

Repercussions of the pandemic of COVID-19: care of the pediatric population in Primary Health Care*

Repercussões da pandemia de COVID-19: assistência da população pediátrica na Atenção Primária à Saúde

How to cite this article:

Shibukawa BMC, Uema RTB, Piran CMG, Fonseca BS, Furtado MD, Merino MFGL, et al. Repercussions of the pandemic of COVID-19: care of the pediatric population in Primary Health Care. Rev Rene. 2022;23:e72798. DOI: <https://doi.org/10.15253/2175-6783.20222372798>

-  Bianca Machado Cruz Shibukawa¹
-  Roberta Tognollo Borota Uema¹
-  Camila Moraes Garollo Piran¹
-  Beatriz Sousa da Fonseca¹
-  Marcela Demitto Furtado¹
-  Maria de Fátima Garcia Lopes Merino¹
-  Ieda Harumi Higarashi¹

*Extracted from thesis “Adesão, não adesão e abandono do acompanhamento infantil pelo ambulatório de alto risco da Rede Mãe Paranaense, Universidade Estadual de Maringá, 2021.

¹Universidade Estadual de Maringá.
Maringá, PR, Brazil.

Corresponding author:

Camila Moraes Garollo Piran
Av. Colombo, 5790 – Zona 7, CEP: 87020-900.
Maringá, PR, Brazil.
E-mail: camilagarollo@gmail.com

Conflict of interest: the authors have declared that there is no conflict of interest.

EDITOR IN CHIEF: Ana Fatima Carvalho Fernandes
ASSOCIATE EDITOR: Francisca Diana da Silva Negreiros

ABSTRACT

Objective: to describe the repercussions of the COVID-19 pandemic on the care of the pediatric population in Primary Health Care. **Methods:** qualitative study conducted with 28 primary care coordinators linked to a regional health region. Data were imported into the NVivo Release Program for content analysis. **Results:** there was a reduction of access to primary care for actions of prevention and promotion of child health, intensifying assistance based on the biomedical model to the detriment of surveillance of child development as well as the need for (re)organization of assistance through new strategies. **Conclusion:** the pandemic had a negative repercussion on child health care represented by the reduction in demand and pediatric demand in Primary Health Care, however, it was identified that services were reorganized through new appointments and tele-attendance to maintain the principles of primary care and the Brazilian Unified Health System. **Contributions to practice:** the study enabled the identification of new forms of health organization regarding the care of children in primary care in the context of the COVID-19 pandemic. Because, the use of telehealth can contribute to the monitoring of children in other realities.

Descriptors: COVID-19; Pandemics; Primary Health Care; Child Health; Maternal and Child Health.

RESUMO

Objetivo: descrever as repercussões da pandemia da COVID-19 na assistência à população pediátrica na Atenção Primária à Saúde. **Métodos:** estudo qualitativo realizado com 28 coordenadores da atenção primária vinculados a uma regional de saúde. Importaram-se os dados para o Programa NVivo Release, para realização da análise de conteúdo. **Resultados:** houve redução do acesso à atenção primária para ações de prevenção e promoção da saúde da criança, intensificando a assistência baseada no modelo biomédico em detrimento da vigilância do desenvolvimento infantil bem como da necessidade de (re)organização da assistência por meio de novas estratégias. **Conclusão:** a pandemia apresentou uma repercussão negativa na assistência à saúde infantil representada pela redução da procura e da demanda pediátrica na atenção primária à saúde, contudo, identificou-se que os serviços se reorganizaram por meio de novos agendamentos e teleatendimentos a fim de manter os princípios da atenção primária e do sistema único de saúde. **Contribuições para a prática:** o estudo possibilitou a identificação de novas formas de organização da saúde no que se refere ao atendimento da criança na atenção primária no contexto da pandemia de COVID-19. Pois, o uso da telessaúde, pode contribuir para o acompanhamento do público infantil em outras realidades.

Descritores: COVID-19; Pandemias; Atenção Primária à Saúde; Saúde da Criança; Saúde Materno-Infantil.

