

Organization and offer of physical therapy care in response to the COVID-19 pandemic in Brazil

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Abstract *The recovery of people affected by COVID-19 is a process that continues beyond the acute condition of infection by Sars-CoV-2. The impairment of several body systems can cause functional impacts and demand continuous physical therapy assistance both in outpatient care and in Primary Health Care (PHC). In this essay, we seek to discuss the challenges of organizing and offering Physical Therapy assistance in response to the COVID-19 pandemic in Brazil. The analysis was summarized in three dimensions: offering physical therapy assistance in PHC, outpatient care, via telehealth. It is concluded that functional rehabilitation depends on the PHC's response capacity; there is a shortage of rehabilitation services that precedes the pandemic, and may not respond satisfactorily to the demands of the current epidemiological context; it is necessary to articulate the outpatient physiotherapy and PHC teams; although telehealth is a resource and an opportunity to increase the population's access to functional rehabilitation, its use requires caution; the physiotherapist plays a crucial role in the entire COVID-19 care continuum.*

Key words *Physiotherapy, COVID-19, Primary health care, Rehabilitation, Telehealth*

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Introduction

COVID-19, a disease caused by Sars-Cov-2, is responsible for the biggest pandemic in the last 100 years. Worldwide, until mid-January 2022, data from the World Health Organization (WHO) present more than 308 million confirmed cases and more than 5.4 million deaths from COVID-19¹. In the same period, Brazil was the third country in the world with the most cases and the second with the highest number of deaths confirmed by the new Coronavirus, with official statistics from the Ministry of Health indicating over 22 million cases and over 616 thousand deaths in the national territory².

Although considered to have low lethality in the general population³, the thousands of people recovered from the acute phase of infection by Sars-CoV-2 may present impairment in several body systems, such as the respiratory, neurological and musculoskeletal. In this scenario, the functional impacts resulting from clinical manifestations secondary to SARS-CoV-2 infection are multiple, and do not end with hospital discharge or resolution of the infectious condition^{4,5}. Therefore, there will be a need for continuous care encompassing different professionals and services, especially physical therapy assistance.

In addition to hospital care, especially related to hospitalizations in Intensive Care Units (ICU), the medium and long-term manifestations of COVID-19 are targets of physiotherapeutic interventions, both in outpatient care and in the follow-up of these individuals within the scope of primary health care (PHC). Physiotherapeutic assistance is essential to guarantee functionality, independence in performing daily living activities and quality of life for this population^{6,7}.

Physiotherapy is a profession whose main objective is the promotion of the individual's general health, related to human functionality⁸. In its practical structure, it is consistent with values reflected⁹ in the World Health Organization's International Classification of Functioning, Disability and Health (ICF), a biopsychosocial model that considers the limitations of body structures and function, activity and participation, as well as, the assessment of contextual factors, such as the individual's environment and personal factors related to living conditions¹⁰. Likewise, the scope of physical therapists' practice has become comprehensive with the application of scientific principles and actions to prevent, identify, treat or rehabilitate movement dysfunction.

Although the urgent and growing demand for functional rehabilitation services has been evidenced in the scope of the COVID-19 pandemic, it must be considered that this is not an isolated problem¹¹. Added to this is the pre-existing demand for rehabilitation services resulting from chronic diseases, marked over the years by a deficient supply of services¹². It is worth mentioning that the unequal distribution of physical therapists along macro and micro regions of the country¹³ also compromises the provision of care, with a greater concentration of these professionals linked to specialized outpatient care and/or in hospitals/urgencies and emergencies predominantly in large cities¹⁴, while in small ones, the availability of these professionals is greater in PHC.

Measures to prevent and control COVID-19, especially social distancing and restricting the transit of people¹⁵, have contributed to promoting new modalities of health care for the most diverse population groups. In this scenario, telehealth initiatives have become an alternative to face-to-face care, given the need to offer continuous care, even remotely. From the perspective of Physiotherapy, assistance via Information and Communication Technologies (ICT), such as video calls, phone calls and the use of messaging applications, represents a new challenge to be faced in order to expand access to physical therapy care, without harm to the quality of care^{6,16}.

