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AGED PEOPLE'S HEALTH NEEDS IN THE FACE OF LONG COVID-19 AND ACCESS TO HEALTH SERVICES

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ABSTRACT

Objective: to understand the health needs of aged people who had long Covid-19 and details about access to the health system to meet these demands.
Method: an exploratory and qualitative study carried out with 41 aged individuals who had Covid-19 in 2020 and presented residual symptoms 18 months after the infection. Data collection took place between February and July 2022 through semi-structured interviews via telephone calls. In the analysis, initial and focused coding analytical techniques were used and the conceptual basis was grounded on the Primary Health Care "Accessibility" attribute.
Results: four categories emerged when analyzing the results, namely: Understanding the need for professional care; Recognizing the demands that led aged people to seek health services; Understanding availability of the services; and Analyzing payment capacity.
Conclusion: the aged population has developed specific health demands related to long Covid-19, and public and private health services are heterogeneous in their approach to this new condition, as care based on guidelines proposed by official bodies is not unanimous in public and private services and Health Plan Operators.

DESCRIPTORS: Covid-19. Acute post-coviD-19 syndrome. Older adults' health. Primary health care. Access to health services.

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NECESSIDADES DE SAÚDE DOS IDOSOS FRENTE À COVID LONGA E O ACESSO AOS SERVIÇOS DE SAÚDE

RESUMO

Objetivo: conhecer as necessidades de saúde dos idosos que tiveram a Covid longa e o acesso ao sistema de saúde para atender essas demandas.
Método: estudo qualitativo exploratório, realizado com 41 idosos que tiveram Covid-19 no ano de 2020 e apresentaram sintomas residuais após 18 meses da infecção. A coleta de dados ocorreu entre fevereiro e julho de 2022 por meio de entrevistas semiestruturadas via telefone. Na análise foram utilizadas as técnicas de codificação inicial e focalizada e a base conceitual se fundamentou no atributo “Acessibilidade” da Atenção Primária à Saúde.
Resultados: na análise dos resultados emergiram quatro categorias: Compreendendo a necessidade de atendimento profissional; Reconhecendo as demandas que levaram os idosos a buscar o serviço de saúde; Percebendo a disponibilidade dos serviços; e Analisando a capacidade de pagamento.
Conclusão: a população idosa desenvolveu demandas específicas de saúde relacionadas à Covid longa, e os serviços de saúde público e privado possuem heterogeneidade quanto à abordagem dessa nova condição, uma vez que o atendimento pautado em diretrizes propostas por órgãos oficiais não é unânime nos serviços públicos, privados e Operadoras de Plano de Saúde.

DESCRITORES: Covid-19. Síndrome pós-covid-19 aguda. Saúde do idoso. Atenção primária à saúde. Acesso aos serviços de saúde.

REQUERIMIENTOS DE SALUD DE ADULTOS MAYORES FRENTE A COVID-19 PROLONGADO Y ACCESO A SERVICIOS DE SALUD

RESUMEN

Objetivo: averiguar las necesidades de salud de los adultos mayores que tuvieron Covid-19 prolongado y detalles del acceso al sistema de salud para suplir estos requerimientos.
Método: estudio cualitativo y exploratorio realizado con 41 adultos mayores que tuvieron Covid-19 en 2020 y presentaron síntomas residuales 18 meses después de la infección. La recolección de datos tuvo lugar entre febrero y julio de 2022 por medio de entrevistas telefónicas semiestructuradas; en el análisis se utilizaron las técnicas analíticas de codificación inicial y focalizada y la base conceptual se fundamentó en el atributo “Accesibilidad” de la Atención Primaria de la Salud.
Resultados: surgieron cuatro categorías en el análisis de los resultados, a saber: Comprender la necesidad de atención profesional; Reconocer los requerimientos que llevaron a los adultos mayores a procurar un servicio de salud; Percibir la disponibilidad de los servicios; y Analizar la capacidad de pago.
Conclusión: la población anciana desarrolló requerimientos de la salud específicos relacionados con Covid-19 prolongado y los servicios de salud públicos y privados presentan cierta heterogeneidad en relación al enfoque de esta nueva condición, puesto que la atención basada en directrices propuestas por órganos oficiales no es unánime en los servicios públicos, privados y de Operadoras de Planes de Salud.

