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ARTICLE REVIEW

Innovations produced in Primary Health Care during the COVID-19 pandemic: an integrative literature review

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Abstract *Primary Health Care (PHC) proved to be an important part of the prevention, control and treatment measures against COVID-19, a situation in which it was challenged to keep up its provision of regular services as well. This article identifies the main arrangements made to provide PHC care in the context of the COVID-19 pandemic. An integrative literature review of articles found in PubMed, SciELO and LILACS databases was performed using the descriptors "Primary Health Care" and "COVID-19". Findings were analyzed considering three questions: Information and Communication Technologies (ICT), Organizations of Work Processes and Non-COVID Chronic Diseases. The use of different forms of ICT to provide PHC is highlighted regarding patients with respiratory symptoms and chronic patients. Changes in team composition, service flows, physical spaces and working hours were also introduced. Although strategies aimed at monitoring chronic patients and at remote care may have helped minimize deterioration of their health, the decrease in the number of visits performed during this period could have resulted in an increased demand for PHC in post-pandemic years.*

Key words *COVID-19, Primary Health Care, Health Policy*

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Introduction

The COVID-19 pandemic has imposed new challenges on health managers worldwide and in Brazil, on the three government area in charge of managing the Brazilian Public Health System (SUS) to ensure immediate responses to the greatest health crisis of this century. The speed and high rate of transmission of the SARS-CoV-2 virus, as well as the occurrence of serious and fatal cases significantly impacted health networks, pointing to the risk of a collapse due to the development of the disease to Acute Severe Respiratory Syndrome. The resilience of health systems and services was put to the test, requiring plasticity, organizational capacity and the production of technological care arrangements capable of reconfiguring, in a short period of time, offers, flows and work processes at different care network points[1].

Primary Health Care (PHC) proved to be an important part of prevention, diagnosis, treatment and monitoring measures against COVID-19, a situation in which it was challenged to keep up its provision of regular services to the population[2]. Although much effort was made at the onset of the pandemic to increase the number of hospital beds and ventilatory support, most COVID-19 patients received PHC in the form of outpatient treatment[3-5].

Although every country configures PHC in different ways, it is one of the key components of every effective health system[6] and a link of the care network that, due to its territorial base, allows establishing a closer contact to individuals, families and the community[7]. National health systems (NHS) rely on PHC as a powerful device to organize and coordinate care, given its capillarity, information on users and suitability to find adequate solutions to the various health challenges faced by people in their processes of illness and care[7].

PHC assumes greater sanitary responsibility than other care network links, as its collective health surveillance, promotion and prevention actions exceed the individual dimension of care[5]. Given this context, there is evidence that National Health Systems (NHS) strongly rooted in PHC respond more effectively to health emergencies[8,9]. The COVID-19 pandemic put to the test countries that were not able to develop coordinated territorial actions with other health network components[5], which worsened access inequalities and difficulties that had existed before the pandemic.

In Brazil, PHC works in many different ways, due to the heterogeneity and particularities of Brazilian regions and municipalities[10]. The COVID-19 pandemic broke out at a time when PHC was affected by government measures that jeopardized the doctrinal principles of the Brazilian Public Health System (SUS). Some examples include the impacts of Constitutional Amendment No. 95, which limited public spending; the change in National Primary Care Policy, which makes the composition of the Family Health Strategy teams more flexible; the implementation of the "*Previne Brasil*" program, which changed the traditional financing logic of PHC; and the suspension of the "*Mais Médicos pelo Brasil*" program, which further worsened the lack of health care services[11-15].

It is crucial to know what responses and innovations were developed to address the COVID-19 pandemic to understand responsiveness and organization of Health Systems[16], as there is evidence of a certain perspective of ambivalence of actions developed by PHC, such as presence-absence, plasticity-rigidity, or even experimentation-repetition during the COVID-19 pandemic. In this sense, this article aimed to identify the main arrangements that were developed to offer PHC care in the context of the COVID-19 pandemic.

Method

The present integrative literature review is part of a main research project funded by Fapesp/PPSUS which aims to analyze the productions, inventions and challenges in care management implemented by health care networks in two Health Regions of the State of São Paulo to address the COVID-19 pandemic, with an emphasis on PHC.

