física, procesos de trabajo y entrenamientos. **Consideraciones finales:** Evidenciado que planeamiento, coordinación de acciones pautadas en decisiones del Gabinete de Crisis y divulgación de informaciones confiables mediante un punto focal fueron esenciales para organización, gestión del servicio de urgencia y protección a trabajadores.
Descriptores: Pandemia; Infecciones por Coronavirus; Gestión de Recursos; Enfermería; Servicio de Urgencia en Hospital.

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INTRODUCTION

Coronavirus infections have been known since the 1960s, but the disease caused by the 2019 coronavirus (COVID-19) has brought world public health into an unprecedented situation, due to the high demand for ventilator support and its high mortality rate[1-3].

Researchers from all over the world turned to researches to treat and cure the infection caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), while health workers and managers started to seek trategies to optimize and guarantee the quality and safety of the care provided to the population, considering suspected and confirmed COVID-19 cases.

The fast dissemination of the virus throughout the world, infecting individuals and traversing territories, led the outbreak to be classified as a pandemic on March 11, 2020. Many countries started adopting actions to deal with this Public Health Emergency (PHE), including community blockades such as social isolation and the closing of borders[4].

The number of confirmed cases worldwide, until February 2021, was 103,631,793, with 2,251,613 deaths due to COVID-19[5]. Among these deaths, 227,563 were notified in Brazil, which had 9,339,220 confirmed cases, with a lethality rate of 2.4%[6].

The World Health Organization (WHO) warned about the need for actions to deal with the Public Health Emergency of International Concern (PHEIC), to contain the dissemination of the virus and save lives, minimizing the impact of the pandemic[7]. To this end, it was necessary to reorganize the health services concerning the management of physical resources, human resources, and infrastructure.

In Brazil, in January 2020, through the PHE Operation Center of the Ministry of Health (MS), the first actions to guide the PHE response were taken and coordinated in the scope of the Single Health System (SUS)[8], in the states of the federation and affecting the different levels of health care. In association with the Ministerial Decree[9] and the state Resolution[10], others can be mentioned, such as the National Contingency Plan for the Human Infection by the New Coronavirus[8], the Protocol for the Treatment of the New Coronavirus[11], the Guide for Epidemiological Surveillance Public Health Emergency of National Importance due to the Coronavirus Disease 2019[12], and the Technical Note No. 04 from the National Surveillance Agency (ANVISA)[13]. All these documents are the early directives to attempt uniform actions and strategies to prevent, identify, and treat patients, as well as to guarantee the safety of the workers.

Each state organized the attention and designed exclusive units called "reference centers" (RC)[11-13]. In the state of Rio de Janeiro (RJ), seven field hospitals were promised, although only the City Hospital Ronaldo Gazolla, the Instituto Estadual do Cérebro, and the field hospitals in Riocentro and in the districts of Maracanã and Leblon had that role, and even so, they cold not absorb the demand for care, with an oscillating number of cases which, at some moments, was too large for the services to handle.

Consequently, other health units needed to reorganize their attention to deal with the pandemic locally, that is, inside the area where they attend. In this regard, emergency services, which have worked for a long time above their functioning, capacity stood out, and found themselves overcrowded[14].

The difficulties faced by the services also stand out, going from issues regarding the diagnosis and treatment of the disease, the unavailability of material resources, the exhaustion of health professionals, not to mention the latent preoccupation with the political direction of Brazil, since there is insecurity in regard to the investment from the government for SUS and for science in general[1516].

There is also a contrast with the governors and actions of countries that had good results in controlling the pandemic, since representatives of the Brazilian government publicly denied essential preventive measures originated in scientific recommendations, such as social isolation[15-16].

Therefore, in the search for management solutions to attend both the emergency situations previously known, and those resulting from the severe acute respiratory syndrome (SARS) and flu-like illness (FLI) caused by the new coronavirus, the following question was raised: What are the main aspects to be planned by health services in the attention of emergencies in the population caused by the increasing trend of COVID-19 cases?

OBJECTIVE

To describe actions taken by the organizational management of an emergency service due to the COVID-19 pandemic, determined according to the prevalence of cases of infection by the coronavirus, severe acute respiratory syndrome, and flu-like illnesses.

