Ieda Maria Alves, Beatriz Curti-Contessoto, and Ana Maria Ribeiro de Jesus

CHALLENGES OF CREATING A MEDICAL DICTIONARY FOR A LOW LITERACY AUDIENCE IN BRAZIL
Focusing on Politically Marked Terms Related to the COVID-19 Pandemic

Abstract The COVID-19 pandemic has impacted numerous sectors at different levels and has imposed a radical change in the pace of life in societies across the globe. A partially technical vocabulary related to COVID-19 quickly became part of everyday life, introduced mainly by news and official bodies. To describe the characteristics of the terminology being disseminated in Brazil, the project *Study and dissemination of COVID-19 terminology* (2020–2024) was proposed. More specifically, it has been possible to observe the recurrence of lexical units closely related to political issues – which is the focus of this paper. Entries like *gripezinha* (small flu), *tratamento precoce* (early treatment), *kit covid* (COVID kit) and *ministério paralelo* or *gabinete paralelo* (parallel ministry or parallel office) will be explored in this paper. These examples show cases of politically marked terms related to the COVID-19 Brazilian pandemic context. In Brazil, the pandemic has been marked by science denialism, especially on the part of the federal government. Due to this political influence, particularly concerning interference in the Brazilian public health system, these terms, which are not officially recognized by the Brazilian and international medical community, were included in the proposed dictionary, supplemented with contextual information elucidating the political dimensions entailed.

Keywords COVID-19; science denialism; political interference

1. Introduction

The COVID-19 pandemic has had a profound impact on numerous sectors at various levels, fundamentally altering the pace of life in societies across the globe. This unprecedented health crisis not only challenged healthcare systems but also brought about significant changes in economic activities, education, and social interactions. As countries grappled with lockdowns, social distancing measures, and travel restrictions, the way people worked, learned, and connected with others underwent a dramatic transformation.

A notable aspect of this period has been the rapid integration of a partially technical vocabulary related to COVID-19 into everyday life. This vocabulary was primarily introduced through news and official communications from health authorities and government institutions, aiming to inform and guide the public in understanding and combating the virus. Thus, specialized medical terms, such as *comorbidities* and *strain*, became widely known and used by the general public.

To describe the characteristics of the terminology being disseminated in Brazil, based on the principles of communicative theory of terminology (Cabré, 1999), the project *Study and dissemination of COVID-19 terminology* (2020–2024) was proposed. In the scope of this project, a terminological dictionary aimed at non-specialised speakers in the medical field and with little formal education is being elaborated. To achieve this, we collected texts from Brazilian institutions (Butantã Institute, Fiocruz, Fapesp) and international sources (World Health Organization (WHO), Pan American Health Organization (PAHO)) – official corpus (OC) – along with texts extracted from widely circulated Brazilian newspapers (*Folha de S. Paulo*, *O Globo*, *O Estado de São Paulo*) – journalistic corpus (JC) – from the year 2020 onward. The motivation for the creation of this dictionary arises from the fact that 29% of the Brazilian population has difficulty in interpreting texts and performing simple mathematical operations in their daily activities (INAF, 2018). Because of that, all entries were prepared by following the principles of an international tendency towards using plain language (*linguagem simples*), more easily understood by users who are not specialised in the area in question. Following these principles, the definitions and explanatory or complementary notes, in relation to the term, are being written in *plain language*, which designates texts understandable by different types of speakers (Gasperin, Maziero, & Aluísio, 2010; Cortina, Delgado, & Finatto, 2021; ISO 24495-1, 2023).

The corpus collected for this project enabled the observation of terms that extend beyond specialized medical knowledge and reveal a political bias. The study presented in this paper details the results of a descriptive analysis of these specific terms, linking them to the political landscape of Brazil during COVID-19 pandemic. It also outlines how these terms were documented in the proposed dictionary.

Considering these objectives, this paper is organized as follows: after this introduction, section 2 presents the Brazilian political context during the COVID-19 pandemic, listing relevant facts and linguistic expressions associated to them. Section 3 discusses the decisions related to the inclusion of politically marked terms in the conceptual system created for the project and provides examples of the entries in the proposed dictionary. Some final considerations are made in the last section.

