

Health Communication on Rio de Janeiro City Hall's Instagram: Analysis of covid-19 Vaccination Strategies

Comunicação em Saúde no Instagram da Prefeitura do Rio de Janeiro: análise das estratégias da vacinação contra a covid-19

Comunicación en Salud en el Instagram del Ayuntamiento de Río de Janeiro: análisis de las estrategias de vacunación contra la covid-19

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ABSTRACT

This research aimed to analyze how the Municipality of Rio de Janeiro (RJ) used Instagram for health communication during the first five months of the covid-19 vaccination campaign. Content analysis was employed on 148 selected posts from the Municipality's Instagram account, resulting in the emergence of two categories. It was observed that the Municipality of Rio de Janeiro made use of a variety of resources to promote the vaccination campaign, seeking to boost vaccine confidence through user interactivity, and emphasizing city's characters and historical sites. The Municipality of RJ employed both traditional and informational strategies for the vaccination campaign while leveraging digital platform tools to amplify its reach. In conclusion, the study discusses the limitations of social media usage by governmental entities and how to engage in dialogue with the principles of the Unified Health System.

Keywords: Communication; Vaccination; Health; Instagram; Covid-19.

RESUMO

Esta pesquisa pretendeu analisar a forma com a qual a Prefeitura do Rio de Janeiro utilizou o Instagram para comunicação em saúde nos cinco primeiros meses da vacinação contra a covid-19. Utilizou-se a análise de conteúdo de 148 publicações selecionadas do Instagram da Prefeitura e, dessa análise, emergiram duas categorias. Verificou-se que a Prefeitura do Rio de Janeiro diversificou recursos para divulgar a campanha de vacinação, procurando estimular a confiança vacinal por meio da interatividade com os usuários e enfatizando personalidades e locais históricos da cidade. Constatou-se que a Prefeitura do Rio de Janeiro adotou estratégias tradicionais e informacionais para a referida campanha de vacinação e buscou utilizar as ferramentas da plataforma digital para amplificá-la. Ao final, discutem-se as limitações da utilização das redes sociais por entes e órgãos estatais e como estabelecer diálogos com os princípios do Sistema Único de Saúde.

Palavras-chave: Comunicação; Vacinação; Saúde; Instagram; Covid-19.

RESUMÉN

Esta investigación tuvo como objetivo analizar la forma en que el Ayuntamiento de Río de Janeiro (RJ) utilizó Instagram para la comunicación en salud durante los primeros cinco meses de la vacunación contra la covid-19. Se realizó un análisis de contenido sobre 148 publicaciones seleccionadas del Instagram de el Ayuntamiento, lo que resultó en la identificación de dos categorías. Se observó que el Ayuntamiento de Río de Janeiro diversificó los recursos para difundir la campaña de vacunación, buscando estimular la confianza en la vacunación a través de la interactividad con los usuarios, enfocándose en personalidades y lugares históricos de la ciudad. Se constató que el Ayuntamiento de RJ empleó estrategias tanto tradicionales como informativas para la campaña de vacunación, al tiempo que aprovechaba las herramientas de la plataforma digital para amplificar su alcance. En conclusión, se discuten las limitaciones del uso de las redes sociales por parte de entidades y organismos estatales, así como la manera de establecer diálogos alineados con los principios del Sistema Único de Salud.

Palabras clave: Comunicación; Vacunación; Salud; Instagram; Covid-19.

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INTRODUCTION

On January 18, 2021, about 10 months after the first case of covid-19 in the city of Rio de Janeiro (Cavalcante; Abreu, 2020), Dulcinéia da Silva Lopes, a 59-year-old nursing technician at the Ronaldo Gazolla Municipal Hospital, and Terezinha da Conceição, aged 80, were the first Cariocas (cariocas are people born in the city of Rio de Janeiro) to be vaccinated against the disease. The event, held at Christ the Redeemer, took place a day after the Brazilian Health Regulation Agency (Anvisa) approved the CoronaVac vaccine, developed by the pharmaceutical company Sinovac in partnership with the Butantan Institute, and Covishield. It was produced by the pharmaceutical company Serum Institute of India, in partnership with AstraZeneca/OxfordUniversity/Fiocruz. The date signaled the first of millions of doses to be administered across the city over the following months, in a vaccination campaign of unprecedented proportions.

Several setbacks characterized the vaccination against covid-19, among them the lack of alignment between the union, states and municipalities during the period (Fernandez; Pinto, 2020). Constitutionally, the protection and defense of health are competencies shared by the federal entities (Brazil, 1988); however, the Federal Government, through the Ministry of Health, is responsible for drawing up the National Immunization Program (PNI) (Brazil, 1975). It so happens that after changing health ministers four times (Oliveira; Baccarin, Guimarães, 2020), the diffusion of ineffective treatments (Brazil, 2021) and several statements against immunization by then-president Jair Bolsonaro (Lopes, 2022), the agency was intermittently paralyzed and the PNI weakened. Given this backdrop, the role of municipalities in promoting vaccinations was decisive. Meanwhile the difficulties imposed by the economic situation accentuated the burden on municipal managers in conducting the campaign (Mello; Lima; Costa, 2023).

The municipal administration was tasked with communicating official and scientific information about immunizing agents to the public, as well as using Information and Communication Technologies (ICTs) to communicate about the lengthy vaccination rollout that was commencing at the time. Since the first cases of covid-19 in Brazil, science communication has had to adapt to engage with society in a context of uninterrupted information overload, which has hindered (and still hinders) discernment about which sources and guidelines related to the pandemic are reliable. The World Health Organization (WHO) has defined this phenomenon as an infodemic (Mello; Lima; Costa, 2023; Opas, 2020). As a result, the communication structures of federal entities and public bodies, especially those of city halls, were urged to step up their efforts.

