

# Construction of a booklet on vaccine against COVID-19

**RESUMO** | Objetivo: Descrever a atuação e o pensar da Enfermagem no enfrentamento da pandemia da COVID-19 relacionado às condições de saúde e segurança no trabalho. Método: Trata-se de um estudo de artigo de revisão sistemática de literatura, realizado através de um levantamento de dados a partir da Biblioteca Virtual em Saúde durante os meses de abril a julho de 2020. Resultados: Foram selecionados 9 artigos que afirmaram o desafio da Enfermagem no âmbito educação em saúde, trabalho com limitações existente e a sua importância na linha de frente. Conclusão: Essa pandemia permite uma reflexão sobre trabalhadores de enfermagem, suas condições de trabalho, cuidado aos pacientes com vulnerabilidades e características diversas. Pensar nos seus anseios, medos, incertezas e condições seguras de trabalho pode favorecer a implantação da política de saúde e segurança do trabalhador, implantar medidas de prevenção e controle de contaminação ocupacional, estrutura hospitalar adequada, rede integrada institucional de apoio psicológico.

**Descritores:** Cuidados de enfermagem; Vulnerabilidade social; Saúde do trabalhador; COVID-19.

**ABSTRACT** | Objective: To describe the performance and thinking of Nursing in the face of the COVID-19 pandemic related to health and safety conditions at work. Method: This is a study of a systematic literature review article, carried out through a data survey from the Virtual Health Library during the months of April to July 2020. Results: 9 articles were selected that stated the challenge of Nursing in the field of health education, work with existing limitations and its importance on the front line. Conclusion: This pandemic allows a reflection on nursing workers, their working conditions, care for patients with different vulnerabilities and characteristics. Thinking about their anxieties, fears, uncertainties and safe working conditions can favor the implementation of the worker's health and safety policy, implement measures to prevent and control occupational contamination, adequate hospital structure, integrated institutional network of psychological support.

**Keywords:** Nursing care; social vulnerability; Worker's health; COVID-19.

**RESUMEN** | Objetivo: Describir la actuación y el pensamiento de Enfermería frente a la pandemia de COVID-19 en relación a las condiciones de salud y seguridad en el trabajo. Método: Se trata de un estudio de artículo de revisión sistemática de la literatura, realizado mediante levantamiento de datos de la Biblioteca Virtual en Salud durante los meses de abril a julio de 2020. Resultados: Se seleccionaron 9 artículos que planteaban el desafío de la Enfermería en el campo de la salud la educación, el trabajo con las limitaciones existentes y su importancia en la primera línea. Conclusión: Esta pandemia permite una reflexión sobre los trabajadores de enfermería, sus condiciones de trabajo, atención a pacientes con diferentes vulnerabilidades y características. Pensar en sus angustias, miedos, incertidumbres y condiciones de trabajo seguras puede favorecer la implementación de la política de seguridad y salud del trabajador, implementar medidas de prevención y control de la contaminación ocupacional, estructura hospitalaria adecuada, red institucional integrada de apoyo psicológico.

**Palabras claves:** Atención de enfermería; vulnerabilidad social; salud del trabajador; COVID-19.

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## INTRODUCTION

In 2020, the World Health Organization (WHO) recognizes as a global health emergency the spread of cases of respiratory disease, caused by the etiological agent Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV-2), a new strain of the coronavirus family, cause of the disease called COVID-19.<sup>1</sup> The COVID-19 pandemic caused negative repercussions in the most varied social, economic, political, cultural and histo-

rical contexts, unprecedented in the recent history of epidemics.<sup>1, 2</sup>

In 2021, the National Health Surveillance Agency (ANVISA) authorized the emergency use of two vaccines in Brazil.<sup>3</sup> Vaccines are considered, among disease prevention measures, the best cost-benefit ratio<sup>4</sup>, and their importance lies in the individual protection of the general population by preventing the mass spread of fatal diseases or that lead to serious sequelae, compromising quality of life and general health.<sup>1</sup> It is not yet possible to know whether vaccines against COVID-19 will induce long-term immunological memory duration - which will define whether or not there will be a need for revaccination.