This integrative review was performed in six steps that were adapted from the methodology proposed by Mendes *et al.*[17] and the presentation of results follows the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA)[18].

The present review answers the following guiding question: "What kind of innovations were introduced in Primary Health Care arrangements during the COVID-19 pandemic?" To this end, scientific publications from three different databases were surveyed from the beginning of the pandemic to March 2022: Lilacs, SciELO and PubMed. MESH and DeCS descriptors "Prima-

ry Health Care" and "COVID-19" were used and combined with the Boolean operator "AND". Duplicate records were eliminated and studies were evaluated by their titles and abstracts using the Rayyan electronic platform[19] to make sure they met all inclusion and exclusion criteria. Selected articles were read in full to check their eligibility.

All publications found in the databases that answered the research question were included, regardless the language or place where the study was carried out. Articles that did not answer the guiding question were excluded, just as editorials, letters to the editor, comments, essays, opinion articles, reviews and articles that investigated the use of medication or other forms of treatment. All bibliographic references of selected articles were reviewed to find additional articles that could be included in the review.

Articles included in the review were analyzed regarding their year of publication, language, data collection period, place of execution, methodology and main results that would show innovative care arrangements in PHC.

Results and discussion

By applying the criteria described above, the survey found 2,185 articles, 25 of which were duplicates and thus excluded. After reading their titles and abstracts, 127 articles were selected for full reading, 67 of which were included in the review and fully analyzed (Figure 1). Chart 1 presents the main findings of the studies analyzed by the present review.

Most of the reviewed articles were published in English, i.e., 58 studies, followed by 7 articles published in Portuguese. Research took mostly place in the United States (23 studies), followed by Brazil and the U.K. (8 studies each) and Canada (7 studies).

Seventeen articles were published in 2020 and another 44 in 2021. Regarding the time of data collection or period studied, 49 studies used data from the first term of 2020 and only three studies used data from 2021.

Results highlight three main topics that are analyzed and discussed below: Information and Communication Technologies (ICT), Work Process Organizations and Non-COVID Chronic Diseases.

Information and Communication Technologies

Use of ICT is mentioned in almost all articles analyzed by the review, varying in terms of form and intensity of use. Use of ICT is justified as a strategy to ensure physical distancing due to the COVID-19 virus' high potential for its spread in closed spaces, such as health care clinics[20].

The types of ICT used varied significantly from place to place where research took place. Most of them included phones, text or video messaging applications[21-23], SMS messages[24], telemedicine platforms and social networks[25].

These technologies were used for care and monitoring of respiratory symptomatic patients and confirmed cases of COVID-19. Text messaging or SMS applications were used to schedule appointments, perform triage and monitor patients with COVID-19 or other chronic diseases. One study states the use of automation mechanisms by a messaging application, which allows monitoring COVID-19 patients by automatically providing users with guidelines that meet their description of health issues[26].

ICT has also been used extensively to support chronically ill patients, including telemedicine consultations and phone monitoring of patients[23,27]. Some health care clinics developed systems that issued daily reports of people with chronic conditions at higher risk who required closer monitoring by physicians[28]. Contact, active search and monitoring of these people by phone calls have also been reported[29-32].

Not only doctors made use of these technologies. Several members of multidisciplinary teams applied ICT to their professional activities, such as the practice of physical activities supervised by physical educators[21], consultations with occupational therapists[33], nurses[34] and pharmacists[35].

In a short period of time, health professionals had to adapt their practice and start providing care services remotely, despite uncertainties about regulations and whether remote services should be paid or free[36]. According to a Canadian study, before the COVID-19 pandemic only 6.5% of physicians offered telemedicine consultations, a figure that jumped to 66.4% during the pandemic. Most of these professionals intended to keep practicing telemedicine after the pandemic as well[24].