In this environment, the municipal administration has also had to deal with the growth of vaccine hesitancy in Brazil, defined as the delay in accepting or refusing vaccination, despite the availability of services (MacDonald, 2015). A study that conducted online interviews with 173,178 Brazilians in all the country's states in January 2021 showed that 11.9% of participants had vaccine hesitancy and 7.7% of respondents had covid-19-specific vaccine hesitancy (Moore *et al.*, 2021).

Considering this scenario, this study sought to understand how the Rio de Janeiro City Hall operated on its official Instagram page during the covid-19 vaccination campaign between January 1 and May 31, 2021. Understanding the practices of federal entities and public bodies on digital platforms is relevant given their potential reach for health communication. To this end, social media can represent a means of interacting with subjects, both in the diffusion of public information and in the social control of administrative acts, as well as monitoring the content resulting from this interaction (Santos, 2016).

In addition, studies have shown that the covid-19 pandemic has contributed to expanding the use of health communication technologies. Therefore, analyzing experiences on social networks can help create a fast, accessible and democratic communication network between the state and society. Instagram made it possible to share qualified health information and knowledge through posts made by different government

profiles, helping the population to access information about the pandemic in a less harmful way (Coutinho *et al.*, 2022).

The research was carried out using content analysis, initially using documentary examination to obtain the maximum amount of relevant information (quantitative and qualitative aspects). In total, 148 posts were selected and catalogued. Based on the investigation, two categories were formed that presented common criteria or some analogy in their content (Bardin, 2015). These were: 1. Informative: with the aim of informing about the vaccination campaign (vaccination schedule, vaccination sites and campaign progress); and 2. Interactive: with the aim of promoting vaccine confidence through posts that generate conversations and shares on social networks.

The research seeks to consider the communication strategies used, assessing the difficulties faced during the immunization rollout and the limitations of ICTs as health communication tools. The study also seeks to establish connections between the use of ICTs and the principles of the Unified Health System (SUS) to guide innovative communication practices (Araújo; Cardoso, 2007).

METHODOLOGY

The growing importance of social networks in health communication stimulated the undertaking of this research, which aims to understand how the Rio de Janeiro City Hall used its official Instagram page between January 1 and May 31, 2021, the initial period of the vaccination campaign against covid-19. Initially, Content Analysis (CA) was used, followed by a quantitative and qualitative approach.

CA is a “set of techniques for analyzing communications in order to obtain, through systematic and objective procedures for describing the content of messages, indicators (quantitative or not) that allow the inference of knowledge related to the conditions of production/reception (inferred variables) of these messages”. Inferences correspond to the production of logical deductions (Bardin, 2015, own translation).

To carry out the CA, documentary analysis techniques were first used to obtain the maximum amount of information with the maximum amount of relevance (quantitative and qualitative aspects). The entire content of the Rio de Janeiro City Hall Instagram profile from January 1st to May 31st was analyzed, and 148 posts associated with the covid-19 vaccination campaign were catalogued.

Instagram was chosen because it is the third most popular social network in Brazil, with approximately 113.5 million users at the beginning of 2023 (Kemp, 2023). Among Rio de Janeiro City Hall’s social networks, its official Instagram profile has the largest number of followers, with approximately 821,000 in December 2023, making it the second most followed city hall profile among Brazilian state capitals. Therefore, throughout 2021, the profile was an essential communication tool for vaccination against covid-19.

To provide a more detailed view of the material, posts were selected to illustrate the categories that emerged from the analysis. User comments were taken from the posts shown in this research and reproduced in an image format. The criterion used were the number of posts in the category and the relevance of the topic to the debate proposed here. Some of the aspects explored can be placed in more than one category, after all, they aren’t mutually exclusive, but rather feed into each other. However, for the purposes of analysis, we chose to associate each category with a particular predominant characteristic.

RESULTS

According to data from the Brazilian Institute of Geography and Statistics (IBGE), the municipality of Rio de Janeiro had an estimated population of 6,211,223 people in 2022, making it the second largest urban center in Brazil (IBGE, 2022). From March 2020 to December 2023, there were 38,195 deaths by covid-19 in its territory, and the lethality rate reached 8.7%, one of the highest in Brazil (Rio de Janeiro, c2023).

During the early stages of the pandemic, the municipality dealt with various challenges, such as a shortage of resources, an insufficient number of professionals, a lack of PPE and testing (Fernandes; Ortega, 2020). In addition, there were cases of corruption involving the overcharging for hospitals and equipment. This generated a great deal of political instability, which ultimately resulted in the impeachment of the then governor of the state, Wilson Witzel (Barcellos, 2021).

Nationally, since the first cases of covid-19 in February 2020, the fight against the pandemic had been characterized by uncoordinated action by the federal entities, as well as misinformation (Galhardi et al., 2020), a reality that persisted during the vaccination campaign. In the first few months of vaccination the municipality of Rio de Janeiro complied with the Ministry of Health (MoH) and the National Immunization Program (NIP) guidelines. However, in the absence of doses, parameters for defining priority groups and public health information policies on immunizing agents, it sometimes acted outside its constitutional competence.

The Rio de Janeiro City Hall's official Instagram profile proved to be a decisive tool for communicating with the population about the vaccination campaign. This was especially true at the beginning, when it was necessary to establish locations, days, times of the week, groups to be vaccinated, information about shortages of doses, among other relevant information.

All 147 posts about the covid-19 vaccination campaign made by the account between January 1 and May 31, 2021, were selected chronologically. According to content analysis, 97 posts were categorized as "informative", since they deal with topics related to the vaccination rollout schedule (arrival of vaccines, vaccination of priority groups, vaccination points, number of Cariocas vaccinated, request to return for the 2nd dose, changes in schedules, suspensions, etc.).

