ABSTRACT

Objective: To understand how the municipalities of the Northern macro-region of Paraná reorganized PHC services during the Covid-19 pandemic. Methodology: a qualitative case study in which 27 local health managers from 16 municipalities in this macro-region were interviewed from July to October 2021. The interviews were analyzed through discourse analysis and the project was approved by the research ethics committee. Results: the health crisis of Covid-19 directly interfered in the organization and provision of PC services in the studied region. Despite this, there was reorganization of services through sentinel units for the care of people with respiratory symptoms, reorganization of the flow of care to users, monitoring of suspected and confirmed cases of Covid, actions for the assistance of patients with chronic conditions, as well as the development of partnerships with universities to increase attention to users. Final considerations: despite the Federative crisis that delayed the response time of the municipalities, they demonstrated resilience capacity to reorganize their PC services contributing to the fight against the pandemic.

Keywords: Health services. Primary Health Care. Pandemics. Covid-19.

INTRODUCTION

In March 2020, the World Health Organization (WHO) declared a Covid-19 pandemic, a disease caused by the SARS CoV 2 virus, which mainly affects the airways and has a high contamination power. Reaching several countries and causing impacts of variable proportions, this disease overloaded health systems and prompted mobilization to confront them.

In Brazil, as in other parts of the world, a significant portion of this mobilization was focused on hospital services, with several extensions focused on increasing the number of beds, especially in intensive care units (ICU). In addition, coping with the pandemic required the formulation of risk management plans involving the different federal entities, also highlighting the importance of territorial action in this context.

In this sense, Primary Care (PC), through the Family Health Strategy (FHS), played an important role in territorial issues considering the provision of services, guidelines on the disease, surveillance of users in isolation and training of professionals and servers to ensure protection of workers and the population using the services.

However, political, social and economic issues had direct interference in the organization of the health system during the pandemic, given the poor coordination and cooperation of the federal government with other federal entities in this process. At the beginning of the health crisis, governors and mayors affirmed that resources were not enough, something abnormal for the Unified Health System (SUS), considering the long trajectory of operation of the deep transfer.

In addition, the apex of this conflict process occurred when the Ministry of Health (MS) accused states of overestimating the number of deaths caused by the disease, the number of victims and infected and placing under suspicion the entire cooperative model of the SUS. This
situation of intergovernmental decoordination has generated waste of resources, overlapping of actions and damages to the guarantee of social rights built over the years\(^4,5\), in addition to the already known health damages, with high number of infections and deaths.

In this scenario of pandemic and crisis in federal relations, it is essential that the municipal health system and especially PHC have the ability to adapt and reorganize their services to respond adequately to the needs of the population.

A study conducted at the national level showed that primary care in the SUS had to reinvent itself during the pandemic, discovering new forms of distance care, whether by telephone, WhatsApp or by peridomiliary visits of community health agents\(^6\). Despite the power of PHC in its capacity for reinvention and capillarity, studies indicate that the transfer of resources to the municipalities was not sufficient and, in addition, there was no regularity and clear criteria that guided these transfers\(^6,7,8\).

Based on this context of health instability associated with financial instability and coordination between the different federal entities, the question is: how did municipalities organize themselves, within the scope of primary care, to respond to the demands brought by Covid-19? In an attempt to answer this question, this article aimed to understand how the municipalities of the Northern macro-region of Paraná reorganized PC services during the Covid-19 pandemic.

**METHODOLOGY**

This is a qualitative study, conducted in municipalities at the PC level, which used a single case study methodology, with multiple units of analysis. For Yin\(^9\), this method contributes to the understanding of phenomena from particular dimensions of analysis, allowing a greater deepening of the evaluations performed in that bounded radius. The bounded radius in this study are the municipalities that make up the Northern macro-region of Paraná, which totals approximately two million inhabitants distributed in 97 municipalities, most of them small (less than 20 thousand inhabitants), and five health regions (RS) - 16\(^{th}\), 17\(^{th}\), 18\(^{th}\), 19\(^{th}\) and 22\(^{nd}\).

As a case study, this research followed the following steps: a) definition of the problem to be investigated, which is the organizational changes and strategies used to cope with the Covid-19 pandemic in PC; b) prior planning of the investigation, where the visits would be carried out (municipalities included, managers to be interviewed, researchers who would go to the field, questions that would compose the script, etc.); c) Systematic data collection, interviews with semi-structured script and field diary; d) Interpretation of results, through discourse analysis; e) Dissemination of results.