DESCRIPTORES: Covid-19. Síndrome post-covid-19 agudo. Salud de la tercera edad. Atención primaria de la salud. Acceso a servicios de salud.

INTRODUCTION

At the end of 2019, the first case of pneumonia caused by the SARS-CoV-2 virus was recorded, with high transmissibility and morbidity and mortality, culminating in a pandemic. This event raised concerns not only about the acute Covid-19 phase, but also about its medium- and long-term consequences[1].

In its acute phase, CoviD-19 presents systemic manifestations that vary from absence of symptoms to mild, moderate or severe symptoms. These affect several systems, which can cause disabilities in the infected person and even lead to death. Over time, residual symptoms of the acute phase were evidenced, sometimes lasting from onset of the infection and, at others, disappearing completely and reappearing after approximately 12 weeks (three months), without any alternative diagnosis to justify them, this condition being called long Covid-19[1–2].

Identification of long Covid-19 is a dynamic process that has intrinsic and extrinsic determinants for the individual. This imposes major challenges to health services, as it is directly related to severity of the disease in the acute phase, pre-existing chronic conditions, the patient's age, treatment measures taken during the first four weeks of infection and the time required to detect late symptoms, in addition to the absence of official protocols that standardize assessment and definition of this condition[3].

The aged population was considered by the Pan American Health Organization (PAHO) as a risk group for Covid-19 due to the inevitability of the immunosenescence process (progressive weakness of the immune system), which increases vulnerability to infections, chronic non-communicable diseases and the consequent increase in their morbidity and mortality[4]. As a result, when considering the consequences of Covid-19, aged people developed health demands that they did not previously have, which were eventually disabling and required specific care[5].

Brazil has a duplicated health system, that is, operationalized both by the public system and by supplementary health (health plans and private care – offered through payment of a monthly fee and/or per service). These coexist and allow the population to receive concomitant assistance according to their preferences and financial possibilities, without canceling each other out, thus providing greater variety of professionals and services available[6].

Aged people usually use health systems more frequently than adults, mainly due to multimorbidities that require periodic monitoring. With the advent of Covid-19 and long Covid-19 there was an increase in the search for services, bringing to light the Primary Health Care (PHC) Accessibility attribute[7].

PHC is the Unified Health System (*Sistema* Único *de Saúde*, SUS) care level that represents the users' main gateway to health services, providing care to people in a comprehensive manner, with the intention of meeting health needs in their entirety, coordinating and guiding other care levels[8]. In order for these needs to be systematically met, four essential attributes were described that guide assistance planning, namely: Accessibility or first contact access; Care coordination; Longitudinality; and Comprehensiveness[9].

The Accessibility attribute, or first contact access, involves the provision of accessible services both with physical and attention capacity, that is, a place that is easily accessible for people and where they can receive initial care regarding their health needs. This concept of access is an important ally in reducing morbidity and mortality, as the initial assistance provided by PHC professionals, rather than specialists, is more relevant in identifying complaints and contributes greater resoluteness to the care provided[8–9].

In Brazil, this care model is largely operated by the SUS; however, some Health Plan Companies (*Operadoras de Planos de Saúde*, OPS) are increasingly reproducing, even if partially, this PHC model in providing care to users. In this way, the users bring their health demands both to public and

private services – even in cases where the private service uses the standard approach (spontaneous demand) and does not adopt the Primary Care model[8].