Meanwhile, 42 posts are in the "interactive" category, as they feature renowned figures from the city of Rio de Janeiro; they feature images and videos about festive dates in the city and how they could return with the advancement of vaccination; they show landmarks in the city such as vaccination centers and stories of vaccinated Cariocas; and, finally, they cover information about immunizing agents (why there are priority groups, fake news, information about the vaccine and its efficacy).

Eight posts are about connections between the campaigns to combat hunger and provide vaccinations, and the NGO Core Response's support for City Hall. Neither are included in the categorization.

Figure 1 shows the above.

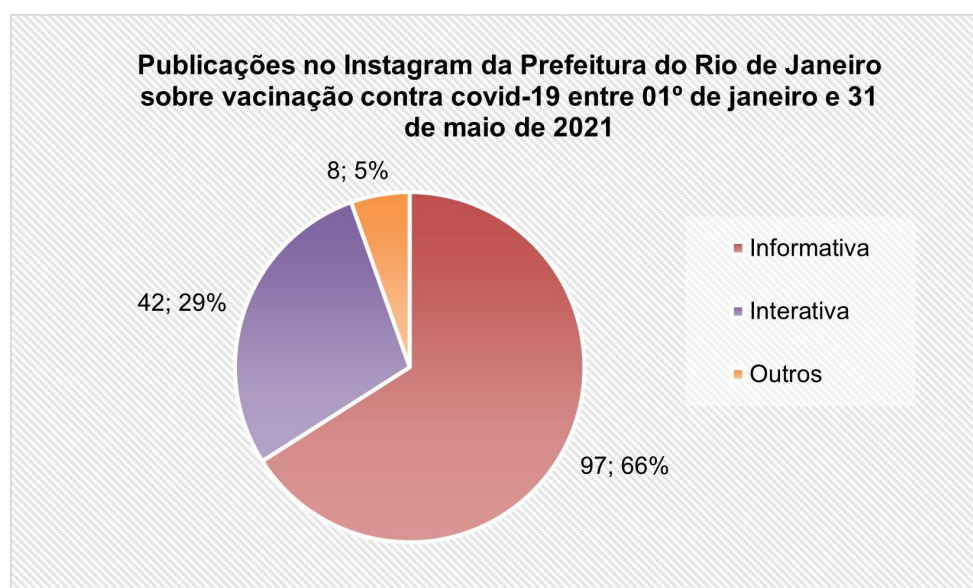


Figure 1 – Table with number of analyzed posts and respective percentages for each category
Source: prepared by the authors based on research data.

The above data is available in an [Excel table](#) with links to the posts, the content, the subject that emerges and its category.

Informative: the trajectory of vaccination in the city of Rio de Janeiro

This category consisted of 97 posts covering basic information about the vaccination campaign, such as the vaccination schedule, vaccination sites and campaign progress. It also includes diffusion of the vaccination of priority groups and age brackets, vaccination centers and other practical information about the vaccination rollout.

The first two months of the campaign (January and February) were notable for the arrival of immunizing agents, the vaccination of priority groups (frontline workers and the elderly), the diffusion of schedules and the first pause in vaccination due to a lack of immunizing agents. Whereas, the following three months (March, April and May) show the campaign progressing thanks to the arrival of immunizing agents, with the vaccination of other members of priority groups and the consequent diffusion of new schedules, as well as further pauses due to a lack of immunizing agents.

With the arrival of the first doses of CoronaVac in the municipality, vaccination of priority groups began on January 19, 2021. At the time, the priority groups were health workers who cared for covid-19 patients, workers involved in the vaccination campaign, people with disabilities (18+), those living in shelters, the indigenous population (living on indigenous land), the elderly (60+) living in nursing homes and workers at institutions for the elderly. The limited size of the group demonstrates the scarcity of doses during the period.



Figure 2 – Post from January 18, 2021, with a picture of the first people vaccinated in Rio de Janeiro
Source: <https://www.instagram.com/p/CKM9-I8HTxZ/>. Accessed on: November 2, 2023.

In April, basic education professionals, people (including pregnant women) with comorbidities, people with permanent disabilities and essential workers were included in the priority group.

However, in May the Federal Supreme Court (STF) suspended the vaccination of basic education professionals and essential workers to re-establish the original order of priority groups stipulated by the Ministry of Health (MS) (which stated that people with comorbidities should be immunized first). The state of Rio de Janeiro, through State Decree No. 47,547/2021 (Rio de Janeiro, 2021), had prioritized the immunization of public sector workers in the security sector (police, civil guard etc.), emergency services,

the armed forces and the education sector ahead of the full immunization of the elderly, people with comorbidities and disabilities, the homeless and the prison population.

According to Justice Ricardo Lewandowski, the decree did not respect the staggered subdivision of priority groups, which was necessary given that not enough doses were immediately available to vaccinate all groups in a single stage (Lewandowski [...], 2021). What happened demonstrates a lack of coordination among the federal entities as well as the limited doses available, which led to a slow and muddled process.



Figure 3 – Post on May 6, 2021, with image of the Supreme Court's ruling
Source: <https://www.instagram.com/p/COjNPXtnl1g/>. Accessed on: December 22, 2023.

In addition, over the period analyzed, there were four pauses in the timetable, three of which were due to a lack of doses. These pauses, implemented in line with the staggering of priority groups, led to delays and then acceleration of the rollout. In short spaces of time, the dates for certain groups were changed, highlighting how disorganized and inconsistent the distribution of doses by the federal government was. This meant that those belonging to a priority group had to constantly check which date was scheduled for their immunization.