METHODS

Ethical aspects

This study was approved by the Research Ethics Committee of the institution and did not require a Free and Informed Consent Form. The researchers employed actions to mitigate the risks of the research, guaranteeing the confidentiality of the data using a Commitment Agreement for Data Usage.

Design, period, and place of study

This is an experience report carried based on a retrospective analysis of the data regarding the cases of SARS-CoV-2 infections, severe acute respiratory syndrome (SARS), and flu-like illnesses (FLI) during the first semester of 2019 and 2020. There was also a document analysis of the institutional protocols of the emergency service of a medium-and-high complexity federal hospital in the city of Rio de Janeiro.

The institution is registered in the National Register of Health Facilities and had 185 functioning beds at the start of 2020, 18 of which were destined for the urgency and emergency sectors. It provides clinical and surgical care and is a reference for cancer patients and for surgical specialties of the unit, providing on-demand attention to surgical and clinical cases. Its physical structure is in accordance with the regulatory norms, and has all equipment necessary for the support of patients with serious cases. It counts with a multiprofessional health care team, formed by on-duty physicians with clinical and general surgery specialties, nurses, physical therapists, nutritionists, nursing technicians, and support services (diagnostic imaging and laboratory).

To subsidize the management of the service, this study attempted, by using the data related to the attention, to identify

the epidemiological setting of the COVID-19 pandemic in the ifrst months of the year of 2020, comparing it with the same period from 2019.

The data was collected from June to August 2020, using the e-SUS report software, based on the records of attendances as coded by the International Classification of Diseases and Related Health Problems (ICD-10)[17].

Population and sample

The population was formed by users attended by the emergency services from January to June in 2019 and 2020. The ICD-10 codes recognized in clinical practice during the pandemic were included when potentially related to the SARS-CoV-2 infection and associated with respiratory diseases.

It stands out that the determination of the diagnosis was made more difficult by the several existing respiratory diseases. Due to the scarcity of laboratory tests in the period analyzed, the cases of chronic RSs were also evaluated, especially considering the difficulties in determining whether an acute situation attended in an emergency was due to the worsening of a chronic state or to the development of a new disease. Cases related with chronic respiratory or cardiorespiratory diseases were not included. The codes used are synthesized in Chart 1.

It stands out that the FLIs presented acute respiratory frameworks, characterized by fever or feverishness, even if only referred, accompanied by cough, throat ache, coryza, or trouble breathing[18].

Study protocol

In the first stage, there was a survey of the users attended by the emergency service due to diseases related to respiratory syndrome, according with the ICD10[17].

The second stage included the analysis of data to size the proportion of the attention carried out due to the epidemiological weeks. Also, institutional protocols and documents regarding the flow of care in the emergency service were read, and the protocols and actions implemented were analyzed.

Analysis of results and statistics

The changes in the profile of care in the emergency service that was the setting of the study were analyzed according with the proportion of RS, considering:

$$\frac{\text{The number of respiratory syndromes (COVID-19 + SARS + FLI) in the period}}{\text{Total number of attendances}} \times 100$$

Using the Stata SE 15 software, the analysis of the proportion of attention was carried out based on the epidemiological weeks, according with the calendar of the Ministry of Health and due to the years of 2019 and 2020[19].

All protocols and documents were read that determined changes in the flow of care in the sector, with data related to managerial organization and conduct to protect the health care team. These data were recorded in a form developed by the research team and analyzed descriptively, from May to July 2020.

Chart 1 - Description of the ICD-10 codes related to the respiratory syndrome that were identified during the period of the study, Rio de Janeiro, Rio de Janeiro, Brazil, 2020

