



Primary care and vaccination: challenges and contributions for the Brazilian population

Lidiane Dias Reis

Doutorado em Neurociências pela Fundação Oswaldo Cruz (Fiocruz)

ORCID: 0000-0001-6577-6545

Richardson Lemos de Oliveira

Mestre em Saúde Pública pela Universidad Nacional de La Plata (UNLP)

ORCID: 0000-0002-4523-2337

Wilder Kleber Fernandes de Santana

Doutor em Linguística pela Universidade Federal da Paraíba (UFPB)

ORCID: 0000-0001-7569-499X

Maiton Bernardelli

Doutor em Saúde Coletiva pela Universidade do Vale do Rio dos Sinos (UNISINOS)

ORCID: 0000-0002-1118-113X

Altemir Luiz Dalpiaz

Doutor em educação pela Universidade Católica Dom Bosco (UCDB)

ORCID: 0000-0003-3651-7071

Luciana Quagliane Ribeiro

Doutorando em Educação- Universidade Estácio de Sá (UNESA)

ORCID: 0000-0002-6225-313X

Vinicius da Silva Freitas

Doutorando em Educação- Universidade Estácio de Sá (UNESA)

ORCID: 0000-0003-2920-3998

Guilherme de Andrade Ruela

Mestrado em Saúde Pública – Epidemiologia (UFMG)

ORCID: 0000-0001-6976-8710

João Batista Lucena

Mestrado em Educação pela Universidade Federal do Rio Grande do Norte (UFRN)

ORCID: 0000-0003-1201-5368

Hugo de Andrade Peixoto

Mestrando em Enfermagem pela Faculdade de Enfermagem da Universidade do Estado do Rio de Janeiro (UERJ)

ORCID: 0000-0002-8982-158X

Cristiane Moreira de Sousa

Residência em Clínica Cirúrgica em Universidade Federal do Estado do Rio de Janeiro (UNIRIO)

ORCID: 0000-0002-9290-6402

Dandara Ferreira Reis

Residência em Clínica Cirúrgica em Universidade Federal do Estado do Rio de Janeiro (UNIRIO). Pós-graduação em enfermagem intensivista - Universidade do estado do Rio de Janeiro (UERJ)

ORCID: 0000-0001-7008-229X

Josele da Rocha Schröder

Residência em oncologia clínica – INCA e Mestranda do PPGENF UNIRIO

ORCID: 0000-0003-3314-2307

Rose Procopio Chelucci

Pós-graduação em Saúde da Família pela Universidade Castelo Branco (UCB)

ORCID: 0000-0002-9174-1116

Andréa Capistrano

Pós-graduação em Saúde da Família pela Universidade Estácio de Sá (UNESA)

ORCID: 0000-0002-8396-1020

Luiz Leonardo Louzada Nobrega

Especialista em Saúde da família e Comunidade pela Faculdade Souza Marques

ORCID: 0000-0002-0757-5101

Paula Paraguassu Brandão

Pós-doutorado, Universidade Estácio de Sá / UNESA, Programa de Pós-graduação em Enfermagem e Biociências / PPGEnfBio da Universidade Federal do Estado do Rio de Janeiro / UNIRIO, Centro

Universitário Celso Lisboa / UCL

ORCID: 0000-0003-1051-8703

Abstract

The present research delimited as objective to carry out an investigation on the challenges encountered by Primary Health Care and its Contributions with regard to vaccination for the control and immunization of the population. It is essential to consider contemporary narratives - national and international - that orbit around the central axis "Primary care and vaccination", which consisted of: immunization; population management; quality of life; contributions; challenges and vaccine coverage, in a timeline from 2019 to 2022. As challenges, we deal with disinformation, or even fake news, which confuse the population, leading them to disbelieve in the vaccine potential. Finally, we analyze what have been the main contributions of primary care to improve the implementation of vaccine management. We resort to portals such as the World Health Organization (WHO), the Ministry of Health of Brazil and articles from the Virtual Health Library to strengthen that, in Primary Health Care, vaccination services offer important evaluation indicators, which have been demonstrating, as over time, the contribution of vaccination actions to the health sector, characterizing them as one of the most rewarding, in view of the impact on disease control.