In the period analyzed, 7 different schedules were identified for 6 priority groups, the seventh of which was a timetable determined by age. The posting of a calendar did not necessarily mean that it was adhered to, given the pauses and speeding up of the immunization rollout mentioned above.

Resultantly, the content analysis found a greater predominance of information on vaccination schedules, vaccination sites and campaign progress. The end of this phase marked the end of priority groups. Subsequently, the City Hall announced the start of a new one. In addition, the City Hall also pointed out that 98% of the city's elderly population had received at least the first dose of the covid-19 vaccine by June 1, 2021.

Interactive: fostering vaccine confidence

This category was made up of 42 posts featuring renowned figures from the city of Rio de Janeiro, festive dates and local landmarks such as vaccination centers, stories about vaccinated Cariocas and informative actions about immunizing agents. Contemporary culture established new forms of sociability, allied to digital technologies. New technologies offer everyone the chance to be content creators and distributors; as

a result, the advertising industry has changed its tactics to engage consumers. By introducing interactivity, it has made them an ally in the propagation of its messages (Souza Neto, 2016). Interactivity is reflected in the “time-space duration of clicks, the relevance of content that consumers engage with and the experience that context will bring” (Souza Neto, 2016, p. 22, own translation).

In the case of Rio de Janeiro City Hall’s Instagram, interactivity was used to promote vaccine confidence and to convey information about the safety and reliability of vaccines. This took place against a backdrop of misinformation and vaccine hesitancy. In terms of content, there were publications that made strong connections between the “carioca identity” and the vaccine (for example, the use of local celebrities and places which the city’s population hold affection for). There were also stories from ordinary people about their experience with immunization, combating misinformation and information about the safety and efficacy of the vaccine. To encourage the sharing of positive messages about immunizing agents, Rio de Janeiro City Hall used humor, relaxed and/or informal language and local slang.

For example, attention was directed to the old guard members of samba schools, as well as notable *sambistas* (samba musicians and dancers) during the vaccination of priority groups. At the end of January, to launch the new round of vaccinations for the elderly starting in February, composer Nelson Sargento, wearing a mask with the symbol of the Vasco da Gama club, and actor Orlando Drummond were both vaccinated at the Palácio do Catete. Notably, Vasco da Gama club has the second largest fan base in Rio de Janeiro and one of the ten largest fan bases in Brazil.



Figure 4 – Post from January 31, 2021, with image of Nelson Sargento receiving the vaccine against covid-19
Source: <https://www.instagram.com/p/CKtgRUaH-sl/>. Accessed on: November 2, 2023.

Following the same direction, the City Hall profile reported on the vaccination of Portela’s Old Guard, composers and singers Monarco and Tia Surica as well as street cleaner and *passista* (carnival parade dancer) Renato Sorriso. Furthermore, it published a video of singer Zeca Pagodinho’s vaccination, who was singing a parody of his song “Vai vadiar” in a light-hearted manner, with an appeal for the population to come and take the 2nd dose of the immunizing agent.



Figure 5 – Post from April 16, 2021, with video of Zeca Pagodinho receiving the vaccine against covid-19
Source: <https://www.instagram.com/p/CNvbA5xFTbl/>. Accessed on: November 17, 2023.

Cultural expressions of the city like sambas and carnival marches were employed to publicize the campaign and the vaccines. For example, the musician and composer Moacyr Luz created the *Samba da Vacina* (Vaccine Samba), whose refrain is “you know that the doctor, studied to prescribe, only the vaccine can cure” (own translation). A video was made together with the samba which featured the vaccination of the elderly population and samba singer Nelson Sargento.

As doses arrived and the vaccination process for priority groups gathered pace, in addition to using local celebrities, Rio de Janeiro City Hall also announced the use of well-known locations in the city as vaccination centers. This was the case with the Sambadrome, the Cacique de Ramos carnival street party, Portela, the Municipal Theater and the Museum of Tomorrow.

With Carnival being suspended, in February 2021, the city’s reputation as a Carnival stronghold was particularly utilized.



Figure 6 - Post from February 13, 2021, with video of King Momo and the Mayor of Rio de Janeiro handing over the key to the city to health professionals.

Source: <https://www.instagram.com/p/CLPb0brHwIz/>. Accessed on: November 05, 2023.

In addition to celebrities and the use of places and dates that held emotional appeal for residents of Rio de Janeiro, other communication strategies for vaccine confidence were also observed. One such example was the telling of stories about the lives of residents. Elderly people, health professionals or education professionals, shared their experiences and expectations in relation to vaccination. These included Dona Suzete, Doutor Ivan, Cleusa, Norma, Sicília, Eliete, Celma and Miriam, among others. Thus, we can see that Rio de Janeiro City Hall sought to add personality to its profile, rather than purely using institutional language.



Figure 7 – Post from May 2, 2021, with a video of Ivan Santana, a neurosurgeon who was placed on leave because he was considered high-risk, describing his experience with the first dose of the vaccine.

Source: <https://www.instagram.com/p/COYbTG-Hb92/>. Accessed on: December 22, 2023.

Although they appear in smaller numbers, there are also posts with information on the efficacy and safety of vaccines. On April 1, known as April Fool's Day, the City Hall ran a campaign against fake news about vaccines and preventive measures against covid-19, urging people to seek information from official sources. The post stands out for its reach, with 24,132 views on 22/12/2023, accompanied by numerous comments in defense of “early treatment” and the doctor’s right to recommend it, against the “vachina” (a play on words bringing together vaccine and China), claims that the City Hall is “politicized”, expressing opposition to the lockdown, among others.