It should be noted that the identification of needs in the planning of care provision should include not only the severity of the case, but also multimorbidity, functionality and individual vulnerability. Given the above, the objective of this essay is to discuss the challenges of organizing and offering physical therapy assistance in response to the COVID-19 pandemic in Brazil.

Offer of physical therapy assistance in Primary Health Care (PHC)

Physical Therapy practice has been focused in rehabilitation instead preventive care. Faced with the care demands imposed by the COVID-19 pandemic on health systems, it is essential to discuss new responsibilities and possibilities for physical therapy care, focused on health and not just on disability¹⁷. In this context, physical therapy in PHC presents itself as an alternative capable of strengthening the system's resoluteness and contributing to guaranteeing comprehensive care¹².

In PHC, physiotherapists can work in Basic Health Units, in households^{18,19}, social facilities and community clinics, articulating clinical-as-

sistance actions with health promotion and the prevention of impairments, risks factors and disabilities, integrating individual, socio-community, home and education actions^{20,21}. Other strategies involve participation in team meetings, action planning, case discussions, construction of singular therapeutic projects (PTS), matrix support on human movement, expanded clinic, action in the territory, articulation with the population^{20,22}, surveillance of the deficiencies and incapacities of the population, development of system management practices and supporting public policies development based on the approach of social determinants that affect human functioning¹⁷. Also noteworthy are educational health actions that can include guidance on exercises, encouraging lifestyle changes, inviting users and their families to be co-responsible in the recovery process or even in recommendations for caregivers to prevent injuries^{18,23}.

The process of reorganization of practices requires municipal managers to organize, expand and qualify health services, their infrastructure, the number of professionals and the model of care for new demands. Additionally, performance of PHC teams should not be limited to coping with COVID-19. It is essential that the work process be aware and able to respond to the demands arising from the epidemiological profile of the population¹⁸⁻²⁰.

The rehabilitation of individuals with sequelae of COVID-19 will depend, among other aspects, on the PHC's ability to respond to this new demand and on its role in coordinating the care responsible for directing the user's itinerary in the health network. The identification of cases, the mapping, the classification of risks and the articulation between the primary level, specialized health network and the partnership with educational institutions will be crucial for the system to be able to deal with the upcoming challenges. Thus, it will be necessary to design referral and counter-referral flows, the reorganization of the Care Network for Persons with Disabilities²⁴ and the Health Care Network for People with Chronic Diseases²⁵, or even the implementation of a new care liaison for COVID-19 in the Health Care Network (Rede de Atenção à Saúde – RAS), in the search for the provision of comprehensive and coordinated care²⁶. There are also propositions that defend organized systems with direct access by the population to primary physical therapy services, as a means of reducing organizational barriers to physical therapy care and better care coordination¹⁷.

Despite the significant advances made by PHC in improving the population's living conditions, the Unified Health System (Sistema Único de Saúde – SUS) faces historical underfunding and regulatory centralization by the federal government, which limits the heterogeneity of the forms of organization of services in response to demands and population needs²⁷. In addition, there is an ongoing project to undermine Brazilian primary care, based on the National Primary Care Policy (Política Nacional de Atenção Básica – PNAB) edited in 2017, which can compromise the reach of its attributes by its work teams and, also, the possibilities of municipal managers organize the provision of functional rehabilitation in PHC.

The new financing of primary care proposed by *Previne Brasil* denotes the risks circumscribed in this regulation, which strangles the contribution of resources to the Expanded Nucleus of Family Health and Primary Care, as a strategic component, and makes it optional for municipal managers keep the support teams in the clinical and care support. Such a measure may restrict the population's access to rehabilitation and differentiated activities induced by the health professionals teams, such as the construction of comprehensiveness, expanded territorialized care, network articulation and exchange with services and policies from other sectors^{28,29}. Given this financial constraint, it was difficult for municipal managers to maintain existing teams and even expand functional rehabilitation actions for the sequelae of COVID-19 in PHC.

