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ESPAÇO TEMÁTICO: COVID-19 – CONTRIBUIÇÕES DA SAÚDE COLETIVA
THEMATIC SECTION: COVID-19 – PUBLIC HEALTH CONTRIBUTIONS

The role of primary care in the Brazilian healthcare system: limits and possibilities for fighting COVID-19

O papel da atenção primária na rede de atenção à saúde no Brasil: limites e possibilidades no enfrentamento da COVID-19

El papel de la atención primaria en el sistema de salud brasileño: límites y posibilidades para combatir COVID-19

Regina Paiva Daumas [1]
Gulnar Azevedo e Silva [2]
Renato Tasca [3]
Iuri da Costa Leite [1]
Patrícia Brasil [4]
Dirceu B. Greco [5]
Victor Grabois [1]
Gastão Wagner de Sousa Campos [6]

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Introduction

On March 12, 2020, the World Health Organization (WHO) declared the disease caused by the novel coronavirus (SARS-CoV-2) a pandemic [1]. The infection (COVID-19) is more transmissible and has a higher case-fatality rate than influenza, estimated at some 14 times greater [2]. The high infection rate, with each case infecting 2 to 3 other individuals on average, leads to the epidemic's expansion in geometric progression [3]. In Brazil, where community transmission throughout the country was declared on March 20, more than 147,000 cases and 10,000 deaths from COVID-19 had been confirmed as of May 9, 2020 [4]. Isolation of cases and contacts and social distancing of the general population have been the main strategies recommended to delay the expansion of COVID-19 and allow the health system's adjustment to the rapidly increasing demand for hospital beds, especially in intensive care, avoiding the collapse of hospital care [5,6].

The initial clinical presentation of COVID-19 is flu-like, with fever, cough, sore throat, and coryza. About 80% of patients recover without complications and are classified as mild or moderate cases (either without pneumonia or with mild viral pneumonia) [7]. The other 20% evolve with dyspnea and hypoxemia secondary to extensive viral pneumonia and require hospitalization for oxygen therapy and other interventions [8]. One fourth of these (some 5% of the total) evolve to critical conditions due to respiratory failure, disseminated intravascular coagulation, circulatory shock, or multiple organ dysfunction, requiring intensive care. Case-fatality in the latter group is more than 40% [9,10].

COVID-19 treatment aims to meet the patients' needs in different phases of the infection and throughout the spectrum of severity, in a line of care that ranges from monitoring mild cases in isolation at home, with instructions on management of symptoms and the identification of early warning signs, to admission in intensive care units (ICUs) and post-discharge rehabilitation. Mitigation of risks of infection to health professionals and other patients should guide the choice of the best strategies for organizing the health care system to meet these needs [11].

To reduce transmission and limit mortality from COVID-19, government should create the conditions for individuals and families to maintain social distancing while preparing the health system to deal with the pandemic. In Brazil, the Unified National Health System (SUS) should prepare to provide care for the growing number of COVID-19 patients, maintain care for other acute and chronic illnesses, and ensure the safety of health professionals and patients during care [12].

[1] Escola Nacional de Saúde Pública Sergio Arouca, Fundação Oswaldo Cruz, Rio de Janeiro, Brasil.
[2] Instituto de Medicina Social, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brasil.
[3] Organização Pan-Americana da Saúde/ Organização Mundial da Saúde, Brasília, Brasil.
[4] Instituto Nacional de Infectologia Evandro Chagas, Fundação Oswaldo Cruz, Rio de Janeiro, Brasil.
[5] Faculdade de Medicina, Universidade Federal de Minas Gerais, Belo Horizonte, Brasil.
[6] Faculdade de Ciências Médicas, Universidade Estadual de Campinas, Campinas, Brasil.

Correspondence
I. C. Leite
Escola Nacional de Saúde Pública Sergio Arouca, Fundação Oswaldo Cruz.
Rua Leopoldo Bulhões 1480, Rio de Janeiro, RJ 21041-210, Brasil.
iuri.fiocruz@gmail.com

Recommendations for preparing the health system for COVID-19 care

The health system's capacity to fully perform its roles in the context of the pandemic requires not only expanding the number of hospital and ICU beds, but also reorganizing the pathways along the health system, redefining the roles of different units and levels of care and new points of entry, especially remotely [11]. All modalities of telehealth remote communications (remote health counseling, consulting, monitoring and bed management) play a central role from this moment on [13,14]. A plan with protocols for all levels of care is crucial to link all these activities, including standards for health workers' protection and precautionary measures to avoid the spread of SARS-CoV-2 in healthcare units [15].

