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Experience report of nursing services in screening for the diagnosis of COVID-19 in health professionals

ABSTRACT | Objective: To describe the difficulties reported by health professionals during the screening service, given the difficulties in assisting suspected or confirmed patients at COVID-19. Method: This is an experience report of the care provided in nursing screening to health professionals to collect samples for the diagnosis of COVID-19, between April and July 2020, at a public university in central Brazil. Results: The difficulties reported were: limited access to Personal Protective Equipment in the workplace; restricted access to diagnostic testing for COVID-19 and poor knowledge about the differentiation and purpose of the tests. Conclusion: The performance of nursing to health professionals in the pandemic is extremely important. Strategic approaches by government agencies and health institutions regarding training for health professionals and access to equipment necessary for workers' health are relevant.

Keywords: Coronavirus Infections; Community Health Nursing; Health Services.

RESUMEN | Objetivo: Describir las dificultades reportadas por los profesionales de la salud durante el servicio de cribado, dadas las dificultades para atender a pacientes sospechosos o confirmados en COVID-19. Método: Se trata de un informe de experiencia de la atención brindada en el cribado de enfermería a profesionales de la salud para recolectar muestras para el diagnóstico de COVID-19, entre abril y julio de 2020, en una universidad pública del centro de Brasil. Resultados: Las dificultades reportadas fueron: acceso limitado a Equipo de Protección Personal en el lugar de trabajo; acceso restringido a las pruebas de diagnóstico para COVID-19 y poco conocimiento sobre la diferenciación y el propósito de las pruebas. Conclusión: El desempeño de la enfermería a los profesionales de la salud en la pandemia es de suma importancia. Los enfoques estratégicos de las agencias gubernamentales y las instituciones de salud con respecto a la capacitación de los profesionales de la salud y el acceso a los equipos necesarios para la salud de los trabajadores son relevantes.

Palabras claves: Infecciones por Coronavirus; Enfermería en Salud Comunitaria; Servicios de Salud.

RESUMO | Objetivo: Descrever as dificuldades relatadas pelos profissionais de saúde perante a assistência a pacientes suspeitos ou confirmados da COVID-19, durante um atendimento em triagem para realização de exame. Método: Trata-se de um relato de experiência dos atendimentos em triagem de enfermagem à profissionais de saúde para coleta de amostras para o diagnóstico da COVID-19, entre abril a julho de 2020, em uma universidade pública da região central do Brasil. Resultados: As dificuldades reportadas foram: acesso limitado aos Equipamentos de Proteção Individual nos ambientes de trabalho; acesso restrito a testagem diagnóstica para COVID-19 e pouco conhecimento sobre a diferenciação e finalidade dos testes. Conclusão: A atuação da enfermagem aos profissionais da saúde na pandemia é de extrema importância. É relevante abordagens estratégicas de órgãos governamentais e de instituições de saúde acerca de capacitação para os profissionais da saúde e acesso aos equipamentos necessários para a saúde do trabalhador.

Palavras-chaves: Infecções por Coronavirus; Enfermagem em Saúde Comunitária; Serviços de Saúde.

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INTRODUCTION

Coronaviruses are important pathogens that develop respiratory, gastrointestinal, liver and central nervous system infections. The coronavirus belongs to the family coronaviridae of the order nidovirales and the subfamilies; alphacoran-

avirus, betacoronavirus, deltacoronavirus and gamacoronavirus. At the end of 2019, in the province of Wuhan, China, the new coronavirus was detected, from the subfamily betacoronavirus, which is responsible for the Severe Acute Respiratory Syndrome (SARS), known as the SARS-CoV-2 virus, which develops the COVID-19 disease.^{1,2} On March 11th, 2020, the World Health Organization (WHO) considered COVID-19 to be a pandemic.³

The spread of SARS-CoV-2 occurs from person to person through the respiratory tract, through droplets, through coughing or sneezing, through aerosols, through procedures such

as orotracheal intubation, secretion aspiration and others. Dissemination by contact occurs through contact with the infected person and the surface contaminated by the virus.^{1,2,3} Thus, it is essential that health professionals on the front line of the COVID-19 pandemic be supported with the Personal Protective Equipment (PPE) necessary for each assistance to be offered.³

COVID-19 disease has limited scientific knowledge regarding its approach and several nonspecific clinical manifestations that may include cough, fever $\geq 37,8^{\circ}$ C, dyspnoea, myalgia, fatigue or tiredness, gastrointestinal symptoms such as diarrhoea, anosmia (loss of smell) or hyposmia (decreased smell), ageusia (loss of sense of taste), sore throat, headache and chills.