This research is justified by the need to produce diverse information on the consequences of long Covid-19 for aged people's health and on access to public and private health services, as studies on this topic are scarce. To date, Brazilian research on long COVID-19 has adopted a quantitative approach, providing findings on persistent symptoms or quality of life[10–14].

No Brazilian study that has qualitatively analyzed the experience of living with long Covid-19 and access to health services has been identified, which signals the need to explore this topic and give a voice to those affected. As qualitative research studies seek to understand human meanings, actions and interrelationships, the participants' and researchers' subjectivity is part of the result and is influenced by their social, historical, local and interactional contexts[15].

Therefore, the reason to expand the production of qualitative studies on long Covid-19 in different Brazilian scenarios is reinforced, presenting different epistemological grounds to generate results that enable improving the organization of health services, with equitable access, implementation of qualified actions, and that meet the health needs of aged people with long Covid-19.

In this context, the objective of this study was to understand the health needs of aged people who had long Covid-19 and access to health systems to meet these demands, with the following research question: "how are health services meeting the demands generated by the health needs brought by aged people during long Covid-19?"

METHOD

This is an exploratory and qualitative research study carried out with aged residents of the state of Paraná who had Covid-19 diagnoses confirmed in 2020, with symptoms related to long COVID-19 for up to 22 months after the acute phase of the disease.

The conceptual basis was grounded on the PHC "Accessibility" attribute, which is the structural element in the first care provided to an individual, popularly called the "gateway"[9]. As thus is a qualitative research study, as determined by the Equator Network, its development followed the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist for greater quality and reliability during its conduction[16].

The state of Paraná is located in the Brazilian South Region, with a population of approximately 11.6 million inhabitants and its aged population representing nearly 1.8 million, corresponding to 15.9% of the total population. The health system in Paraná has health services at all complexity levels provided for in the SUS, with a care flow organized into four macro-regions and 22 health regions[17–18].

104 aged individuals were considered eligible for this research, intentionally selected from the Cohort/Covid Paraná/ State University of Maringá (UEM) database (to which both this study and the authors are linked), of people monitored for 18 months after acute infection of the disease and who remained with symptoms related to long Covid-19. The participants in this cohort were selected from the "*Notifica Covid-19 Paraná*" databases, where mild cases were recorded, as well as from the "Influenza Epidemiological Surveillance Information System (*Sistema de Informação de Vigilância Epidemiológica da Influenza*, SIVEP-Influenza)", for moderate and severe COVID-19 cases. However, for access to sensitive data (full name and identification-related data, personal documents, address and telephone number), they were provided by the Paraná State Health Department (*Secretaria Estadual de Saúde*, SESA) for development of the Cohort project.

The eligibility criteria were as follows: being at least 60 years old, positive for SARS-CoV-2 by RT-PCR (diagnosed with Covid-19) in 2020, reported in the aforementioned databases, living in the state of Paraná, and with the persistence of symptoms after 18 months attributed to long Covid-19. In situations where the older adults had limiting conditions related to cognition and speech, their main caregivers were the interview respondents. Aged people found to be dead in the telephone contacts made by the researchers were excluded from the study.

Severity of Covid-19 in its acute phase was classified based on the treatment locus, assigning mild cases to outpatient treatment, moderate cases to hospitalization in wards and severe cases when referred to Intensive Care Units (ICUs)[19].

Sample size was reached with 41 aged individuals. This number was determined by theoretical saturation, which is a systematic method used to determine the number of participants in a qualitative study based on the researcher's knowledge, measured by the association between the study topic and the object to be studied[20].

The interviews were carried out via telephone calls, recorded on a smartphone-type telephone device and using the CubeACR® Android application. In a single call, the older adults were invited to participate in the study and sequentially interviewed. Initially, the interviewer presented himself, invited the subject to the research and the participant stated their verbal acceptance, followed by reading the Free and Informed Consent Form (FICF), which was sent to each participant according to their interest, via conventional or electronic mail. Subsequently, the interviews were transcribed in full and checked for content and transcription fidelity.