The WHO suggests creating 24-hour healthcare call centers, training attendants in the use of protocols that allow distinguishing between mild, moderate, and severe cases, as well as advising mild cases on home isolation measures. Serious cases should be transported to reference hospitals for COVID-19 in ambulances reserved exclusively for this purpose, with qualified and adequately protected personnel, according to the recommended infection prevention measures [11].

When preparing the health system for COVID-19 care, we also need health facilities with low and medium-complexity beds in COVID-19 wards to hospitalize suspected cases at high risk for severe disease or those who cannot stay at home in self-isolation, such as those with comorbidities, those who live alone and those who are most affected by the disease, although not seriously ill. These services should be adequately equipped to conduct therapeutic interventions, monitor signs of clinical deterioration, and provide timely transfer to higher complexity beds when necessary. These units should also admit patients that are discharged from reference hospitals but who still require hospital care, thus helping free up high-complexity beds for critical patients [11,16].

The description of COVID-19 care demands emphasizes that the direct role of primary healthcare (PHC) in moderate and severe cases is quite limited. Face-to-face care for suspected cases of COVID-19 in PHC units should be avoided whenever possible (besides having little impact on the outcome of the disease), since it involves high risk of infection both to the healthcare team and to other patients.

The role of PHC during the COVID-19 pandemic

Although PHC has limited capacity to act on the case-fatality of serious cases, a strong and well-organized PHC system with qualified personnel in adequate numbers can help decrease the infection's incidence in the population in its covered area, with a direct impact on drecreasing morbidity and mortality. Through community work, PHC can act to reduce the infection's spread, monitor mild cases in home isolation, support communities during social distancing, identify and deal with situations of individual or collective vulnerability, and especially guarantee access to healthcare and the necessary referrals during the epidemic's most critical phases. PHC can thus play a central role in mitigating the pandemic's effects, maintaining and extending its attributes such as access to the first-contact access, long-term person-fosused care, comprehensive care, and coordination of care, and especially cultural competence and family and community orientation [17].

By reaffirming its calling for community action, PHC can expand the local response capacity not only to reduce the infection's spread, but also to attenuate the social and economic effects of social distancing measures. For example, through social medias and community radios, family health teams can advise the population on the modes of transmission and inform people about health care call centers. The work by community health agents can help identify the most vulnerable individuals and families, in situations of greater vulnerability, assist the distribution of food and other essential items, and mobilize resources within the community itself.

In individual clinical care, using telehealth modalities, PHC professionals can adivide suspected cases on self-isolation and identification of warning signs; identify patients who cannot be cared for at home; monitor the clinical evolution of these suspected cases; conduct teleconsultations for more complex cases; and request referral to a hospital when signs of clinical deterioration are identified. All these measures help reduce demand and the risks of infection in emergency units and allow concentrating the latter's resources on treatment of more serious cases.

In order to maintain access to healthcare for other conditions, the work by PHC during the pandemic should also focus on: (1) continuity of preventive activities such as vaccination; (2) follow-up of chronic patients and priority groups like pregnant women and infants; and (3) care for minor emergencies and acute exacerbations of chronic illnesses. The suspension of these activities for several weeks could result in increased morbidity and mortality from other causes, expanding the pandemic's effects, as reported in situation in which the choice was made for a clinical care model centered only on hospital care [18].

As with suspected COVID-19 cases, telecare can be adopted as a strategy for monitoring individuals with other illnesses who are in stable condition. It is possible to respond to demands for continuous-use medications or even clinical evaluation, which can often be performed by teleconsultation. Face-to-face care at the PHC unit would be reserved for patients with acute non-respiratory complaints and for those with acute complications of chronic diseases, in which the approach can be via PHC, with up to a few hours of treatment and clinical observation, avoiding the patient's visit to hospital and emergency services, which will tend to be increasingly overloaded during the pandemic. The availability of personal protective equipment and updates on infection prevention and control measures according to the best available evidence, with periodic training, supports the safe maintenance of healthcare activities at the PHC unit and at home.