Keywords: Primary care. Vaccination. Challenges and contributions.

Introduction

The objective of this research is to carry out an investigation into the challenges encountered by Primary Health Care and its Contributions with regard to vaccination for population control and immunization, in which we delimit COVID-19¹ in Brazil as an analytical event.

Data from the Pan American Health Organization (PAHO, 2020), in dialogues with the World Health Organization (WHO) record that "A health system based on primary health care guides its structures and functions towards the values of equity and solidarity". social" and, thus, comes the "right of every human being to the enjoyment of the highest attainable standard of health without distinction as to race, religion, political ideology, or economic or social condition" (PAHO, 2020)²

¹ Classified as a public health emergency of international concern by the World Health Organization - WHO on January 30, 2020, the pandemic caused by the new coronavirus (SARS-CoV-2) has become a complex and highly serious problem. Which tension and calamity demanded actions not only from local authorities, but from the joint mobilization of public, health and authorities from multiple areas of health.

² Also according to PAHO (2020), "At its core, primary health care (PHC) cares for people, rather than just treating specific diseases or conditions. This sector, which offers comprehensive, affordable and community-based care, can meet 80% to 90% of an individual's health needs over a lifetime. This includes a spectrum of services ranging from health promotion and prevention to chronic disease control and palliative care. It will be impossible to achieve health for all without acting on the social, economic, environmental and commercial determinants of health, which often lie beyond the health sector."

As challenges, we deal with disinformation, or even *fake news*³, which confuse the population, leading them to disbelieve in the vaccine potential. Finally, we analyze what have been the main contributions of primary care to improve the implementation of vaccine management. We use portals such as the World Health Organization (WHO), the Ministry of Health of Brazil (BRASIL, 2021) and articles from the Vitruvian Health Library (BVS) to strengthen that, in Primary Health Care, vaccination services offer important evaluation indicators, which have been demonstrating, over time, the contribution of vaccination actions to the health sector, characterizing them as one of the most rewarding, in view of the impact on disease control.

In structural terms, initially, we have the methodological aspects that underlie our research. In the next section, we raise a debate on the challenges faced by Primary Health Care such as misinformation, or even fake news. Then, we discussed their contributions with regard to vaccination for population control and immunization. It is essential to consider contemporary narratives - national and international - that revolve around themes such as: primary care; immunization; vaccination; population management, in a timeline from 2019 to 2022.

Research Methodological Aspects

Regarding the methodological aspects, according to Gil (2017, p. 17), we can define research as “[the] rational and systematic procedure that aims to provide answers to the problems that are proposed”. Research, at this specific point, is required when “there is not enough information available to answer the problem, or when the available information is in such a state of disorder that it cannot be adequately related to the problem” (GIL, 2017, p. 17).

The research presented here is characterized with a qualitative approach, through a bibliographic study, through which it is intended to carry out the collection of information that will be described and analyzed, along with the observation, interpretation and analysis of the data. The World Health Organization (WHO, 2020) states, on primary care, that “The principles necessary to maintain a system of this nature are the ability to respond equitably and efficiently to the health needs of citizens, including the ability to monitor progress towards continuous improvement and renewal”. Thus, the conduct of our research follows qualitative lines, insofar as we resort to existing studies in order to strengthen, reinterpret, disseminate and reliably share information.

According to Minayo (1994), qualitative research is concerned with issues with a level of realities that are difficult to quantify, given that “It works with a universe of meanings, motives, aspirations, beliefs, values and attitudes, which corresponds to a space deeper into relationships, processes and phenomena that cannot be reduced to the operationalization of variables”. The qualitative approach, therefore, “deeps into the world of meanings of human actions and relationships, a side that is not perceptible and not captured in equations, averages and statistics” (MINAYO, 1994, p. 22).