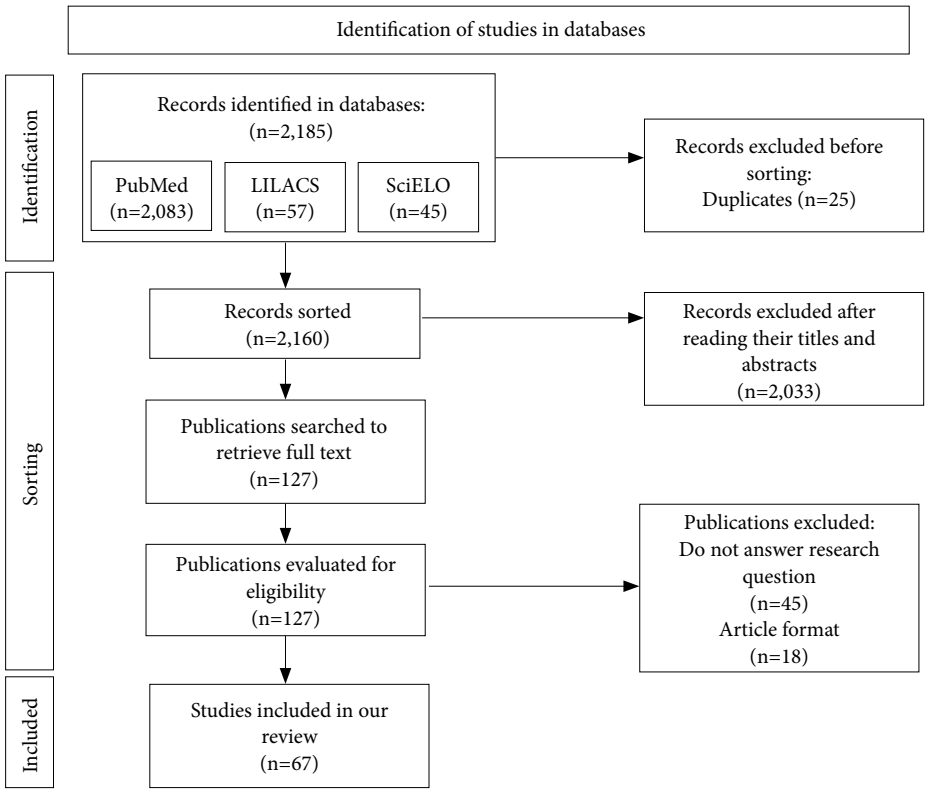

Figure 1. Article selection flowchart.

Source: Authors.

In Brazil, use of telemedicine has always been a matter of controversy among medical entities and to such an extent that the Federal Council of Medicine (CFM) revoked the ordinance issued in 2018 that authorized telemedicine approximately two months after its publication. The alleged reason was a "request from numerous medical entities that ask for more time to analyze the document"[37,38]. Despite that fact, at the beginning of the pandemic, the CFM sent the Ministry of Health (MS) a letter declaring that it recognized the possibility of exceptionally using telemedicine during the COVID-19 pandemic[39]. Based on this official letter from CFM, the MS issued Ordinance No. 467/2020 regulating the use of telemedicine as one of the measures to address the pandemic[40]. After that, the matter was regulated through the enactment of Law No. 13,989/2020[41].

The significant increase in the use of telemedicine during the pandemic was mentioned as one of the justifications for the publication of CFM Resolution No. 2,314/2022, which regulates the matter after the COVID-19 pandemic[42]. Establishing regulatory standards for the practice and payment of treatment by telemedicine associated with comparable care quality and user satisfaction are pointed out as important factors to keep up its use after the pandemic[43].

Despite uncertainties about the regulation regarding use of ICT, it is clear that its use often occurred spontaneously and autonomously, like a strategy created in an act, on initiative of professionals who were looking for ways to ensure care services without exposing people to the risk of contamination by the COVID-19 virus. The lack of official support for its use, paired with a lack of adequate equipment and software programs led many professionals to use social networks and their personal cell phones instead.

Chart 1. Summary of main results.

