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## OPERATIONAL PLANNING DURING THE COVID-19 PANDEMIC: COMPARISON BETWEEN THE WHO RECOMMENDATIONS AND THE BRAZILIAN NATIONAL CONTINGENCY PLAN

Nila Larisse Silva de Albuquerque<sup>1</sup>

### ABSTRACT

**Objective:** In view of the publication of the COVID-19 guide – Operational Planning Guidelines to Support Country Preparedness and Response, by the World Health Organization, this paper attempts to compare the content of the Brazilian National Contingency Plan to the WHO guidelines. **Development:** Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Cov2), the virus that causes COVID-19, has a sustained community transmission in Brazil since March 2020. The country launched the National Contingency Plan for Human Infection with the new COVID-19 Coronavirus in February 2020, in order to guide the national response to fight the disease.

**Conclusion:** The Brazilian document only partially meets the recommendations of the international guide, the main gaps being the points of entry, prevention, and control of the infection caused by SARS-CoV-2 in health equipment and community spaces, handling suspected and confirmed cases, and operational and logistical support.

**DESCRIPTORS:** Operational Planning; World Health Organization; Pandemics.

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<sup>1</sup>Nurse. Nursing PhD student. Federal University of Ceará. Fortaleza, CE, Brazil. 

## **PLANEJAMENTO OPERACIONAL DURANTE A PANDEMIA DE COVID-19: COMPARAÇÃO ENTRE RECOMENDAÇÕES DA ORGANIZAÇÃO MUNDIAL DA SAÚDE E O PLANO DE CONTINGÊNCIA NACIONAL**

### **RESUMO**

*Objetivo:* frente à divulgação do guia COVID-19 - Operational Planning Guidelines to Support Country Preparedness and Response, pela Organização Mundial da Saúde, esta comunicação buscou comparar o conteúdo do Plano de Contingência Nacional às orientações da Organização Mundial da Saúde.

*Desenvolvimento:* Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Cov2), causador da COVID-19, apresenta transmissão comunitária sustentada no Brasil desde março de 2020. O país lançou seu Plano de Contingência Nacional para Infecção Humana pelo novo Coronavírus COVID-19, em fevereiro de 2020, no intuito de orientar a resposta nacional de combate à doença.

*Conclusão:* o documento brasileiro atende parcialmente às recomendações do guia internacional e concentra suas principais lacunas nos pilares sobre pontos de entrada, prevenção e controle da infecção por SARS-CoV-2 COVID-19 em equipamentos de saúde e espaços comunitários, manejo de casos suspeitos e confirmados e suporte operacional e logístico.

**DESCRITORES:** Planejamento Operacional; Organização Mundial da Saúde; Pandemias.

## **PLANIFICACIÓN OPERATIVA DURANTE LA PANDEMIA DE COVID-19: COMPARACIÓN ENTRE LAS RECOMENDACIONES DE LA ORGANIZACIÓN MUNDIAL DE LA SALUD Y EL PLAN DE CONTINGENCIA NACIONAL**

### **RESUMEN:**

*Objetivo:* en vista de la divulgación de la guía COVID-19 - Operational Planning Guidelines to Support Country Preparedness and Response, por parte de la Organización Mundial de la Salud, este comunicado tuvo como objetivo comparar el contenido del Plan de Contingencia nacional con las pautas de la Organización Mundial de la Salud.

*Desarrollo:* Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Cov2), que causa el COVID-19, presenta transmisión comunitaria en Brasil desde marzo de 2020. El país lanzó su Plan de Contingencia Nacional para la Infección Humana por el nuevo Coronavirus COVID-19 en febrero de 2020, con la intención de orientar la respuesta nacional de lucha contra la enfermedad.

*Conclusión:* el documento brasileño cumple parcialmente las recomendaciones de la guía internacional y concentra sus principales déficits en los pilares sobre puntos de entrada, prevención y control de la infección SARS-CoV-2 COVID-19 en equipamientos de salud y espacios comunitarios, manejo de casos sospechados y confirmados, y soporte operativo y logístico.

**DESCRIPTORES:** Planificación operativa; Organización Mundial de la Salud; Pandemias.

## INTRODUCTION

COVID-19 is an infectious disease caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), conventionally called the new coronavirus. It has a mean incubation period of 5.5 days and symptoms appear within 11 days in 97.5% of the people infected<sup>(1)</sup>.

Although epidemiological information on COVID-19 is limited, evidence indicate that the mean age of patients hospitalized due to the disease is 49 years old and that the most common symptoms are the following: fever (98%), cough (76%), dyspnea (55%), and muscle fatigue (44%)<sup>(2)</sup>. Patients with pre-existing comorbidities develop more severe forms of the disease and have significantly high mortality rates<sup>(3)</sup>.

The sustained advance of COVID-19 cases in the world is accompanied by the creation of plans for rapid responses to the spread of the disease<sup>(4)</sup>. They include actions for early detection, isolation, epidemiological surveillance, prevention and control measures, as well as health impact assessment<sup>(3)</sup>.