Offer of outpatient physical therapy care for functional rehabilitation in COVID-19

The increased demand for functional rehabilitation in the management of COVID-19 is already a reality in different countries such as Italy, Portugal and Spain³⁰⁻³². There is increasing notification of patients with a decline in cardiorespiratory capacity, musculoskeletal and neurological limitations and reduced quality of life, in the chronic phase of the disease^{33,34}, but also, there is a significant shortage in the supply of rehabilitation care and insufficient infrastructure in outpatient care for rehabilitate people with sequelae of COVID-19³⁵.

Therefore, it is evident not only the strategic role of outpatient physical therapy services in functional rehabilitation^{7,36,37}, but the urgency of debates on the expansion of these services in the SUS, given that the majority of the Brazil-

ian population depends directly on this system. In the Brazilian public health system, health is a guaranteed-by-law right, however, the debate on the provision of outpatient physiotherapy care for rehabilitation in COVID-19 can not ignore the historical challenges, which include the underfunding of regional distribution of health services and professionals³⁸.

Outpatient physical therapy services are supported by Brazilian public policies, however, the provision of functional rehabilitation in COVID-19 should be carefully analyzed, given the historical fragility in the expansion and organization of health rehabilitation services in Brazil^{22,39,40}. This exposes two main questions: 1) the response capacity of states and municipalities to expand public services at a speed compatible with this new demand; 2) referring to the care model, which enables comprehensive and equitable care, due to the diversity of users with unique needs for functional rehabilitation.

At the international level, there is a heated debate in countries such as Spain and Italy on the need to structure physiotherapy services for the rehabilitation of COVID-19 complications³⁵. In some articles, there are notes defending the expansion of the offer of community services (home and outpatient), considering the low access to specialized services in most cases that are discharged from hospital⁷; and other ones, even so, defending its expansion in the specialized outpatient scope⁴¹. In Brazil, this debate has not yet taken hold and is evident only in superficial mentions of COVID-19 care protocols^{42,43}, without deeper reflections in favor of expanding outpatient physical therapy services for rehabilitation in COVID-19²⁶.

Inequalities in the public provision of outpatient physical therapy services have been a major obstacle to ensuring access to functional rehabilitation in COVID-19. In Spain, this has been recurrent due to the greater concentration of physical therapists in the private sector and asymmetry in the professional/inhabitant ratio in the public system³⁰. Faced with the scenario of community transmission and the accelerated internalization of the pandemic to rural and remote regions⁴⁴, this inequality in the offer of physical therapy services highlights an alert for countries in situations of economic crisis, where there are health regions with great social inequalities and public health system's dependent³⁰. In Brazil, the scenario of significant regional socio-economic inequality has been an obstacle to the expansion and agreement of the offer of health

services, especially in the North and Northeast regions⁴⁵, which requires taking this reality into account when considering the recent needs for expansion of outpatient physical therapy services in COVID-19.

In Brazil, the challenges for offering functional rehabilitation do not encompass only the regional expansion of services, but their nature (whether public, private or philanthropic). More recent articles indicate the significant number of outpatient physical therapy establishments in the country^{46,47}. However, the characteristics of outpatient physiotherapy production revealed that great part of the services is offered in the private/philanthropic sector, contracted with public resources through the SUS⁴⁷, which is a critical challenge for public managers who do not have their own network services to guarantee the expansion of public offering of functional rehabilitation services for COVID-19.

The Interruption of physiotherapeutic care due to restrictions used to reduce the spread of Sars-Cov-2 can negatively affect the continuity of care, increasing risk of hospitalization, falls, fractures and other consequences of immobility induced by quarantine^{31,35}. At the beginning of the pandemic, the shortage of professionals due to absences and the changes in the team/user ratio signaled as a challenge, the creation of new organizational routines of outpatient services, including the redefinition of work shifts and the dynamics of physical therapy appointments and care^{32,48}, with the objective of guaranteeing health safety for both users and physiotherapists, as occurred in Spain and Portugal⁷.