Specific frameworks such as the World Health Organization (WHO) Vaccination Scale-up Model show that social influences and what people think and feel affect motivation to get vaccinated. Vaccine hesitancy can result from fear and possible exaggerations of the perceived risk of adverse events and other factors, which can later be perpetuated by social media.<sup>4</sup>

Social networks and social norms have powerful influences on health behavior, and some evidence shows that these results extend to vaccination.<sup>5</sup> The infodemic (excess of information that makes it difficult to broadcast news from reliable sources) caused by the coronavirus pandemic, imposed a risk to the population's access to reliable information, since intentionally false news is spread quickly, to the detriment of the sharing of scientific data that end up not having the same reach.<sup>6</sup>

You cannot escape or deny reality, fake news about the COVID-19 vaccine exists and will continue to circulate. Therefore, the need for clarification and updating on vaccination must become constant. Even with the

massive guidelines of preventive and protective measures against the virus, the rapid spread of the disease took place. With this, we can understand health education as a fundamental part in the prevention and continuity of the quality of life of those benefited by these actions.<sup>6</sup>

Some social groups are more vulnerable to the propagation and access to false or dubious news, such as the elderly, who, with the recent inclusion in the digital world, still have a low critical interpretation of information, difficulty in following the flow of news and little skill with internet tools.<sup>6</sup> However, it is important even as a social and digital inclusion that this public is not made invisible, nor underestimated in terms of their capabilities.

In this sense, it is important to make products that subsidize adherence to the COVID-19 vaccine, especially since it is a material that will remain permanently over the next few years due to the continued emergence of new variants. Given the importance, during the execution of the Advanced Topics in Health Education discipline, that make up the curriculum for postgraduate training in nursing at the Federal University of Pará, a study was carried out on this topic in order to support the discussion and possible construction of educational technology.

Thus, to support the rigorous process of construction of the study, an Integrative Literature Review (ILR) was carried out, and the guiding question was defined: What are the practical and informative aspects of vaccination against COVID-19 in Brazil? In this way, based on real subsidies on the subject of vaccination against COVID 19, the purpose of the study is presented: build a multimedia/interactive booklet to mediate the promotion of adherence to vaccines against COVID-19 from the practical

and informative aspects in a way that is more accessible to the elderly public that uses internet tools to search for such information.

## METHOD

It is a descriptive methodological research, for the development of a technology, light-hard, in the format of multimedia booklet. The protocol was divided into two stages, namely: Stage 1: Review of the Literature on vaccines against COVID-19; Stage 2: Educational Technology construction process, subdivided into 3 stages. Phase 1 - Production of a script for delimiting the layout and subtitles; Phase 2 - preparation and choice of layout and Phase 3 - choice of media and design.

The strategy used to guide the question of this review was the PICO<sup>(8)</sup> mnemonic (Patient, Intervention, Comparison and "Outcomes", outcome), considering respectively the patient: the population to be vaccinated, whether priority groups or not, given the extension of the vaccination schedule in Brazil has advanced; Intervention: vaccination against COVID-19, of the various types of vaccine existing in Brazil so far; and compare: rates of mortality/diseases and acceptance by the population; Outcomes: reduction of mortality rates or reduction of injuries for the Brazilian population.

As for the types of studies that will be admitted in the searches, they will be: primary scientific articles, such as original articles, experience reports, reflection articles that deal with the theme. In this perspective, from the search for descriptors in the Decs/MESH descriptor databases, the following descriptors were selected: Educational Technology; Pandemics; Vaccines against COVID-19 and Brazil. The temporal delimitation was the studies published between Mar-