Data collection took place between February and July 2022, a period that comprised 18 months after the acute phase of the disease. To this end, a semi-structured qualitative interview script consisting of two parts was used. The first part involved sociodemographic characterization, collecting objective information such as gender, marital status, schooling, family income, Covid-19 severity and treatment locus, municipality of residence and of hospitalization. The second part included open questions that guided the interviewer to systematically collect subjective data that responded to the research objectives, such as: Tell me how your health is/was after you had Covid-19. How have you managed your health after having Covid-19? After you had Covid-19, did you need to use any health services to deal with your new health conditions? If yes, why? If not, why not?

When presenting the results, the statements were edited without interfering in their content and coded with the letter "I" (Interviewee), sequential Arabic numerals in relation to the order in which the interviews were carried out and treatment locus (Outpatient service [OUT], Ward [WRD], and/or ICU).

The data were analyzed concomitantly with the collection procedure, using initial and focused coding analytical techniques according to the methodological framework adopted[21] and, in order to support the analysis, the MAXQDA® 2022 (license Nº. 333214973) software was used, which enabled exploring the qualitative data in depth.

For the initial coding, a thorough evaluation of the interview fragments was carried out and, based on the researcher's familiarization, provisional codes were created. The concepts most mentioned by the interviewees were then grouped, giving rise to the preliminary categories. For focused coding, the most recurrent codes supported the creation of source codes, and the categories with the study phenomena emerged from them[21].

Given the perspective of the framework adopted (the PHC Accessibility attribute[9]), for the needs to be known within an unprecedented context such as long COVID-19, it was indispensable to adopt the concomitant analytical technique, as the data are simultaneously products and producers of new information, through a dynamic deduction, induction and verification process, in addition to being subjected to constant refinement through questions, rendering the theoretical explanation increasingly denser[21].

This study met all the requirements set forth Resolutions 466/12 and 510/16 of the National Health Council, which regulate research involving human beings, and was approved by the Ethics Committee of the State Health Department and also by the Ethics Committee from the State University of Maringá.

RESULTS

A total of 41 aged individuals took part in this study (there were three cases in which the questions were answered by the main caregivers): 22 male and 19 female, with a greater representation in the age group of 60-69 years old. Most of the respondents were married (n=30), with Incomplete Elementary School (n=15), family incomes between one and two minimum wages (n=13) and not receiving any financial assistance from the government (n=35). The month with the highest number of infections reported was December, followed by July and August 2020:16, six and five notifications, respectively.

When considering the type of service, 29 resorted exclusively to the SUS and 12 reported having a health plan, using the services in a mixed way. Regarding severity of COVID-19 in its acute phase, most of the participants had moderate intensity with treatment in wards (n=17), followed by 13 patients who underwent outpatient treatment (mild cases) and 11 who developed the severe form of the disease, requiring treatment in ICUs. The reported cases are distributed across 13 health regions and 25 municipalities in the state of Paraná, with predominance in the cities of Curitiba, Maringá and Londrina.

The health services sought were distributed between public services, health plans and private services. When analyzing the interviews, four categories emerged to be discussed in this study, namely: Understanding the need for professional care; Recognizing the demands that led aged people to seek health services; Understanding availability of the services; and Analyzing payment capacity.

Understanding the need for professional care

This shows the emergence of some factors that suggest whether or not aged people should seek health services; in other words, the self-assessment of their health status took place at the individual and home levels, with excerpts that evidence the attempt to manage the symptoms at home: […] *I had a lot of problems after COVID, [...] I have a lot of depression. I had a lot of muscle pain, one moment my hand hurts, another time my groin, every time it's different, but I drink some tea and I'm taking it* (I15; ICU). […] *but I think that the pain, like I told you, you have to take a little medication every few days, because the body hurts a lot, but in general it can be considered normal, nothing that has left a heavy aftereffect. Thank God no* (I38; WRD).