Introduction

The pandemic caused by the new viral strain of the *Coronaviridae* family, *Severe Acute Respiratory Syndrome Coronavirus* (SARS-CoV-2), a beta-coronavirus first discovered in China, has caused rapid spread across continents with 308,458,509 confirmed cases of the disease worldwide, and 5,492,595 deaths by January 11, 2022. Global coronavirus (COVID-19) data regarding the number of cases and deaths among children has been limited, so it is difficult to understand the ways in which children are being affected in this period⁽¹⁾. The complexity of the disease, then called COVID-19, has caused local and national governments to enact preventive regulations to contain the transmission of the virus, which has consequently abruptly changed the routine and organization of society as a whole⁽²⁾.

In Brazil, such restructuring was organized by social and public health guidelines, collaborated to delay transmission, and protect vulnerable populations, also reorganizing the activities of health services⁽³⁾. It is noted that COVID-19 impacted on all points of the health care network, especially in Primary Health Care, considered the gateway service in the system, drastically changing its flow of care⁽⁴⁾.

Regarding the pediatric population, previous international studies have shown that the Primary Health Care services ended up interrupting some activities related to preventive interventions, such as the development of childcare, which performs the monitoring of child growth and development. Added to this is the fact that the spontaneous demand itself has decreased, motivated by the families' fear of seeking services in this period. The hesitation of parents to vaccinate their children was also observed, leading them, consequently, to lack of regular assistance, a fact that has caused concern to managers and health professionals⁽⁴⁻⁵⁾.

In Brazil, studies on the repercussions of the pandemic on pediatric care in Primary Health Care

are still scarce. The national research published so far on the subject, mostly focus on clinical aspects of the disease in children, besides having reviews as the main method⁽⁶⁻⁷⁾. Therefore, this study is justified by the need to understand the effects of the pandemic on the health care of children in primary care on a national level.

Recognizing the status of pediatric care in the context of national Primary Health Care provides subsidies for health institutions to have a guide as to what can be improved or readjusted in their reality, as well as offering relevant data to public services that can foster new actions and guidelines for this specific public.

It is important to highlight that the safety measures are essential for the control of the pandemic, however, the actions related to the prevention of diseases and health promotion remain indispensable, since they interfere directly in the child's global development status. Considering the above, the question is: What are the repercussions of the pandemic period in the care of the child public in Primary Health Care? Thus, it was defined as an objective to describe the repercussions of the COVID-19 pandemic on the care of the pediatric population in Primary Health Care.

Methods

This was a qualitative study, using the Consolidated Criteria for Reporting Qualitative Research (COREQ) as a guideline for the research. The study population consisted of primary care coordinators in each municipality. Inclusion criteria were having at least one year of work experience, being sufficiently engaged in child health care and able to answer questions related to care practices in their municipality. Those who were on vacation or in possession of certificates were excluded.

The setting of this study was a regional health region of the state of Paraná that covers a total of 30 municipalities. Each city has a Primary Health Care

coordinator, who were invited to join the sample. Twenty-eight primary care coordinators participated, including 26 nurses, one nutritionist and one social worker. Two Primary Health Care coordinators refused, citing work overload caused by COVID-19.

Data collection was performed from March to April 2021. With the list of eligible participants, the healthcare professionals indicated were contacted for a first approach of presentation, ethical instruction, and invitation to participate in the study. Upon acceptance, the day and time were scheduled according to the availability of the professional, and an invitation through Google Meet was sent individually. All the meetings were recorded and later transcribed in full. Before starting each interview, the informed consent form was read, and permission was requested for the recording after audio consent.

The following guiding question was used to conduct the interviews: How has the pandemic of COVID-19 influenced the care practice for the child population in primary care in your municipality? In addition to this, supportive questions previously defined by the researcher were used to achieve the objective of the study. There was no pilot test. Each interview lasted an average of 30 minutes. The data were transcribed in Microsoft Word 2019® and sent to all participants by e-mail, so that they could read, review, and subsequently approve the interview. All interviews were approved on the first reading.

The data were imported into the NVivo Release version 1.5.1® program and analyzed based on the categorical content analysis technique proposed by Bardin, a technique that consists of three stages, namely: pre-analysis, exploration of the material and treatment of the results found associated with interpretation. The first stage consists of the recognition of all the material followed by the systematization and codification of the data. In the second moment, the raw data is aggregated into homogeneous units that facilitate the description and characterization of the content, organizing them, then, in units of meaning⁽⁸⁾.