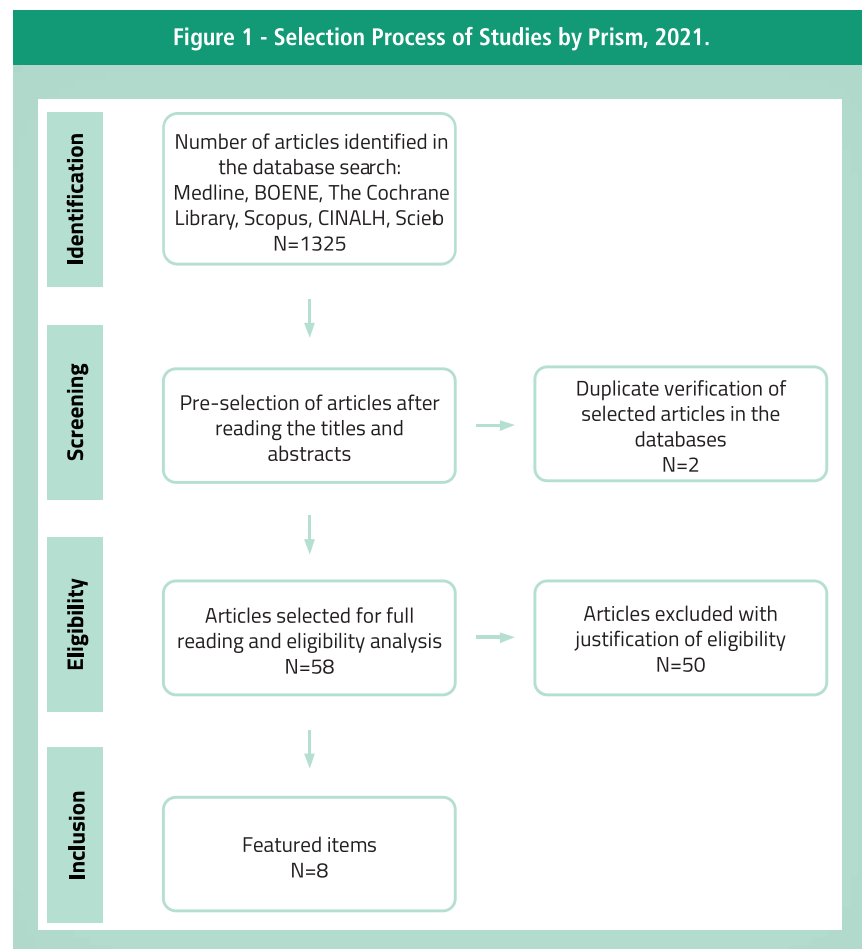
ch 2020 and June 2021, in English, Portuguese and Spanish. The descriptors were combined with the Boolean operator AND, as follows: "Educational technology (Tecnologia Educacional) AND Vaccines against COVID-19 (Vacinas contra COVID-19)"; "Pandemics (Pandemias) AND Vaccines against COVID-19 AND Brazil"; "Tecnologia Educacional AND Pandemias AND Vacinas contra COVID-19"

A preliminary search was carried out in the Virtual Health Library database to assess the thematic scope of the subject and the existence of other integrative review studies on this topic. The databases that will be used to search for studies will be: Databa-

se on Nursing (BDENF), Medical Literature Analysis and Retrieval System Online (Medline), The Cochrane Library, Scopus and Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Scientific Electronic Library Online (SciELO).

Two stages were carried out for the selection of studies. Initially, four independent reviewers will select, based on the titles and abstracts, the studies on the subject studied, and then they will hold an online meeting to discuss the selected studies. In the second stage, the same reviewers independently selected the studies after an exhaustive and complete reading. If there are disagreements, a fifth re-

Figure 1 - Selection Process of Studies by Prism, 2021.



Source: Prepared by the authors adapted from PRISMA 2021.

viewer will be called to evaluate the study. In the event of doubts regarding the selection of the study, after consulting the fifth reviewer, the study will be excluded.

After selection, the reviewers held discussion groups about the studies in order to start the analysis stage. An instrument was developed by the authors to be used in the data extraction stage and that will help in conducting thematic analysis. The analysis stage had the participation of all reviewers, where recurrences were observed in the studies in order to categorize them into thematic units for presentation.

In the searches, 1325 studies were identified, of which 60 were admitted because they met the inclusion criteria based on reading the title and abstract, 2 excluded after verification of duplication in the databases, therefore, 58 articles were selected for full reading and eligibility analysis, of which 50 were excluded due to eligibility reasons, such as not providing information about the study population, do not directly correspond to the ILR theme or studies that lack methodological clarity, obtaining a total of 8 articles, as a potential bibliography, as illustrated in the prism described in Figure 1.

### DATA EXTRACTION

Data extraction was performed by four reviewers independently, to minimize the risk of bias, through the use of a data extraction instrument (Figure 1) developed by the authors. The information (Table 1) that will be extracted with this instrument will be: study objective, methodology, authors, year of publication, region or city/state/country where the study was conducted, study participants and results that address the topic and answer the review question.