The selection of municipalities, which are part of the case study, was made through financing indicators, classified into five axes (chart 1).

**Chart 1. Axes and indicators used for the classification and selection of municipalities. Londrina, 2022**

<table>
<thead>
<tr>
<th>Axes</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal investment in Health</td>
<td>Proportion of free source investment in relation to total investments in health</td>
</tr>
<tr>
<td></td>
<td>Proportion of open source health resources (Law No. 141/2012)</td>
</tr>
<tr>
<td>Ability to use intergovernmental transfer resources</td>
<td>Ability to use intergovernmental transfer resources</td>
</tr>
<tr>
<td>Ability to adhere to strategic actions</td>
<td>Adhesion to Saúde Bucal (SB), Informatiza APS, Saúde na Escola (PSE) and Saúde na Hora</td>
</tr>
<tr>
<td>Registration capacity</td>
<td>Registration coverage</td>
</tr>
<tr>
<td>Performance</td>
<td>Final Synthetic Indicator (FSI)</td>
</tr>
</tbody>
</table>

**Source:** Created by the authors.

The municipalities received scores according to their performance in each of the indicators, being classified from the score reached (low, intermediate and high) and by their typology.
Repercussions of the Covid-19 pandemic on the organization and provision of primary care services

(rural, adjacent rural or urban). The reference values for the scores were:
- Low score: from 5 to 8.66;
- Intermediate score: from 8.67 to 12.33;
- High score: from 12.34 to 16

The lower the value, the lower the difficulties of the municipality in budget management and organization of PC. In order to select a greater diversity of scenarios for the case study, the municipalities that were closest to the extremes of values (16, in the high score, 12.33 in the intermediate and 5 in the low) of each RS were included. The refusal of the municipality to participate in the research was constituted as the exclusion criterion.

At the end, 10 urban and seven adjacent rural municipalities were selected, six of low score, nine intermediate and two high. Contact was made, by email and/ or telephone, with the health departments of the selected municipalities, presenting the objective of the research and those who agreed to participate, were scheduled date and time for the interviews. There was a refusal by an urban municipality with a high score, reducing the number of research sites to 16. The inclusion of the interviewees was conditioned to the position occupied (necessarily health secretaries and PC coordinators). We interviewed 27 managers, 16 coordinators of PHC and 11 health secretaries. The five interviewers were researchers, three teachers, all doctors and two master students.

The data were obtained through questions about the changes that occurred in the organization of PC due to the Covid-19 pandemic: “What changes occurred in the organization of PC during the pandemic?” And “What strategies were used in PHC in coping with the pandemic?”. A pilot test was applied prior to the interviews, in a municipality not selected for the study.

The interviews were conducted from July to September 2021, in person, and took place in a room of the health departments of the participating municipalities, in which only the interviewee and two researchers were present, which guaranteed privacy to the process. The interviews had an average duration of 60 minutes, were recorded and the audio files were later transcribed in full and then deleted, as stated in the informed consent form (ICF).

In order to preserve the identity of the participants in the presentation of the results, the managers were coded with the letter G, followed by a number in the order of the interviews, namely: G1, G2... G27.

The analysis method chosen was the discourse analysis proposed by Martins and Bicudo(10). First, a floating reading of the transcripts of each interview was performed in order to appropriate and know the central ideas of the actors, listing the units of meaning. The next step consisted in the Nomotetic analysis, in which, after a new reading of the interviews, approximations were made and convergences and divergences of the units of meaning were identified, which allowed to build categories for the structuring of the phenomenon studied.

This manuscript is linked to the research project entitled “Changes in the rules of transfer of federal resources of the Unified Health System: implications and challenges for the financing and organization of Primary Health Care in Brazil” approved by the Ethics Committee of the National School of Public Health Sérgio Arouca according to opinion 4.196.806 and CAAE: 30675420.60000.5240. Given the ethical considerations, the participants, after being informed about the objective of the research and agreeing to participate, signed the ICF.

RESULTS

The academic training of managers was varied, being 17 nurses, two doctors, a pharmacist, a pedagogue, two dentists, two lawyers, an accountant and a computer engineer. In relation to training in the managerial area, 13 managers reported having postgraduate degrees in public management or collective health and 14 reported not having specialization in the area.