Authors	Year	Study Location	Methodology	Main results
Adepoju *et al.*[67]	2021	USA	Quantitative	Use of ICT.
Adepoju *et al.*[68]	2021	USA	Quantitative	Use of ICT.
Albert *et al.*[64]	2021	USA	Qualitative	Use of ICT; Home monitoring of chronic patients with sphygmomanometers, glucose meters, INR meters and sending these devices by mail.
Alboksmaty *et al.*[29]	2021	England	Qualitative	Proactivity in contact with chronic patients for monitoring; Use of ICT; Triage and selection of patients with most urgent needs.
Almeida *et al.*[69]	2021	Portugal	Quantitative	Use of ICT.
Ashcroft *et al.*[25]	2021	Canada	Qualitative	Use of ICT; Innovations in triage to detect patient needs early and refer them to specific groups.
Bhatti *et al.*[30]	2020	Canada	Qualitative	Use of ICT; Active contact with patients; Partnership with voluntary entities to check food insecurity; Referral to shelters; Provision of tents; Triage at reception; Changes made to the physical structure of the unit; Consultations at home, shelters and asylums.
Blazey-Martin *et al.*[28]	2020	USA	Experience Report	Use of ICT.
Breton *et al.*[70]	2021	Canada	Quali -Quantitative	Use of ICT.
Breton *et al.*[44]	2021	USA and Canada	Qualitative	Use of ICT.
Brey *et al.*[63]	2020	South Africa	Experience Report	Home delivery of medication for chronic patients.
Careyva *et al.*[71]	2021	USA	Experience Report	Use of ICT.
Carvalho *et al.*[72]	2021	Brazil	Experience report	Use of ICT; Implementation of an active flu syndrome search form; Notebook for evaluation and monitoring of PHC indicators by the state government.
Cerqueira and Pinheiro[73]	2022	Brazil	Experience report	Implementation of a guideline for coping with the pandemic, defining responsibilities of care network points and creating health care lines based on PHC.
Chang *et al.*[74]	2021	USA	Quantitative	Use of ICT.
Cheng *et al.*[75]	2021	USA	Experience Report	Use of ICT.
Cirino *et al.*[49]	2021	Brazil	Experience report	PHC participation in the COVID-19 contingency committee; Maintenance of priority health care lines; Open access for other demands; Separation of symptomatic flow and specific team for symptomatic care; Home visits to vulnerable patients; Easier renewal of prescriptions, delivered to family members; Extended prescription validity; Guidelines for preventive measures and distribution of masks by community health agents.
Crowley *et al.*[59]	2021	South Africa	Quali -Quantitative	Greater number of pills to increase time between consultations and take out of medication; Home delivery of medication in partnership with social organizations; Use of ICT; Exclusive care areas for Covid and non-Covid patients.
Danhieux *et al.*[31]	2020	Belgium	Qualitative	Space was reorganized to create Covid patient areas; Use of ICT; Active monitoring of chronic patients considered at higher risk.

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Chart 1. Summary of main results.

Authors	Year	Study Location	Methodology	Main results
Donnelly *et al.*[57]	2021	USA	Qualitative	Use of ICT; Changes in job tasks, since usual activities could not be performed in the same way working online.
Driver *et al.*[57]	2021	USA	Quantitative	Use of ICT.
Fernandes *et al.*[76]	2022	Brazil	Qualitative	Use of Popular Health Education to keep up and strengthen ties with the community and to develop community actions to fight and prevent Covid.
Fernandez *et al.*[22]	2021	Brazil	Qualitative	Use of ICT; Home visits by Health Care Agents were suspended; Visits took only place at the gate and focused on information and guidance.
Fernemark *et al.*[50]	2021	Sweden	Qualitative	Use of ICT; Definition of separate teams and locations to care for symptomatic patients or patients with confirmed Covid; Face-to-face work meetings and training replaced by remote meetings.
Fifolt *et al.*[53]	2022	USA	Qualitative	Use of ICT
Franzosa *et al.*[54]	2021	USA	Qualitative	Use of ICT; Delivery of oximeters to Covid and suspected Covid patients and monitoring by phone; Assessment of need for drugs and supplies; Virtual team meetings.
Franzosa *et al.*[77]	2021	USA	Qualitative	Use of ICT.
Ghafri *et al.*[23]	2020	Oman	Qualitative	Use of ICT; Definition of exclusive care areas for symptomatic and confirmed Covid patients.
Gilkey *et al.*[78]	2021	USA	Quantitative	Use of ICT.
Glazier *et al.*[79]	2021	Canada	Quantitative	Use of ICT.
Grossman *et al.*[80]	2020	Israel	Quantitative	Use of ICT.
Hasani *et al.*[81]	2020	Oman	Qualitative	Use of ICT.
James *et al.*[34]	2021	Australia	Qualitative	Use of ICT.
Johnson *et al.*[56]	2021	Canada	Quali-Quantitative	Use of ICT.
Joy *et al.*[82]	2020	UK	Quantitative	Use of ICT.
Knierim *et al.*[83]	2021	USA	Experience Report	Use of ICT.
Koster *et al.*[35]	2020	Netherlands	Quantitative	Use of ICT; Automated drug dispensers; Home delivery of medication.
Kunwar *et al.*[60]	2021	India	Quantitative	Distribution of medication in community health centers; Delivery of greater number of pills to increase time between consultations and take out of medication at health care centers.
Kurotschka *et al.*[62]	2021	Italy	Qualitative	Use of ICT.
Lim *et al.*[26]	2021	Malaysia	Qualitative	Use of ICT.
Mitchell *et al.*[55]	2022	UK	Qualitative	Home consultations and visits; Increase in nurses' scope of responsibility: authorized to prescribe medication; Use of ICT.
Mohammed *et al.*[24]	2021	Canada	Quantitative	Use of ICT.
Montelongo *et al.*[84]	2021	Brazil	Quali -Quantitative	Use of ICT.