The third and last step is characterized by the inference of data previously present in the literature on the subject, associated with the results found⁽⁸⁾. In the same program, a word cloud was developed using interview data with a minimum length of five letters based on frequency.

Through the content analysis of the interviews, three categories emerged, which will be presented individually in sequence: Reduced supply and demand for children's health services in primary care; Healthy children do not need follow-up; and Resumption of activities and new ways of working.

The study was developed in accordance with the guidelines set by Resolution 466/12 of the National Health Council submitted for evaluation to the Ethics Committee on Research with Human Beings of the State University of Maringá with Certificate of Ethics Appreciation Presentation: 24906719.9.0000.0104 and approved under opinion number 4,594,485/2021. The identification of the participants was made by the letter "P" for professionals and the Arabic numeral corresponding to the order in which the interview was conducted, to ensure the confidentiality of their identity.

Results

Twenty-eight health professionals participated in the study, being 26 nurses, one nutritionist and one social worker. The mean age was 38 years (standard deviation - SD: 6.77), with predominance of females 27 (96.4%). The average time working in the position was seven years (SD: 5.71).

By the Word Cloud method, we identified words that were transcribed more frequently, and they are the ones that appear larger than the others: child (283), pandemic (201), care (104), COVID-19 (97), consultation (87), passed (83), health (78). In the figure below (Figure 1) it is possible to visualize the word cloud:

and it is only a routine consultation. I'm not going to do that, I'm not going to do that follow-up now, I'll leave it, I'll wait for it to pass." So, we felt a lot in this sense, even in the issue of home visits of the newborn, that many did not accept because of fear, fear, of a health team entering inside the house (P9).

It is possible to see that the belief that the healthy child does not need to be periodically evaluated appeared both within the professionals and in the view of the family members.

Resumption of activities and (re)organization of the work process during the COVID-19 Pandemic

In a pandemic context, innovation and creativity became part of the daily routine of health professionals who face new challenges daily. In the meantime, it was necessary to use adaptation strategies to comply with the existing health calendars that, at this moment, needed to be executed somehow: *We must comply with the calendars, the campaigns must be kept, we just changed the way they were done, an example, before there was the D Day campaigns, today there is no more, we are getting organized and doing it in other ways! Everything to avoid crowds, that's what we do (P1). Now we will start to reschedule childcare on a day only for children, which stopped during the pandemic, and we will start to do it again (P6). Both puerperium consultations, as well as child consultations, pregnant women, we managed to stipulate a day of our own (P8).*

Delimiting strategies for appointments focused on prioritizing, at least, vaccination, seeking to offer support, even if remotely, and reduce the crowding in services, were also situations listed by the representatives of the municipalities, which, for the most part, are represented by nurses: *We established a format to schedule vaccines, because vaccination is the time to get the children, because we suspended practically all childcare, because we started to tell mothers to come only when necessary (P27). There were some consultations that were teleconsultations when exams were returned. The pediatrician saw the exams and talked to the mother by telephone. So as not to agglomerate people here in front of the unit (P21). It is being scheduled by time. We opened a place outside the entrance of the unit and put-up awnings, we put up chairs with the right distance to not stay inside the health unit (P14).*

It can be noticed in the speeches presented, the initiatives of health professionals for a reorganization of their realities, in order to guarantee care for the pediatric population in their municipalities, a situation of extreme necessity, considering the vulnerable condition of this age group.

Discussion

It is believed that the use of technology to monitor health services was increasing because of the pandemic and, in a way, it can remain in force even after the pandemic has ended, since it has proven effective in some situations, especially in answering specific questions and maintaining contact with users.

The situations created by the pandemic caused several changes within the health services. On one hand, the professionals understood that the lack of attendance to the services was a preventive measure since it aimed to reduce the risk of contamination of the child and family. At the same time, it was perceived that the absences were a "solution" imposed by the municipalities themselves, to reduce the risk of contamination, when they suspended services to children.

The Pan American Health Organization (PAHO) determined in March 2020, in an official document, that primary care services would need to reorganize because of the anticipated progression of the pandemic of COVID-19. According to this guideline, it would be necessary to stipulate activities regarding community education on self-care, prevention measures, isolation, and initiation of quarantine⁽⁹⁾.