ICD-10	Description
A41.9	Sepsis, unspecified organism
B33.4	Hantavirus (cardio)-pulmonary syndrome [HPS] [HCPS]
B34	Viral infection of unspecified site
B34.2	Coronavirus infection, unspecified
B34.9	Viral infection, unspecified
J01.9	Acute sinusitis, unspecified
J06.9	Acute upper respiratory infection, unspecified
J09	Influenza due to certain identified influenza viruses
J10	Influenza, due to other identified influenza virus
J11	Influenza due to unidentified influenza virus
J11.1	Influenza due to unidentified influenza virus with other respiratory manifestations
J11.8	Influenza due to unidentified influenza virus with other manifestations
J12.9	Viral pneumonia, unspecified
J15/J15.9	Bacterial pneumonia not elsewhere classified/Unspecified bacterial pneumonia
J15.8	Pneumonia due to other specified bacteria
J18/J18.9	Pneumonia, unspecified organism
J18.2	Hypostatic pneumonia, unspecified organism
J18.8	Other pneumonia due, unspecified organism
J21	Acute bronchiolitis
J21.8	Acute bronchiolitis due to other specified organisms
J21.9	Acute bronchiolitis, unspecified
J44	Other chronic obstructive pulmonary disease
J44.9	Chronic obstructive pulmonary disease, unspecified
J45	Asthma
J45.9	Other and unspecified asthma
J80	Acute respiratory distress syndrome
J90	Pleural effusion, not elsewhere classified
R06	Abnormalities of breathing
R06.9	Unspecified abnormalities of breathing
U07.1/U071	COVID-19
U07.2/U072	COVID-19, unidentified virus
U04.9	SARS
Z20.9/Z209	Contact with and (suspected) exposure to unspecified communicable disease

DEVELOPMENT

From the total of 11,647 and 10,771 attendances carried out from the 1st to the 26th epidemiological week, in the years of 2019 and 2020, 7.25% and 19.4%, respectively, were due to RSs. The data in Figure 1 is a comparison of these periods.

From the 8th to the 9th epidemiological weeks of 2020, there was a discrete increase in the curve indicating the cases, and a precaution room was set up. It included one nursing professional exclusive to attend to suspected COVID-19 cases. At this point, the first notifications in the Brazilian territory started[8,12].

From the 13th week of 2020 on, from March 28th and April 3rd, the curve of attention of RS cases started to ascend, reaching its peak of 77.14% in the 19th week, a behavior that was not observed in the epidemiological curve from 2019. This ascension is in accordance with the growth in the number of notifications in the country[20].

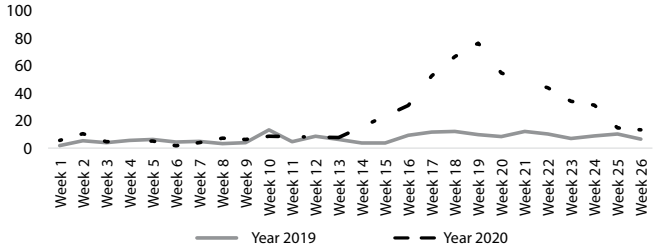

Figure 1 - Distribution of attendances of respiratory syndromes, Rio de Janeiro, Rio de Janeiro, Brazil, 2020

A study from Pernambuco compared the cases of SARS in Pernambuco before the COVID-19 pandemic and during its growth, finding that the number of notifications were three times higher during the pandemic than before[21].

When compared to international, worldwide projections, the medium growth of cases in Brazil was lower. This finding does mean that the problems experienced by the Brazilian population in general and by front line workers in specific were less intense or severe, considering that they had many difficulties, from the access to attention and testing to the purchasing of supplies that were essential to attend cases of SARS and FLI[3].

Considering this increase in the demand for attention at the first level of care, changes were necessary in the physical structure, in the attention flow, and in the organization of professionals who work in the emergency sector, including a remodelling of the physical structure and an adaptation of flow and protocols due to the new reality. It stands out that the first actions followed the prescriptions made at the time by the MS and by ANVISA[8,12].

There was not only an increase in the number of RS cases in 2020, but also in the number of nursing workers on leave due to the fact that they in the risk groups for the infection and worsening of COVID-19 symptoms (elders, pregnant women, and those with chronic diseases). There were also workers in temporary leave, with symptoms related to SARS-CoV-2 infections, leading to a diminution of nearly 50% in the size of the work force and overloading the workers who were in the frontlines of health care, who had to deal with increased demand for care and attend to patients with graver cases.

The institution followed the MS recommendations in regard to the guidance to deal with the pandemic, especially in regard to reduced circulation of people withing the unit, suspension of elective surgeries, assessment of the minimum amount of equipment and supplies to attend and receive patients who needed respiratory isolation[8,12].

