









# Vaccination against covid-19 in older people: information provided by the news media

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## Abstract

**Objective:** To evaluate the media content produced about vaccination against covid-19 aimed at the older population in Brazil. **Method:** A desk research study based on the analysis of 19 articles published by the newspapers Estadão, Folha de S. Paulo, O Globo and GAÚCHAZH between December 2020 and September 2021. The data were processed by the Iramuteq software, analyzed using Descending Hierarchical Classification (DHC) and interpreted by Content Analysis. **Results:** The corpus yielded five thematic classes. These classes revealed the dissemination of information about vaccination against covid-19 for older people as a necessary measure for the health of this population, justifying the intense reporting of news on the vaccination campaign. The articles highlighted the organization of immunization policies, as well as their benefits for the older population, especially institutionalized individuals. In addition, the vaccine emerged as a key element in the fight to contain the spread of the coronavirus, increasing the protection of older residents of long-term care facilities and, undeniably, reducing the mortality of this population. **Conclusion:** The findings highlight the importance of disseminating health promotion policies across a wide variety of communication channels, allowing access to health information by all audiences and reinforcing the urgency of collective care practices offered to older people, including those residing in institutions.

**Keywords:** Covid-19. Older people. News Media. Vaccine. Health promotion. Long-Term Care Facility for the Elderly.

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No funding was received in relation to the present study.

The authors declare that there is no conflict in the conception of this work.

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Received: January 07, 2023

Approved: May 17, 2023

## INTRODUCTION

Covid-19 is an infectious, highly communicable disease caused by the SARS-CoV-2 virus. Around 3 months after the first cases were reported in December 2019 in Wuhan, China, the World Health Organization (WHO) declared the situation a pandemic<sup>1,2</sup>. This triggered the great world health crisis in the last 100 years<sup>3,4</sup>.

Subsequently, lockdown and personal protection measures were implemented around the world, in addition to hand cleansing protocols and respiratory etiquette. The concerted efforts of authorities to implement public and health policies preventing further outbreaks sought to curb soaring mortality rates<sup>5</sup>.

In 2020, older individuals represented approximately 53% of the deaths attributed to the disease in Brazil, emerging as one of the most vulnerable groups to the infection<sup>6,7</sup>. Given that aging is a natural process accompanied by numerous biopsychosocial changes, older individuals are more prone to developing chronic diseases and/or functional decline. These factors, in the context of the coronavirus, constitute a potential risk in this population<sup>7,8</sup>.

With regard to residents of long-term care facilities (LTCFs), the situation caused by the coronavirus proved even more critical. The majority of such residents have chronic comorbidities, increasing their level of frailty and, hence, the chances of developing more severe forms of the disease<sup>8,9</sup>.

In this setting, the search for treatment and a vaccine against covid-19 were viable actions to tackle the pandemic<sup>10</sup>. Although developing immunobiological agents takes time, efforts were made to ensure the efficacy and effectiveness of new vaccines in the shortest possible timeframe<sup>11</sup>.

Following approval by international agencies, vaccination against covid-19 took center stage, where vaccination was made available free of charge to Brazilian citizens<sup>5</sup>. Vaccination proved the main strategy in controlling the novel coronavirus, with the potential to change the dynamics of the outbreak by reducing the number of severe cases

and hospitalizations, and providing effective protection<sup>6,10</sup>.

Initially, the priority groups were health professionals, indigenous peoples and institutionalized individuals aged 60 years or older<sup>12</sup>. Over time, the logistics of the vaccine rollout were adapted according to the specific needs of each area, allowing intensifying of vaccine measures<sup>13</sup>. Supporting biosafety actions in LTCFs, immunization took place in a manner which minimized transit of residents and exposure to risks by applying vaccines onsite within care facilities<sup>14,15</sup>.

The body of evidence on the impact of the vaccine at a population level is growing. Media channels highlighted shifts in the dynamic of the pandemic, as reported by government organs globally, which included a decline in the number of cases and hospitalizations among older people and other population groups. However, the need for adherence to the recommended schedule of vaccine doses against covid-19 should be reiterated to the public, aiding mass immunity<sup>16</sup>.