In this context, it can be said that the representatives of the municipalities participating in the study acted according to what was determined by the official bodies, thinking at first in articulating ideas and solutions to try to minimize the impacts of the pandemic and, at the same time, monitor groups and cases considered at risk. A study conducted with nurses who work in Primary Health Care showed that 71.3% of them claimed not to be attending the child population, to avoid crowds, according to what had been

previously requested by official bodies⁽⁹⁻¹⁰⁾.

It is understood that the child population was not considered a risk group for COVID-19 at the beginning of the pandemic, but the possibility of this clientele acting as a vector of the disease was conjectured, taking the virus into the home and, consequently, infecting their parents, grandparents, and other family members who could potentially get sick and become a severe case. Therefore, depriving children of face-to-face care was considered a preventive and public health measure. Although morbidity and mortality rates are low in this population, it is necessary to be alert, because childhood cases can increase indirect morbidity and mortality when the disease affects other age groups and risk groups⁽¹¹⁾.

The concern about not taking children to routine consultations, advising families to stay at home and avoid crowds, can also be justified by the fact that the child is considered a vulnerable being⁽¹²⁾. However, depriving the child of care and surveillance of child development can lead to more serious situations and consequent need for hospitalization, further worsening their health status. Although the child is seen as healthy, there is a need for developmental surveillance, given the importance of early identification of disorders and clinical warning signs, especially regarding neurodevelopment⁽¹³⁾.

In other countries, such as Portugal, the National Program for Child, and Youth Health, implemented in 2013, guides the continuity of actions related to health promotion, prevention of diseases, and monitoring of child growth and development. The maintenance of initiatives like this is essential for the development of the culture of surveillance of child growth and development, since the program reinforces the importance of knowing how to identify, early, potential problem situations during routine consultations, since this early detection can directly affect the child's health and the outcome of the complications encountered⁽¹⁴⁾.

This dilemma in the Brazilian context between attending or not attending children, suspending, or

not attending, and defining priority cases has been happening since March 2020, when social distancing measures were decreed, restricting many services, especially to children, to avoid crowding⁽¹⁵⁾. However, this fact exposed children to a situation of social vulnerability and increased the predisposition to hospitalizations for other sensitive conditions that affect this age group⁽¹³⁾.

The guidance about the reorganization of the service received by health managers and put into practice throughout the health care network and, furthermore, added to the very fear experienced by family members in a still unknown context as occurred at the beginning of the pandemic made the mothers themselves signal to health services that the child was well and therefore did not need care. At the same time, it was noticed that the professionals also shared this belief that the healthy child did not need to be monitored, which made the phenomenon of withdrawal from monitoring the child's health become increasingly frequent⁽¹⁶⁾.

It is observed, although inevitably, that during the pandemic there was an expansion of biomedical thinking in health services with an exclusive focus on curative and focused only on diseases, which is still in force both in the training of professionals and in common sense. The fact of considering that a healthy child does not need monitoring diverges from the concept of health promotion, since the care related to childcare aims to monitor and evaluate children's growth and development, besides being essential to ensure the identification of disorders that may have a better response when identified and treated early, allowing the signs and symptoms to be previously diagnosed and treated, reducing even the risks of hospitalization^(10,14).

Up to the present day, we have experienced situations in which parents still do not understand the need to monitor healthy children and are unaware of the signs and symptoms of possible diseases, a fact that contributes to an increase in the number of missed cases, even before the pandemic exists⁽¹⁷⁻¹⁸⁾.

It was noticed that the gap in childcare lasted

for a long period of time. A study conducted in the states of Minas Gerais, São Paulo and Paraná showed that as the months went by and more information about the development of the disease was discovered, the lack of follow-up of children continued due to prioritization of cases, maintenance of the distance and suspension of routine care⁽¹⁰⁾.

When asked about the new routines and forms of care in the current context, the professionals interviewed said, in their great majority, that they were able to reorganize the vaccination schedule and used technology to be able to monitor children and their families. As a primary prevention strategy for health, vaccination is the only situation that can reduce cases of diseases from preventable causes as well as hospitalizations for sensitive conditions in childhood, which unfortunately can coexist with other serious respiratory diseases such as COVID-19⁽¹⁹⁾.

