


Implementation and management of the intensive care service in the interior of Ceará in times of COVID 19: An experience report

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ABSTRACT

This study aims to report the experience regarding the implementation and management of the Intensive Care service in the interior of Ceará because of COVID 19, in the period from March to August 2020. This is a descriptive study of the experience report type, where the intensive care unit was faced with a new reality of care, as well as with the immediate selection and training of the multidisciplinary team. The structuring and organization of the hospitalization and treatment service included the incorporation of new technologies, the availability of Personal Protective Equipment, awareness about the isolation of an area then critical for the movement of people, and the concomitant selection and training of the team that would provide care to these patients. It should be noted that actions aimed at continuing education in health were fundamental to improve the quality of patient care, strengthening the safe practice of the growing demand for professionals to work in

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ICUs. This reality has highlighted some important aspects in the context of the Brazilian health team, such as the inadequate number of professionals, low salaries, and inadequate working conditions. Thus, with the objective of guiding the care provided with excellence, this study shows the importance of a service based on a scientific technical base, the relevance of training and the integration of multidisciplinary team and strengthens the perception of the need to implement and manage an evidence-based service to benefit from management tools, technologies, and knowledge in the care of patients with COVID-19.

Keywords: COVID-19, Intensive care unit, Continuing education.



INTRODUCTION

With the emergence of the new coronavirus, scientifically called Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV-2), the etiological agent of Coronavirus Disease 2019 (COVID-19), and its rapid global spread, the number of infected people and the demand for health services grew, resulting in an increase in hospitalization rates and individuals requiring intensive care in hospital services (Meneses, 2020).

In Brazil, the first confirmed case of COVID-19 was registered on February 26 in São Paulo, then spread throughout the country. The COVID-19 epidemic was declared a pandemic on March 11, 2020, becoming a serious public health problem (Brasil, 2020).

Epidemiological data for 2021 showed that there were about 240,940,937 confirmed cases of COVID-19, including 4,903,911 deaths, worldwide. As of October 2021, Brazil had 21,664,464 confirmed cases with 603,282 deaths (WHO, 2021).

The world's health care system has collapsed. Even in developed countries with well-structured systems, they were affected, due to the overload in the demand for the treatment of critically ill patients, who required intensive care. Public hospitals often had to opt for rationing of intensive care beds, as health needs increased, but financial resources did not (Massuda et al., 2020).

In hospital health services, work is focused on the act of caring, involving a direct link between professional and patient (Dal'Bosco et al., 2020).

In this context, the Intensive Care Units (ICUs), which are characterized as environments of high complexity in the in-hospital environment, with the objective of offering advanced life support for various levels of impairment in critically ill patients, played a role of great relevance and protagonism. Since, in a general context, an ICU provides a specialized facility focused on continuous monitoring, maintenance, stabilization, and improvement of the clinical condition of hospitalized patients on an interrupted basis (Ferreira, 2017).

These circumstances, in addition to directly affecting the work routine of health services, interfering in the schedules and shifts of professionals, also negatively influenced care management and the quality of nursing care, contributing significantly to the intensification of a crisis in the health sector. In this sense, this problem requires professionals to develop their managerial skills and competencies, which consist of articulating and integrating actions, favoring, qualifying, and contextualizing care, in a predictable or planned way (Treviso, *et al.* 2017).

In this context, care practice and management are essential for the organization of work and human resources, as their performance is based on general competencies, which include health care, decision-making, communication, leadership, management, and continuing education (Souza; Axe; Sousa, 2019). These actions direct the activities of professionals in a coordinated and organized



manner towards qualified, comprehensive, and efficient care (Berghetti; Franciscatto; Getelina, 2017).

Thus, the changes, the advances in the scenarios of care practices and the health situation, made the *World Health Organization* (WHO) consider the moment as one of the greatest health crises ever seen in the world, which had repercussions in changes in the organization of teams and work logistics. Thus, these aspects required from the professionals training, specialized knowledge, competencies and managerial skills, as well as experience in the administrative area for the organization of sectors, material resources and equipment, for the recruitment and dimensioning of personnel and assistance (Soares; Resck; Terra, 2016), especially in the midst of these adversities and potential situations that weaken the quality and problem-solving capacity of health care.

