

Community health workers: reflections on the health work process in Covid-19 pandemic times

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Abstract *Abstract This study discusses the reorganization of the Community Health Workers (CHWs) work process as a result of the Covid-19 pandemic, considering its importance as a link between the community and the health services in the field of basic care. The literature review comes from the following databases: Virtual Health Library, Scientific Electronic Library Online, and the Brazilian Scientific Publications Portal databases in open access and document review of technical and normative notes from the Municipal Health Secretariats in Brazil. The analysis was based on the premises of Primary Health Care and on the axes of the CHW work, especially cultural competence and community orientation, aiming to discuss the changes introduced in this work regarding the following aspects: 1) health teams support, 2) use of telehealth, and 3) health education. This study concluded that the Covid-19 pandemic demanded reorganization of the work process and assistance flows in the field of basic care. In order for the CHW to continue developing their activities it is necessary to guarantee decent working conditions, training and continuing education, including the concern about the possible discontinuity of other care needed to ensure the population health care in the territory.*

Key words *Coronavirus infections, Pandemics, Community health workers, Primary health care*

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Introduction

At the end of the 1980s, Brazilian health model reform, recommended by the Sanitary Movement¹, created the Unified Health System (SUS) founded on the principles of universality, integrality equity, decentralization, regionalization, and social participation².

Over the last 32 years, the SUS³ construction process has experienced several alternative proposals for the organization of services, especially in basic care^{3,4}. The implementation of the Program of Community Health Agents (*Programa de Agentes Comunitários de Saúde*, PACS) since 1991, and the Family Health Program (FHP), created in 1994 and later considered as Family Health Strategy (FHS, 1997), are highlights among the proposals.

In this process, the Community Health Worker (CHW) is linked with the FHP to work in the basic units, and represent the community's connection and health services⁵. The FHS is the priority strategy to consolidate and expand basic care, which, through the National Policy of Basic Care (*Política Nacional de Atenção Primária*, PNAB), under Ordinance No. 2436/2017. It determines as principles and guidelines: "the exercise of democratic and participatory practices of care and management, teamwork, aimed at populations in the defined territories and comprising the individual in their singularity and socio-cultural inclusion, in search of integrated care" (our translation)⁶.

Therefore, the CHW is essential in Primary Health Care (PHC) as it presents the following attributes: cultural competence, community orientation, and bond-building strategies. In this way, they establish daily contact with families in their territory and their communication? transits between technical and popular knowledge^{7,8}.

Given the novel coronavirus (SARS-CoV-2) pandemic, the units operating the FHS can identify in advance potential severe cases by offering territorialized care, and promoting longitudinality and care coordination at all levels of health care⁹. Nevertheless, to meet this demand, the health work process needed to be significantly readjusted because of logistical and space-time constraints, such as alternative forms of activity developed by the PHC team and the community's social isolation. Such changes compromised the mobility among the different territories covered by the FHS teams, the face-to-face relationship with users/community, especially in-home visits. Furthermore, this relationship required

changes in assistance flows and the interrelationship among team members, making it challenging to hold face-to-face meetings for monthly planning of activities⁹.

This study systematizes some reflections on the strategies adopted for the CHW work's requalification, maintaining the essential attributes of the PHC when facing the COVID-19 pandemic. This issue is relevant since the coronavirus pandemic demands a reconfiguration of the health work process, especially the one developed by the CHW, which requires the link, contact, and strengthening of the taxes derived from PHC. This situation particularly happens when there is mobilization and guidance of the various population groups, for the health promotion and protection, in the health's crisis.

Methodological strategy

This is a theoretical-reflexive study based on a critical analysis of specific texts identified through a scientific and documentary literature review, including notes, recommendations, and guidelines concerning the reorganization of the CHW work process in pandemics, specifically by Sars-CoV-2.

The selection of studies was carried out on June 9, 2020, in the bibliographic bases of Virtual Health Library (VHL), Scientific Electronic Library Online (SciELO) and Brazilian Open Access Scientific Publications Portal (Oasis) using the terms as descriptors and Boolean operators: "community health agent AND covid-19", "community health agent AND coronavirus infections", "community health agent AND pandemic", "community health agent AND primary health care", "community health agent AND coronavirus infections OR covid-19 AND primary health care" and their Portuguese correspondents.