In Brazil, the orientation was to restart routine vaccination about three months after the suspension of care related to childcare, considering that the risk of not vaccinating the children was greater than that of quickly exposing them to the Basic Health Unit to perform the vaccine application⁽¹¹⁾.

In addition to the care related to the control of the vaccination schedule, it was evident in the reports collected in this study, the use of technology as a tool or strategy for care, a situation in which monitoring was performed remotely. The use of digital technologies helps to somehow make monitoring happen, allowing cost reduction and increased accessibility. However, for this to occur adequately and effectively, it is necessary that the team is trained about its importance and adequate performance⁽¹⁰⁾.

It is understood that the study brings relevant considerations for nursing, since the interviewed professionals are mostly nurses. Despite occupying senior management positions, Primary Health Care nurses acted in accordance with the recommendations of the official bodies and sought strategies, within what they had at the time, to minimize the effects of the pandemic within the recommendations for child health care.

There was no possibility of identifying punctual decisions made individually by them, since the decisions were applied jointly and, in a way, to control damages and situations arising from the pandemic context.

Study limitations

The limitation of this study refers to the fact that only one health care region was approached, therefore, it has a restricted geographic context, besides contemplating only the assistance and organization of Primary Health Care services in the view of health care professionals.

Contributions to practice

The study enabled the identification of new forms of health organization regarding the care of children in primary care in the context of the pandemic of COVID-19 using telehealth. This finding may inspire health professionals to use this tool to monitor children in other realities, thus reducing the distance generated by COVID-19 between health services and their users.

Conclusion

The pandemic had a negative repercussion on child health care, represented by the reduction in demand and pediatric demand in Primary Health Care; however, it was identified that the services were reorganized through new appointments and telephone calls to maintain the principles of primary care and the single health system. It is noteworthy that many situations related to health care came from official agencies and, consequently, had to be applied by the services. However, the importance of the gradual and safe return of the child's health follow-up must be emphasized, to avoid possible damages related to the increase of preventable diseases and the lack of early detection of them.

Acknowledgments

To the Coordination for the Improvement of Higher Education Personnel Brazil (*Coordenação de Aperfeiçoamento de Pessoal de Nível Superior*) - Funding Code 001.

Authors' contribution

Conception and design or data analysis and interpretation: Shibubukawa BMC, Higarashi IH.

Writing of the article and relevant critical review of the intellectual content: Shibubukawa BMC, Uema RTB, Piran CMG, Fonseca BS.

Final approval of the version to be published: Shibukawa BMC, Uema RTB, Piran CMG, Fonseca BS, Furtado MD, Merino MFGL, Higarashi IH.

Agreement to be responsible for all aspects of the manuscript related to the accuracy or completeness of any part of the work to be properly investigated and resolved: Shibukawa BMC, Uema RTB, Piran CMG, Fonseca BS, Furtado MD, Merino MFGL, Higarashi IH.