³ Regarding the false news about vaccination against COVID-19 in Brazil, it is pertinent to highlight the “Survey carried out by the Eu Fiscalizo app, from the Fiocruz National School of Public Health, between March 26, 2020 and March 31, 2021, revealed that, among the fake news about Covid-19 circulating on the internet, 19.8% were about vaccines. The application, developed for users to notify inappropriate content in communication vehicles, social media and whatsapp, also showed that the most used digital medium for the dissemination of false content about vaccines was Instagram (46%), followed by WhatsApp (24%). %, Facebook (14%), websites 12% and Twitter (4%)” (FIOCRUZ, 2022).

In this direction, with regard to the conditions for effectiveness, an investigation into the challenges encountered by Primary Health Care and its Contributions with regard to vaccination for population control and immunization, as well as the contextualization of the theoretical and methodological apparatus, we propose to follow by a line of study that interpretivist overcomes the shackles left by the excesses of the positivist paradigm (CHIZZOTTI, 2003; ROHLING, 2014; SANTANA et al., 2022). Below, we present a graph that contains the descriptors that guided our research, as well as served as the foundation and design of the study:

Graph 1: Primary Care and Vaccination



Reference: authors' collection – adaptation of Freepik's pie chart *in portuguese*

Regarding the time frame, it became essential to consider contemporary narratives - national and international - that orbit around the central axis “Primary care and vaccination”, which consisted of: immunization; population management; quality of life; contributions; challenges and vaccination coverage, in a timeline from 2019 to 2022.

Challenges Faced by Primary Health Care Regarding Vaccination

One of the main challenges faced by Primary Care with regard to vaccination coverage is misinformation, or even fake news, which confuse the population, leading them to disbelieve in the vaccine potential. Vaccination coverage refers to a series of procedures to reach the population so that they are vaccinated, aiming for immunization (WHO, 2019). In this line of investigation, even though the scientific understanding is that “Safe and effective vaccines are a tool to protect the population” (PAHO, 2020), during

the proliferation of COVID-19, there was a series of fake news that not only misinformed the people about the effectiveness of vaccines, but also made them believe that they could be harmful to health.

Santana et al., (2020, p. 188) understand that, even with the investiture of serious news about the effectiveness of vaccines at the height of COVID-19, “several people proliferate unscientific news about the effectiveness of the vaccine, and this will be target of our investigation, through discursive genres”. According to Frugoli et al., (2022), given the fact that the COVID-19 pandemic has exposed society to unusual circumstances, “The lack of a specific treatment unfolds in the clamor for the vaccine and its refusal, based on misinformation and false information about them” (FRUGOLI et al., 2022, p. 3). The authors reveal that during this period, 20% of Brazilians did not intend to be vaccinated when a vaccine was available and 34% said they believed in at least one fake news related to vaccination, a fact that was attested by Avaaz (2020).

One of the immediate consequences of the fabrication of fake news during and after COVID-19 was the strengthening of a terrain called post-truth. Post-truth “has as one of its origins and forms of support the attack on science” (PIVARO; GIROTTTO JÚNIOR, 2020, p. 1075). At the center of post-truths, then, is scientific denialism, which, in turn, “[...] began to be used as a way of manipulating public opinion by the industry for economic reasons and, succeeding, its tactics were reproduced when necessary by other corporations” (PIVARO; GIROTTTO JÚNIOR, 2020, p. 1076).

PAHO data (2020) help us to understand that, among the main factors that denote the challenges regarding the maintenance of vaccination coverage, regarding beliefs and false information, are: a) the vaccine contains toxic elements; b) vaccines are part of a commercial conspiracy by the pharmaceutical industry; c) natural immunity is better. Right at the beginning of the dissemination of the effectiveness of vaccines against COVID-19, for example, the fake news emerged that “CoronaVac could cause ‘cancer and suicidal thoughts’ (FOLHA DE SÃO PAULO, 2021).