Thus, this study aims to report the experience of the implementation and management of the Intensive Care service in the interior of Ceará as a result of COVID 19. from March to August 2020

METHODOLOGY

This is a descriptive study of the experience report type on the implementation and management of the Intensive Care service in a city in the interior of Ceará as a result of COVID 19, which occurred in the period from March to August 2020.

Pereira *et al.* (2018), an experience report is an exploratory study, described by analytical texts referring to the experiences lived in the field, supporting the effectiveness of this research. It is reiterated that the work corresponds to an experience report based on a subjective analysis of the authors.

The study took place in the city of Sobral, located in the North Zone of Ceará, more specifically in the Northern Regional Hospital (HRN) is the largest hospital in the interior of the Northeast Region, with more than 54 thousand square m² of built area, being responsible for serving an estimated population of 1.6 million people, from the 55 municipalities that are part of the Northern macro-region of the State. Tertiary (attends to cases of medium and high complexity). It has 24-hour urgent and emergency care). It is a reference in pediatrics, thoracic surgeries, vascular surgeries, and otorhinolaryngology (Institute of Health and Hospital Management, 2021).

In order to construct subsidies that would guide the implementation and management of Intensive Care Units, a literature review was carried out, based on institutional guidelines and standardizations, as well as recommendations established by the National Health Surveillance Agency (ANVISA) and the Brazilian Association of Intensive Care Medicine (AMIB) for adherence and adequacy of the best evidence for the local reality and pertinent in all stages of the process. In this continuum, the document was evaluated and approved by the Hospital Infection Control Service (SCIH) and approved by the hospital's Quality Management, to which the CC unit is subordinate.



The implementation and management of the service aimed at the care of critical patients with COVID-19 included points from the structuring and organization of the service for the admission and treatment of patients, as well as the incorporation of new technologies, availability and training on the use of Personal Protective Equipment (PPE), awareness about the isolation of an area then critical for the circulation of people and the concomitant action of selection and training of the team that would provide the Assistance to these patients

RESULTS AND DISCUSSION

With the emergence of COVID-19, the health team was faced with a new reality of care, changes in the logistics of services, as well as the need for selection and training of the multidisciplinary team.

The challenges with regard to the management of resources and materials were not trivial, requiring from health services and managers strategies and plans to face this new reality, with contingency measures prepared almost continuously.

For the reorganization and implementation of a new intensive care unit, the first stage consisted of the selection of the members of the multidisciplinary team. Where the main requirement was the choice of professionals with expertise in the area of care for critical patients, however, if there was insufficient of these professionals to compose the service in a comprehensive way, the team was merged, inserting members who would need training in an immersive way about the area and during the shifts it was decided to keep professionals with more experience and others who would need greater supervision.

It is emphasized that the actions aimed at continuing education in health were fundamental to improve the quality of care for patients with the new coronavirus, strengthening the safe practice of the growing demand for professionals to work in ICUs. In addition, the management established among the actions present in the management of the service. channels of dialogue between the multidisciplinary teams in the context of intensive care, which were of fundamental importance in the context experienced.

The pandemic moment required the structuring of Institutional Protocols, based on the Protocols of the Ministry of Health. One of the strategies adopted to disseminate information was educational actions, under the responsibility of the service's most experienced professionals, who took on this great challenge, supported by hospital management, aiming at the systematization of care for the safety of patients and professionals.

According to Ferrari (2020), in addition to respiratory compromises, COVID 19 can cause damage to other systems, including the cardiovascular system, immune reactions, and systemic



inflammatory disorders. Therefore, hemodynamic surveillance of the patient should be intensified in order to avoid or minimize further damage.

In this context of patient and professional safety, the training addressed the following topics: definition of COVID-19, the epidemiological situation of the disease in the world, in Brazil and in Pernambuco, main signs and symptoms, standard precautionary measures, droplets, aerosols and contact, importance of the use of PPE, demonstration of the steps of dressing and undressing, and the step-by-step of hand hygiene.

The clinical severity presented by the patients and the increase in the number of clients with hemodynamic instability was exacerbated in May and required a greater demand for work from the team. In the actions adopted in the logistics of the service, admission stands out, where care was based on the performance of various procedures, clinical stabilization and the establishment of communication to family members.