### RESULTS

Table 1 - Information collected from selected articles, 2021.	
<b>REVIEW TITLE</b>	
<b>CONSTRUCTION OF A BOOKLET ON VACCINE AGAINST COVID-19: PRACTICAL AND INFORMATIONAL ASPECTS</b>	
P - the population to be vaccinated, being priority groups or not, given the extension of the vaccination schedule in Brazil has advanced;	
I - vaccination against COVID 19, of the various types of vaccine existing in Brazil so far;	
C - mortality/disease rates and population acceptance;	
O - reduction of mortality rates or reduction of injuries for the Brazilian population	
Review question: "What are the practical and informative aspects of vaccination against COVID-19 in Brazil?"	
DATA EXTRACTION INSTRUMENT	
1. Identification	
Authors	
2. Bibliographic Data	
Year of Publication and Journal	
3. Main Results	
Figure 1. Data extraction tool.	
Source: Prepared by the authors, 2021.	

The data extracted from the studies will be synthesized through the use of tables and figures, in line with the objective of developing this ILR, which has the exclusive purpose of aggregating the results and presenting an overview. Data synthesis was performed through consensus among the four reviewers in a narrative manner, respecting the ideals presented by the authors of the studies, as summarized in Table 2 below.

### PREPARATION OF THE BOOKLET

From the results obtained in the ILR, a script was created for the construction of a multimedia booklet, the booklet construction protocol was subdivided into 3 phases: Production of script for layout delimitation and subtitles; Preparation and choice of

layout and Choice of media and design.

At first, it was decided on the creative way in which the ideas would be placed, so the script was created with the purpose of organizing the concepts, based on data extracted from previously selected studies, at this point, it is necessary to choose a language that is easy to understand, objective and clear, for this purpose we established a health professional as the main character and communicator of our booklet, as he is the one who conveys greater confidence and credibility in his messages.

In the creation of the illustrations of the booklet, drawings created by one of the authors were used. For this, we relied on the facilities that technology brought us, using a tablet, containing a Stylus in a format simi-



Table 2 - Synthesis of selected articles in ILR, 2021.

Article	Title	Year	Database	Results
A1	COVID-19 fake news diffusion across LatinAmerica	2021	Scopus	Through the analysis of 102,379 tweets from six important fact-checking agencies, the study identified that so-called fake news goes beyond country borders and is intertwined with the political situation of each country. Noting that fact-checking remains a promising solution to combat fake news. For we are fighting not only a pandemic, but also an "infodemic".
A2	COVID-19 vaccines: Frequently asked questions and updated answers	2021	Scopus	The questions involved questions about the different types of vaccines, their vaccine composition, efficacy, marketing, adverse reactions and effects, the functioning of nucleic acid vaccines (RNA, DNA), viral vector vaccines and were all answered technically reaffirming the conviction about the importance of vaccination against COVID 19.
A3	Current state of the first covid-19 vaccines	2021	Scopus	Reaffirms vaccine safety information, demonstrating that all in all, the newly developed COVID-19 vaccines hold the promise of a brighter future than 2020, but also with challenges and that 2021 will show how these vaccines will be deployed and whether the desired goal of controlling the COVID-19 pandemic will be achieved.
A4	Factors affecting nurses' intention to accept the COVID-9 vaccine: A cross-sectional study	2021	Scopus	The safety of the COVID-19 vaccine and its side effects affect nurses' intentions to accept the vaccine, which can result in low acceptance rates, in this regard, urgent action is needed to address these fears and increase confidence, as vaccine-related nurses' decisions can affect public acceptance of the vaccine.
A5	Is Mandatory Vaccination for COVID-19 Constitutional under Brazilian Law?	2021	MEDLINE	The article reinforces the view that the constitutionality of mandatory vaccination cannot be met a priori, explaining that an in-depth analysis of this issue is beyond the scope of the article, but they argue that the courts will have to worry about the limits of their institutional capacity to decide on issues that require the evaluation of complex social facts and scientific information.
A6	Misinformation on social networks during the novel coronavirus pandemic: a qualitative-quantitative case Study ofBrazil	2021	MEDLINE	The information found on social media about COVID-19 contradicts the scientific consensus, resulting in a population equipped with disinformation and which causes confused knowledge, beliefs and memories, causing fear and unpreparedness. Therefore, it is hoped that they can develop effective strategies that help to increase the dissemination of correct information and a massive effort to restore the credibility of health institutions in the country.
A7	The politics of Covid-19 vaccine confidence	2021	Scopus	The challenge of vaccination against COVID 19 lies in the political will, which has been the main driver of action and denial in the COVID-19 pandemic crisis, it is on it that the actions that will reflect positively or negatively on the course of facing the pandemic are based.
A8	Vaccine hesitancy and the challenges of dealing with the COVID-19 pandemic among older adults in Brazil	2020	SciELO	The elderly have become one of the most vulnerable groups in the pandemic, thinking about improving this scenario, vaccination listed these as a priority group, but they are also part of the hesitant group, and the so-called fake news can even be considered the most vulnerable targets..