In terms of scientific dissemination, the Oswaldo Cruz Foundation (FIOCRUZ) attested that the disinformation schemes were giving impetus to the anti-vaccination movement. “The supporters' discourse is mainly based on scientific denialism, with arguments without concrete evidence that use false information or taken from the context about vaccination” (FIOCRUZ, 2022). According to the Foundation, Fake news and the avalanche of misinformation caused by this phenomenon have also reached vulnerable populations such as indigenous peoples. The wide dissemination had a direct impact on vaccination in this population, mainly through the discourse of some authorities. “Fake news spread quickly and widely among indigenous populations. And it may have been a major factor in the refusals we saw across entire communities, as they sent letters saying they would accept any vaccine except Covid-19. This is very serious damage, especially considering that the statements questioning immunization came from authorities,” said Ana Lúcia Pontes, a researcher at Ensp/Fiocruz and coordinator of the Abrasco Indigenous Health WG (FIOCRUZ, 2022).

According to statements and records on the FIOCRUZ portal (2022), we can see the seriousness that is linked to the proliferation of false news, whose consequences are capable of causing the aggravation of diseases, and/or even death.

In line with the records of the Final Report of the Parliamentary Commission of Inquiry (CPI) of the Pandemic (BRASIL, 2021), we found that some of the main challenges faced by teams working in Primary Health Care, with regard to vaccination, were “the The negationist influence of some missionaries and the resistance of some indigenous leaders are factors that objectively undermine immunization” (BRASIL, 2021, p. 626). The consequence for this was “ambiguity and mistrust for public policies essential to the preservation of life, which should be clear, decisive and safe” (BRASIL, 2021, p. 626).

According to statements and records on the FIOCRUZ portal (2022), we can see the seriousness that is linked to the proliferation of false news, whose consequences are capable of causing the aggravation of diseases, and/or even death.

The proliferation of groups that spread fake news, therefore, by influencing people, usually with low education, who do not give credibility to vaccines, which is no longer the merit of accessibility, but acceptability. It becomes very complicated for PHC professionals to try to convince people of the benefits of vaccination, since they already disbelieve in its effectiveness and potential. The false information disseminated, in this sense, acts as a mass device that leads the population to an abyss, even though they are witnessing healing and rehabilitation processes by other people.

Aps Contributions with Regard to Vaccination for Population Control and Immunization

Talking about vaccination or vaccination coverage prompts us, firstly, to address the National Immunization Program (PNI)⁴, “One of the largest vaccination programs in the world that, in the last 49 years, has led Brazil to eliminate and control several diseases vaccines” (BRASIL, 2022). This program is responsible for the elaboration of the vaccination policy in Brazil throughout the process of its consolidation, both in the purchase of routine vaccines and the route that manages the definition of the public that will be immunized.

It is worth mentioning, above all, the performance of the PNO - National Plan for the Operationalization of Vaccination against Covid-19, also under the coordination of the Health Surveillance Secretariat (SVS). The Ministry of Health proposed the structuring of a document that would guide the vaccination campaign, with important guidelines and guidelines for states and municipalities, with the guarantee that the campaign would take place equally throughout the country, mainly due to the great harm caused by the COVID-19.

It is in these interchanges that the effective contributions of the current proposal in the National Primary Care Policy (PNAB) enter, which ensures that "Primary care is characterized by a set of health actions, at the

⁴ According to the Brazilian Ministry of Health, “The PNI is responsible for defining the country’s vaccination policy, from the acquisition of immunobiologicals to their availability in vaccination rooms, establishment of norms and guidelines on the indications and recommendations of vaccination. across Brazil. With almost 50 years of existence and 47 different immunobiologicals offered, the PNI is one of the largest vaccination programs in the world, recognized by the Pan American Health Organization (PAHO), an arm of the World Health Organization (WHO), as a world reference. The PNI is also responsible for defining the National Vaccination Calendar, which includes all routine vaccines. This important guideline accompanies all Brazilians from the first day of life, guiding the period and the vaccines that should be taken” (BRASIL, 2022).

individual and collective scope, which covers the promotion and health protection, disease prevention, diagnosis, treatment, rehabilitation, harm reduction” (BRASIL, 2017). This leads us to an investigation carried out by Oliveira et al., (2021), in the defense that one of the central pillars of Primary Care is health maintenance “with the aim of developing comprehensive care that impacts the health situation and autonomy of people and in the health determinants and conditions of collectivities” (BRASIL, 2017).