References

1. World Health Organization. WHO coronavirus (COVID-19) dashboard [Internet]. 2022 [cited Jan 11, 2022]. Available from: <https://COVID19.who.int/>
2. Parmet WE, Sinha MS. COVID-19 - the law and limits of quarantine. *N Engl J Med*. 2020;382(15):e28. doi: <http://www.nejm.org/doi/full/10.1056/nejmp2004211>
3. Somekh I, Somech R, Pettoello-Mantovani M, Somekh E. Changes in routine pediatric practice in light of coronavirus 2019 (COVID-19). *J Pediatr*. 2020;224:190-3. doi: <https://doi.org/10.1016/j.jpeds.2020.05.053>
4. Glazier RH, Green ME, Wu FC, Frymire E, Kopp A, Kiran T. Shifts in office and virtual primary care during the early COVID-19 pandemic in Ontario, Canada. *CMAJ*. 2021;193(6):e200-210. doi: <https://doi.org/10.1503/cmaj.202303>
5. Huss G, Magendie C, Pettoello-Montovani M, Jaeger-Roman E. Implications of the COVID-19 pandemic for pediatric primary care practice in Europe. *J Pediatr*. 2021;233:90-291.e2. doi: <https://doi.org/10.1016/j.jpeds.2021.03.004>
6. Martins LA, Santos DV, Marques PF, Silva EAL, Castro CT, Santos DB, et al. Clinical overview for pediatric population with SARS-CoV-2 and care: review. *Rev Gaúcha Enferm*. 2021;42(spe):e20200162. doi: <https://dx.doi.org/10.1590/1983-1447.2021.20200162>
7. Prata-Barbosa A, Lima-Setta F, Santos GR, Lanzotti VS, Castro RE, Souza DC, et al. Pediatric patients with COVID-19 admitted to intensive care units in Brazil: a prospective multicenter study. *J Pediatr*. 2020;96(5):582-92. doi: <https://doi.org/10.1016/j.jpeds.2020.07.002>
8. Bardin L. *Análise de conteúdo*. São Paulo: Edições 70; 2016.
9. Organização Pan-Americana da Saúde (OPAS). *Reorganização e expansão progressiva dos serviços de saúde para Resposta à Pandemia de COVID-19*. Organização Pan-Americana de Saúde [Internet]. 2020 [cited July 27, 2021]. Available from: <https://iris.paho.org/handle/10665.2/52068>
10. Toso BR, Vieira CS, Furtado MC, Bonati PC. Ações de Enfermagem no cuidado à criança na atenção primária durante a pandemia de COVID-19. *Rev Soc Bras Enferm Ped*. 2020;20(spe):6-15. doi: <https://doi.org/10.31508/1676-379320200000122>
11. Cabral IE, Pestana-Santos M, Ciuffo LL, Nunes YR, Lomba MLLF. Child health vulnerabilities during the COVID-19 pandemic in Brazil and Portugal. *Rev Latino-Am Enfermagem*. 2021;29:e3422. doi: <https://doi.org/10.1590/1518-8345.4805.3422>
12. Wei M, Yuan J, Liu Y, Fu T, Yu X, Zhang ZJ. Novel coronavirus infection in hospitalized infants under 1 year of age in China. *JAMA*. 2020;323(13):1313-4. doi: <https://doi.org/10.1001/jama.2020.2131>
13. Kuo DZ, Coleman C. COVID-19: Caring for children and adolescents with special health care needs. *American Academy Pediatrics* [Internet]. 2020 [cited July 27, 2021]. Available from: <https://www.healthychildren.org/English/health-issues/conditions/COVID-19/Pages/COVID-19-Youth-with-Special-Health-Care-Needs.aspx>

14. Correio SFA. A importância da vigilância do neurodesenvolvimento na consulta de saúde infantil e juvenil em Portugal. *Rev Port Med Geral Fam.* 2020;36(2):215-20. doi: <https://doi.org/10.32385/rpmgf.v36i2.12501>
15. Aquino EML, Silveira IH, Pescarini JM, Aquino R, Souza-Filho JA, Rocha AS, Ferreira A, et al. Social distancing measures to control the COVID-19 pandemic: potential impacts and challenges in Brazil. *Ciêns Saúde Coletiva.* 2020;25(Supl.1):2423-46. doi: <https://dx.doi.org/10.1590/1413-81232020256.1.10502020>
16. Lee PI, Hu YL, Chen PY, Huang YC, Hsueh PR. Are children less susceptible to COVID-19? *J Microbiol Immunol Infect.* 2020;53(3):371-2. doi: <https://doi.org/10.1016/j.jmii.2020.02.011>
17. Rodrigues DA, Sousa MD, Silva FJS, Carvalho DPSRP, Bezerra STF, Gomes JGN. Assessment of adherence to consultations of growth and child development. *Rev Enferm UFPE Online [Internet].* 2019 [cited Jan 13, 2022];13(4):1023-9. Available from: <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/viewFile/238262/31801>
18. Gulliford M. Access to primary care and public health. *Lancet Public Health.* 2017;2(12):e532-3. doi: [https://dx.doi.org/10.1016/S2468-2667\(17\)30218-9](https://dx.doi.org/10.1016/S2468-2667(17)30218-9)
19. Domingues CMAS, Maranhão AGK, Teixeira AM, Fantinato FFS, Domingues RAS. The Brazilian National Immunization Program: 46 years of achievements and challenges. *Cad Saúde Pública* 2020;36(Suppl 2):e00222919. doi: <https://doi.org/10.1590/0102-311X00222919>



This is an Open Access article distributed under the terms of the Creative Commons