The perceived symptoms directly impact older adults' autonomy. In addition to that, some cultural factors related to age were identified in the testimonies: […] *ah, those things, right? It's not like it used to be. There's always some weakness. Then, there's a bit of forgetfulness, but I think it's normal, it's just the age that's approaching* (I34; OUT). […] *my wife says that I've become slower, that my mind has become slower, but I haven't been to the doctor yet to find out if this is due to COVID, I think it's due to labyrinthitis. Forgetfulness and things like that, I think it's due to old age* (I26; WRD).

Recognizing the demands that led aged people to seek health services

In addition to the general manifestations, the emergence of permanent demands that require periodic care associated with long COVID-19 was evidenced: […] *it just gave me rheumatoid arthritis. And what's bothering me most now is this* [...] *the lung (doctor) and the rheumatologist who think it would happen to me anyway. But COVID-19 brought it forward in time* (I10; WRD).

In addition to these, statements also emerged about specific and sometimes serious problems that were linked to long COVID-19 and required intervention: […] *no, no, after a year (of COVID-19), I started to feel pain in my leg, in my heel, and then a red ball appeared on the side of my shin. So I looked for a doctor, I wasn't able to walk any step. So they requested a test, and it turned out to be a thrombosis* (I12; ICU).

Understanding availability of the services

In this category, we were able to notice that long COVID-19 monitoring was carried out both by OPSs/private care and by the SUS. Individual consultations for the older adults with generalist professionals in person were more frequent immediately after the acute phase, and the interval increased as their health status progressed, sometimes involving consultations or care provision at home and/or at the office, with performance of laboratory and imaging tests, as highlighted: […] *I had a follow-up (via health plan) for 2 to 3 months, when I left the hospital. Then I did some tests, that spirometry, [...] now she (the doctor) only did it every 6 months, the last one I did, she said it was OK, so I didn't keep it anymore. She told me not to go there anymore, so much so that physiotherapy too, she dismissed me [...]* (I1; ICU). [...] *I went to some very attentive doctors from the clinic I attend and it was all through the SUS* [...] *I did all the tests and everything was fine [...]* (I36; WRD).

There were cases in which the aged individuals reported using health plans because they had access to such service for a long period of time, and with the intention of relieving public service assistance: […] *I have a health plan, the SUS was already kind of full, right, of people who didn't have a plan* [...] *but, as I have a plan, I used it, even to let the SUS work, it was overcrowded* […] (I33; ICU).

Reports of attempts to use OPSs were identified, but they were unavailable; therefore, both private services and the SUS were sought: […] *no, it was private, because, in fact, she has a health insurance plan, but the hospital that assisted, which was the only one in the city at that time, didn't work under her health plan, so she was admitted privately, we paid for everything* (I25; WRD, answered by the daughter). [...] *because I had already gone to the* (health plan) *and they couldn't diagnose me and I went to the UPA and they diagnosed me positive* [...] (I40; WRD).

In addition to that, reports emerged both about total availability of the SUS to meet all the demands that appeared, and about moments in which there were limitations and unavailability of the public health service to meet the emerging needs of some aged individuals, who resorted to private services: [...] *and an MRI is scheduled for next week due to the pain in the leg* [...] *It was through the SUS that I made the appointment and I'm going to take the exam* [...] *it was quick* (the service) (I17; OUT). […] *if I were to wait for the SUS, look, until today I wouldn't have done it,* [...] *it takes a long time here in my city. Then, I have another daughter. And she gave me strength. I did it through the private clinic, there's a very good discount.* (I7; OUT).

Analyzing payment capacity

When evaluating the testimonies, it was revealed that there was both a need for direct expenses with medications and private services, as well as health plans, including monthly costs: […] *I'm in debt because I spent so much, there's nothing left to spend* [...] *Yes, because of the stomach, this leg is no longer useful, my God in heaven* [...] *So, I'm waiting to see if I can get some money so I can do an ultrasound, or an MRI* (I31; OUT). [...] *my plan is co-participated. So, depending on the month, I spend, in addition to the amount I pay in monthly fees* [...] *But I spend, on average, approximately eight, nine hundred reais, with the plan included* (I16; WRD).