Source: Prepared by the authors, 2021.

lar to a pen that can be used for the production of images. In the second moment, there was the creation of the first sketches, unfinished drawings that aim to give an overview of how the final production will look, then these sketches were presented to the other authors so that they could put their contributions, after that, the final drawings began, which included the creation of "line art" in the "Autodesk Sketchbook" application, soon after there was the colorization with the "Mediabang" application, both applications for the Android operating system.

In order to continue and achieve the feature of a multimedia booklet, links on the subject discussed were selected by the researchers, which are available on the youtube.com platform and can be accessed through the links:

<https://www.youtube.com/watch?v=0pkVlzmfOrE> , <https://www.youtube.com/watch?v=Z-f8fsdDM10> and <https://www.youtube.com/watch?v=M6AdwDX5hv8>

In the third moment, the illustrations were combined with the pre-produced script, using the textual production program "Word" that allowed us to organize texts and images in a way that would best represent the proposed ideas. Therefore, the booklet was finalized and presented to the other authors, as shown in the figures below.

## DISCUSSION

The production of educational technologies has been a potential instrument, given that they allow immediate reach of the target audience and become mediators of care processes.<sup>7</sup> It is a resource widely used in Nursing and in the health area.<sup>8</sup> And, due to the COVID-19 pandemic, several examples of product development were identified.<sup>9, 10, 11</sup>

The choice of typology is also a strategy that must be considered, especially when it comes to the theme and target audience. Due to new digital technologies, there has been a movement to build educational technologies that use multimedia resources.<sup>12</sup> Such a presentation promotes accessibility for different audiences and regions, making access even accompanied by its metrics.<sup>10, 12.</sup>

It is noteworthy that the educational technologies of the booklet type, typology used in this study, is one of the most used depending on its presentation, with very significant results when it comes to vulnerable groups.<sup>10, 13, 14.</sup> In the past, even though it is presented here as a multimedia resource, the very acceleration of information and communication has introduced a movement that implements new digital technologies. Therefore, differentiated presentations are important to accompany these movements.<sup>15</sup>

From the choice of layout presentation and way of presenting the booklet, the evidence identified by IRL was essential to choose the thematic topics listed. It was observed that the studies point to themes that meet the adherence to vaccination, which tells us how important communication and information are in this process.<sup>16</sup> In this follow-up, the fight against Fake News has been pointed out as one of the points to be signaled in order to increase the adherence of individuals to vaccines against COVID-19.<sup>17, 18, 19.</sup>

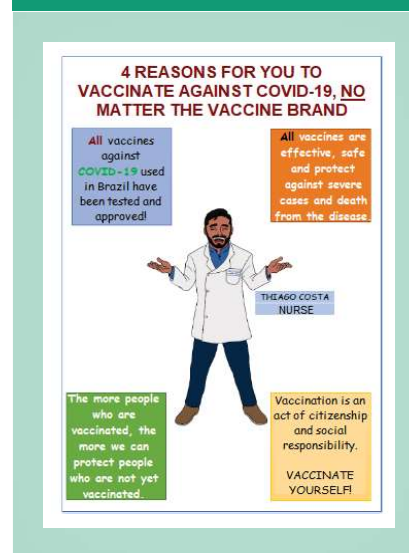
Furthermore, campaigns and institutions have constantly shared information on their social media for the purpose of clarification, combating fake news and disseminating the availability of vaccination services.<sup>19</sup> Therefore, the highlighted digital format was perceived, which makes it possible for booklets built in multimedia format to be shared by health

Figure 2 - Multimedia booklet cover, 2021.



Source: Prepared by the authors, 2021.

Figure 3 - Internal part of the booklet with directed motifs, 2021.