However, these recommendations do not reflect the need for an internal reorganization of the services. Therefore, knowing that the actions are cross-sectional and go through all sectors that act directly or indirectly in emergencies, in March 2020 a work proposal was elaborated to evaluate the impact of the pandemic within the institution and to trigger actions needed to deal with this issue. This proposal was developed in two stages: the formation of a Crisis Office, and the organization of an action plan.

The Crisis Office (CO), formed in the first stage of the increase in the number of cases being attended, included a multidisciplinary team including several sectors involved in direct and indirect patient care of the institution, which was invited by the general management of the hospital to have a role in decision making. The CO was formed by the general management of the unit, the administrative management, chiefs from the infectology, pharmacy, diagnostic support, nursing, medical clinic, intensive care center, emergency, and research center of the unit.

The group had systematic meetings to create an action plan, making changes in the physical structures and the work processes. The main activity of the work group was the elaboration of an action plan using attention axes, as described in Stage II - the actions were evaluation and re-planned in weekly online meetings. Issues still not discussed or that could not be predicted were discussed by the group using a telephone messaging app.

The Organization of the Action Plan, within the model of crisis management, defined actions considered according to attention axes, designed by the CO based on the trajectory of the patients from their arrival in the unit until their discharge. This included those who entered through the emergency service with an adequate triage of suspected cases, the areas destined to attention and/or hospitalization, the clinical management of the cases, notifications, equipment, and supply, the logistic of operations, and the protective measures for frontline workers.

The following attention axes were defined in this work proposal: Emergency attention; Clinical hospitalization; Intensive care hospitalization; Supplies and logistics; Diagnostic and therapeutic support; Communication and information; Work protection.

Considering that the emergency is a service that requires extreme care, actions to be implemented were determined according with the fragilities that could make patient assistance more difficult. Thus began the contigency plan in the sector. Chart 2 is a compilation of the actions to provide assistance based on the best practices and on the safety of workers.

It stands out that, although other demands remain despite the need to expand COVID-19 care, it is necessary to think administratively, creating separate spaces and flows for the two different types of care, due to the increase of FLI and SARS in 2020[23]. Therefore, the institution named its wings "COVID-19" and "COVID-19 free", and its actions were periodically reviewed in the CO meetings.

Furthermore, the management of assistance followed the system of risk classification, which identifies and prioritizes the patients according to the severity of cases using the Manchester protocol[24-25], the attention organized according to the risk of the patients, aimning not to put the possibility of care at risk.

It can also be noted that the CO actions were aligned with the personal protection supplies, according to the recommendation published in March 2020 by the WHO, which discussed the centralized management of these acquisitions and coordinated the supplying of health units to avoid excesses or insufficient stock[26].

Brazil, however, experienced a collective and uncoordinated PHE in regard to the purchasing of supplies. Although the institution being studied is responsible for managing and planning its own goals using the budget destined to it[27], many supplies were not delivered in accordance to the dates agreed upon, and the purchasing sector had to deal with high prices, implying in the need to readapt flows and manage the resources to guarantee the assistance as well as the protection of the workers.

Chart 2 - Presentation of the actions adopted to confront COVID-19 in an emergency service, Rio de Janeiro, Rio de Janeiro, Brazil, 2020