In the course of the pandemic, evidence pointed to extrapulmonary clinical manifestations related to SARS-CoV-2, such as neurological, cardiac, vascular system, renal, hepatic, endocrine, gastrointestinal and dermatological changes.³ The WHO addresses that the majority of patients with diagnosed COVID-19 can be asymptomatic and oligosymptomatic.³

Patients who present a picture of clinical manifestations suggestive of COVID-19, in addition to imaging tests typical of viral pneumonia such as chest radiography and chest computed tomography (CT) are indicated for investigation for diagnosis of the disease.^{1,2,3}

For the diagnostic confirmation of COVID-19 occurs through detection tests of SARS-CoV-2 by molecular biology in Real Time Polymerase Chain Reaction (RT-PCR), (from English, Reverse transcription polymerase chain reaction), that detect the RNA of the virus in nasopharyngeal and/or oropharyngeal secretion and rapid tests that are validated serological tests capable of detecting the presence of anti-SARS-CoV-2 IgM and IgG antibodies in blood plasma samples.^{3,4,5,6,7}

In this context, the spread of the

virus occurred in several countries and the nurse practitioner has played a vital role as an integral part of health care to the suspected or confirmed population of COVID-19 at the most diverse levels of assistance, acting in public health care in prevention and infection control. Nursing has presented itself as a professional group with greater contamination by SARS-CoV-2, due to insufficient protection devices, work overload, lack of health products, generating dissatisfaction in care, feeling of anguish, anxiety, psychological pressure and job stress.^{4,5}

However, we emphasize in writing this experience report to share with the scientific community the main confrontations experienced by nursing professionals in the daily practice of screening (welcoming) to health professionals in the moment preceding the collection of exams for diagnosis of COVID-19.

Therefore, the objective of the experience report is to describe the difficulties reported by health professionals during the screening service, in view of the difficulties in assisting suspected or confirmed patients at COVID-19.

METHOD

This is an experience report on the role of nursing in assisting health professionals in collecting samples for diagnosis of COVID-19 from a public university in central Brazil, between April and July 2020. Sample collection for the diagnosis of COVID-19 in health professionals was focused on expanding the diagnosis of these professionals and minimizing the spread of SARS-CoV-2.

The environment for the collection of samples developed a direct application of the protocols published by the Ministry of Health, the National Health Surveillance Agency and Center Disease Control in the diagnostic testing of symptomatic health professionals for COVID-19.

Diagnostic testing for COVID-19 was performed in an open and airy environment, and the tests were performed using RT-PCR and rapid testing, depending on the symptoms at the time these professionals were attended.

Initially, health professionals with symptoms were screened by nurse professors and nursing students, for the application of a semi-structured questionnaire of sociodemographic data, afterwards, medical professors and medical students, analyzed the patient's data to determine the ideal diagnostic exam to be accomplished. Subsequently, nursing professors and nursing students collected samples from patients in the health professional category.

The nursing care developed in the sample collection space was carried out by nursing professors and students of the last year of the undergraduate nursing course and had the purpose of welcoming the symptomatic health professional, active listening, addressing aspects related to sociodemographic characteristics, clinics, history of previous tests for COVID-19, investigation of the onset of signs and symptoms and their characteristics, as well as measurement of vital signs, oxygen saturation, by means of pulse oximetry, temperature, heart rate, respiratory and subsequently the collection of samples for the diagnostic examination.

The average duration of nursing care for symptomatic health professionals occurred between 15 to 20 minutes, including the applicability of a semi-structured questionnaire to guide care. All information obtained for discussion and reflection in this experience report was spontaneously expressed by health professionals during the identification and application of the questionnaire and at the time of sample collection.

All security and protection measures structured in the recommenda-

tions of the Ministry of Health 8,9 and from WHO 10 were taken to prevent the spread and transmission of SARS-CoV-2 in the workplace.

RESULTS

The nursing care developed during the collection of samples provided an opportunity for welcoming, through a holistic and humanized approach, in order to identify the ideal exam for the diagnosis of COVID-19 to health professionals.

Before starting the collection of samples, we carried out the identification of sociodemographic and clinical data of health professionals, to subsequently allocate them for testing for COVID-19, following a unidirectional flow. The first assistance was performed by nursing, then medical assistance and finally the collection of samples for testing defined in a specific protocol, based on government guidelines.