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Chart 1. Summary of main results.

Authors	Year	Study Location	Methodology	Main results
Morgenstern-Kaplan *et al.*[85]	2022	Mexico	Quantitative	Use of ICT.
Morreel *et al.*[86]	2020	Belgium	Quantitative	Use of ICT.
Murphy *et al.*[87]	2021	England	Qualitative	Use of ICT.
Norman *et al.*[45]	2021	England	Qualitative	Remote work; Use of ICT
Oliveira *et al.*[48]	2021	Brazil	Experience report	Development of a different service flow for symptomatic patients after their registration; Use of ICT; Drive-thru influenza vaccination.
Ritchie *et al.*[51]	2021	USA	Quali -Quantitative	Use of ICT; Remote monitoring of patients using oximeters; Reorganization of personnel to provide care to symptomatic patients by a specific team; Professionals working with risk groups, elderly people and other patients who had to quarantine worked via video consultations; Provision of a larger number of pills to increase time between consultations and reduce take out at health care centers; Engagement in the community to raise money to buy medication, PPE and food for vulnerable patients; Assessment of food insecurity and burnout of caregivers and patients in social isolation.
Schweiberger *et al.*[88]	2020	USA	Quantitative	Use of ICT.
Sclarsky and Kumar[33]	2021	USA	Experience Report	Use of ICT.
Shah *et al.*[89]	2021	England	Quantitative	Use of ICT.
Sigurdsson *et al.*[47]	2020	Iceland	Quali-Quantitative	Separate care areas for symptomatic patients; Remote work teams; Use of ICT; Scheduling of suspected COVID-19 cases at specific times, at the end of the day; Prioritization of pregnant women care and childcare.
Silva *et al.*[21]	2021	Brazil	Qualitative	Rotation of professionals present at the basic health clinic to avoid crowding; Scheduling of users; Separate care location for users with respiratory symptoms; Prenatal care and childcare were maintained at scheduled times; Use of ICT.
Sinha *et al.*[90]	2020	USA	Quantitative	Use of ICT.
Smyrnakis *et al.*[52]	2021	Greece	Qualitative	Use of ICT; Acquisition of PPE on behalf of professionals of the public sector; Separate care hours for symptomatic patients.
Spelman *et al.*[91]	2020	USA	Experience Report	Use of ICT.
Srinivasan *et al.*[92]	2020	USA	Qualitative	Use of ICT.
Steiner *et al.*[61]	2021	USA	Quantitative	Use of ICT; Renewal of contraception without the need for a face-to-face consultation; Provision of contraceptives for one year to reduce the need for consultations and take out at the health clinic; Guidance and provision of emergency contraception in advance of user need.
Stengel *et al.*[93]	2021	Germany	Quantitative	Use of ICT.