Figure 8 – Post from May 1, 2021, with video on truths and lies about prevention and vaccination against covid-19
Source: <https://www.instagram.com/p/CNImVVXHGzb/>. Accessed on: December 22, 2023.

Finally, City Hall also highlighted the first factual evidence showing the effectiveness of the vaccines, such as the drop in the number of people seeking care for flu-like symptoms and in the number of new confirmed cases of covid-19 in the municipality of Rio.

DISCUSSION

When discussing communication in health, we consider the interfaces between the elements that make up the two fields of knowledge. Therefore, the entire theoretical-conceptual and methodological apparatus of communication acquires special significance when operating in the field of health (Araújo; Cardoso, 2007). ICTs have introduced new challenges for this interdisciplinary field, mainly because they enable the rapid production and propagation of messages, with a much greater scope than before. These changes have forced federative entities to adapt their communication models. This situation was further accentuated by the covid-19 pandemic.

According to the World Health Organization (WHO), the infodemic was one of the major challenges posed by covid-19. The phenomenon is related to the widespread propagation of information, making it difficult to identify reputable and reliable sources, with social networks providing a fertile ground for the spread of fake health news. In this scenario, when public entities, such as city halls, operate on social networks, they become part of the battle for this space and can use their institutional credibility to assert themselves as a reliable source.

However, if at one time digital technologies were considered a means for the population to participate actively in communication or even a space of neutrality, it is now known that digital platforms can introduce biases that favor certain latent positions or directions in society, to the detriment of others (Cesarino, 2022).

The digital platforms declared that Brazilian digital advertising generated R\$32.4 billion, making it their main source of funding (A guerra [...], 2023). During the pandemic, advertising on Instagram and Facebook profiles, for example, encouraged “early treatment” (even though it had already been proven ineffective) and spread claims of false adverse effects of covid-19 vaccines, leading Meta, the platforms’ parent company, to take down around 1 million posts (Galvani, Jucá, 2021).

It is well known that the content posted can reach countless users, so its impact is difficult to verify exactly, even if it is later taken down. We must also consider the extent to which digital platforms are willing to reduce their profits to support the cause in the absence of any state regulation on the subject. In the present environment, users are vulnerable to the economic interests of the platforms, since various advertisements, including misinformation about vaccines, can easily be broadcast without sanctions (A guerra [...], 2023).

The new media facilitate the so-called processes of disintermediation, increasing users' distrust of the "mainstream media", intellectuals and academics and the institutions of representative democracy, such as city halls (Cesarino, 2022). For this reason, it is common for federal entities, as part of the state structure, to be viewed with suspicion, while influencer doctors and expert patients (who became popular on the internet during the pandemic) are increasingly considered trustworthy. Taking this into account, communication strategies that bring a personal touch to state profiles can be an alternative to disintermediation, as was the case with posts that told stories about ordinary people living in the city.

There is a distinctive feature in Brazil related to disintermediation: federal entities and high-profile political figures spread disinformation about covid-19 and the respective vaccines through their social media profiles. The process of politicizing certain issues, such as social isolation, the wearing of masks and vaccinations, even led to the reversal of institutional and state credibility that would have allowed official and reliable information to be provided.

Content analysis of the "Informative" category uncovered that the vaccination dates for certain groups were altered over short periods, showing the disorder and inconstancy of the federal government's vaccine distribution. As a result, people belonging to the priority groups had to be on the lookout for changes in the vaccination schedules.

The content analysis showed constant suspensions and repeated changes to the vaccination schedules for priority groups. It was found that the municipal administration chose to prioritize the rapid progress of the campaign, bringing forward the schedule as soon as doses arrived, a strategy that establishes vaccination as the main means of controlling the pandemic. It should be noted, however, that when analyzed from the perspective of health communication, constant changes to the vaccination schedule to bring it forward may not have the desired effect.

The right to communication should not be treated as a mere right to information, but also as the right to be recognized and to participate in public debate. Data analysis reveals that content about the vaccination schedule predominates, thus illustrating an information model that merely transfers health information. It is as if public institutions were left with the task of communicating (Araújo; Cardoso, 2007), without considering that establishing shared communication with society could be more fruitful given the growth in vaccine hesitancy in Brazil.

Thus, the changes to the schedule may have hindered the establishment of more solid communication networks between public authorities and civil society, given that the population was not necessarily informed about all the schedules, either due to problems with access to social networks, the targeting of content by the platform and/or the absence, insufficiency and/or precariousness of various means of health communication.

Another category that emerges from the data analysis is "interactivity", which was used as a way of promoting vaccine confidence (Razai *et al.*, 2021). We can see that Rio de Janeiro City Hall used posts about the "Carioca identity" with the vaccine, emphasizing the participation of local celebrities, especially samba composers and dancers, choosing places with widespread emotional appeal as vaccination posts, telling stories of ordinary citizens from the city and their experiences with vaccines, among other strategies. The

use of this method encourages the sharing of positive messages about the immunizing agents, encouraging interactivity among followers of the City Hall profile.

In this way, Rio de Janeiro City Hall is using new interactive digital technologies as strategic tools for health communication, in search of a two-way relationship between citizens and the government. This is because channels like Instagram can enable and deepen connections with users, who now have direct virtual access to government bodies and/or agencies (Brito, 2006). This idea is based on the concept that the digital transformation has changed the paradigms of communication by segmenting, “disintermediating” and cutting across traditional relationships in society. The new configuration allows actors to be both senders and receivers, promoting interactivity between the parties (Brito, 2006).

However, the logic of interactivity on digital platforms can lead to a client rather than a citizen. This in turn gives rise to debates about how to establish communication in the Unified Health System by using ICTs. In these debates, it should be considered that the determinants of health are more complex than individual or group attitudes to participation and interaction, since the processes of sensemaking include many more factors and mediations (Araújo, 2004; Araújo; Cardoso, 2007) than ‘well-crafted’ communication on social networks.