In this context, the information conveyed by the media on immunization of older adults is of great importance. Although major strides with regard to vaccination have been documented, a strong correlation between the number of deaths attributed to covid-19 in older individuals living in the community and residents of nursing homes is evident, highlighting the importance of community transmission, despite the raft of measures to protect residents of these institutions<sup>17</sup>.

Since the start of the pandemic, countless reports have been published in news media channels on the subject. Against this backdrop, the present study sought to elucidate the type of content disseminated on covid-19 vaccination in national newspapers. Mass vaccination campaigns, incentivized by the media, brought about a shift in the Brazilian scenario, and likewise globally, with a decline in morbimortality associated with the coronavirus. This phenomenon confirms the influence of news reporting on the mindset of the public, prompting greater adherence to the vaccines available. In this context, the objective of the present study was to assess the media content

produced on vaccination against covid-19 targeting older people in Brazil.

## METHOD

A descriptive, exploratory desk research study was carried out involving compiling the news items available on the internet. As the data source, the study drew on news reports published by the national newspapers the *Estadão*, *Folha de S. Paulo*, *O Globo* and *GAÚCHAZH*.

According to information from the Circulation Verifier (IVC Brasil) for 2020/2021, these Brazilian newspapers had the highest general readership in terms of circulation and daily print runs and were therefore elected as the search sources for the present study. The IVC Brasil is a national entity responsible for multi-platform media auditing. The entity provides data on communication, circulation, events and others, interconnecting figures for a range of audiences to agencies in the sector<sup>18</sup>.

As a research instrument, the search tool offered by the website portals of each of these newspapers was employed, in the capacity of service subscriber of each title, given that non-subscribers had only limited access to the database of past articles. The search descriptors selected were the search strings “vaccination in older people” and “covid-19”, and the search period spanned from December 2020 to September 2021. This sample time window was necessary due to the vast number of news texts on adolescents and younger people who later became a priority focus of vaccine campaigns. Column-based reports or news items covering the topic and available online in full were included. Content addressing the topic with other audiences or purpose, or not involving news texts, such as adverts and publicity pieces, were excluded.

News items were selected according to headline/title, read and then stored in a digital spreadsheet along with the following parameters: newspaper, publication date, headline, type of item, content link, and topic. For data processing, an analysis *corpus* was constructed based on the content selected, in the form of a single text file encompassing all of the items chosen.

The database was processed using the free software tool IRAMUTEQ (*Interface de R pour analyses Multidimensionnelles de Textes et de Questionnaires*), allowing statistical analyses to be performed on text corpuses and individual tables/words, organizing and identifying the elements with the highest representativeness<sup>19</sup>.

In the present study, the Descending Hierarchical Classification (DHC) was used, by which text segments are classified according to their respective vocabulary. Use of matrices cross-referencing text segments and words yields a stable definitive classification, deriving the classes and organizing the data into a dendrogram<sup>19</sup>. Content analysis was then performed, enabling inference and interpretation of the results.

The report generated by the IRAMUTEQ tool classified 73.41% of the material as relevant. Classification of at least 70% of the text units assures robust reliable results<sup>19</sup>. Based on the analysis of the data compiled, word groups were produced and presented in the form of a dendrogram.

## RESULTS

The search led the retrieval of 190 news items. Of this total, 19 met the inclusion criteria and were included in the study. Most of the items selected were published in the *Estadão* newspaper (42%). Regarding type of news content, there were more news reports than column type publications. These findings are presented in Table 1.