During nursing care, we highlighted the need for patients in the health professional category to express their feelings in addition to answering only the questions asked, on certain occasions the same was extended due to this need.

At this time, the nursing care in which patients who were symptomatic health professionals expressed their difficulties faced at the time of the pandemic. The most evident difficulties that were mentioned by health professionals during nursing care, were categorized in three main axes: 1) limited access to PPE in work environments; 2) restricted access to diagnostic testing for COVID-19; and 3) little knowledge about the differentiation and purpose of the tests for COVID-19.

During the nursing care, many health professionals mentioned the difficulty of service managers in making PPE available in sufficient quantity and quality, some reported facial injuries due to the use of N95/PFF2 masks with



This fact demonstrates that, despite the abundance of guidelines on diagnosis, including official national guides, which should be known by health professionals who are dealing with this reality on a daily basis, misinformation is a conflicting factor for the team that seeks care.



inadequate adaptations, which present excessive pressure on the face causing headache during the work shift and even pressure injuries.

In relation to the performance of diagnostic tests, such as the rapid test and the PCR, the professionals reported dissatisfaction with the inattention/neglect of the workplaces that did not provide diagnostic tests even in the face of a symptomatic picture compatible with suspected SARS-CoV-2 contamination, or in the event of a team member presenting a reactive result for the new coronavirus. This type of report was described by health professionals from the public health care network and mainly by nurses and technicians from the private health care network, with complaints of disregard for the dignity of life of people who were on the “front line” of the COVID-19 pandemic.

Diagnostic tests were indicated according to the elapsed date of symptom onset, with the RT-PCR in the first days and the rapid test from the 7th day. In some consultations, previous questions occurred during the service process regarding the test to be performed, with contestation of the adopted protocol, demonstrating ignorance of the correct purpose of each test. This fact demonstrates that, despite the abundance of guidelines on diagnosis, including official national guides, which should be known by health professionals who are dealing with this reality on a daily basis, misinformation is a conflicting factor for the team that seeks care.

DISCUSSION

PPE, especially in the current pandemic period, has become an ally of health professionals to ensure protection against viral particles present on surfaces and dispersed in the air, thus minimizing the spread and contamination through SARS-CoV-2.³⁻⁵ Therefore, the correct use of PPE as well as the

integrity of the equipment favors the prevention and control of infection and the quality of life of health professionals who are daily facing and fighting the spread of the new coronavirus in the work environment.³⁻⁵

Therefore, the PPE used in practice in healthcare settings is made up: hat, procedure gloves, waterproof long-sleeve apron, surgical mask, N95 or PFF2 mask, propé, goggles and face shield (in English; face shield). In addition to these PPE, there are inputs that can not be missing to ensure worker safety, such as 70% alcohol gel, water and soap for hand hygiene and paper towels.¹⁰

In addition, many health professionals approached that the shortage of PPE was a global problem and that they worked in extremely unhealthy environments with only surgical masks, contrary to current government recommendations^{8,9,10}, given that the managers did not offer them the appropriate PPE, increasing the risk of exposure to the virus.¹⁰ A study carried out in Latin America with health professionals revealed that 43,9% of workers did not have

access to N95 masks and 67,6% to facial protectors, revealing the magnitude of this problem.^{11,12}

International recommendations emphasize that employers of health professionals should provide appropriate safety measures for personal safety and advise workers to remain isolated when they are reported to have symptoms and the possibility of contamination.^{13,14}

CONCLUSION

We conclude that the performance of nursing to health professionals in the pandemic is extremely important. During the nursing care performed in the collection of exams for the diagnosis of COVID-19, we demonstrate the experiences presented by patients, symptomatic health professionals during their work on the front line of the COVID-19 pandemic.

Health professionals reported that health institutions often leave workers helpless about appropriate PPE care for patients with suspected or confirmed COVID-19 cases.

During the consultations, it was noticeable that health professionals were outdated in relation to the types of tests available and, consequently, their correct handling, knowing that, nursing professionals acted directly in continuing education in each service. In addition, health professionals emphasized the lack of assistance from health institutions regarding employee diagnoses for COVID-19.

Based on the scenario we are experiencing, we conclude that the experience presented reflects the vulnerability of health professionals, through the performance of nursing during the COVID-19 pandemic. However, this study highlights the importance of updating health professionals about the context of the new coronavirus pandemic so that health professionals are able to demand their rights, such as access to PPE.

In addition, the approaches and strategies of government agencies and health institutions regarding training for health professionals and access to the necessary equipment for workers' health and mental health become relevant. 🐦

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