Considering these discussions on health communication through digital platforms, the principles of the Unified Health System (SUS), be they the doctrinal principles of universality, equity and comprehensiveness, or the organizational principles of decentralization, hierarchization and participation, could be possible ways of building communication that guarantees that society is recognized and participates in the public debate, especially in vaccination processes.

Instead of health institutions using communication as a prerogative to support and implement their policies, diffusing actions and prescribing behaviors, while the people merely receive information, digital platforms can be used, even with their limitations, to provide new spaces for speaking and listening.

During the period analyzed in this research, it was found that the Rio de Janeiro City Hall profile responded to some questions raised by means of comments, a tool capable of creating direct communication between citizens and public authorities. Providing other forums or resources in this regard, establishing a direct channel of communication and engagement with the population, can contribute to building a more robust health information ecosystem, as well as taking into account the principle of universality.

Digital platforms can be used based on equity and comprehensiveness, but there are obstacles. The structures of ICT algorithms are not transparent, so it is not possible to ascertain the supposed neutrality of the content that is delivered to the user. In addition, there is a clear preference for recent posts, connections between similar behaviors (Cesarino, 2022) and the predominance of knowledge that is personalized for the audience (in detriment of the reach of federal entities, as is the case here).

Even so, equity and comprehensiveness must be addressed. This means considering social differences in communication about immunization, enforcing contextualization to define circulation possibilities as well as understanding and appropriation of communication strategies. Furthermore, it means addressing practices of listening to and recognizing the other, services such as spaces for conversation and emphasizing authorized speeches (Araújo; Cardoso, 2007).

As for decentralization, it is important to understand the ways in which the right to speak and be heard is unevenly distributed. In this sense, health communication must seek to deconcentrate the power of speech within institutions. For this reason, communication about vaccines on social networks should not be conceived by the federal government or other institutions in isolation, but in partnership with social movements and communities to consolidate voices other than those of the state in the construction of health policies.

Actions on digital platforms should also favor the emergence and consolidation of local channels and profiles for the expression and circulation of messages. Opportunities to listen should be provided, to build an inclusive communication model about vaccines which welcomes different contexts and actors. Decentralization can lead to greater participation in communication decisions.

As for hierarchization, communication should not necessarily be the sole responsibility of the most central bodies, as is the case with Rio de Janeiro City Hall. In a context where disintermediation exacerbates users' distrust of the institutions of representative democracy, the communicative capacity of municipalities must be strengthened. This does not prevent a rethink of the centralized and hierarchical way in which health communication often takes place.

Finally, we turn to the matter of participation. Here we recommend universal, equitable, integral, decentralized and non-hierarchical communication, a principle that addresses the same issues of inequality in discursive power. Therefore, the communication strategy on vaccines must develop spaces, processes and practices that amplify the most peripheral voices. In this sense, presenting the experience of Rio de Janeiro residents and health professionals on vaccination can be a way of building these spaces, but it is important that the initiative is constructed jointly with society, in a non-vertical way. It is worth pointing out that the promotion of a "carioca identity" with priority given to themes related to samba may not encompass the plurality of inhabitants of the city of Rio de Janeiro and surrounding regions who access the capital's health services.

FINAL CONSIDERATIONS

Through the discussion of the results presented here, the aim was to collaborate with federal entities and public bodies in the use of digital platforms for health communication, especially for vaccination. Thus, this study considers that social networks are essential spaces to be contested, despite their limitations. Through this research, we sought to demonstrate how important digital media are for immunization, as well as their potential when in dialogue with the principles of the Unified Health System (SUS) (Melo *et al.*, 2021), considering that the right to health can only be fully achieved by individuals and the community if they are also guaranteed the right to communication.

REFERENCES

- A GUERRA das plataformas contra o PL 2630. Netlab, Rio de Janeiro, Apr. 2023. Available from: <https://www.netlab.eco.br/post/a-guerra-das-plataformas-contr-o-pl-2630>. Accessed: 23 Ago. 2024.
- ARAÚJO, Inesita Soares de. Mercado Simbólico: um modelo de comunicação para políticas públicas. **Interface – Comunicação, Saúde, Educação**, Botucatu, v. 8, n. 14, p. 165-178, 2004. DOI: <https://doi.org/10.1590/S1414-32832004000100010>. Available from: <https://www.scielo.br/j/icse/a/mXPrpPYcQxGMCJZ3jN9CHGB>. Accessed: 23 Ago. 2024.
- ARAÚJO, Inesita Soares de; CARDOSO, Janine Miranda. **Comunicação e Saúde**. Rio de Janeiro: Editora Fiocruz, 2007.
- BARCELLOS, Renato. Entenda o processo de impeachment que resultou na cassação de Wilson Witzel. **CNN Brasil**, São Paulo, 30 Apr. 2021. Available from: <https://www.cnnbrasil.com.br/politica/entenda-o-processo-de-impeachment-que-resultou-na-cassacao-de-wilson-witzel/>. Accessed: 23 Ago. 2024.
- BARDIN, Laurence. **Análise de conteúdo**. São Paulo: Edições 70, 2015.
- BRASIL. [Constituição (1988)]. **Constituição da República Federativa do Brasil de 1988**. Brasília, DF: Presidência da República, [2023?]. Available from: http://www.planalto.gov.br/ccivil_03/Constituicao/Constituicao.htm. Accessed: 23 Ago. 2024.