Two categories of analysis were constituted: a) Reorganization of PC services in coping with the Covid-19 pandemic and b) Actions developed by PC during the Covid-19 pandemic.

Reorganization of PC services in coping with the Covid-19 pandemic

The reorganization of PC to combat Covid-19 took place in several ways in the 16...
municipalities studied, and it is possible to see that the beginning of the pandemic brought several challenges to this level of attention. Initially, there was difficulty for the organization of the services and for the acquisition of materials, due to the scarcity of technical and epidemiological as well as the circulation of disparate information issued by the Ministry of Health and agencies such as the National Health Surveillance Agency (ANVISA), the World Health Organization (WHO) and the State Health Department (SESA). The delay in the transfer of resources and the difficulty of obtaining safe technical information made some municipalities choose to close or suspend routine care in the Basic Health Units (BHU).

At the beginning of the pandemic we did not have much information, the professionals were also very afraid, we did not have a specific place for the care of these patients, nobody knew how they should be treated, we did not have resources and even the information was not enough (G5).

With the constitution of the management committees and the preparation of the contingency plan, different strategies were adopted by the municipalities, through the process of provision and training of professionals, organization and reorganization of flows and definition of strategic points for care of respiratory symptoms.

We hired new professionals through the SSP, did trainings with the guidelines we had until then and directed patients with respiratory symptoms to be assisted by these teams. (G3)

After this initial process, the creation of “sentinel” units (units for the specific care of patients with Covid-19), the creation of care flows and training of professionals working on the front line were highlighted:

We were able to structure the sentinel (unit), assemble the flows, the units began to reference the flu syndromes to the sentinel. (G6)

For most managers, the reorganization of the health services of the municipalities was done by directing patients with respiratory symptoms to strategic units that were structured to ensure better protection for other users and reduce the risk of infection. There were reports of tenting in outdoor environments to care for the respiratory symptomatic not to interrupt the routine care of BHU:

We opened other spaces for respiratory references, so according to the pandemic, we were adapting, we had places in the territory to meet that population. (G1)

There was a tent that was outside, so the calls were [performed] all there. (G2)

Moreover, to ensure that there was no contact between the possible infected and the others, another strategy adopted was the partnership between BHU and schools in the territory, where routine care was promoted with part of the FHS team.

The schools were always partners, so the unit’s care and consultations that were not respiratory complaints, patients sought schools, part of the team was in the unit and the other part in schools. (G7)

The opening of units at strategic points in municipalities with extended hours of care to avoid the displacement of users with respiratory symptoms was also mentioned by managers.

We left three units open, one at each end, on each axis of the city. We left them for three to four months [...] in all were five units, counting with the extended hours. (G3)

In contrast, the closure of BHU due to the insufficient number of professionals to attend the Covid-19 units during the pandemic occurred in many locations. Amid the workforce crisis, several municipalities held a public call through a Simplified Selection Process (SSP).

So from 10 units we reduced to five units in attendance, because also began to come a lot of removal of professionals, [...] we also had problems [of professionals] with chronic disease, so we lost practically three teams at the time”. (G4)

We did PSS recently because of the home office, due to the removal of professionals by the pandemic. (G5)

**Actions developed by PC during the Covid-19 pandemic**

In order to cope with the pandemic, PC services needed to be reformulated in several aspects. In this sense, health surveillance actions were reinforced and the use of new technologies and remote care was introduced.
We tried to reorganize in the territories for people to have access, do active search, many jobs with elderly telemonitoring, set up services of 0800, nutritionists called patients. (G8)

Due to the sanitary guidelines of social isolation, it was necessary to suspend group activities during the peak moments of the pandemic, but gradually they have been resumed.

Today we have been returning, and today we work with all actions, we have highlighted prevention of cervical cancer, collection of Pap test. (G6)

In addition, due to the concern not to allow the most vulnerable users to be disaffected, some of the actions performed by the FHS were maintained, such as the provision of medication and monitoring of users using insulin and the monitoring of people with chronic high-risk diseases. The monitoring of these users took place by teleattendance.

We prioritized the things that most concerned. For example, the dependent insulins, we made a monitoring of all. When was the last exam, if he was going to get the medicines, as he was, as was the food, [...] we did all this process at the beginning of the pandemic by telecare. (G8)

Another strategy for maintaining health surveillance and longitudinal monitoring, but avoiding agglomeration in the units, was the release of medication, scheduled with a longer than usual period.