On the other hand, there was also an expression of gratitude and appreciation for the work of the SUS, with allegations of financial inability to pay for good quality treatments: [...] *and I thank the*

SUS who took care of me and, if it weren't for them, I wouldn't be able to have adequate treatment, because my financial situation isn't suitable for that, and I know that paid hospitalization is expensive, so I'm very grateful (I38; WRD).

It was all through the SUS, all the appointments [...] *Thank God, I was lucky, because they attended to me, I went there yesterday, I saw there yesterday, I took the tests and I'll have the results, so I can't complain* (I32; OUT).

It is worth considering that aged people turned to professionals who had already treated them and with whom they were already familiar and, in most cases, this search was driven by the patients' own knowledge of their needs and also of the health service as a whole.

DISCUSSION

The current study sought to understand the health needs of aged people who had the acute phase of Covid-19 in 2020 and developed long Covid-19 approximately 18 months later, as well as how the specific demand they generated is being met by the health system of the state of Paraná.

With each new health need that arises due to a little-known condition, a new demand emerges for reorganizing the flow of patients and the health indicators and for promoting or recovering the population's quality of life based on this new circumstance – evidencing the importance of the essential attribute of Accessibility to health services, in addition to the ongoing commitment to community health education[9].

Therefore, when considering the consequences of long Covid-19, the patients found it difficult to manage the multiple demands arising from the imbalance imposed by the disease, in divergence from the experiences previously underwent[22].

Severity of the disease is not directly related as a determining factor or condition for prolongation of the symptoms; however, the patients who had the severe form of the disease in its acute phase with ICU admission, aged people, transplant recipients, immunocompromised patients and those with pre-existing comorbidities are the groups with the highest number of symptoms persisting[23].

In addition to the symptoms brought about by the long Covid-19 condition, in the aged population there is significant prevalence of neurocognitive disorders that culminate in cognitive decline. These are associated with physiological changes already expected in the senescence process, but are sometimes pathological symptoms masked by their normalization as inherent to aging, with the consequent lack of research and adequate treatment.[24] This study also showed that older adults' symptoms and doubts are related to understanding what is expected or not at each moment.

Among its various characteristics, pathological cognitive decline makes aged people resistant to changes in their routine due to difficulty adapting, resulting in reluctant, introverted, depressive and anxious behaviors[24]. Added to this, there are neurological sequelae, considered among the most common, brought about by long Covid-19 itself, with symptoms such as dementia, depression, anxiety and mood and/or attention disorders, which can further aggravate reluctance to seek health services and, sometimes, even in cases where their autonomy ends up being compromised[25].

The search of aged people with long Covid-19 for specialized care did not follow a linear order[22]; it took place in an unruly manner, based on several factors related to physical, emotional and social limitations. However, older adults' prior knowledge, derived from common sense about home treatments, oftentimes makes them look for artisanal remedies before seeking health services, and this is due to the ease obtaining plants for tea, to their low cost and to knowledge passed on through generations[26].

Although there are ongoing studies to investigate long Covid-19 itself, no criteria for the development of this condition have been established, much less a way to prevent it. Characteristics such as gender, age, ethnicity, intensity degree in the acute phase and presence or absence of

comorbidities are not sufficient to determine whether or not its symptoms will progress[25]. General manifestations of long Covid-19 such as headache, hair loss, fatigue, dyspnea, persistent cough, arthralgia (joint pain), tremors, chest pain and changes in smell and taste are present in most of the patients who report persistence of one or more symptoms[23].