In order to provide practical directions for health policy managers and planners to develop strategic preparedness and response plans to fight COVID-19, the World Health Organization (WHO) released the following document: "COVID-19: Operational Planning Guidelines to Support Country Preparedness and Response"<sup>(5)</sup>.

On its turn, the Health Surveillance Office of the Brazilian Ministry of Health launched the National Contingency Plan for Human Infection with the new COVID-19 Coronavirus<sup>(6)</sup>, which consists of three levels of response: Alert, Imminent Danger, and Public Health Emergency.

Since the middle of March 2020, Brazil is at the third level of response, which corresponds to the situation in which there is confirmation of local transmission of COVID-19 in the national territory. This scenario requires planning and implementing the best practices recommended to fight the spread of the infection. To promote reflections on the optimization of the Brazilian pandemic response plans, this paper attempts to compare the contents of the Brazilian National Contingency Plan<sup>(6)</sup> with the guidelines published by the WHO in its guide of strategic preparedness and response plan to fight COVID-19<sup>(4)</sup>.

## DEVELOPMENT

The National Contingency Plan<sup>(6)</sup> determines the organization of the public health emergency level of national importance in two phases: the containment phase, which attempts to avoid the sustained transmission of the virus, and the mitigation phase, which begins with the registration of 100 positive cases of the new coronavirus. In Brazil, the mitigation phase started about 15 days after the confirmation of the first case of COVID-19 in the country. In Italy, the time interval to reach the 100 case milestone was approximately 20 days and, in the United States, seven days<sup>(7)</sup>.

In this phase, the level of response to the public health emergency of national importance activates the National Contingency Plan<sup>(6)</sup>, which establishes the following response measures: surveillance, laboratory support, infection control measures, care, pharmaceutical care, health surveillance, risk communication, and management<sup>(6)</sup>.

These priorities are in line with the COVID-19: Operational Planning Guidelines to Support Country Preparedness and Response<sup>(4)</sup> document. However, there are gaps and divergences between the National Contingency Plan<sup>(6)</sup> and the WHO recommendations<sup>(5)</sup>, which will be presented below in order to discuss and support the Brazilian responses to

the current pandemic scenario.

## Action pillars

The first pillar presented in the WHO document<sup>(5)</sup> refers to national planning and monitoring actions. It is recommended that national contingency plans have response mechanisms to the situation, with the involvement of relevant ministries and key partners of the society, to provide coordinated management of COVID-19 cases.

The National Contingency Plan<sup>(6)</sup> shows the command structure of the Emergency Operations Center to respond to the new coronavirus and of the technical sub-committees to support decision making. However, it does not include some actions recommended by the WHO in this context, such as estimating the resources needed to contain the cases of COVID-19 in the country and articulating multi-sectorial strategies to provide the necessary financial contributions.

The second pillar is the communication about risks and the community engagement, in which the provision is suggested of the current evidence on COVID-19 to the population and the description of the actions being taken to deal with the pandemic. The topic of communication about risks in the Brazilian contingency plan<sup>(6)</sup> ensures that these actions are carried out, including the dissemination of accurate information and the clarification of rumors in appropriate communication channels.

It is noteworthy that universities have a major role in complying with the other WHO recommendations in this area, such as: conducting behavior assessments to identify the best channels of communication with the community; creating messages to be sent at the local level, including to the most vulnerable groups; identification of community groups and local networks; and dissemination of educational materials in strategic locations and channels.

The WHO highlights that, in countries with local transmission such as Brazil, the third pillar, related to surveillance, the creation of rapid response teams and the investigation of cases, has an essential role in the effective fight against the pandemic. Actions must be based on the adoption of protocols for tracking contacts and monitoring confirmed cases. However, the national plan does not inform which protocols will be adopted to track contacts and monitor confirmed cases. Reports from South Korea<sup>(8)</sup> and Hong Kong<sup>(9)</sup> inform that, in these countries, such procedures were carried out by GPS, phone calls and text messages.

Still within the scope of surveillance, the WHO recommends that disease trends be reported, including clinical data, mortality rate, and cases in risk groups<sup>(5)</sup>. The National Contingency Plan<sup>(6)</sup> mentions the use of Epidemiological Bulletins to disseminate information on the situation of the cases in Brazil. It is suggested that epidemiological data be made available in full on open access platforms, respecting the anonymity of the patients, in order to provide sources of information for conducting national studies on COVID-19. Again, universities have a prominent role by allocating human resources in a timely manner to conduct epidemiological analyses and to create predictive models based on available data.

The fourth pillar addresses the points of entry regarding COVID-19 cases: airports, ports and border crossings. The National Contingency Plan<sup>(6)</sup> includes the WHO recommendations<sup>(5)</sup> for these circumstances, with the exception of guidance on the creation of structures for the rapid isolation of symptomatic passengers in points of entry. Discussions on this topic, as well as possible border closings, may be part of the ongoing reassessment of the document.