The medications were provided for a long period, the continuous...people began to take the drugs for three months. (G3)

The role of the Community Health Agent (CHA) to mediate the relationship between families and teams was also reinforced in several municipalities. These professionals had contact with families, especially for the dispensing of medicines for continuous use.

The CHA of the area saw which medication was missing and renewed with the doctor [...] so they are not leaving home to come to the BHU just to renew a prescription. (G2)

In order to streamline the entire diagnostic part of Covid-19 and maintain the safety of patients and other users, the test result center was created, in which the health professionals of the service called the patients to report results of tests, so that these users did not need to move to the unit.

We created the test result center, so that the patient did not need to go to the unit and not call in his (unit), because it was quite difficult for the patient to call, [...] we were calling the patients. (G8)

The multiprofessional care of the Family Health Support Center (NASF - Núcleo de Apoio à Saúde da Família) was hampered as a result of the pandemic, since these professionals began to perform uniprofessional consultation, by face-to-face or telecare. Despite the difficulties that the pandemic caused, one of the managers said that NASF professionals reinvented themselves to maintain a bond with the population through social media.

When the pandemic process began, there was a distance, then began the more individualized care. (G5)

With the NASF and especially with the family health teams, we created a youtube channel that initially was to produce videos of physical exercise for the elderly who participated in the groups that we had before, and how it stopped, they felt a lot, they were used to the activities, [...] they [NASF team] created the channel, they record the videos, they make Lives. (G8)

Dental care was also impaired, since it was necessary to suspend face-to-face care, due to the release of droplets and aerosols during procedures and the high risk of transmission of infection by the respiratory tract.

The area that suffered most in this pandemic was dentistry, there was no way, we had to stop and this, for sure, will reflect in the indicators. (G2)

Mental illnesses were also evidenced, since the entire health context accentuated these diseases. Managers were mobilized to provide services in this area and a partnership between service and university was made for psychological support in two municipalities, as reported by the manager:

We have also structured a project with the unit and with the municipality, the neo-covid, which is the psychological care after covid. [Patients] are referred from the sentinel unit to UENP [University of the North of Paraná]. (G7)

These partnerships were not limited only to mental health, there are also activities related to
social issues such as support for the elderly in situations of vulnerability due to the lack or absence of family ties.

Because then when we identified that there was an elderly person totally isolated, who had no support network, the university made this bridge with volunteers to support this elderly person. (G8)

**DISCUSSION**

The results showed the difficulty that the municipalities, especially the small and adjacent rural ones, faced at the beginning of the pandemic to organize care for users in PC. This difficulty occurred especially due to the insufficiency of secure technical information by the MH, as well as the delay in the transfer of resources. The omission of the federal government forced subnational entities to assume a significant portion of the responsibilities related to the fight against the new coronavirus\(^{(11)}\). In this context, municipal and state managers had to take the lead and make complex decisions, according to the course of events, given the unprecedented situation caused by the pandemic\(^{(12)}\).

In the course of the pandemic, there was also a lack of human resources, and emergency hiring is necessary to maintain service to users. Despite these difficulties, the municipalities studied demonstrated resilience by reorganizing their PC services both to meet symptomatic respiratory users, as well as other demands.

Thus, in the context of Covid-19, PC had to reorganize itself to act in three axes: care, prevention and service provision\(^{(12)}\). The first axis refers to the promotion of primary and secondary surveillance prevention actions, aiming at mitigation or reduction of new cases of Covid-19. The second deals with the support offered to groups with health or social vulnerabilities, while the third is related to the continuity of services offered by PC before the pandemic, but maintaining social isolation.

Regarding axis one, it is worth recognizing that PC has always been present in several emergency situations in recent years, such as dengue epidemics, Zika, yellow fever, Chikungunya, and the Covid-19 pandemic, demonstrating its fundamental role in these situations\(^{(13,14)}\). Thus, the care model developed by PC with a focus on territorial care, surveillance, comprehensive care, user access and bonding has become essential during the health crisis, monitoring and tracking of confirmed and suspected cases\(^{(15)}\).