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Chart 1. Summary of main results.

Authors	Year	Study Location	Methodology	Main results
Tse *et al.*[94]	2020	China	Quantitative	Use of ICT.
van der Valden *et al.*[95]	2021	Europe (16 countries)	Quantitative	Use of ICT.
Wanat *et al.*[27]	2021	Europe (8 countries: England, Belgium, Ireland, Holland, Germany, Poland, Greece and Sweden)	Qualitative	Use of ICT; Separate places and times for symptomatic care.
Wilson *et al.*[96]	2022	USA	Experience report	Online training of Primary Care professionals.
Wilson *et al.*[32]	2021	New Zealand	Qualitative	Use of ICT.
Wilson *et al.*[32]	2021	New Zealand	Qualitative	Increased interval between appointments for stable chronic patients; Use of ICT.
Xu *et al.*[58]	2020	China	Qualitative	Use of ICT; Home visit of patients in social isolation.

Source: Authors.

Although several reports state that ICT successfully replaced face-to-face consultations[20], some population groups have difficulty accessing that technology[34,44]. Some users lack the required equipment or the skills to use it, others suffer from visual, auditory or cognitive impairments that prevented them from using devices correctly[44,45]. Another concern is the security and confidentiality of data transmitted and stored on health professionals' devices[46].

Therefore, one comes to the conclusion that public policies need to be created that not only encourage the use of ICT in the health area, but also ensure that obstacles to access ICT can be overcome by those population groups, such as lack of access to the Internet, digital illiteracy, as well as physical and intellectual disabilities.

Organization of Work Processes

Workspaces were reorganized to meet the need for physical distancing among team members or to create separate environments for the care of symptomatic patients[21,23,27,30,31,47,48]. Patient appointment times were also changed, i.e., patients with respiratory symptoms or treated by specialized teams were booked at specific hours only[27,47,49-52]. In addition, triage was introduced at clinic reception desks[30] or by phone before people arrived at the clinics to check if they showed respiratory symptoms and to select those who required face-to-face consultations[25,27,29-31,47,52].

Team meetings took place virtually[50,53-55] and messages were exchanged among professionals by means of electronic medical records or e-mail[53,55]. Remote work was introduced, i.e., professionals were offered the possibility to provide patient care by means of electronic platforms from home[47,51,56]. This strategy was also used when professionals who were part of risk groups needed to be removed from their workplace or had to quarantine[51].

Team composition was affected by the fact that professionals had to take turns at clinics to ensure physical distancing[21] or were relocated to other locations to meet greater demands for professionals[22,57].

While some health care workers were professionally limited by the pandemic, other professional categories, e.g. nurses, increased their scope of action and autonomy, including the right to prescribe certain medications[55,58].

Division of flows of patients showing respiratory symptoms or with a confirmed COVID19 diagnosis was a widely used strategy to reduce COVID-19 infection risks[4]. It was noticed that

reorganization of service locations occurred in different ways, according to local realities. Several municipalities in Brazil chose to install tents outside their clinics, while others allocated specific clinics to treat respiratory symptoms[8].

Thus, the present review confirms the plasticity of PHC, allowing to permanently reorganize work processes according to the needs of every stage of the pandemic. That kind of plasticity requires great planning capacity and flexibility from managers to quickly meet new needs, which also requires that they have to be able to accept the different alternatives designed by workers to reorganize work processes.

Non-COVID Chronic Diseases

To reduce the demand for health services by chronically ill patients, the interval between consultations was increased for patients showing a stable clinical condition[32]. Likewise, the validity of medical prescriptions was extended so that users could buy their medication without having to make a new appointment[49] and the quantity of medications was increased as well[51,5961]. Some clinics started to deliver prescriptions for chronic and clinically stable patients to their family members[49] or to send them directly to pharmacies using computerized prescription systems[35,52,62]. Others chose to send patients SMS messages to remind them that certain medications were running out or to schedule and organize delivery of medication[35,61]. Three studies state that some clinics delivered medication to patient homes so that these could spare the trip and thus avoided crowding at clinics[35,59,63]. Two studies report the delivery of oximeters, capillary blood glucose devices, sphygmomanometers and PT/INR measurement kits for remote monitoring of users[54,64].