Field	Description
Physical structure management	Changes in the layout of the risk classification room to increase airflow and ease of access, eliminating the need for the patient to enter in the main reception area to receive attention from the nurse that made the classification, with all preventive barriers in place;
	Division of the attention wings in "COVID-19 free", to attend emergency patients with no respiratory symptoms or other symptoms that could indicate an infection from the new coronavirus; and "COVID-19", to attend all RS cases, with physical barriers adapted for isolation, attending the needs for respiratory precautions and counting on an exclusive and well-equipped team.
	The entrance for workers was changed to the door to the side of the emergency entrance, with a direct passage to their resting space, to avoid passing through the reception;
	Organization of the area where workers put on their vests and equipment, with the installation of a water tank, liquid soap, 70% alcohol gel, and personal protective equipment (PPE), with informational cards indicating the order in which these should be used. At the times of shift exchanges, were made available: water-proof aprons, surgical masks, filter masks (PFF-2), cap, disposable shoes, protective goggles, face shield, disposable scrubs;
	Organization of the area for removing vests with information about the removal of PPEs, water tank, alcohol gel 70%, counter to put the facial masks and goggles and disinfectant to clean these items;
	Definition of places for first medical attention, with the recommended distancing between armchairs, equipped with material for immediate oxygen supplementation;
Assistance management	Prioritization of patients with RS symptoms, as long as there are no cases with risk of death.
	Use of sets of forms for hospitalization and discharge;
	Organization of fast sequence intubation boxes to guarantee that the procedure is safe and fast;
	Request for the purchase of borrowing of equipment to increase the technological park, receiving equipment for monitoring, mechanical ventilation (MV), digital saturation, and beds;
	Guidance for the patient to assume a prone position early for indicated patients; stability for the procedure and pronation with a physical therapy team for patients in MV.
	Establishment of a familiar communication team to provide daily information to the families;
	Use of the *daily huddle* [22] tool to evaluate what is yet to be done in the attention and in the management of the beds, considering the needs of each patient and the availability in the institution, making it possible to free the emergency beds to receive other cases.
Human resource management	Training of the multidisciplinary team about wearing and removing the PPE, using a virtual resource to be able to inform all the teams, in addition to *in loco* interventions;
	Training the nurses for risk classification so they can identify early the signs of severity and identify the suspected, probable, or confirmed cases, according to MS updated information.
	Revision of the administrative attributions of those who work on duty to guarantee that assistance is provided to critical patients, with recommendations for the delegation of bureaucratic activities to administrative workers of the sector;
	Sizing of the nursing team by transferring workers from less critical sectors to increase the workforce for emergencies;
	Monitoring of absenteeism due to COVID-19 and daily observation of signs of emotional exhaustion of frontline workers.

In spite of the efforts of the government, the COVID-19 pandemic exposed the Brazilian shortcomings in regard to the institutional acquisition of supplies for the health system. The dispute involving many countries (but also the private and public sectors within the countries) for supplies, PPEs, ventilators, and sanitizers was marked by judicialization and administrative acts, corroborating the immediate need to create new plans for the centralization of the purchase of these products.

Among the items that raised preoccupation due to their scarcity in the country, stand out N95/PFF-2 masks[28]. This situation reiterated the need for guidance, also produced in the service, for the adequate use, reuse, storing, and exchange of masks. The use of PPEs in adequate conditions and the availability of this equipment is essential for health workers in the context of COVID-19. Therefore, the health teams received guidance about how they should ration the use of these equipment, saving them for the most critical moments.

The exposure during work, coupled with the insecurity concerning this type of practice, was reported all around the country by many authors. This may have contributed for the contamination and absenteeism of many workers who provide direct assistance for users of the health system[29]. It stands out that the sue of personal protection equipment, when allied to hygiene and training measures that favor the recognition of risk situations, significantly reduces the possibility of contamination the workers[30-31].

In order to disseminate the information, the protocols and flows of the institution, and considering the uncertainties and the speed with which information (from sources that were not always reliable), the Center for Patient Safety, based on the best scientific evidence available, led the creation of technical notes, which became part of the documents of the unit. This material gave support for the production of institutional documents presented in the chart in alphabetical order, in order to present them effectively. They were also translated into illustrative cards distributed around the institution.

Considering the reduces workforce and attempting to minimize exposure by optimizing the time of assistance, it is relevant to mention the use of the "lean methodology" in emergencies[22]. This is a tool — originally used in the field of engineering — that was adapted for use in the field of health. It seeks to improve the management of services by rationing resources, spaces, supplies, and especially by guiding the workers about the best practices of care according to evidences and lean flows[32].