With regard to Covid-19, although some managers reported performing health surveillance actions, not all were able to perform them in a territorial and systematic way, having been one of the weaknesses recognized in this study. It is worth mentioning that the integration between epidemiological and health surveillance was fundamental in this process to contain the advance of the disease\(^{(15)}\). In the municipalities in which this integration took place effectively, it was possible to ensure the support and direction of users to PC reference services, as well as the monitoring of suspected users or with confirmation of the disease.

The role of the CHA was also extremely important in the context of the pandemic, especially in the orientation regarding social isolation, in the active search for suspected cases, in the awareness of the population, in combating fake news, in supporting during the vaccination campaign, among other actions. In the analysis of the possibilities of action of PHC services that contribute to the control of the epidemic, it was highlighted that social isolation can be encouraged by the entire team, but mainly by the CHAs, either through the mobilization of leaders, either through the wide dissemination of information about the disease\(^{(16)}\). In a review article, evidence was found that CHAs play an important role in raising awareness, combating stigma and maintaining the provision of essential services in pandemic contexts\(^{(17)}\).

Regarding elective dental care, there was a recommendation that it should be suspended in the country due to the amount of aerosols generated throughout the care, prioritizing only emergency care and dental prenatal care\(^{(18)}\). This measure has greatly affected the work of dentistry as reported by one of the interviewees, because although there is recognition that dentistry needs to be inserted in work of promotion and prevention, individual and curative care is essential in the dental care of the population of the territory.

The possible increase in the rates of depression, anxiety, alcohol abuse, domestic
violence, cases of child abuse and even diseases caused by grief was identified as a situation resulting from the pandemic\textsuperscript{(19)}. These situations were also recognized by the research participants as worrying factors, which affected the mental health of the population and deserved attention from the PHC teams of the municipalities studied.

As for the support offered for the most vulnerable groups (second axis), the tracking of vulnerable families, the use of media technologies, and information messengers, the creation of a call center, the renewal of revenues automatically and the referral of users with problems related to mental health for psychological monitoring in partner universities were some of the actions implemented. In this axis, the CHAs also had a prominent role in the monitoring of the most vulnerable users with chronic diseases, enabling the renewal of recipes or delivering medicines for continuous use at home.

A review study identified the relevance of the bond of the CHA and the family as an essential condition for the continuity of care to the user with chronic disease in PHC\textsuperscript{(20)}. Regarding the promotion of mental health of the population in the pandemic period, an integrative review study highlighted that the use of technology for the production of educational videos, teleconsultations and application development, new methods and these have proved to be effective\textsuperscript{(19)}.

The use of media and technologies such as telecare and electronic medical records also enabled the continuity of service offerings made by PC (third axis) monitoring of users from safer means to professionals and the community. In this sense, ensuring continuity of care is aligned with the parameters of prevention, promotion and rehabilitation in health, and is also one of the solutions to the lack of human resources\textsuperscript{(21)}.

These technologies were also used to continue the activities of the NASF, as reported by managers of one of the municipalities in this study. To combat fake news about the disease and vaccines, we used messaging applications and informative videos with scientific information disseminated with popular language, always respecting the guidelines of the health authorities.

Similar actions were identified in a study conducted in the PC service network in two regions of the city of São Paulo, where telecare technologies and mass messaging applications were used to expand the health education strategy\textsuperscript{(21)}. They were used for the transmission of guidelines aligned with health authorities, in a certain period of the pandemic in which the spread of fake news about the disease in the territory was high. The strategy of mass communication by applications was also used to update the network professionals on the new strategies of coping with the pandemic, with scientific evidence, thus avoiding divergent or publication-oriented practices that have not yet been validated\textsuperscript{(21)}.

And finally, it is worth noting that although PC has managed to reorganize itself, the austerity policies adopted in recent years have directly influenced the political, social and financial crisis in Brazil. In addition, poor coordination by the federal government, the crisis in the Ministry of Health and conflicts between federal entities caused delay in the transfer of resources to the municipal entity and, consequently, delay in the organization of the health system, especially PC, in several municipalities\textsuperscript{(12)}. This was also a reality in the municipalities of the Northern macro-region of Paraná, which certainly impacted on the pandemic.

This manuscript does not intend to exhaust all possibilities of reorganization of PC in the context of the pandemic, being limited to the findings of the research conducted at a certain time and scenario of the municipalities surveyed in the northern macro-region of Paraná. However, many of the strategies of reorganization of PHC services identified in the research, especially the greater approximation of the epidemiological surveillance service with the health units, the use of media technology for monitoring users and for health education activities, for example, can be replicable strategies in other scenarios.