Subsequently, we performed the document review on digital platforms and institutional sites, such as the Ministry of Health (MH) and the official websites of the 26 Brazilian states and the Federal District Health Secretariats. We included documents, norms, and notes that intended to guide the these professionals's work in the pandemic's context. With the same purpose we examined, the Internet pages of specific portals for coronavirus of the World Health Organization (WHO), Pan American Health Organization (PAHO), Oswaldo Cruz Foundation (Fiocruz), and Brazilian Association of Collective Health (Abrasco).

The analysis *corpus* comprised 9 articles and 14 technical documents, including notes, recommendations, and guidelines concerning the reorganization of the CHW work process during the COVID-19 pandemic. The assessment of the 26 State Health Secretariats and the Federal District's websites revealed that only 10 states (37%) published norms and/or work guidelines to the CHWs in the pandemic's context. These Brazilian states are: Bahia, Espírito Santo, Mato Grosso, Minas Gerais, Goiás, Rio Grande do Norte, Rio Grande do Sul, Santa Catarina, São Paulo, and Paraíba. Besides, the MH issued two documents, a recommendation report and a guideline, both focused on the CHW in the times of coronavirus pandemic. The institutions Oswaldo Fiocruz Foundation and the Brazilian Association of Collective Health (ABRASCO) also published documents in this direction. Other institutions such as WHO and PAHO did not issue specific files to health agents that covered general recommendations to health professionals working in the front line.

The theoretical framework to support this discussion is based on the concept of health work process¹⁰⁻¹². For this purpose, aspects related to the care production by CHW guided the central categories of analysis before and during the pandemic through the following PHC premises: accessibility, integrality, longitudinality, and care coordination¹³.

Results and discussion

The work of the community health worker: premises and organizations in PHC

The legislation foresees CHW insertion^{6,14-16} and their integration in FHS as a multi-professional team member has redirected their work process. There have been more emphasis on the families under the responsibility of the PHC teams, who, through the FHS, give priority to the "fully and continuously supported health promotion, protection, and recovery"¹⁷ (our translation) involving the "longitudinality, integration and coordination of care"¹⁷ (our translation).

Primary care includes the reception, the guarantee of accessibility, and the use of health services for each additional need or new health problem, considering geographical, organizational, socio-cultural, and economic aspects⁶. This bond provides care continuity and healthcare longitudinality, regardless of specific health-related

problems or problem type¹⁷. Therefore, this bond builds pathways towards an integrated approach for the individual and families, including linking health services with actions providing information and assistance to meet their health needs comprehensively through different points in the healthcare network¹³.

In this scenario, the CHW's tasks include cultural competence and community orientation, with health education as the central axis of work. Cultural competence allows the "recognition of social groups' cultural characteristics and their different needs and conceptions of the health-disease process"¹⁸ (our translation). Better efficiency and effectiveness of the CHW work in PHC are decisive elements in this context. Community orientation, in turn, is understood as the capacity to join epidemiological and clinical competencies to support programs aiming to better recognize the emerging health demands of the assigned population¹⁹.

As of 2017, Ordinance No. 2. 436 of September 21⁶ defined the following CHW attributions: stimulate community participation in public policies; guide families on the use of health services; identify risk situations through periodic home visits and monitor of families; measure blood pressure, capillary blood glucose, axillary temperature during the home visit (in cases and situations of risk identified to other members of health teams); assist in planning and implementing health actions both locally, (by referring information from the territory of coverage to the FHS, as well as nationally, feeding data from the information systems of the MH⁶).

Although CHW work is considered from the health field, it involves intersectoral actions. For example, the contact with the social assistance network, through the Social Assistance Reference Center (*Centro de Referência de Assistência Social*, CRAS) and the Specialized Social Assistance Reference Center (*Centro de Referência Especializado de Assistência Social*, CREAS), when seeking better strategies for preventing and promoting health for families assigned to FHS teams²⁰.