2. Brazilian Political Context

The health crisis triggered by the spread of the virus causing COVID-19 has required efforts from various sectors of societies worldwide to combat its spread and minimize its effects. Preventive measures such as social distancing, frequent hand hygiene with 70% alcohol gel or soap and water, and the use of masks have been recommended by international organizations like WHO and PAHO.

Brazil's political response to these recommendations, however, was marked by scientific denialism on the part of the federal government. It offered insufficient transparency in reporting statistics and provided conflicting information on COVID-19. It also neglected scientific information, acting against social distancing and health measures

determined by states and municipalities, and delaying vaccination and financial support distribution (cf. De Almeida et al, 2022).

For instance, on March 24th, 2020, the President of the Republic, Jair Bolsonaro, transmitted an official statement in which he attacked the measures such as social distance and lockdown. On that occasion, as many times, he questioned the efficacy of the vaccines and declared that the citizens should return to their normal activities and the students should return to school. During the former president's speech, there were several *panelaços* (pot protests) in different Brazilian cities, demonstrating that a portion of the population disagreed with the federal government's position (cf. UOL, 2020).

In his speeches, former President Jair Bolsonaro often downplayed the importance of the pandemic. He would sometimes refer to COVID-19 as *gripezinha* (small flu), clearly intending to emphasize that the symptoms were not severe (cf. O Globo, 2020).

This scientific denialism also influenced guidelines from the Brazilian Ministry of Health at the time, which lacked scientific basis, such as the promotion of *tratamento precoce* (early treatment) (cf. Brazilian Ministry of Health, 2020). To initiate early treatment – term employed to designate treatments administered to individuals who are not yet infected with the new coronavirus – Brazilian citizens were encouraged to use the *kit COVID* (COVID kit), which included "drugs such as hydroxychloroquine, ivermectin, nitazoxanide, azithromycin, and systemic corticosteroids" (JUSP, 2021) and was aimed at preventing contagion by the new coronavirus or alleviating its symptoms.

The use of the COVID kit was encouraged by the Federal Council of Medicine and the Ministry of Health, with explicit support from the federal government. However, this encouragement went against the recommendations of national medical and scientific organizations, such as the Brazilian Medical Association (AMB) and the Brazilian Societies of Infectious Diseases and Pulmonology and Phthisiology, as well as international organizations like the National Institutes of Health (NIH) and the Infectious Diseases Society of America (IDSA). These organizations advised against the use of the COVID kit, citing the lack of proven clinical benefits and the potential harm these drugs could cause to patients. Despite this, federal authorities promoted the use of the COVID kit, leading to its distribution by health insurance companies and municipalities to their doctors for prescription to patients (JUSP, 2021).

Given the repercussions of this scientific denialism, in 2021, the then Minister of the Federal Supreme Court established a Parliamentary Commission of Inquiry (CPI), known as the *CPI da COVID-19* (COVID-19 CPI), to investigate the possible failures of the Federal Government in dealing with the pandemic, including identifying those potentially responsible. This CPI revealed the existence of a *ministério paralelo* (parallel ministry), which was a group that acted as advisors to the former president Jair Bolsonaro outside the Ministry of Health. Political influencers promoted the so-called early treatment in collaboration with Jair Bolsonaro's government, while a company – Prevent Senior – was responsible for validating the effectiveness of this treatment through purported studies (Folha de S. Paulo, 2021).

The report of the CPI concluded that Bolsonaro, "supported by the parallel ministry defended the herd immunity through collective contamination by the virus". As the federal strategy was stimulating the spread of the coronavirus, Bolsonaro's speeches were against the adoption of preventive measures – especially social distance and the use of masks – to avoid contamination. This report states that:

> The federal government, repeatedly, encouraged the Brazilian population to carry on with their lives normally, without taking any possible precautions. To defend this point of view, it used to invoke the protection and preservation of the economy and to encourage the maintenance of any and all economic activities, as well as face-to-face classes in public and private education. Advertising campaigns focusing on the economy were carried out despite health risks (Comissão Parlamentar de Inquérito do Senado, 2021).