Physiotherapy is one of the professions most vulnerable to contamination by SARS-CoV-2, given that its work process requires very close contact with patients. The insufficiency of Personal Protective Equipment (PPE) limits the offer of functional rehabilitation in ideal safety conditions for professionals and users^{30,49}. There are also challenges related to both the availability of PPE and the dedication of time required by professionals for training and updates on its use, as well as the provision of quality equipment, especially in situations of greater exposure, such as respiratory rehabilitation⁷.

Finally, the challenge of ensuring functional rehabilitation in COVID-19, integrated with other RAS services, which allows for the continuity of care, should be based on the interaction between professionals, family and community. It is necessary to link outpatient physical therapy teams to physical therapy teams in primary care,

which can use telehealth as a resource to offer technical support in patient care⁴².

Offer of physiotherapeutic care by Telehealth and the COVID -19 pandemic

The suspension of face-to-face physiotherapeutic care due to the social distancing recommended by the WHO caused significant changes in the organization and offer of health care, challenging services, health professionals and users to incorporate technological resources that enable remote health care. Therefore, new modalities of care called teleconsultation, telemonitoring and teleconsultation were authorized by the Federal Council of Physiotherapy and Occupational Therapy (Conselho Federal de Fisioterapia e Terapia Ocupacional – COFFITO) through Resolution No. 516, of March 2020, allowing the continuity of the physiotherapeutic follow-up of patients with previous health conditions, as well as the care of patients recovered from the acute phase of COVID -19 who may present complications and dysfunctions in different systems^{6,51}.

Physiotherapeutic care through telehealth represents a resource and opportunity to expand access to rehabilitation for some population groups. Travel costs, as well as the time taken to get to the place of care can be reduced with the use of telehealth^{52,53}. In addition, it can increase access to health care for populations that, historically, have had difficulty in accessing Physiotherapy services, including populations deprived of liberty and those living in rural areas¹³.

Physiotherapists have been especially active in monitoring symptoms, secondary prevention of complications and functional decline, offering assistance through video calls, telephone calls for individualized consultations and sharing information material for health education and support to family members and caregivers. To date, there are no official guidelines or recommendations on procedures and conduct to ensure the quality of care and the safety of patients undergoing remote care. Researchers suggest that telehealth strategies be interspersed with face-to-face consultations for functional reassessment and maintenance of the bond and that they be indicated for specific cases, so that they constitute a resource to be added to physical therapy practice⁵⁴.

The planning and implementation of telehealth must consider socioeconomic, cultural, epidemiological and environmental aspects that influence the access, understanding and adher-

ence of users to the services offered. Telehealth physiotherapy requires the availability of equipment for communication, such as a landline and mobile phone, tablet, computer and satisfactory internet connection. Although access to these resources has increased in recent decades in the Brazilian population, it cannot be assumed that all users have the same level of connectivity to the services and facilities offered by telehealth. The digital exclusion, which overlaps with social and use of health services inequalities, certainly constitutes a source of the main limitations regarding the implementation and use of telehealth in the SUS^{51,55}.

According to the National Population home-based Study performed between 2017 and 2018, 79.1% of Brazilians have access to the internet, and this occurs mostly through smartphones (93.2%). However, it presents important differences between the urban area (79.4%) and the rural area (46.5%), and between the regions of the country, being greater in the South and Southeast regions (81.1% and 84.8%), when compared with the North and Northeast regions (72.1% and 69.1%). These inequalities are also accentuated in the groups of sex, age and income⁵⁶, giving greater vulnerability to women, the older and low-income people.

The disparities, inequities and inequalities experienced in Brazil characterize the socioeconomic and cultural scenario in which technologies are often inaccessible, incomprehensible or impractical for a considerable part of the population. Furthermore, specific prescribing criteria for telehealth care should consider limitations resulting from physical and sensory dysfunctions that result in disabilities for communication (speech, hearing), understanding (cognitive)⁵⁷ and motivation (mood disorders)⁵⁸.