However, there are reports of more specific situations with lower incidence, which were due to contamination by the new coronavirus, or were brought forward in time by it[25,27]. Some aged individuals mentioned seeking the services for treatment and monitoring of Herpes Zoster, Rheumatoid Arthritis, Peripheral Venous Thrombosis, tremors, insomnia, sciatic nerve inflammation and chronic conditions that became a result of long COVID-19 and require periodic follow-up to monitor the treatment and stabilize the condition[28].

In the pandemic context it was necessary to reorganize the coping strategies of public and private health systems, from the creation of new urgency and emergency care flows specific to the Flu Syndrome (FS) and to SARS caused by SARS-CoV-2, respiratory wards and ICUs, even reformulations in PHC itself, with improvements in the use of light technologies by professionals and innovation of care management methods that adapted to this new reality[29].

Various protocols were systematized to organize the public health system in the acute phase of Covid-19; however, there were no official protocols that guided such monitoring in the chronic phase since, in long Covid-19, people developed health needs and demands that the services were not sufficiently prepared to welcome and monitor[30].

By Itself, the installation of long Covid-19 already imposes challenges to health services, as it is an extremely individualized process and has several variables to be considered, such as time after the acute phase, main symptoms developed (or remaining), association or not of comorbidities, measures used to treat the acute phase, age, gender and access to the services, among many others[3].

For being a continental country, Brazil has significant heterogeneity regarding health care; therefore, the SUS gives the federative units autonomy to develop coping strategies that correspond to their own reality and, in the absence of protocols issued by official bodies at the national level, the State Health Departments created their own long COVID-19 care protocols[31].

In August/2021, the Paraná State Health Department issued Guidance Note Nº. 06/2021, revised in October/2021 and called “Guidelines on Management and Monitoring of the Post-Covid-19 Syndrome”. It provides diverse information on transmission of the virus, contextualization about the acute phase of Covid-19 and isolation time in this phase, guidance on the Post-Covid-19 Syndrome itself and suggestions for complementary exams and clinical management of the most common symptoms and, finally, guidelines for PHC and Specialized Outpatient Care (*Atenção Ambulatorial Especializada*, AAE)[32].

Regarding the competencies linked to PHC, the guidance note states that, when a person has been admitted to hospital, transitional care must be carried out in PHC by completing the “Integrated Care Plan – Hospital Care for Primary Health Care (Discharge Plan)” and that the user should be fully supported in their demands, considering, above all, the rehabilitation scope in the Basic Health Unit (BHU) of reference for their home and that, if necessary, the FHS physician must refer the case to AAE[32–33].

Such guidelines are suggested for people who have been hospitalized, either in a ward or in an ICU; for the outpatient treatment cases, Guidance Note No. 06/2021 does not provide the course of action to be adopted. The Minas Gerais Health Department issued the “Post-CoviD-19 Management Guide”, with similar instructions for post-hospital discharge patients, plus instructions for outpatient cases.

In this way, Community Health Agents (CHAs) become key players in attracting these users and are responsible for creating the patient-BHU bridge. PHC must identify patients with positive Rt-PCR for SARS-CoV-2 in their coverage area and, through Home Visits at the end of the quarantine, carry out a brief active listening session to identify possible signs of long Covid-19 in these individuals and refer them to the reference BHU[34].

In 2020, the public health problem caused by Covid-19 was addressed by the Ministry of Health with the declaration of a Public Health Emergency of National Importance (*Emergência em Saúde Pública de Importância Nacional*, ESPIN – February 2020), holding, together with the National Council of Health Departments (*Conselho Nacional de Secretários de Saúde*, CONASS) and the National Council of Municipal Health Departments (*Conselho Nacional de Secretários Municipais de Saúde*, CONASEMS), the leading role in activating the Emergency Operations Center for COVID-19 (*Centro de Operações de Emergência à Covid-19*, COE-Covid-19). As a result, several normative acts were created to combat the pandemic, including the integration of public and private health services[35].