From a medical perspective, the concept of herd immunity would be important once a vaccine is available. Therefore, if at the time when the federal government was advocating this strategy, an effective vaccine had existed and a large portion of the Brazilian population had been vaccinated, herd immunity could have been viable. However, the CPI report shows that this was not the case because there were no vaccines available at that time. Exposing the population to the virus, as advocated by the then federal government in Brazil, was a strategy that could put people's lives at risk and overload the health system. For these reasons, the term *imunidade de rebanho* (herd immunity), previously unfamiliar to the general Brazilian public, began to acquire a negative connotation in this political context. Implementing this strategy without scientific backing and without vaccines effectively suggested that lives were expendable in the name of protecting the economy (UFSM, 2020; Butantan, 2020).

3. Lexicographic Decisions Related to Politically Marked Terms

The terms highlighted in the previous section are politically marked in Brazil and are not strictly medical terms recognized by the Brazilian and international medical communities as related to the COVID-19 pandemic. However, their significant circulation in Brazil led to their inclusion in the nomenclature of the proposed dictionary. Thus, following Cabré's (2008) precepts on the polyhedral nature of terms, which include linguistic, cognitive, and discursive dimensions, the expressions discussed in this paper can be considered terms within the political and social contexts in which they were disseminated.

In this dictionary, the terms and their respective entries are presented by following an onomasiological system. This structure was established according to the DeCS/MeSH (Health Sciences Descriptors, 2021), released by the PAHO. These descriptors consider categories such as causative agent, anatomy, prevention, diagnosis, disease, treatment, government, health policies, among others.

Specifically, regarding the terms covered in this paper, a challenge has arisen: since they are not strictly medical terms, into which categories should these terms be included within the scope of our study?

The term *gripezinha* was used by the former president to refer to the disease COVID-19. It would be logical to think that it should therefore be included in the disease category of the dictionary's conceptual system. However, this inclusion could lead the reader to make an erroneous association between the seriousness of the disease and the politically marked expression.

In turn, the term *tratamento precoce*, whose syntagmatic structure has *tratamento* as its noun nucleus, seems to indicate a specific conceptual relation with other terms in the generic category named treatment. However, this relation is not correct from a medical point of view, since early treatment, as we have seen, is not a type of treatment that has scientific backing.

In a similar vein is the term *kit COVID*. Used in the Brazilian political context to refer to a set of drugs that supposedly promote early treatment, this term could fall under the treatment category. Nevertheless, conceptually associating it with scientifically proven methods of treating COVID-19 would be a mistake.

The term *ministério paralelo* (and its variant *gabinete paralelo*) might suggest a direct conceptual relation with the government organizations combating COVID-19 in Brazil. However, their actions were entirely contrary: this "ministry" existed irregularly to support the scientific denialism propagated by the Brazilian federal government at the time.

Of all these examples, the term *imunidade de rebanho* (or *imunidade coletiva*) is the only one that existed before the COVID-19 pandemic. It is, therefore, a term officially related to the field of health and could, in principle, be included in the dissemination category. However, in Brazil, it was used by the former president to justify the federal government's strategy of resisting preventive measures. The use of this term in his political speeches gave it a negative connotation, associating it with a disregard for the seriousness of the disease. For this reason, it should not be officially linked to the COVID-19 pandemic, as argued by Brazilian medical experts at the time.

The intrinsic connection between these terms and Brazilian politics during the pandemic led us to include them in the government category. This category, provided by DeCS/MeSH, aligns with the criteria we adopted for organizing the onomasiological system in our work.

In this way, the political interference in the dissemination of information related to COVID-19 in Brazil is evident and is also present in the dictionary's microstructure, which is composed by: entry, grammatical information, definition, contextual information and, if necessary, a note. For illustration, we present the entries *tratamento precoce* and *kit COVID*, which are included under government category. The entry is presented in Portuguese, followed by its English translation.

tratamento precoce s.m.
En **early treatment**

Tratamento de prevenção com a utilização de medicamentos que os estudos científicos mostram não serem eficazes contra a Covid-19.

O Ministério da Saúde divulgou novas orientações para uso de medicamentos, mantendo o uso da cloroquina ou da hidroxicloroquina, no tratamento precoce de pacientes com Covid-19, no Sistema Único de Saúde (SUS). A partir de agora, foi ampliado o uso desses medicamentos para gestantes e crianças e adolescentes, que passaram a fazer parte dos grupos de risco. Esses medicamentos são indicados para casos leves, moderados e graves. (<OC_MinSaude_2020-06-18>)

Nota: Incentivado pelo governo federal, esse tratamento recomenda o uso dos medicamentos cloroquina, hidroxicloroquina, ivermectina, azitromicina, nitazoxanida, dentre outros, não recomentados por médicos contra a Covid-19.

early treatment n.