Despite changes in work organization and strategies to reduce the number of chronically ill patients coming to clinics, three studies mention initiatives that aimed at keeping up care services for priority groups, e.g. pregnant women, and actions such as childcare[21,47,49].

Interruption of care services, especially at the beginning of the pandemic, accompanied by a significant drop in the number of consultations particularly affected chronically ill people whose health condition was more likely to worsen or who were prone to developing serious forms of COVID-19[8]. It is known that death related to other diseases during an epidemic increases if these are no longer properly managed[8].

Arrangements developed for the care of chronic health conditions were mostly based on a strategy that involved remote monitoring of these patients and reducing their need to go to clinics. Domiciliary consultations by doctors and nurses, supported by community health agents (CHA) allows monitoring high-risk patients, as well as those who lack access to ICT[13]. The work of CHA gains relevance as they also identify users living in extreme poverty, in situations of food insecurity and vulnerable groups, and as they support isolation strategies[65].

Low attendance at consultations by chronically ill people was noticed, which was either due to access constraints, a reduced number of available consultations, or even fear of contamination by the virus[52]. Indeed, fear of contracting COVID-19 at doctors' offices made many people avoid even virtual appointments, as they feared being referred to offices or hospitals[29]. Low attendance at consultations, associated with the interruption of various outpatient or hospital medical procedures may have resulted in excessive demand for health services in the post-pandemic period and a more effective participation of PHC in coordinating care services offered to these people[66].

A large part of care arrangements and innovations aimed at chronically ill people also resulted from acts on an ad hoc basis. These arrangements did not cover PHC entirely and therefore, it is fundamental to share successful experiences that may leverage solutions needed to meet the post-COVID demand.

Final considerations

Although several healthcare journals have been publishing studies on COVID-19 in a fast way, the research-publication cycle is slow and most of the studies selected for our review relied on data collected at the onset of the pandemic. This fact may have influenced the findings of this review, as arrangements developed at the beginning of the pandemic were intended to meet the need of social distancing and care for symptomatic people by avoiding putting too many patients at risk of infection[46], given the fact that vaccines were not yet available. Several arrangements made after this initial period may have been extremely important for care of users in PHC, but they have not yet been described by scientific literature, such as issues related to vaccination against

the COVID-19 virus or care of patients suffering from "long COVID".

The adopted publication search strategy was not restricted in terms of study location or publication language and contributed to increase review scope and to outline a broad overview of the main care arrangements in PHC. However, a considerable number of articles used data from locations whose public health system differ from the Brazilian public health system. Therefore, many results need to be interpreted with caution, since they cannot necessarily be applied to Brazilian reality.

PHC actively helped control the COVID-19 pandemic and several innovations were made in care arrangements and forms, despite the fact that many services suspended their activities, especially at the beginning of the pandemic. The use of different forms of ICT gained great prominence, not only for people with respiratory symptoms and for chronically ill patients, but also for those with other clinical complications. Although some strategies aimed to monitor chronically ill patients by PHC teams and remote care may have contributed to minimize their health issues, the decrease in the number of visits performed during this period may have resulted in an increased demand in PHC in the post-pandemic years.

The challenge that now emerges is to maintain, institutionalize and formalize innovations and arrangements created during the pandemic in the form of daily practices to qualify health care practices.

Collaborations

F Tureck: preparation and conception of the article; analysis and interpretation of data; writing of the article and approval of the final version. A Chioro: preparation and conception of the article; analysis and interpretation of data; coordination of the research project; guidance on data analysis and interpretation; writing of the article and approval of the final version. LFN Tofani: preparation and conception of the article; analysis and interpretation of data; writing of the article and approval of the final version. CL Lima: preparation and conception of the article; analysis and interpretation of data; writing of the article and approval of the final version. ACS Vieira: preparation and conception of the article; analysis and interpretation of data; writing of the article and approval of the final version. R Andreazza: preparation and conception of the article; analysis and interpretation of data; coordination of the research project; guidance on data analysis and interpretation; writing of the article and approval of the final version.

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