Considering Ordinance No. 2,436⁶ and understanding cultural competence and community orientation as primary axes of the CHW's work, the recommended tasks emphasize an action far from an effective PHC²¹. The latter is conceived as a gateway and organizing axis of care since it involves the bureaucratic activities performed by the CHW, rather than risk prevention and health promotion for the population living and working in the territory of the Family Health (HF) units.

Reorganization of the CHW work in public health emergency contexts

Professional performance in the healthcare field is guided by logistical models of service provision in different spheres and realities, thus determining activities, techniques, and instruments that can be used in each profession¹². The central pillars of PHC for health care reordering are the organization and management of work processes¹². Hence, PHC applies to understand the components of this process and how they are (re)organized in public health emergency scenarios.

The healthcare work process results from the sum of processes by which individuals act using production means, on some object in order to, by modifying it, get a certain result/product¹⁰⁻¹². In the PHC context, CHWs are members of the *gens' group*. Objects are the socio-health conditions or needs of individuals and families. Production means or work instruments are knowledge, skills, tools, and/or equipment. Finally, purposes or objectives are results projections that aim to satisfy needs and expectations, according to their social organization, at a particular historical moment¹⁰⁻¹².

When considering the health work process from this concept, public health emergency events require, besides new forms of social behavior, adequacy and development of work strategies and methodologies, especially in the CHWs' performance. Carmo *et al.*²² point out that, in situations like this, there is "a need for readjustment and improvement of concepts, structures, processes and practices of health surveillance, in an articulated manner with the health care network" (p.29, our translation). In this sense, the COVID-19 pandemic represents one of the most significant health challenges in recent years, directly influencing the dynamics and relationship between the elements that compose this work process and change the healthcare provision in the territory.

Therefore, the object of the CHWs' work goes beyond the previous health needs, including demands that arise from emergency and require activation of others demands, such as knowledge acquisition, practice improvement, and new tools usage such as information and communication technologies and social media.

However, the CHW work attributes – cultural competence and community orientation – cannot be excluded from everyday services. In pandemic or outbreak times, these features help in the greater permeability and acceptance of the

measures established and recommended by the country's health authorities. This happens not only because of the capillarity that the CHW has in the territory but also because this worker is one of the main responsible for recognizing the demands and particularities of the territory under their responsibility. The health surveillance function has been pointed out as the key to minimize damage and reduce avoidable deaths in public health emergencies⁹.

The review of the evidence²³⁻²⁷ on the CHW work in pandemic contexts, indicates that they represent a significant part of the workforce in the front line and can be valuable in pandemics control and prevention such as COVID-19. In countries with well-established programs, the CHW functions and tasks transform during pandemics because of the need to redefine normal procedures for conducting routine activities. Besides training, supervision, and support, it is recommended that these professionals receive adapted and continuously updated guidance²³⁻²⁷.

The following CHW activities are considered typical in the international scenario during pandemics: awareness, community engagement and sensitization on disease aspects, adoption of security measures and combat stigma, and contact tracing²³.

Based on these elements and on the analysis of the selected material, reflections on the reorganization of work in the SARS-CoV-2 epidemic context were conducted according to the following empirical and theoretical categories: 1) Support to health teams, 2) Use of Telehealth, and 3) Health education. We decided to deepen the debate based on these three topics, considering that they stand out. In addition, we created a diagram (Figure 1), the diagram will be explained throughout the following sections and it exemplifies the restructuring of the CHW work process in the COVID-19 pandemic, without disconnecting from the premises that structure PHC.

1. Support for health teams

The CHW work process reorientation in support of health teams must occur to comply with the PHC premises (as shown in the diagram). However, in the pandemic scenario, accessibility and longitudinality/continuity of health care are paramount to guarantee assistance²⁸. Considering the attributions already defined in Ordinance No. 2,436, we identified that the structuring of the CHW's activities in health teams support in-

cludes home visits and data collection; situational diagnosis of vulnerable patients and assistance to patients with chronic diseases; and active and passive surveillance of confirmed mild cases for COVID-19^{9,29-38}.