In addition to telecare, home visits by physicians and nurses can ensure maintenance of care for patients with more complex conditions and higher risk, including those who need to change bandages and dressings. Home visits by community health agents, conducted in the peridomicile, obeying social distancing, allow follow-up of patients who do not have telephones and the delivery of medications and basic inputs to the population, thus avoiding patients' unnecessary visits to the PHC unit.

Even with all the effort to expand teleconsultations, and although call centers to handle suspected cases of COVID-19 are prioritized, a substantial portion of the population in the territory will continue to visit PHC services and hospital emergency departments. Patients should thus be screened at the first point of contact with any health service, and all precautions should be taken to control infection, according to the prevailing guidelines, which include care in open-air areas, limitation of physical contact, modifications to patient flows, separation of examination areas and waiting areas, distancing, physical barriers, and availability and rational use of personal protective equipament (PPE), according to the activity and type of contact performed [1]. As the epidemic progresses, the risk of infection in health units increases, even with patients not reporting respiratory symptoms, since cases of asymptomatic infection and atypical presentations become more numerous. This justifies expanding the use of PPE and infection control measures to diverse situations and areas of care [19].

The risks of COVID-19 transmission in health services and the high costs of implementing biosafety standards justify the widespread use of telecare tools and all the necessary financial support to implement them. Based on the strategies, it becomes possible for the restriction and regulation of physical access to PHC services not to represent total restriction of access, but to be replaced by safer and more cost-effective forms of care. To implement the necessary changes for full functioning of PHC during the pandemic, investments in structures such as tents for external care, vehicles to support home care, and cellphones and internet will be indispensable, as well as free access to internet for all users.

The creation of dedicated COVID-19 hubs for handling suspected cases, conducting initial management, and facilitating referrals when necessary is a valid alternative where it is not feasible to adjust the PHC unit to conduct these activities safely [11]. However, it is impossible to function properly without the effective exchange of information between these hubs and PHC units, essential for the latter to maintain surveillance and coordination of care in their respective coverage areas. Only strong PHC connected to the other points of care, with greater community action and capacity for coordination, will be capable of minimizing the pandemic's harms and avoiding the breakdown of care for chronic and acute conditions.

Limits to action by PHC given the deficiencies in the network of care for COVID-19

The full exercise of activities inherent to PHC that might otherwise reduce the pandemic's magnitude and impact in populations is diminished, especially by the shortage of hospital beds and the lack of definition of patient flows, problems that already existed before COVID-19.

For example, in the city of Rio de Janeiro, where the Mobile Emergency Medical Service (SAMU) does not conduct home care for urgent COVID-19 cases and the PHC units (USBs in Portuguese) are responsible for receiving patients with respiratory symptoms and requesting vacancies for hospital admission, COVID-19 cases, especially the more severe ones, accumulate in these units while waiting for hospital beds. A similar process occurs in the Emergency Care Units (UPAs in Portuguese), another portal of entry for COVID-19 beds and which are experiencing growing difficulty in referring their patients to specialized beds [20].

In the same city of Rio de Janeiro, the lack of basic and intermediate beds for COVID-19 cases has meant that many patients referred to the emergency-care UPAs are returned to the PHC units, invariably in worse condition than before. The impossibility of hospitalizing patients without signs of respiratory failure but with high risk of clinical deterioration or with contraindication to home isolation [21] has delayed the implementation of adequate clinical support and raised major apprehension among health teams, who are acutely aware of the risk of patients arriving at the PHC unit in respiratory failure or of dying at home without medical care.

The shortage of designated COVID-19 beds, alongside the flow of access to these beds via PHC and emergency units, as in the city of Rio de Janeiro, tends to seriously jeopardize the capacity of these health services to provide healthcare for patients with other diseases, while also increasing the risks of COVID-19 transmission. Transportation of severe patients from home directly to the reference hospital for COVID-19 treatment, as suggested by the WHO [11], should be considered a top priority, since it speeds up arrival to the site where the definitive therapy can be performed and reduces the points of the patient's contact with other health units and transportation teams, highly vulnerable to SARS-CoV-2 infection.