BRASIL. Presidência da República. Lei nº 6.259, de 30 de outubro de 1975. Dispõe sobre a organização das ações de Vigilância Epidemiológica, sobre o Programa Nacional de Imunizações, estabelece normas relativas à notificação compulsória de doenças, e dá outras providências. **Diário Oficial da União**, Brasília, DF, 30 out. 1975. Available from: https://planalto.gov.br/ccivil_03/LEIS/L6259.htm#:~:text=LEI%20n%206.259%2C%20DE%2030%20DE%20OUTUBRO%20DE%201975.&text=Disp%C3%B5e%20sobre%20a%20organiza%C3%A7%C3%A3o%20das%20doen%C3%A7as%2C%20e%20d%C3%A1%20outras%20provid%C3%Aancias. Accessed: 23 Ago. 2024.

BRASIL. Senado Federal. CPI da Pandemia. **Relatório final**. Brasília, DF: Senado Federal, 2021. Available from: <https://legis.senado.leg.br/sdleg-getter/documento/download/fc73ab53-3220-4779-850c-f53408ecd592>. Accessed: 28 Dec. 2022.

BRITO, José Augusto Pereira. Cibercidadania: a virtualização na Comunicação Pública contemporânea. **Organicom**, São Paulo, v. 3, n. 4, p. 106-123, 2006. DOI: <https://doi.org/10.11606/issn.2238-2593.organicom.2006.138914>. Available from: <https://revistas.usp.br/organicom/article/view/138914>. Accessed: 23 Ago. 2024.

CAVALCANTE, João Roberto; ABREU, Ariane de Jesus Lopes de. Covid-19 no município do Rio de Janeiro: análise espacial da ocorrência dos primeiros casos e óbitos confirmados. **Epidemiologia e Serviços de Saúde**, Brasília, DF, v. 29, n. 3, p. e2020204, 2020. DOI: <https://doi.org/10.5123/S1679-49742020000300007>. Available from: <https://www.scielo.br/j/ress/a/Dq6LJRhyfzqzTRgKyq3Wx9Lz>. Available from: 23 Ago. 2024.

CESARINO, Letícia. **O mundo do avesso**: verdade e política na era digital. São Paulo: Ubu, 2022.

COUTINHO, Maísa Miranda *et al.* Instagram – Novo instrumento de comunicação em saúde: uma revisão da literatura. In: SEMINÁRIO INTERNACIONAL DE SAÚDE DA FAMÍLIA E DEMOCRACIA, 1., 26-29 Oct. 2022, online. **Anais** [...], [S. l.]: Even3, 2022. DOI: <https://doi.org/10.29327/saudeedemocracia.534185>. Available from: <https://www.even3.com.br/saudeedemocracia/>. Accessed: 23 Ago. 2024.

FERNANDES, Luisa; ORTEGA, Francisco. A Atenção Primária no Rio de Janeiro em tempos de covid-19. **Physis: Revista de Saúde Coletiva**, Rio de Janeiro, v. 30, n. 3, p. e300309, 2020. DOI: <https://doi.org/10.1590/S0103-73312020300309>. Available from: <https://www.scielo.br/j/physis/a/dR8cWVJsGKzFBpKvg8KNw8k>. Accessed: 23 Ago. 2024.

FERNANDEZ, Michelle Vieira; PINTO, Hêider Aurélio. Estratégia intergovernamental de atuação dos estados brasileiros: o Consórcio Nordeste e as políticas de saúde no enfrentamento à covid-19. **Saúde em Redes**, Porto Alegre, v. 6, n. 2 supl, p. 211-225, 2020. DOI: <https://doi.org/10.18310/2446-4813.2020v6n2Suppl211-225>. Available from: <http://revista.redeunida.org.br/ojs/index.php/rede-unida/article/view/3150>. Accessed: 23 Oct. 2024.

GALHARDI, Cláudia Pereira *et al.* Fato ou Fake? Uma análise da desinformação frente à pandemia da covid-19 no Brasil. **Ciência & Saúde Coletiva**, Rio de Janeiro, v. 25, n. supl 2, p. 4201-4210, 2020. DOI: <https://doi.org/10.1590/1413-812320202510.2.28922020>. Available from: <https://www.scielo.br/j/csc/a/XnfpYRR45Z4nXskC3PTnp8z>. Accessed: 23 Ago. 2024.

GALVANI, Giovanna; JUCÁ, Julyanne. Facebook e Instagram derrubaram 1 milhão de postagens com fake news sobre covid. **CNN Brasil**, São Paulo, 11 Nov. 2021. Available from: <https://www.cnnbrasil.com.br/economia/facebook-e-instagram-derrubaram-1-milhao-de-postagens-com-fake-news-sobre-covid/>. Accessed: 23 Jan. 2024.

IBGE. Rio de Janeiro. **IBGE Cidades**, Brasília, DF, 2022. Available from: <https://cidades.ibge.gov.br/brasil/rj/rio-de-janeiro/panorama>. Accessed: 27 Ago. 2024.

KEMP, Simon. Digital 2023: Brazil. **DataReportal**, [s. l.], 12 Feb. 2023. Available from: <https://datareportal.com/reports/digital-2023-brazil>. Accessed: 23 Ago. 2024.

LEWANDOWSKI suspende decisão que permitia mudança de grupos prioritários para vacinação no RJ. STF, Brasília, DF, 3 May 2021. Notícias. Available from: <https://portal.stf.jus.br/noticias/verNoticiaDetalhe.asp?idConteudo=465229&ori=1>. Accessed: 27 Ago. 2024.

LOPES, Anna Júlia. Relembre declarações de Bolsonaro sobre a vacinação. **Poder360**, [s. l.], 17 jan. 2022. Available from: <https://www.poder360.com.br/governo/relembre-declaracoes-de-bolsonaro-sobre-a-vacinacao/>. Accessed: 23 Jan. 2024.