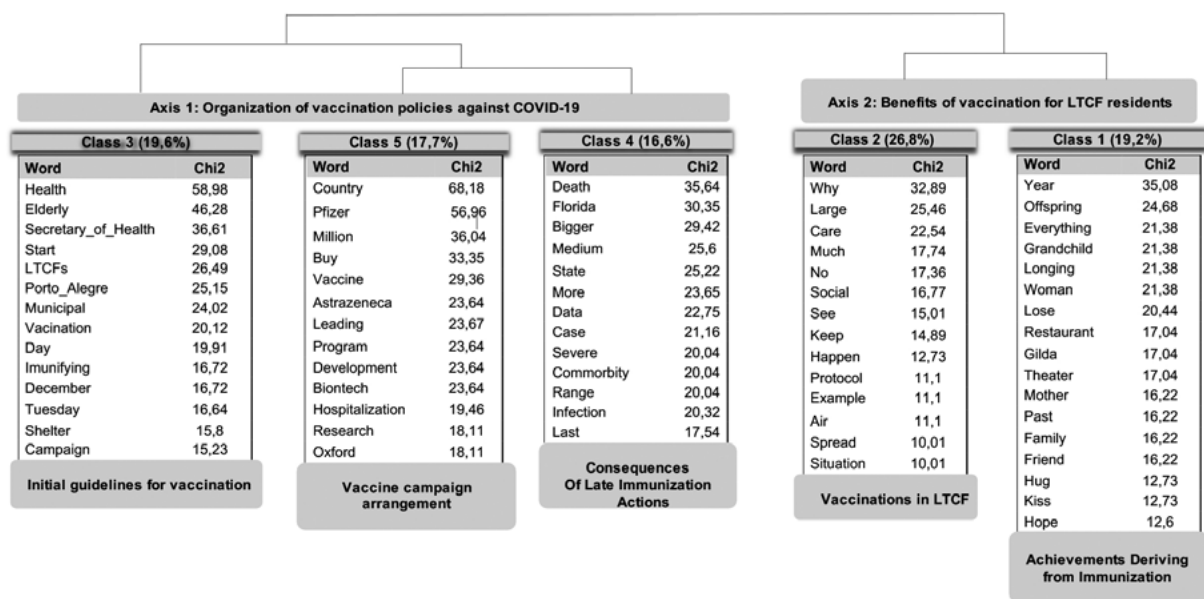
Analysis of the text *corpus* revealed 13,262 instances of words, comprising 3061 distinct forms. Thus, the *corpus* was divided into 361 elemental context units (ECUs), of which 265 (73.41% of total words) were matched using DHC of text segments, indicating the degree of semantic affinity of the resultant classes.

The *corpus* was divided into two main different themes: *Organization of covid-19 vaccination policies*, accounting for 54% of the total ECUs analyzed; and *Benefits of vaccination for LTCF residents*, representing 46% of the content analyzed. The 5 classes derived from the partitions of the corpus are depicted in Figure 1.

**Table 1.** Proportion of news items on covid-19 vaccination for older people, by newspaper and type. João Pessoa/Paraíba state, 2022.

News items selected by newspaper		Type and no. of news items	
O Globo	6 (32%)	Column	2
		Report	4
Estadão	8 (42%)	Column	3
		Report	5
Folha de São Paulo	1 (5%)	Column	0
		Report	5
GáuchaZH	4 (21%)	Column	0
		Report	4

Source: produced by authors



**Figure 1.** Dendrogram of main themes on vaccination for older adults reported in news media channels. João Pessoa, Paraíba state, 2022.

Source: produced by authors using Iramuteq software.

### Class 3: Initial guidelines for vaccination

In this class, the news items emphasized the commencement of vaccination in Brazil and worldwide, expounding on the distribution of vaccines to the population, and also the logistics for determining priority groups to receive immunization against covid-19, as illustrated in the passages below:

“The United Kingdom began vaccination on 8th December, following approval of the *Pfizer*

vaccine. Roughly 400,000 older adults and health professionals are covered by the initial campaign; older residents of nursing homes and staff are priority” (Estadão, 14/12/2020).

“Each state has devised a vaccination plan. According to rules for Rio de Janeiro, only health professionals and older residents of some nursing homes can receive the little over 480,000 vaccine doses in this first stage” (Folha de São Paulo, 22/01/2021).

The news items also report how the cities, states and Brazilian Federal government, as well as the experience of European countries, have systematized the start of the campaign for the vaccine. Moreover, they reveal that the oldest old residing in institutions, a group highly vulnerable to covid-19, were prioritized at the outset in different locations.

Health professionals, including those practicing in LTCFs, were also prioritized due to the need for care and protection of residents in these facilities.