**FINAL THOUGHTS**

The Covid-19 pandemic had a direct impact on the organization and the provision of scheduled services of AB, requiring the
suspension of activities in groups, campaigns and other actions that generate agglomerations or increase the amount of aerosols in the environment.

The development of this study allowed us to understand how the municipalities of the Northern macro-region of Paraná reorganized PHC services during the Covid-19 pandemic, in order to fulfill their role in the health care network.

In the context of the pandemic, many municipal managers enabled the implementation of strategic points of care for Covid-19, sentinel units, partnered with universities, articulated surveillance services with basic units, and expanded the partnership with diagnostic testing laboratories.

Actions such as telecare, tracing of suspected cases and confirmed cases, the care of patients with respiratory symptoms in the referral units and routine in the other units were also implemented, collection of tests, health education aimed at combating fake news with the population of the territory, delivery or sending via e-mail of medical prescriptions of continuous use to chronic patients to minimize agglomerations, use of social media and telecare of users with chronic diseases and psychological care.

It is noticed that, despite the scenario of political, economic and social conflicts and the poor coordination by the federal entity have influenced the organization and the response time of the municipalities to face the pandemic, The management of PC in the municipalities studied demonstrated resilience by reorganizing its services in order to meet the needs and demands of the user population during the pandemic.

**REPERCUSSÕES DA PANDEMIA DA COVID-19 NA ORGANIZAÇÃO E OFERTA DE SERVIÇOS DA ATENÇÃO BÁSICA**

**RESUMO**

**Objetivo:** Compreender como os municípios da macrorregião Norte do Paraná reorganizaram os serviços da AB durante a pandemia da Covid-19. **Metodologia:** estudo qualitativo do tipo estudo de caso em que 27 gestores locais de saúde de 16 municípios que integram essa macrorregião foram entrevistados, no período de julho a outubro de 2021. As entrevistas foram analisadas por meio da análise de discurso e o projeto foi aprovado pelo comitê de ética em pesquisa.

**Resultados:** a crise sanitária da Covid-19 interferiu diretamente na organização e na oferta de serviços da AB na região estudada. Apesar disso, houve reorganização dos serviços por meio de unidades sentinelas para o atendimento a pessoas com sintomas respiratórios, reorganização do fluxo de atendimento aos usuários, monitoramento de casos suspeitos e confirmados de Covid, desenvolvimento de ações de teleatendimento para a assistência dos portadores de condições crônicas, além do desenvolvimento de parcerias com universidades para ampliar a atenção aos usuários.

**Considerações finais:** apesar da crise federativa que retardou o tempo de resposta dos municípios, estes demonstraram capacidade de resiliência para reorganizar seus serviços da AB contribuindo para o enfrentamento da pandemia.


**REPERCUSIONES DE LA PANDEMIA DE COVID-19 EN LA ORGANIZACIÓN Y LA PRESTACIÓN DE SERVICIOS DE LA ATENCIÓN BÁSICA**

**RESUMEN**

**Objetivo:** comprender cómo los municipios de la macrorregión Norte de Paraná/Brasil reorganizaron los servicios de la Atención Básica (AB) durante la pandemia de Covid-19. **Metodología:** estudio cualitativo del tipo estudio de caso en el que 27 gestores locales de salud de 16 municipios, que integran esa macrorregión, fueron entrevistados, en el período de julio a octubre de 2021. Las entrevistas fueron analizadas por medio del análisis de discurso y el proyecto fue aprobado por el comité de ética en investigación. **Resultados:** la crisis sanitaria de Covid-19 interferió directamente en la organización y oferta de servicios de AB en la región estudiada. Pese a todo, hubo reorganización de los servicios por medio de unidades sentinelas para la atención a personas con síntomas respiratorios, reorganización del flujo de atención a los usuarios, monitoreo de casos sospechosos y confirmados de Covid, desarrollo de acciones de telellamadas para la asistencia de los portadores de condiciones crónicas, además del desarrollo de alianzas con universidades para ampliar la atención a los usuarios. **Consideraciones finales:** a pesar de la crisis federativa que retrasó el tiempo de respuesta de los municipios, estos demostraron capacidad de resiliencia para reorganizar sus servicios de AB, contribuyendo para enfrentar la pandemia.

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