In this way, a new model of State support for supplementary health was launched, qualified as inverted complementarity, where the public sector purchased private services, created partnerships in hospital management, hired social organizations to carry out the services, and created philanthropic models for health care – all managed by the financial banking sector[29].

Such acquisition was carried out in order to complement the workforce, structure, inputs and resources, so that the health system would be able to meet the large demand of people that emerged so abruptly[29]. However, the pandemic contingency measures were limited to care for the acute phase of Covid-19, with few records from private services regarding assistance for persistent symptoms and long Covid-19[35].

Regarding the performance of OPSs in caring for long Covid-19 cases in the state of Paraná, they did not digitally publish their protocols and/or care flows intended for these specific patients. However, there are records of remote monitoring of these patients in the post-Covid-19 period using Telemedicine technology, where users seek assistance via instant messages (WhatsApp) or video calls with physicians, in order to solve doubts and/or record complaints of symptoms[36].

It is known that OPSs have an operating logic centered on capital accumulation, with fragmented care and reactive, episodic and uniprofessional assistance, and not necessarily on commitment to the care quality provided – despite having better performance related to response capacity, effort and availability. This assistance model precludes the possibility of providing adequate care for chronic conditions that require medium- and long-term monitoring and planning[6,37].

Prior to the pandemic, the OPSs had already been suffering a reduction in the number of beneficiaries due to a slowdown in formal employment and economic decline and, during the pandemic period, social and economic inequalities became even more evident in the country[29,33].

Due to overcrowding of the SUS, some people sought OPSs and/or private services to carry out exams and consultations, in an attempt to speed up the diagnosis and treatment process for long Covid-19, which exerted an unscheduled financial impact – not to mention the plans that have co-participation, which saw an increase in their use and, consequently, an increase in the beneficiaries' financial expenditure[6,29].

Existing for slightly over three decades, the SUS has been chronically underfunded over time, having lost the equivalent of half of the financial resources it held at its creation. Despite this, the number of deaths during the pandemic would have been much higher if it had not been for this universal health system, as most users would not have been able to afford good quality treatments on their own; and, now, in the treatment of long Covid-19, the SUS has focused not only on strengthening

hospital capacity and emergency care, but also on collective and individual health actions, aimed at coping with, monitoring and overcoming this late phase resulting from Covid-19[38].

When providing care to patients with long CoviD-19, non-standardization of protocols in accordance with technical-scientific parameters established and accepted by the scientific community in a way represents a disharmonious functionality between public, private and OPS services, resulting in that the demands brought by aged people are handled in particular and incommunicable ways. Public service care is based on the guidelines proposed by official bodies, although in a unique way according to location and regional needs, and private services and OPSs conduct themselves autonomously, governed by their own protocols[38].

As a limitation of this study, we can indicate the fact that the research was carried out in only one Brazilian state, which can generate contrasts in relation to other regions of the country, both positive and negative, due to the wide variation in realities found; in addition to the difficulty accessing information about how OPSs act in the face of long Covid-19, which precludes creating a reliable general overview.

CONCLUSION

Long Covid-19 brought with it specific health demands in the aged population that require comprehensive, universal and equitable monitoring, demanding individualized planning in the medium-/long-term, with unprecedented characteristics of the population. Health services have a heterogeneous approach to long Covid-19 and it is important to point out the need to produce a care protocol for aged people with this condition aimed at monitoring by official bodies, guiding health professionals in a flow of more directive service, even within regional particularities, as care based on guidelines proposed by official bodies is not unanimous in public, private and OPS services.

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NOTES

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APPROVAL OF ETHICS COMMITTEE IN RESEARCH

Approved by the Ethics Committee in Research of the State Health Department (opinion Nº 4,214,589 and CAAE: 34787020.0.3001.5225) and also by the Ethics Committee of *Universidade Estadual de Maringá* (opinion No.4,156,272 and CAAE: 34787020.0.0000.0104).

CONFLICT OF INTEREST

There is no conflict of interest.

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