### Class 5: Organization of vaccine campaign

Results showed that the global panorama of the vaccination campaigns against covid-19 was a focus of news media reports. Thus, class 5 shows the planning and legislative procedures behind the acquisition of vaccines and their availability to society. In Brazil's case, the national health system (SUS) provided free immunization at a nationwide level.

“Brazil is a world reference in large-scale immunization programs and has a public health system (SUS) which reaches remote regions of this country of continental proportions” (Estadão, 14/12/2020).

“Over this period, the vaccine may have saved the lives of up to 58,000 people aged 60 or older, according to figures projected by the epidemiologist Marcelo Gomes” (O Globo, 18/07/2021).

The media also reported on the need to invest in large-scale immunization, given that studies around the world had shown that the start of vaccination promoted an improvement in the situation for the population, particularly older people, with a lowering of hospitalizations and severe cases. The organization of campaigns in Brazil and other countries required huge financial investment. However, deaths were avoided and costs of lengthy hospital stays reduced.

### Class 4: Consequences of delayed immunization actions

The news items selected in this class report on the consequences arising from delays in commencement

of vaccination in different countries. These delays resulted in a worsening of the pandemic crisis with an increase in number of hospitalizations and high mortality rate.

“The data on the pandemic in Florida, sparser since the state lifted the emergency for covid-19, reveal only limited information on who is dying. Hospitals stated that over 90% of their patients were unvaccinated” (Estadão, 30/08/2020).

“If vaccination had not commenced, Rio de Janeiro would now be seeing peaks of over 350 deaths per day, whereas the 7-day rolling average is below the 120 notifications mark” (O Globo, 18/07/2021).

The passages reveal that adopting a preventive approach through vaccination can avoid negative consequences for older individuals and other population groups. The media also highlights that delayed actions represent a major obstacle for health promotion, holding back the running of interventions to ensure well-being, in stark contrast with the positive outcomes seen in areas where early vaccination was carried out.

### Class 2: Vaccination at LTCFs

Class 2 is the largest of the classes, being part of the second theme of analysis and having a direct focus on vaccines against covid-19 for residents of LTCFs. The content shows that initial vaccination in LTCFs was prioritized worldwide given their residents were cause for major concern owing to the high rates of infection, transmission and severe cases.

“Immunization will be carried out in 5 stages: in the first, 650,000 older residents of LTCFs will be vaccinated; in the second, individuals aged older than 75 and older than 65 years with comorbidities” (Estadão, 14/12/2020).

“There are 90 older residents and 120 staff of the LTCF. This is literally lifesaving because they are not just high-risk, but extremely high-risk. They have been under lockdown for 10 months” (GaúchaZH, 19/01/2021).



The frailty of older residents of LTCFs is multifactorial, making them a top priority. The aging process, comorbidities, immunosenescence and close contact with other older residents, negatively impact their health, calling for extra care measures amid such a major pandemic.

### Class 1: Benefits derived from immunization

Class 1 expounds on the benefits provided by covid-19 vaccination for LTCF residents. Although the population as a whole has been hit by the pandemic, albeit economically, physically, mentally or socially, older individuals develop more severe symptoms of the disease, particularly those who are institutionalized.

“After almost a year without hugs or kisses from the family and friends, this group of over 60s and 70s can get their first dose” (O Globo, 16/01/2021).

“We are delighted to be out after 1 year and 10 days, it was high time! It’s an injection of vitality, dreams and great optimism” (Estadão, 25/02/2021b).

The reports show that, after vaccination, family visits and interaction among the older residents, which had been banned to prevent contamination and local outbreaks, could now be resumed, allowing a change in the prevailing scenario of insecurity, loneliness and fear. This content reflects the situation experienced by older people who were shielded from their families and not allowed to mix or interact with the other residents of the nursing homes.

According to the Descending Hierarchical Classification, the relationship between the classes (Figure 1) shows that the news content on covid-19 vaccination demonstrates that large-scale immunization is advocated by most news media channels as a solution to the crisis created by the disease, providing a range of benefits for the population at large, especially LTCF residents, leading to an improvement in quality of life.