Chart 3 - List of illustrative cards produced by the Crisis Office to deal with COVID-19, Rio de Janeiro, Rio de Janeiro, Brazil, 2020

Card	**Description**
1	Advice about caring and protecting the skin of prone patients
2	Advice about preparing the body
3	Advice about swab collection
4	Advice about the clinical management of the patient hospitalized with COVID-19
5	Advice about the oral hygiene of critical patients
6	Advice about the order in which the PPEs should be worn and removed
7	Advice about the standard-precaution measures in regard to the use of the relevant PPE
8	Advice to the patients and visitors about circulation norms
9	Doses of medications for intensive care
10	Flowchart of the entrance, with COVID-19 cases separated from other users.
11	Flowchart to notify/investigate FLI/request testing
12	Proposal for the pharmacological management of patients hospitalized with COVID-19 and information on the use of chloroquine and its drug interactions
13	Set of forms for attendance, with discharges: form for notifications, consent form for isolation, guidance for home, medical prescription book, medical certificate
14	Set of forms for hospitalizations: notification form, testing request, authorization for hospitalization, guide for requestion transfers to the reference center

To this end, the cards generated by the service and used to disseminate information on the new work process and procedures are lined up with the methodology and provide safety to the community who is receiving assitance and to the workers.

Furthermore, the kits for the execution of the assistance and bureaucratic procedures, elaborated from the optics of the project, guided organized, safe, and agile execution of the activities, preserving the integrity of these workers by diminishing their exposure time[22,32].

In regard to worker protection, during the pandemic the problems faced daily by nursing workers also stand out, related to work conditions, high work loads, low pay, and inadequate work environments[33]. This reiterates that working in the struggle against COVID-19 exposes one not only to the (biological) risk of contamination, but also to psychosocial risks (including stress), mental and physical exhaustion, depression, and burnout syndrome.

Through the nursing observatory, the National Council of Nursing registered (until February 04, 2021) 47,664 cases of COVID-19 in nursing workers, with 535 deaths. It should be mentioned that Rio de Janeiro was the third state in the country in number of reported cases and the second in the number of deaths, according to gross data[34].

Therefore, this study proposes the reevaluation of management and attention protocols for suspected and confirmed COVID-19 in the emergency services, to guarantee nursing professionals safe and dignified work by promoting the prevention of physical and mental disorders in these professionals, who are potentially exposed to the virus during their activities[33].

Considering the variations in the number of cases of people infected by SARS-CoV-2 in Brazil, surveillance is necessary, in addition to the rigorous control of its dissemination and the early identification of cases, in order to predict the necessary resources for emergency care.

The control of the dissemination of the disease should be effectively strengthened in and out of health institution. The same is true for measures to contain and mitigate the pandemic, including social distancing and an actual adoption of protocols of safety, testing, isolation of confirmed cases, minimization of the circulation of people, use of masks, among other actions[23].

These measures aim to reduce the overload on health care services, providing conditions for all professionals involved in health practices to treat, care, and work.

Study limitations

This study is limited due to the fact that it is an epidemiological and managerial analysis of the emergency service of a single institution.

Study contributions

As a contribution to the advance of nursing knowledge, this study showed that it is possible to reorganize emergency services during a pandemic, basing it on scientific evidence from the fields of epidemiology, worker's health, and nursing management.

FINAL CONSIDERATIONS

This study presented the administrative and care measures adopted in the emergency service of a public federal hospital facing the COVID-19 pandemic in the state of Rio de Janeiro, during the first semester of 2020, with a clear increase in FLI and SARS cases, also presenting the results from the same period of 2019.

It has become clear that the planning, the coordination of actions based on the decisions of the members of the CO, and the dissemination of reliable information, taking into consideration a focal point, were essential for the organization and management of the emergency service. The prediction and provision of the supplies and equipment necessary for the care of the population, as well as the training of workers to use PPE and manage cases, in addition to the physical restructuring of the hospital wings, were essential for the service in this pandemic.

The actions of the management stand out, as it anticipated outcomes and created mechanisms, flows and routines that

reduced the time spent in care and guaranteed safety, as well as the inclusion of the several sectors and workers involved in actions to confront the pandemic.

The importance of caring for the workers and of continuously evaluating them was also demonstrated, aiming to avoid contamination and signs of mental exhaustion.

This study shows paths that can be followed by other public or private institutions in the organization of the the entryway to the system in other peaks of the COVID-19 pandemic or even in other public health emergencies. Finally, the organization and success of the actions result from the capacity of managing material resources, valuing human capital, and having care as the main axis of attention.

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