The fifth pillar addresses the structure of national laboratories to meet the growing demand for testing to detect SARS-CoV-2 infection. According to the WHO guide, all countries should prepare national laboratories to handle large-scale testing for COVID-19<sup>(6)</sup>. It is noteworthy that the testing capacity in Brazil is concentrated in the Central Public Health

Laboratories (*Laboratórios Centrais de Saúde Pública, LACEN*) and can be expanded with the collaboration of laboratories from universities and the private network, as long as they comply with the relevant sanitary regulations.

The sixth pillar of the international guide<sup>(5)</sup> discusses the prevention and control of COVID-19 infection in health facilities and community spaces. On the subject, the National Contingency Plan<sup>(6)</sup> focuses on providing guidance to the health services on the prevention and control of infections for suspected and confirmed cases of COVID-19.

However, the WHO determines additional actions in this area, such as: assessing the ability to prevent and control SARS-CoV-2 infections in public and private health systems, as well as pharmacies and community spaces; and guidance on control and prevention practices in schools, supermarkets, public transportation, and households<sup>(5)</sup>. Thus, it is considered that subsequent updates to the national plan may add and reinforce guidance on prevention and control of infections, based on procedures consensually accepted in the literature<sup>(10)</sup> and aimed not only at health equipment, but also at households and communities.

There are gaps in the national plan<sup>(6)</sup> regarding the design of infection prevention and control strategies, which make health professionals vulnerable to COVID-19. Although the WHO recommends that the plans inform the procedures behind the registration and investigation of health professionals infected and the implementation of mechanisms of screening, early detection, and control of sources of infection in the areas where the health teams work<sup>(5)</sup>, these points are not addressed in the Brazilian direction.

It is recommended that other segments of society, such as research and extension groups of universities and class councils, contribute to the creation of strategies in this area, especially with regard to the organization of screening spaces to monitor frontline health workers.

Health equipment management strategies should include the exponential increase in suspected and confirmed cases of COVID-19, and this is the seventh pillar of the WHO guide<sup>(5)</sup>. Preparing for proper infection management involves mapping vulnerable populations and public and private health facilities capable of receiving suspected cases of COVID-19, as well as identifying alternative sites that can be used to provide treatment, assessing the capacity of ICU beds, and planning self-care guidelines to be provided to those with mild symptoms of COVID-19.

In the National Contingency Plan<sup>(6)</sup>, the operation of these preparedness actions in the country is little explored; however, it provides guidelines aimed at the proper operation and the expansion of health care networks in the face of the increase in COVID-19 cases.

Still in the case management pillar, the WHO recommends that the national response plans to COVID-19 describe actions to assess the feasibility of inserting diagnostic methods, treatments and vaccines in clinical trials<sup>(5)</sup>. Due to the pandemic, new diagnostic tests were adopted worldwide and, in Brazil, they are authorized by the National Health Surveillance Agency.

It should be noted that, although the national plan mentions only the diagnostic method of real time Reverse Transcription Polymerase Chain Reaction - RT-PCR<sup>(6)</sup>, the adoption of new diagnostic methods demands specific health surveillance actions. Similar recommendations are applied to conducting special studies to test the compassionate use of pre-existing drugs, off label use, and the development of new treatments.

Finally, the WHO guide presents its eighth and final pillar: operational and logistical support. It is known that, given the COVID-19 pandemic and its impacts on health services, logistical arrangements should be reinforced. To this end, the WHO recommends that resources and inputs available in the local and national health sector be mapped, and that the control and management system of the medical-hospital supply chain, as well as the purchasing processes, be redirected to meet the demand<sup>(5)</sup>.

The National Contingency Plan<sup>(6)</sup> proposes to guarantee and monitor strategic stocks of laboratory inputs for diagnosis and treatment of suspected and confirmed cases. However, it does not specify how the production, purchase and distribution chain of inputs will be readjusted to suit the context. In the current scenario, in which countries with large-scale dissemination of COVID-19 face low availability of inputs and personal protective equipment, outlining the operational and logistical support is essential to maintain the response services to the COVID-19 pandemic.

According to the WHO, the maintenance of essential services, such as sanitation and water treatment, energy supply, food production and telecommunications, should also be part of the contingency plan<sup>(5)</sup>. The National Contingency Plan does not contemplate this aspect; however, Decree No. 10,282<sup>(11)</sup> defines the essential services and activities that cannot be interrupted during the state of calamity in Brazil.

## CONCLUSION

In summary, the National Contingency Plan for Human Infection with the new COVID-19 Coronavirus<sup>(6)</sup> partially meets the recommendations of the WHO guide<sup>(5)</sup>. The main gaps are the pillars regarding points of entry, prevention and control of SARS-CoV2 infection, which leads to COVID-19, in health equipment and community spaces, case management, and operational and logistical support. It is considered that detailing strategies aimed at these pillars is essential for improving the response to the COVID-19 pandemic in Brazil.

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Corresponding author:

Nila Larisse Silva de Albuquerque

Universidade Federal do Ceará

R. Alexandre Baraúna, 1115 - 60430-160 - Fortaleza, CE, Brasil

E-mail: [larisseufc@hotmail.com](mailto:larisseufc@hotmail.com)

Role of Authors:

Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - NLSA

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