MACDONALD, Nomi E. Vaccine hesitancy: Definition, scope and determinants. **Vaccine**, Amsterdam, v. 33, n. 34, p. 4161-4164, 2015. DOI: <https://doi.org/10.1016/j.vaccine.2015.04.036>. Available from: <https://www.sciencedirect.com/science/article/pii/S0264410X15005009>. Accessed: 23 Ago. 2024.

MELO, Rochele Malheiros de *et al.* O engajamento público através das mídias sociais. **Revista Estudo & Debate**, Lajeado, v. 28, n. 3, p. 88-111, 2021. DOI: <https://doi.org/10.22410/issn.1983-036X.v28i3a2021.2865>. Available from: <https://www.univates.br/revistas/index.php/estudoedebate/article/view/2865>. Accessed: 23 Ago. 2024.

MELLO, Clarissa Mello *et al.* **Direto pro (a)braço**: a resposta do Rio de Janeiro à pandemia de covid-19. Rio de Janeiro: Secretaria Municipal de Saúde, 2023. Available from: https://epirio.svs.rio.br/wp-content/uploads/2023/01/SMS_DiretoAbraco.pdf. Accessed: 23 Ago. 2024.

MOORE, Daniella Campelo Batalha Cox *et al.* Low covid-19 vaccine hesitancy in Brazil. **Vaccine**, v. 39, n. 42, p. 6262-6268, 2021. DOI: <https://doi.org/10.1016/j.vaccine.2021.09.013>. Available from: <https://www.sciencedirect.com/science/article/pii/S0264410X21011920>. Accessed: 23 Ago. 2024.

NETLAB. A Guerra das Plataformas contra o PL 2630. abr. 2023. Disponível em: <https://uploads.strikinglycdn.com/files/2cab203d-e44d-423e-b4e9-2a13cf44432e/A%20guerra%20das%20plataformas%20contra%20o%20PL%202630%20-%20NetLab%20UFRJ,%20Abril%202023.pdf>. Accessed: 22 jan. 2024.

OLIVEIRA, Maria Carolina Lopes de; BACCARIN, Matheus; GUIMARÃES, Larissa Souza. Três meses, três ministros: o conteúdo do Instagram do Ministério da Saúde na pandemia da covid-19. In: ENCONTRO ANUAL DA ANPOCS, 44., 1-11 Dec. 2020, online. **Anais [...]**. [S. l.]: Anpocs, 2020. Available from: <https://biblioteca.sophia.com.br/terminal/9666/acervo/detalhe/1743?guid=1724778790684&returnUrl=%2fterminal%2f9666%2fresultado%2flistar%3fguid%3d1724778790684%26quantidadePaginas%3d1%26codigoRegistro%3d1743%231743&i=1>. Accessed: 23 Ago. 2024.

ORGANIZAÇÃO PAN-AMERICANA DA SAÚDE (OPAS). Entenda a infodemia e a desinformação na luta contra a covid-19. [Brasília, DF]: Opas, 2020. Available from: https://iris.paho.org/bitstream/handle/10665.2/52054/Factsheet-Infodemic_por.pdf. Accessed: 28 Dec. 2022.

RAZAI, Mohammad S. *et al.* Covid-19 vaccine hesitancy: the five Cs to tackle behavioural and sociodemographic factors. *Journal of the Royal Society of Medicine*, Londres, v. 114, n. 6, p. 295-298, 2021. DOI: <https://doi.org/10.1177/01410768211018951>. Available from: <https://journals.sagepub.com/doi/10.1177/01410768211018951>. Accessed: 23 Ago. 2024.

RIO DE JANEIRO. Decreto no 47547, de 30 de março de 2021. Dispõe sobre a criação do Calendário Único de Vacinação da Secretaria de Estado de Saúde para as Ações de Imunização da campanha da vacinação contra a covid-19 em todo o estado do Rio de Janeiro. *Diário Oficial do Estado do Rio de Janeiro*, Rio de Janeiro, v. 42, n. 60, p. 1, 2021. Available from: <https://leisestaduais.com.br/rj/decreto-n-47547-2021-rio-de-janeiro-dispoe-sobre-a-criacao-do-calendario-unico-de-vacinacao-da-secretaria-de-estado-de-saude-para-as-acoes-de-imunizacao-da-campanha-da-vacinacao-contra-a-covid-19-em-todo-o-estado-do-rio-de-janeiro>. Accessed: 27 Ago. 2024.

RIO DE JANEIRO. Painel Rio covid-19. Rio de Janeiro: Prefeitura da Cidade do Rio de Janeiro, 2023. Available from: <https://www.data.rio/apps/painel-rio-covid-19/explore>. Accessed: 22 Jan. 2024.

SANTOS, Gustavo Henrique Campos dos. O uso das mídias no poder público: análise do perfil “Senado Federal” no Facebook. 2016. Dissertação (Mestrado em Administração Pública) – Fundação João Pinheiro, Belo Horizonte, 2016.

SOUZA NETO, Francisco Monteiro de. Linguagens na Ciberpublicidade: análise semiótica dos mecanismos de busca. 2016. 103 f. Dissertação (Mestrado em Mídia e Cotidiano) – Universidade Federal Fluminense, Niterói, 2016. Available from: <https://app.uff.br/riuff/handle/1/3827>. Accessed: 23 Ago. 2024.

STF. Lewandowski suspende decisão que permitia mudança de grupos prioritários para vacinação no RJ. STF, Brasília, DF, 3 maio 2021. Disponível em: <https://portal.stf.jus.br/noticias/verNoticiaDetalhe.asp?idConteudo=465229&ori=1>. Acesso em: 27 ago. 2024.