Regarding home visits, it is recommended^{9,29-38} to abstain from entering the homes and to prioritize peridomiciliar area for the execution of the planned activities. It is opportune to use this moment to investigate the number of rooms and resident people in the household, considering the age group and the presence of comorbidities, as well as the conditions of access to basic sanitation, in order to carry out, preliminarily, a

risk analysis for coronavirus²⁹. Haines et al.²⁵ and Ballard et al.²⁶ point out that home visits are key opportunities for situational diagnosis of vulnerabilities, as it allows the identification of users/families in extreme poverty, food insecurity, and vulnerable groups. Chatterjee²⁷ draws attention to the demanding intersectoral character, since, by identifying the most vulnerable, the CHW can activate other instances of the health system and of the protection and social assistance services. The objective is to ensure that these groups receive the necessary food, monetary, social and medical support, whether provided by government agencies or other sources.

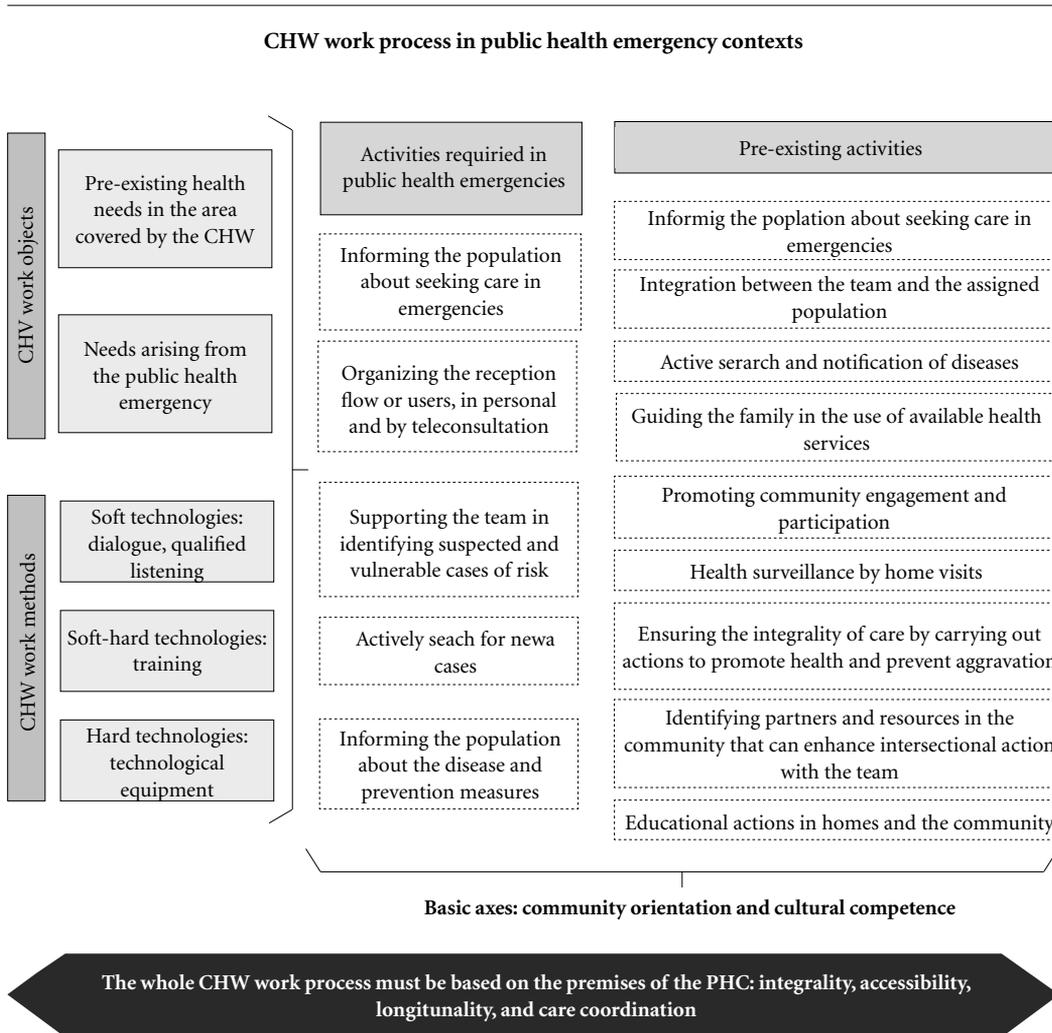


Figure 1. Diagram on the CHW work process in emergency contexts in public health.