Thus, the telehealth strategy must be carefully incorporated, in order to not accentuate existing inequalities⁵⁹. With the advancement in the use of health technologies, the expansion of the exploitation of private companies that prioritize profit over caring for people's lives is discussed, which threatens universal health care policies. Health services can be attracted by promises of cost reduction and improvement in patient prognosis and outcomes, however, there is lack of scientific evidence⁵³.

In general, the expansion of telehealth can be seen as something positive and promising for many sectors and services in the health care system, but the planning and implementation require comprehensive public policies to reduce

social and digital inequality, with an emphasis on the democratization of the Internet, as well as the development of specific guidelines (still lacking) to train and guide health professionals. In fact, the problems of accessing the internet and devices for its use in response to the demands generated by COVID-19 in Brazil are not restricted to users, but are also experienced by health professionals and managers of PHC units.

In a report on the challenges of primary care in facing the COVID-19 pandemic in the SUS, Bousquat et al.⁴⁹, described that the most frequent strategy of adaptation to the pandemic context was the incorporation of distance contact, mainly by telephone, which was mentioned by 50.8% of professionals and 37.7% of managers, followed by the WhatsApp. These authors highlighted that, with such actions, the SUS is reinventing itself, but technological devices and internet are lacking. The internet was precarious or almost non-existent for approximately 60% of the survey respondents. There was still little availability of institutional cell phones, implying the need to use the personal devices of professionals to contact users. One of the main recommendations is to expand the availability of cell phones and internet access for professionals and users, thus enabling the new forms of distance communication that have been developed.

The development, expansion and democratization of telehealth for the Brazilian population are essential aspects for the modernization and continuous improvement of the health system, however, its insertion must be complementary to the care already offered in the SUS in person, working as a support tool for professionals, caregivers and users in health care. In this way, the increase in the number of professionals with permanent training for physical therapy assistance, remote or face-to-face, with adequate working conditions that allow both maintenance of the professional bond and resolute care to users, are essential strategies for the implementation of public health policies. Thus, investments aimed at expanding the population's access to Physiotherapy need to be included in the policy agenda to face the COVID-19 pandemic.

Final considerations

COVID-19 has ratified to society the relevance of the SUS, how the health system has been working in an integrated way, the need for a strong and universal PHC, facing the ongoing project of its neo-selectivity and commodification, as well as the struggle for guarantee of the right to health, life and quality Physiotherapy services. Physiotherapists have an indisputable role across the entire *continuum* of care for COVID-19, which includes prevention of infection, care in the acute phase of the disease, surveillance of risk factors for functional decline, and interventions for maximizing long-term functional results.

The organization and provision of physical therapy assistance in response to the COVID-19 pandemic requires strategies that act on the inequity of the regional distribution of physical therapists in Brazil and that guarantee the maintenance and expansion of the accumulated experiences of physical therapy care in PHC and in the specialized outpatient setting. However, the new Brazilian fiscal regime, added to the economic and political crisis, threatens not only the continuity of care, but, mainly, its public expansion at a speed compatible with demand.

Although the telehealth resource is an opportunity to expand the population's access to functional rehabilitation in COVID-19, its availability does not depend only on hiring professionals, but on an implementation process that is allied to overcoming cultural and technological barriers of the Brazilian population. Telehealth care programs should be developed avoid worsening inequalities in health care access, not becoming an object of dominance by the private sector, with imposition of economic barriers to the care process, nor influence the quality of care offered.

The pandemic revealed the need for the development of new skills by health professionals, managers, political authorities, class associations and Universities. In this process, Physiotherapy in health services has strengthened its social role and commitment to the maintenance/enhancement of human and life movement.

Further studies are encouraged on the distribution and inequalities in the provision of physical therapy assistance in Covid-19, on the strategies for organizing Physiotherapy services in response to the pandemic in PHC and in specialized outpatient care, as well as on the possibilities of organization of care through telehealth.

Collaborations

The authors participated equally in preparation of the article and performed the following activities: data design and planning, critical review of the content and approval of the final version of the manuscript.

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