Source: Prepared by the authors, 2021.

services.<sup>12</sup>

Other flagged contents refer to the composition, functioning and reaction of vaccines.<sup>20</sup> It is noteworthy that the development of vaccines against COVID-19 was a challenge

<sup>21</sup> but currently after its implementation, positive cases are observed regarding the adherence and distribution of vaccines in the countries. <sup>20, 22</sup> It is noteworthy that in this circle that involves the entire process of worldwide distribution, we still have the obligation <sup>21</sup> and participation of public authorities, <sup>16</sup> which were topics widely discussed during the vaccination campaigns.

At this level, studies have pointed out how the public power has the role of deciding how these campaigns should be conducted, especially regarding social groups, especially those in vulnerable situations. <sup>13, 21</sup> It was notorious that, during the course of the pandemic in recent years, groups in situations of social vulnerability and the elderly were the ones who presented the most prominent conditions in terms of mortality and access to services to prevent COVID-19. <sup>23, 24</sup>

Therefore, when it is proposed to make a technology for vulnerable groups, such as the elderly, it is possible to reduce health inequities. <sup>23</sup> Communication through booklets with the elderly is one of the most cited typologies in studies, making it significant for the public, making it possible to reduce these deficits. It is also observed that the elderly with the advent of the pandemic expanded their knowledge about media <sup>24</sup> leaving them vulnerable to fake news <sup>23</sup> these devices being important mediators to reduce this vulnerability.

It is noteworthy that this situation occurred because the sharing of information on social networks was widely used by this group during the course of the pandemic. And, therefore, products that promote health care are essential both in the course of the pandemic, but also as an instrument for affirming the visibility of the elderly on social networks and the use of technological resources. <sup>24</sup>

The use of digital technologies by

the elderly should not be seen as an obstacle, but as a potential resource for disseminating information. WhatsApp, YouTube, Facebook are among the social networks most used by these groups, and therefore they should be used for health communication. Certainly, as an opportunity, it ends up reaching groups of these networks and even enabling engagement <sup>25</sup>

In addition, as the digital and easily accessible resource, widely used in the pandemic <sup>15</sup>, the possibility of rejection as perceived in face-to-face dialogues is reduced. In addition, the vaccine booklet becomes timeless, and as it has thematic topics that are not exclusive to the COVID-19 vaccine, they allow clarifications on observed content for better vaccine adherence.

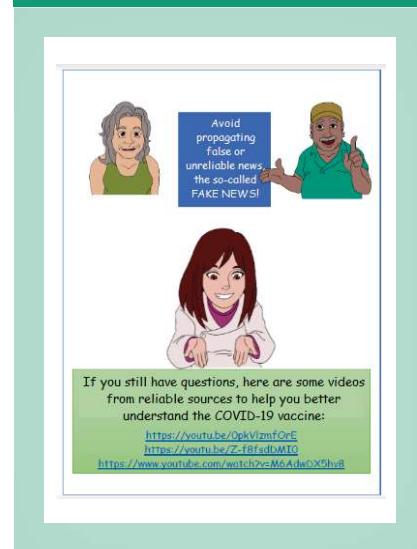
Regarding the mediation process, it is understood that educational technological products build bridges between health professionals and the elderly, especially when constructed based on evidence. <sup>8</sup> These initiatives should focus primarily on praxis <sup>30</sup>, given that they improve human behavior, interventions, prevention of diseases and injuries, enabling the visibility of vulnerable groups. <sup>8</sup>

## CONCLUSION

This study describes the construction of educational technology using multimedia resources, being one of the most accessible typologies and that in recent years has been implemented due to digital social platforms. As a proposal for an educational instrument, it made it possible to create reflections for the action of the elderly, considering that vaccines against covid-19 will be continuously in the health network.

It was found that the studies used as evidence for the construction of the content of the booklet pass through important points the communica-

Figure 4 - Internal part of the booklet with hyperlinks, 2021.



Source: Prepared by the authors, 2021.

tion about vaccines, its presentation as composition, commercialization, reactions, functioning, mandatory and participation of the public power. It is noteworthy that the elderly were identified as easy targets for Fake News about vaccination, demonstrating the importance of this instrument.

As a limitation, it is pointed out that the booklet mentions only 1 type of vaccine, not having discussed the other vaccines offered by the Unified Health System, as well as validation with the target audience. It is recommended that, due to Fake News and the anti-vaccine movement, other studies are carried out for the development of other technologies, whether educational and care-educational, in order to sensitize the population of Brazil to the adherence of vaccines made available by the Ministry of Health. As well as guide them according to their target audience, evidenced their effectiveness. 🐦

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