Source: own elaboration based on the theoretical elements proposed by Faria *et al.* (2009)

Based on the household information collected and cataloged, CHWs are assigned to map the users at higher risk for COVID-19, activating social support networks, from the territorial point of view. Likewise, the CHWs are responsible to record and analyze the distribution of COVID-19 cases by place of residence, gender, age group, presence of comorbidities, and social vulnerability³⁹. In this sense, as CHWs are in direct contact with the territory, they are advised to map possibilities of places or isolation strategies accurately for users at higher risk for COVID-19³⁹.

Goldfield *et al.*⁴⁰ consider that the activities developed should include monitoring changes in the epidemiological situation and in public health strategies. According to them, these activities should aim at social acceptance, control of new cases, contact tracking, health monitoring, prevention and strict control of infections in health facilities, use of other active control interventions, continuous active surveillance activities, sharing of health data with members of the same country, and a team for the information systems team, all attributions that are already recommended by the PNAB.

Heins *et al.*²⁵ mention that the CHWs performance along with the territories and the community contributes to establishing a bond and a relationship of trust in the health system, so that in the future they will be involved in community tests for COVID-19, including the expansion of diagnostic tests. In the long run, they can contribute to the condition management by monitoring physical and mental health and reviewing the availability and use of medicines²⁵.

In the Health Unit, the CHWs are responsible for organizing the reception flow to avoid agglomeration of groups with more than 10 people, preferably welcoming users in ventilated environments, in addition to assisting in active and passive surveillance activities, treatments flow and vaccination schedules³⁸. Similarly, the Brazilian recommendations establish that the CHW must assist in the service using the Fast-track COVID-19, a fast flow screening tool to assisting in cases of flu syndrome with a method derived from screening protocols in emergencies³⁸.

In addition to actions to promote, prevent and control diseases, these recommendations^{9,38} include attributions related to the identification and monitoring of suspected and confirmed cases through temperature, blood pressure, and early detection of COVID-19 symptoms. However, personal protective equipment (PPE) and other equipment (thermometer, portable pulse oxim-

eters) are necessary items, as well as the proper CHWs training to effectively qualify them according to the protocols indicated for the pandemic^{9,38}.

The challenge is not restricted to CHW work. However, it covers the work process in PHC to ensure that continuous care for users is not interrupted and that patients in the territory are not neglected. In parallel, defining specific flows for suspected or confirmed COVID-19 users during the pandemic.

On the other hand, based on the premises of accessibility and longitudinality, a key feature that involves the work of the CHW is the reach of marginalized and vulnerable populations to ensure that they have access to services. Above all, tests and any actionable results promptly with culturally appropriate and necessary messages to fight against the pandemic^{9,29-38}.

2. Use of Telehealth

In exceptional circumstances, the possibility and ethics of using telehealth was recognized as a priority, as far as possible, for the CHW performance²⁹⁻³⁸. The reason is due to the need to adopt measures of social distancing and restrictions on home visits.

In this sense, telehealth is understood as a system of health services provision at a distance, intermediated by information and communication technologies (ICTs)⁴¹. Silva⁴² describes it as a way of conceiving health processes, breaking the distance barrier based on the use of ICTs, covering sub-areas, such as health or health tele-education. ICTs can be used to develop educational activities at a distance, like lectures, courses, conferences, online classes, etc. They can also cover research and tele-epidemiology networks (for monitoring and investigating epidemiological research using systems linked to the internet); health administration and management networks, as well as telemedicine, which involves tele-guidance, telemonitoring (guidance and supervision for remote monitoring or enforcement of health and/or disease parameters), teleconsulting, and tediagnosis⁴¹.