Preventive treatment with drugs that scientific studies have shown to be ineffective against COVID-19.

The Ministry of Health has released new guidelines for the use of medicines, continuing the use of chloroquine and hydroxychloroquine for the early treatment of COVID-19 patients in the Unified Health System (SUS). The use of these drugs has now been extended to pregnant women, children, and adolescents, who are considered part of the risk groups. These drugs are recommended for mild, moderate, and severe cases. (<OC_MinSaude_2020-06-18>)

Note: Encouraged by the federal government, this treatment recommends the use of drugs such as chloroquine, hydroxychloroquine, ivermectin, azithromycin, and nitazoxanide, among others, which are not recommended by doctors for treating COVID-19.

Kit COVID s.m.
En **COVID kit**

Conjunto de medicamentos recomendados pelo governo do ex-presidente Jair Bolsonaro para evitar o contágio pelo novo coronavírus ou amenizar os sintomas da COVID-19.

Pesquisadores da USP relatam em artigo na revista científica The Lancet Regional Health – Americas como ocorreu a disseminação do "tratamento precoce da covid-19" com o chamado "kit covid" no Brasil. Referendado –

sem comprovação científica – por autoridades públicas e médicos e bastante difundido nas redes sociais, o "kit covid" inclui drogas como hidroxicloroquina, ivermectina, nitazoxanida, azitromicina e corticosteroides sistêmicos, e tem sido amplamente utilizado no País porque, supostamente, poderia tratar a covid-19 de forma precoce e, assim, evitar hospitalizações e mortes. (<JC_JUSP_2021-10-14>)

COVID kit n.

Set of medications recommended by the government of former President Jair Bolsonaro to prevent the spread of the new coronavirus or to alleviate the symptoms of COVID-19.

Researchers from the University of São Paulo reported in an article in the scientific journal The Lancet Regional Health – Americas how the dissemination of the "early treatment of COVID-19" with the so-called "COVID kit" occurred in Brazil. As it was endorsed – without scientific proof – by public authorities and doctors and widely spread on social media, the "COVID kit" includes drugs such as hydroxychloroquine, ivermectin, nitazoxanide, azithromycin, and systemic corticosteroids, and it has been widely used in the country because it supposedly could provide an early treatment of COVID-19 and thus prevent hospitalizations and deaths. (<JC_JUSP_2021-10-14>)

As demonstrated by these examples, the definitions of *tratamento precoce* and *kit COVID* not only clarify the meaning of these terms in the specific context of COVID-19 but also highlight particular political aspects in Brazil. The contextual information presented support this connection between COVID-19 and Brazilian politics, and the notes, where provided, elucidate other pertinent elements.

4. Final Remarks

This paper presents a cross-section of the results achieved by the Project *Study and dissemination of COVID-19 terminology*, focusing on politically marked terms in Brazilian Portuguese identified in the studied corpora. To elucidate the link between the dissemination of these terms and politics in Brazil, this paper provides a brief contextualization of the federal government's strategies during the COVID-19 pandemic.

The facts elucidate that the approach adopted by former President Jair Bolsonaro and his political supporters, backed by the guidelines from the Ministry of Health, contradicted the recommendations put forth by scientists and health experts in Brazil and the international community. This concerted effort in favor of interests, particularly economic interests, by the federal government, propagated scientific denialism throughout the country.
Indeed, a portion of the population did adhere to the federal recommendations,

including seeking early treatment. This situation in Brazil underscores the profound disconnection between science and a part of Brazilian society.

Political decisions influenced the handling of the COVID-19 pandemic, resulting in severe health repercussions and endangering lives, which left an imprint on the lexicon associated with the pandemic. Consequently, the proposed dictionary not only documents linguistic data regarding these terms, accentuating their inherent political dimensions, but also preserves this part of Brazil's history during this dark period for humanity.