The media content produced on vaccination against covid-19 aimed at older people in Brazil is

constructed and conveyed through an information network, conferring a positive influence on vaccination take-up. Although older people may be aware of the importance of vaccination, influence from third-parties can often be necessary to prompt them into actually getting vaccinated, further corroborating the importance of the role of media in fully covering the matter.

### DISCUSSION

The meaning derived from the materials analyzed on vaccination against covid-19 brings to the fore the content covering the organization of policies for implementing the vaccine in Brazil and the main benefits for the older population. With regard to the action of the vaccine, this was administered with the goal of reducing the risk of severe cases of infection and proved a focus of reports in all newspapers searched.

The results of the present study suggest that the content of the news items portray the vaccine as an effective measure against the coronavirus disease. The logistics for distribution of the vaccine featured as a key factor, ensuring that the population, including those in remote locations, had free access to the vaccine under the national health system (SUS). Thus, operational planning for commencing vaccination, as outlined in Class 3, was essential.

Vaccine programs are regarded as one of the most successful and effective health intervention strategies for the population in combating infectious diseases. This explains why its implementation, in conjunction with other measures aimed at protecting health, constituted a promising element to mitigate the spread of covid-19<sup>20</sup>.

Hence, vaccination efforts have a positive impact in disassociating the disease from death. Given that vaccines can prevent serious outcomes and hospitalizations, changing the *status quo* from one of pandemic to endemic, it is vital for public health entities to devise strategic measures to vaccinate the whole population, with the aim of achieving maximum immunity on a global level<sup>21,22</sup>.

With respect to these conditions, the National covid-19 Vaccination Rollout Plan faced challenges along the way, such as availability of up-to-date population-based data, where the last nationwide census took place 12 years prior<sup>23,24</sup>. This increases the efforts needed at state and municipal levels to manage registries of individuals who have been vaccinated and those yet to receive the vaccine.

Therefore, the most effective strategy for structuring health campaigns was based on the use of microplanning. These approaches entail a set of strategic actions and methods which pool local information, logistics analysis, monitoring tools and population databases<sup>23-25</sup>. This information was used to map the target population and the most effective actions to reach priority groups<sup>26,27</sup>.

It is noteworthy that vaccination against covid-19 may require a variety of strategies contingent upon the supply of different manufacturers, age range and groups, as well as specific local conditions<sup>27</sup>. Nevertheless, given their potential for containing infectious diseases, it is paramount that campaigns are mounted as soon as vaccines become available<sup>28</sup>.

Efforts are made toward structuring and organizing vaccine campaigns in a bid to optimize the vaccination process, conferring immunity to the population as rapidly as possible, curbing the spread of diseases. Over this period, Class 5 highlights the context of Brazilian planning.

Clearly, wealthier countries, particularly China and Japan, made heavy use of technology to aid the process of registration and checking of vaccination status, assuring greater safety and adherence to recommended protocols<sup>29</sup>. This contributed to increased compliance and faster meeting of goals.

A number of studies show that, after commencing the vaccination program, there was a considerable decline in infections, hospitalizations and mortality attributed to the virus<sup>13,15,16</sup>. However, besides reducing cases, vaccination reopened up socioeconomic activities<sup>30</sup>. Countries with larger economies had more effective vaccination campaigns, providing high coverage of the adult population, leading to lifting of restrictions and earlier resumption of activities<sup>31</sup>.

In this respect, one of the fundamental aspects for successful large-scale vaccination is information. The population needs to be aware of the benefits in order to take up the vaccine<sup>32</sup>. Countries that failed to adopt effective covid-19 vaccination measures, including health education, faced negative consequences of delayed actions, as shown in Class 4.

Limited adherence of South American countries, in terms of effective measure to curb the virus, led to further spread and rising rates of transmission and mortality as the months went by<sup>33</sup>. This issue was recurrent in the news items, revealing that measures to combat the disease were implemented differently depending on location.

On this front in Brazil, there was a lack of standardization and integration across cities and states, leading to disparities in decision-making and consequent differences in the number of cases and death tolls throughout the country, with contamination levels remaining high<sup>33</sup>. Moreover, risks such as the steady rise in hospitalizations and deaths, along with difficulties countering variants of the novel coronavirus, placed an increasing cost burden on the health sector and other areas<sup>13</sup>.