Health professionals working in critical and semi-critical care needed to prepare themselves to deal with the overload of critically ill patients, in a scenario of lack of equipment such as mechanical respirators, high-flow nasal catheters, non-invasive ventilation masks and personal protective equipment (PPE), which are extremely essential in view of the high transmissibility of the virus (Phua et al., 2020). This was and still is one of the challenges faced in the Brazilian context, which, like other global health systems, needed to undergo a rapid transformation to face and manage the health crisis (Rodriguez; Morales et al., 2020).

In the daily routine of the service, the team was faced with clinical worsening of the patients, prolonged hospitalization and difficulty in their recovery due to the systemic involvement caused by the disease. Another important point to highlight was the adoption of weekly meetings through videoconferencing in order to strengthen the initial training offered to professionals to improve care practices based on the discussion of cases and adverse events that occurred during the week. Thus, enabling an improvement in the coordination of care and communication between professionals.

The frontline position of the multidisciplinary team in the ICU environment makes it conducive to their protagonism due to the very characteristics of the profession that require them to remain at the patients' side for a longer time. Thus, the competencies of these professionals stand out in the application of Ministry of Health protocols related to the pandemic (Barbosa *et al.*, 2020).

However, it should be noted that the climate is one of total attention and apprehension. among health professionals, The need to face a totally unknown scenario in terms of speed of spread, possibility of infection on a scale never seen before and number of deaths only comparable to a war scenario. This scenario requires a lot of physical and emotional effort from health professionals who are and will be on the front line, in addition to stress and the high risk of contracting the virus.



Nursing professionals are one of the groups of vulnerability, since the number of deaths among health professionals is already a fact and causes concern for the authorities (Brasil, 2020)

The care and managerial challenges were especially related to factors such as the need to redefine workflows; need for rapid isolation; global clinical management; and infection prevention, considering both the protection of patients and health professionals. In addition, it was necessary to redefine public policies to increase the capacity of intensive care beds, focusing not only on infrastructure and supplies, but also on team management (Phua et al., 2020)

In the study conducted by Bitencourt *et al.* (2020), the protagonism of health professionals was pointed out in all interfaces of care for patients with COVID-19 from the composition of the commissions, through the planning and operation of the physical structure, human resources management and construction of protocols and care flows, in addition to acting directly in care.

In this context, it was noticed that the reconciliation of technical-scientific practice with humanization practices in these spaces has become a challenge due to the great demand required of health professionals. Despite this, and due to the isolation of these patients, actions such as video calls to family members were adopted, in addition to calls to family members made by medical professionals to pass on information in a more detailed way. The provision of activities that were part of the patients' daily lives were also included in the routine of the service, such as listening to music, praying, among others.

In this context, it is also worth mentioning the importance of social support as an element of protection that helps individuals to face stressful situations more efficiently. Therefore, the relevance of using other non-face-to-face devices to get in touch with others and strengthen social support through telephone calls and video calls is emphasized (WHO, 2020).

Among the limitations of the study are, due to the high demand required of multiple activities, the difficulty of recording all the actions performed and the impossibility of a more individualized focus on the difficulties and points of improvement identified in the actions of each group of professionals. As well as the lack of equipment, PPE and changes in protocols often made the team adapt the work process initially structured.

CONCLUSION

Promoting the implementation and management of the intensive care sector was a challenging process that required professionals to have excellence in technical and scientific knowledge and a strong emotional structure. In addition to care, managerial and clinical reasoning skills and acquisition of more knowledge in the area. Thus, it is extremely important that the professional maintains a posture of active listening, empathy, communication, multiprofessional work, critical sense and humanization to generate a good functioning of the service in which he is inserted.



This reality highlighted some important aspects in the context of the Brazilian health team, such as the inadequate number of professionals, low salaries and inadequate working conditions. It also strengthened the importance of a service guided by the technical-scientific basis, relevance of training and integration of the multiprofessional team, and strengthened the perception of the need to implement and manage an evidence-based service in order to empower management tools, technologies, and knowledge about the care of patients with COVID-19.

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In-depth studies on the subject are relevant because they provide society with knowledge of the importance of the multiprofessional team's performance in the face of critically ill patients in all contexts. As well as strengthening the importance of training and continuing education in health services.

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