In a Brazilian scenario, investigations carried out by the Oswaldo Cruz Foundation (FIOCRUZ)⁵ found that the benefit of vaccination against the Sars-CoV-2 virus has been proven, both in the prevention of serious cases and to avoid deaths from Covid-19. It was found that “When analyzing adults with a complete immunization schedule, the estimated effectiveness values of the AstraZeneca vaccine indicate that the prevention of severe cases and deaths is between 80% and 90%” (FRIOCRUZ, 2022). Regarding the CoronaVac vaccine, also considering the complete two-dose regimen, for severe cases and deaths, “effectiveness values are in the range between 70% and 90%, while Pfizer’s effectiveness is 80% to 90% with immunization partial, that is, first dose, for young adults (20 to 39 years and 40 to 59 years)” (FRIOCRUZ, 2022).

And how can Primary Care be effective in terms of consolidating vaccination coverage, that is, what would be its benefits in enhancing effective actions to control and immunize the population? To answer this question, we list some essential points, based on records from the Pan American Health Organization (PAHO, 2020):

- ✚ Primary care contributes to the maintenance of health in a highly effective and efficient way, by acting on the main causes of health problems and risks to well-being;
- ✚ PHC professionals are qualified to deal with emerging challenges that threaten health and well-being in the future;
- ✚ The strategies used by PHC have also proved to be a cost-effective investment;
- ✚ Quality primary care reduces total health expenditures and improves efficiency, for example by reducing hospital admissions;
- ✚ It works to address complex health needs, with a multisectoral approach that includes: health promotion and prevention policies; solutions that serve communities; and people-centred health services;
- ✚ Primary health care also includes the key elements needed to improve health security and prevent health threats such as epidemics and antimicrobial resistance, through measures such as education and community engagement, rational prescribing, and a core set of essential public health functions, including surveillance;
- ✚ Strengthening systems in the community with the decentralization of health services contributes to building resilience, which is critical to resisting shocks to health systems;

⁵ Specifically A study conducted by researcher Daniel Villela, current coordinator of the Scientific Computing Program at Fiocruz (PROCC/FIOCRUZ).

Primary care and vaccination: challenges and contributions for the Brazilian population

These notes, in addition to the commitment of PHC professionals regarding the clarification of vaccines as well as their effectiveness, directs us to the fact that “vaccination against Covid-19 is extremely successful” (FRIOCRUZ, 2022).

Epidemiologist Carla Domingues, former coordinator of the National Immunization Program of the Ministry of Health, reinforces: “There is no doubt about the great progress and important adherence, which shows that the Brazilian population believes in vaccines and the PNI...” (FRIOCRUZ, 2022). As a result of the effectiveness of vaccination coverage in Brazil, there was a very positive impact on the reduction of hospitalizations and mortality at all ages.

Conclusion

With the present study, we believe that we have fulfilled our objective of carrying out an investigation into the challenges encountered by Primary Health Care and its Contributions with regard to vaccination for population control and immunization, in which we delimited as an analytical event COVID-19 in Brazil.

As shown in the chart that we present here in the methodological aspects, we were guided by six maxims that were interconnected within the scope of the theme “Primary Care and Vaccination”, which were: immunization; population management; quality of life; contributions; challenges and vaccine coverage, in a timeline from 2019 to 2022. So, in addition to raising a debate on the challenges faced by Primary Health Care such as misinformation, or even fake news, we also discussed their contributions with regard to vaccination for population control and immunization.

Finally, we draw attention to the fact that our study is not consecrated as a true and unquestionable voice. To the extent that it is credible among so many other contemporary narratives, we hope that the present investigation can influence other scholars to focus on the theme of vaccination in order to contribute to improvements in the great area of health.

References

BRAZIL. Ministry of Health. (2009). The work of the Community Health Agent. Brasilia – Federal District. Accessed on: 03.15.2021.