Although more strongly encouraged in the current context, we would like to highlight that this tool has been regulated by the Ministry of Health. In 2006, the Permanent Telehealth Commission and the Executive Telehealth Committee were created. In 2007, the Program Telehealth Brazil Networks and the National Telehealth Project (replaced in 2011, through Ordinance

No. 2,546, by Telehealth Brazil Networks), which aims to strengthen and improve the quality of primary care in SUS⁴³.

Among the recommendations and guidelines of the technical documents evaluated for the adequacy of the CHW work in the pandemic, we have the possibility of carrying out “online visits” in substitution for home visits, intermediated by communication channels (Whatsapp, email, phone, and others) from the FHS and/or PHC to monitor and inform the population about the cancellation of consultations and provide guidance on the Basic Health Unit (BHU) work routine in the current situation³⁸.

The Secretariat of Health of the state of Rio Grande do Sul³⁶, for example, proposed that the work should be carried out alternately between home visits and telephone monitoring of users with symptoms of COVID-19. More specifically, this proposal would be every 24 hours in case of people over 60 years old and/or with clinical risk conditions, and every 48 hours to all the others. 14 days after the onset of symptoms are completed, face-to-face care must be guided if necessary. Haines et al.²⁵, as proposed by the Secretariat of Rio Grande do Sul, present the possibility of regular review of groups considered vulnerable (personally or virtually), depending on the need.

Abrasco⁴⁴ reinforces that in order to achieve more efficient actions developed by the CHW in the virtual dimension, it is necessary to develop capacities for internet use and application. We would like to point out that the PNABs^{6,16} already guaranteed freedom for municipalities to develop or purchase software to collect or manage family data, as well as the availability and maintenance of tablets or smartphones for FHS and CHW. More recently, the MH, sought to improve the quality of health information and now has been leading the process of implementing the e-SUS PC Strategy (*Estratégia e-SUS AB*) through the computerization of health services and the increase of technologies to make the work process in Primary Care (PC) viable⁴⁵.

However, Abreu et al.⁴⁶ highlight aspects that hinder the implementation of these systems, mainly due to the absence of support for clarifying doubts, as well as the absence of manuals for CHWs, which rises to negative perceptions when operating these tools. Mendonça et al.⁴⁷ emphasize that it is necessary to investigate the ICTs usage coverage by the community of each CHW action, since the access to these tools is heterogeneous among different social groups. This action prevents the inclusion of a large part of

the population, especially the poorest and least educated, in the digital society, and thus restricts the CHW's ability to accompany them based on this methodology.

Although tele-education, tele-epidemiology, and telemonitoring are already being incorporated into the CHWs work, we know that these tools have been more demanded in their daily lives at this time^{46,47}. The incorporation of these new work tools requires state investments for training staff/people and to acquire and maintain devices and applications in use, as well as the recognition of social inequalities and accessibility with regard to the use of these technologies for the CHW work process⁴⁷. Thus, these new ways of working must be inserted in order to guarantee a greater efficiency and effectiveness of the work of the CHW and favors longitudinality and accessibility to the care provided by the PHC.

3. Health education

So far, health education measures have hierarchically taken place and overloaded with a strictly technical view. This resulted in campaigns and materials designed from a purely biomedical perspective⁴⁸. However, recognizing that the health-disease-care processes are expressed in different ways, according to the affected social group (which are determined by macro and microstructural dimensions) these tools are not consumed and understood by everyone with the same avidity⁴⁸.

The CHW's action already had an essential educational work to prevent diseases and promote health to families and communities. In the present context, the indispensability of this action has been reinforced in all the documents analyzed^{9,29-38}. Above all, it was pointed out the need to strengthen the CHW's competence in promoting the understanding of the epidemiological situation, ways of transmitting the virus, signs and symptoms of COVID-19, as well as providing guidance and information on the BHU functioning in the community. The chw is also important to report on behalf of the community, home and personal protection measures, such as social distance, use of fabric masks, personal hygiene, hand washing, respiratory etiquette, with special attention to resolve fake news^{9,29-38}.