Delayed decision-making, out of step with guidance recommended by the WHO, as well as the adoption of ineffective health policies, had repercussions not only for the local population, but also for overall immunity, promoting outbreaks that were localized or affecting specific populations<sup>33</sup>.

Amid this scenario, at the outset of the pandemic, more specifically during the first wave of covid-19, LTCFs worldwide were the hardest hit by outbreaks of the disease<sup>33</sup>. The absence of action plans and public policies to address the situation caused thousands of residents in these areas to develop severe infections and/or evolve to death. The news covering this aspect can be found in Class 2, showing that the main factor responsible for turning the prevailing situation around was vaccination.

After launching of the vaccine campaigns, the older population showed renewed optimism and resumed their daily routines, which was further restored with the arrival of the so-called “new normal”. Thus, it is undeniable that the pandemic

heightened concerns over environments housing older people, including LTCFs, because these facilities tend to accommodate older individuals who are more frail. This calls for constant scientific updating, with actions based on the latest evidence aimed at preventing contamination by SARS-CoV-2, allowing this to be tackled, while maintaining respect for older members of society, caregivers, family and workers<sup>14</sup>.

Studies support the positive impact of vaccination<sup>15,16</sup>. The first dose of the covid-19 vaccine in residents of LTCFs resulted in a 40-50% reduction in infections, rising to 80-90% protection with the full vaccine schedule. Concerning severe cases, vaccination promoted a 95% reduction in hospital admissions and 97% decrease in mortality risk<sup>35</sup>.

The potential of protection, particularly among more frail individuals, provides fresh hopes of social interaction, as reported in the news items contained in Class 1. Given that these individuals have come through an extremely lonely pandemic, uncertainties associated with the novel coronavirus can be attenuated by vaccination.

Notwithstanding, older residents of LTCFs are, in many ways, already somewhat isolated from social interactions, having contact only with fellow residents, staff and family members who visit regularly. Amid the pandemic, the news content confirmed that lockdown and social distancing were further reinforced, with restrictions being eased only after administration of 2 doses of the vaccine, allowing resumption of safe contact with others which, for many, symbolized a return to normal life.

Thus, the influence of communication channels on which topics were discussed socially should be recognized. On the one hand, the media reported the difficulties faced by more frail older individuals, together with the health policies for organizing the vaccine campaign, which met with some push back from governments and the population, undermining planning efforts; on the other hand, the benefits gained by areas which implemented the campaign earlier were used to justify the imminent need

for wider adoption of these actions, outlining the advantages of implementation.

Nevertheless, the dissemination of information in the news media contributed toward building an image of the vaccine as fundamental for maintaining health in society, broadening knowledge on vaccination and undoubtedly influencing the take up of the vaccine.

The present study has some limitations, including the use of written text only, where the stock of images employed in news items was not examined and nor was the time bias of information.

## CONCLUSION

This study revealed how the news media influenced the start of vaccination against covid-19, and likewise the measures adopted and their impact on the population. The results presented show that the vaccine campaign was extensively reported, with news items that focused on the risk faced by unvaccinated older individuals, along with the benefits of applying the vaccines.

In this sense, actions targeting the older population in general and residents of LTCFs, a priority group for receiving the vaccines from the outset, show that the global pandemic phenomenon reiterated the need for quality gerontological care, while underscoring the need to confer new meaning to care actions for older people.

Similarly, the news content highlighted high morbimortality as a consequence of delayed implementation of vaccination, besides other difficulties faced by the population at large. Thus, the covid-19 vaccine emerged as a key component in the effort to curb the spread of the virus, spelling hope of better times ahead for the older population amid the unprecedented crisis experienced worldwide.

Therefore, understanding the approach to the issue during the course of vaccination against covid-19 allows reflection on the proposal of these measures for health, which impact care quality, satisfaction with services delivered, case reduction, and disease prevention.



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Edited by: Yan Nogueira Leite de Freitas

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