References

Brazilian Ministry of Health. (2020). *Ministério da Saúde reforça ação pelo enfrentamento à Covid-19 na região Sul.* Retrieved February 7, 2024, from https://www.gov.br/saude/pt-br/assuntos/noticias/2020/julho/ministerio-da-saude-reforca-acao-pelo-enfrentamento-a-covid-19-na-regiao-sul

Butantan. (2020). *O que é imunidade de rebanho?* Retrieved March 7, 2024, from https://coronavirus.butantan.gov.br/ultimas-noticias/o-que-e-imunidade-de-rebanho

Cabré, M. T. (1999). *La terminología: representación y comunicación. Elementos para una teoría de base comunicativa y otros artículos.* Institut universitari de lingüística aplicada (IULA).

Cabré, M. T. (2008). El principio de poliedricidad: la articulación de lo discursivo, lo cognitivo y lo lingüístico en Terminología. *Ibérica, 16,* 9–36.

Comissão Parlamentar de Inquérito do Senado. (2021). *CPI da Pandemia.* Retrieved May 30, 2024, from https://legis.senado.leg.br/comissoes/comissao?codcol=2441

Cortina Silva, A. F., Delgado, H. O. K., & Finatto, M. J. (2021). Acessibilidade textual e terminológica para o português brasileiro: pesquisa, estratégias e orientações de [re]escrita. *Revista Moara, 58,* 322–343.

De Almeida, L., Carelli, P. V., Cavalcanti, N. G., do Nascimento J.-D. Jr, & Felinto, D. (2022). Quantifying political influence on COVID-19 fatality in Brazil. *PLoS ONE 17*(7), e0264293. https://doi.org/10.1371/journal.pone.0264293

Folha de S. Paulo. (2021). *CPI avalia que caso Prevent pode chegar ao governo e traz gabinete paralelo de volta ao foco.* Retrieved May 30, 2024, from https://www1.folha.uol.com.br/poder/2021/09/cpi-avalia-que-caso-prevent-pode-chegar-ao-governo-e-traz-gabinete-paralelo-de-volta-ao-foco.shtml

Gasperin, C., Maziero, E., & Aluísio, S. M. (2010). Challenging choices for text simplification. In A. Branco, A. Klautau, R. Vieira, & Vera L. Strube de Lima (Eds.), *Proceedings of PROPOR 2010* (pp. 40–50), 9th International Conference (PROPOR), Springer.

Health Sciences Descriptors. (2021). *DeCS – Descritores em Ciência da Saúde.* Retrieved May 30, 2024, from https://decs.bvsalud.org/en/

INAF. (2018). *Indicador de analfabetismo funcional: Em 20 anos, índice de analfabetos funcionais caiu de 40% para 30%.* Retrieved May 30, 2024, from https://alfabetismofuncional.org.br/

ISO 24495-1. *Plain language* — Part 1: Governing principles and guidelines. Geneva: ISO, 2023.

JUSP. (2021). *"Tratamento precoce" e "kit covid": a lamentável história do combate à pandemia no Brasil.* Retrieved May 30, 2024, from https://jornal.usp.br/ciencias/tratamento-precoce-e-kit-covid-a-lamentavel-historia-do-combate-a-pandemia-no-brasil/

O Globo. (2020). *Bolsonaro volta a minimizar pandemia e chama Covid-19 de 'gripezinha'.* Retrieved May 30, 2024, from https://oglobo.globo.com/politica/bolsonaro-volta-minimizar-pandemia-chama-covid-19-de-gripezinha-1-24319177

UFSM. (2020). *O que é "imunidade de rebanho" e por que não há consenso científico sobre sua eficácia?.* Retrieved May 30, 2024, from https://www.ufsm.br/midias/experimental/agencia-da-hora/2020/07/24/o-que-e-imunidade-de-rebanho-e-porque-nao-ha-consenso-cientifico-sobre-sua-eficacia

UOL. (2020). *'Gripezinha': leia a íntegra do pronunciamento de Bolsonaro sobre covid-19.* Retrieved May 30, 2024, from https://noticias.uol.com.br/politica/ultimas-noticias/2020/03/24/leia-o-pronunciamento-do-presidente-jair-bolsonaro-na-integra.htm?cmpid=copiaecola

Contact information

Ieda Maria Alves
Universidade de São Paulo
iemalves@usp.br

Beatriz Curti-Contessoto
Universidade de São Paulo
bfcurti@gmail.com

Ana Maria Ribeiro de Jesus
Universidade Federal do Espírito Santo
ana.m.jesus@ufes.br