As a health educator, the CHW has the arduous task of contributing to reflections on popular, social and health initiatives in coping with the situations that the pandemic brings, as well as collecting, knowing, systematizing, and trans-

lating the anguish and doubts of the population in this scenario⁴⁹. With the use of technologies, it is possible to lead the action in this period^{27,50}, in digital media (such as WhatsApp groups) and local media (such as a bicycle with a speaker, community radio, sound cars, community newspapers, information leaflets, and posters).

In this regard, the COVID-19 pandemic has revealed the need for educational strategies that reach personal beliefs and a worldview largely influenced by historical, cultural, and social factors. In determining individual behavior and choices at this time, such factors can be challenging for professionals who are directly involved in fighting SARS-CoV-2²⁷.

In view that the community competence is one of the differences in the CHWs work, dialogue with the population about their demands and the importance of fostering social participation and community engagement becomes essential⁴⁸. Importantly, the CHW has taken on a leadership role (although not systematically) promoting improved communication strategies^{25,40}.

In the health unit environment, the CHW is in charge of carrying out educational activities while patients await for care; advising on the use of available tools, such as the *Coronavirus-SUS* application of MH; and reinforcing the guidelines for patients who will remain in isolation and their caregivers²⁸. Despite the current epidemiological scenario, it is noteworthy that arboviruses epidemics did not cease to exist. Therefore, it is essential that the CHW take advantage of the aforementioned opportunities to advise on measures to prevent dengue, zika, and chikungunya, as well as symptoms and the search for care at the health unit²⁹⁻³⁸.

Necessary considerations

It is evident that the COVID-19 pandemic required restructuring health systems and reorganizing the work process and assistance flows. However, this PHC reorganization could not mean discontinuity of other prevalent care in the territory, especially in fragile scenarios and with such distinct vulnerabilities present in Brazilian society, expressing itself in the heterogeneity of the population's epidemiological situation in the different territories. It is expected that the experience resulting from fighting this critical event — still in catastrophic progression — can stimulate the recognition and mobilization of society

in defense of SUS for its promotion, strengthening, and greater preparation. Especially in PHC, in situations like this pandemic, teams' work and care flows can be readjusted quickly without compromising the actions that had already been developed to intervene on the determinants of the health-disease process and also on the risks faced by registered families and individuals.

The increase in new ways of working, such as the use of ICTs, must be expanded beyond the moments of emergency in public health, particularly to enhance and optimize the activities developed. Finally, it is necessary to guarantee decent working conditions to develop the model shown in the figure, in addition to the CHW ongoing training and education. Therefore, we cannot forget that the work performed by the CHW is essential to execute the premises that guide Brazilian PHC into action. The work that has community orientation and cultural competence as its cornerstones cannot be allowed to be replaced by other rationalities, such as bureaucratic and ineffective work for health care provision.

Considering the aspects mentioned above, some recommendations directed to the CHW work reorganization process in health emergencies we presented some below. They based on the experience of fighting against COVID-19:

Development of a health education perspective that does not attribute to individuals and families the "blame" for exposure to illness and death risks, and that is not merely prescriptive of habit and attitude changes, but recognizes the role played in determining the health-disease process by living, working and leisure conditions;

Development and construction of culturally accessible communication strategies through guidelines reachable to all the population, with CHWs training and continuous supervision to qualify them in using these new communication and health education strategies;

Guarantee of personal protective equipment and other working conditions, worthy remuneration, and offer psychological support to the CHWs and their families.

These recommendations are based on professional qualification to enable situations of necessary CHW reorganization working process, without harming the legal perspectives, to ensure the provision of actions and services to the population. They seek for the universality of access and equity in health, in defense of that CHW's dignity of work and life, health workers and the population.

Collaborations

FBM Maciel, HLPC Santos, RA Silva, EA Souza, NMBL Padro and CFS Teixeira contributed substantially to the study's conception and planning; in the data acquisition, analysis, and interpretation; in the writing and critical review; and approved the final version to be published.

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