Challenges for the SUS in fighting the pandemic

The fight against the COVID-19 pandemic in Brazil involves substantial changes in the way healthcare is provided and reorganization of the entire healthcare system. In order to optimize the use of available resources, telehealth resources need to be connected to prehospital care (SAMU-COVID) and regulation of beds by the SUS. Protocols for triage and classification of cases as mild, moderate, and severe, with and without risk of complications, need to be implemented to support decisions on emergency telehealth and PHC. Complete and consistent communications among all components of the health system and with the population must be created urgently to guarantee their effectiveness and transparency [13].

Although major changes in the flows and organization of the healthcare system may appear difficult, all evidence indicates that doing more of the same will mean greater spread of the disease and inefficient use of resources. The health system's capacity to save lives in this pandemic will depend not only on the number of ICU beds and ventilators, but also on the organization of the network of care to guarantee timely access to these beds, maintenance of care pathways for other diseases, and treatment of various types of urgent and emergency conditions. The specific solutions for this organization should be adapted to each context, respecting the general premises and local response capacity, with the understanding that Brazil is a continental-sized and heterogeneous country. In Brazil's large cities, where the disease has spread more quickly, much can be done with the existing infrastructures, complemented by new resources and initiatives.

The results of these efforts at reorganization will be limited if the deficiencies in the health care system are not resolved. These networks are weak and fragmented with persistently insufficient PHC in many places of Brazil to deal with an emergency like the current pandemic, which depends on effective services projected to the community. Despite the expansion of PHC in Brazil in recent years, the lack of mechanisms to guarantee its sustainability continues to threaten the continuity

of care throughout the country [22]. The lack of coordination between levels of care and of systemic flows in the healthcare system, as identified previously [23], has become even more critical in the pandemic, revealing the importance of adopting strategies that allow effective coordination of care with PHC teams.

The COVID-19 epidemic reached Brazil after Congress had unwisely imposed a cap on expenditures in health and education by passing *Constitutional Amendment n. 95* [24], which freezes or drastically curtails budget funds for health. At the same time, important structural policies for PHC came under serious assault. These featured the Brazil's More Doctors Program, created to address the shortage of physicians in PHC and whose discontinuity exacerbated healthcare voids in highly vulnerable localities. Next, the new model for financing primary care [25] imposed by the current Federal administration places the system's universal coverage in serious jeopardy [22]. Although new resources can be allocated for the SUS during the pandemic, it is impossible to ignore the negative impact of the chronic underfinancing of the SUS on the population's health, since the majority of the Brazilian population depend on this public system.

Even with its deficiencies, the importance of the SUS in fighting the pandemic has been demonstrated beyond question. The nearly unanimous recognition of the need for more resources for the system to deal with the crisis makes this an especially appropriate moment for reinforcing and adequately financing the SUS. In addition, the extremely serious current health emergency highlights the privileged position of primary care for guaranteeing access to healthcare and for acting on health determinants in the face of an emerging challenge. The prioritization of PHC, with the expansion of the Family Health Strategy and strengthening of all its attributes, emphasizing so-called derived attributes (cultural competence and family and community orientation) [17] are essential measures for containing the spread of COVID-19 in the population.

Contributors

R. P. Daumas contributed to the study's conception and drafting and revision of the manuscript. G. Azevedo e Silva, R. Tasca, I. C. Leite, P. Brasil, D. B. Greco, V. Grabois, and G. W. S. Campos contributed to the drafting and revision of the manuscript.

Additional informations

ORCID: Regina Paiva Daumas (0000-0002-8923-7711); Gulnar Azevedo e Silva (0000-0001-8734-2799); Renato Tasca (0000-0002-1407-5914); Iuri da Costa Leite (0000-0002-9136-8948); Patrícia Brasil (0000-0001-9555-7976); Dirceu B. Greco (0000-0002-4419-5634); Victor Grabois (0000-0003-3310-4212); Gastão Wagner de Sousa Campos (0000-0001-5195-0215).

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