BRAZIL. Ministry of Health. (2012). National Primary Care Policy. Brasilia – Federal District. Accessed on: 03.15.2021.

BRAZIL. Ministry of Health. PNI: understand how one of the largest vaccination programs in the world works. 2022. Available at: <https://aps.saude.gov.br/noticia/18379> Accessed on: 10.10.2022

BRAZIL. Federal Senate. Final Report of the Parliamentary Commission of Inquiry (CPI) of the Pandemic. Brasilia DF. 2021.

Primary care and vaccination: challenges and contributions for the Brazilian population

CHIZZOTTI, A. Qualitative research in human and social sciences: evolution and challenges. Portuguese Journal of Education, v. 16, no, 2, p. 221-236, 2003.

NEWSPAPER. It is false that CoronaVac can trigger 'cancer and suicidal thoughts'. Available at: <https://lupa.uol.com.br/jornalismo/2020/12/15/verificamos-coronavac-cancer-pensamentos-suicidas>
Accessed on: 10.08.2022

FREEPIK Circular vectors and flat circular diagrams. Available at: https://br.freepik.com/vetores-gratis/infografico-de-diagrama-circular-plano_14455258.htm#query=modelo%20de%20graficos&position=13&from_view=keyword Access on: 05.10.2022

FRUGOLI, Alice Gomes et al. Fake news about vaccines: an analysis under the 3Cs model of the World Health Organization. Journal of the USP School of Nursing, v. 55, 2021.

GALHARDI, Cláudia Pereira et al. Fake news and vaccine hesitancy in the context of the COVID-19 pandemic in Brazil. 2022

GIL, Antonio Carlos. How to design research projects. 4. ed. Sao Paulo: Atlas, 2002.

<https://piaui.folha.uol.com.br/lupa/2020/12/15/verificamos-coronavaccancer-pensamentos-suicidas/>
Accessed on: 08.10.2022.

MINAYO, M. C. S. (org.) Social Research – Theory, method and creativity, 23rd edition, Petrópolis RJ, Voices 1994.

OLIVEIRA, R.L; De Santana, Wilder Kleber Fernandes; Vidal, L.L; Pernambuco, M.L.; Correa, P ; Almeida, B. S. . On the application of conducts in the childcare consultation: report of professional experience in a family clinic in the city of Rio de Janeiro. International Journal of Development Research, vol. 11, p. 45364-45367, 2021.

WHO. World Health Organization. Primary health care. 2022

PAHO Pan American Health Organization. Primary health care. Partnership with the World Health Organization (WHO). 2020. Available at: <https://www.paho.org/pt/topics/atencao-primaria-saude> Accessed on: 10.09.2022.

Primary care and vaccination: challenges and contributions for the Brazilian population

PIVARO, Gabriela Fasolo; GIROTTO JUNIOR, Gildo. The organized attack on science as a form of manipulation: from global warming to the coronavirus. *Brazilian Notebook of Physics Teaching*, v. 37, no. 3, p. 1074-1098, Dec. 2020

ROHLING, N. The epistemic bases of dialogic discourse analysis in qualitative research in applied linguistics. *L&S Notebooks on Language and Society*, v. 15, p. 44-60, 2014.

SANTANA, W.K.F. et al. Anti-scientific discourses about the Coronavac vaccine in Brazil: a dialogic analysis. In: *Language at the interface with science teaching: [Electronic resource]: / Organizers Alberto Lopo Montalvão Neto; Jose Pedro Simas Filho. – Catu: Bordô-Grena, 2021. p. 187-203.*

SANTANA, W. K. F. *et al.* Strategies to become an excellent professional in the burnout society: from method to emotional balance. **International Journal for Innovation Education and Research**. Vol:-10 No-07, 2022.

WORLD HEALTH ORGANIZATION (WHO). WHO Director-General's statement on IHR Emergency Committee on Novel Coronavirus (2019-nCoV). Geneva: WHO; 2020. [cited 2020 Apr 16]. Available from: [https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/23-01-2020-statement-on-the-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov)).