

ANALYSIS AND COMPARISON OF SPANISH
TRANSLATED COVID-19 PUBLIC HEALTH RESOURCES

by

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This thesis project focuses on the possibility of a language barrier contributing to the Latinx community's disproportionate COVID-19 morbidity and mortality rates. The project analyzed resources from the Oregon Health Authority and the Centers for Disease Control and Prevention. Through close textual and visual analysis, this thesis examines language use and form in disease communication. The project compares English and Spanish versions to one another, as well as Spanish translations to best practice guidelines. The research found disparities in information available in Spanish and differences between the organizations. In its conclusion it emphasizes the importance of accurate medical translations as a form of mitigating health disparities.

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Introduction

Personal Motivation

I grew up in Santa Maria, California, an area where the majority of the population speaks Spanish. For this reason, I wanted to learn how to speak Spanish. Through my time working and volunteering in my community, I learned more about the difficulties that can come with not speaking English in the United States. I saw that people not fluent in English often experienced barriers, including access to services of all kinds. As I began my coursework and examined medical care and healthcare systems throughout the world, I wondered about the accessibility of our healthcare system for those who do not speak English. In my courses at the University of Oregon, I have learned more about the communities our medical system neglects. When the COVID-19 pandemic began, these experiences led me to think about how all of this connects to the ability and willingness of non-native speakers to access COVID-19 information and care. This became the basis of my thesis project.

Intellectual Motivation

With multiple languages spoken in the United States and the critical nature of healthcare resources during a pandemic, identifying the gaps and disparities in translated resources is a timely and necessary investigation. Preventing the spread of an easily transmitted, deadly disease hinges on the full population engaging in safe and mitigating behaviors. If we expect all citizens to do their part, we must ensure that all citizens have access to accurate, relevant, and easily understandable educational

materials. The study of health disparities and what barriers contribute to them is important for the health and wellness of our country.

Overview of COVID-19 and Impact on Spanish Speakers

COVID-19, or coronavirus disease, was first recognized in December of 2019. Over the following months, it spread across the world and the World Health Organization declared COVID-19 a pandemic. Public health departments continue to collect data on COVID-19 testing, rates, and deaths. These numbers show that COVID-19 is disproportionately impacting minorities in the United States of America. One group that suffers from this disparity is the Latinx population. Researchers have suggested several possible reasons that the Latinx population faces this burden, one of them being a language barrier.

While English is the most popular language in the United States, there is a large population of Spanish speakers in the country, which dates back to early colonizers. Colonizers from Spain arrived in present-day Florida in 1513 and established a colony there in 1565.¹ However, the Spanish had more influence on the West and Southwest areas of the United States, where the majority of Spanish speakers in the United States live today.² It is estimated that in the mid-19th century, 100,000 Spanish speakers lived in this region citation.³ While English eventually became the most common language in the United States, Spanish maintains a prevalence in many communities.

¹ Carter, Phillip. "American Varieties: ¡Spanglish! Spanish in the U.S." Public Broadcasting System. Web. 5 May 2020. <<http://www.pbs.org/speak/seatosea/americanvarieties/spanglish/usa>>

² Carter, Phillip. "American Varieties: ¡Spanglish! Spanish in the U.S." Public Broadcasting System. Web. 5 May 2020. <<http://www.pbs.org/speak/seatosea/americanvarieties/spanglish/usa>>

³ Roca, Ana, and John M. Lipski, eds. *Spanish in the United States: Linguistic contact and diversity*. De Gruyter Mouton, 1993.

According to the United States census data, there are approximately 41 million Spanish speakers in the United States, making up 13.4% of the population.⁴ In Oregon, approximately 370,000 people, or 9.4% of the population speak Spanish.⁵ In both the United States and Oregon, Spanish is the second most popular spoken language. Because there are so many speakers, it is important that public health organizations provide information in Spanish in order to promote the health of Spanish speakers and the Latinx community.

Because English is the most common language of the United States, the majority of communication is in English. This includes public health and medical information. However, it has been shown that interpreters and translators play an important role in helping Spanish speakers comprehend medical information and navigate the healthcare system citation. Therefore, this study will investigate the research questions “What differences (if any) exist when comparing English and Spanish COVID-19 resources?” and “What differences (if any) exist when comparing Oregon Health Authority and Centers for Disease Control and Prevention resources in both English and Spanish?” In my investigation, I found that there is less information available in Spanish on these public health websites. While there are less resources available in Spanish, the majority of available resources follow translation best practices. There are few instances of English terms without translations or medical terms and acronyms without explanations.

⁴ U U.S. Census Bureau; Language Spoken at Home, 2017 American Community Survey 1-Year Estimates, using American FactFinder;
<https://archive.ph/20200214011034/https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_1YR_S1601&prodType=table#selection-263.0-273.47>; (14 February 2020).

⁵ Data USA, “Oregon State,” <https://datausa.io/profile/geo/oregon>.

In order to protect Spanish speakers and the Latinx community, public health organizations should continue to translate these resources and ensure that all English phrases, medical terms, and acronyms are clearly defined or explained in Spanish.

Literature Review

Because COVID-19 has been around for only a year, the research on it is changing and growing every day. As of March 11, 2021, there have been 29,052,862 cases in the United States and 527,726 deaths.⁶ In Oregon, there have been 158,291 cases and 2,305 deaths.⁷ However, it is thought that we do not know the actual number of COVID-19 related deaths and that these numbers may be an underestimation. This is because some people are never tested for COVID-19, some may receive a false negative, and some may die outside of healthcare settings.

Even though we may not have the exact number of people who have been affected, there is still evidence of a clear health disparity. There is evidence of both racial and economic disparities in COVID-19 across the United States. A study done in June of 2020 found that predominantly African American counties in the United States had infection rates and death rates three times higher than predominantly white counties.⁸ The Latinx community is also facing a larger burden of COVID-19 morbidity and mortality. When the initial United States data on COVID-19 was released, in 27 states the percentage of COVID-19 cases identified as Hispanic exceeded the proportion of Hispanics in the population.⁹ A more recent systematic review of data up to November 2020 found that African American and Hispanic populations have higher

⁶ Centers for Disease Control and Prevention, "COVID Data Tracker," 11 March 2021, <https://covid.cdc.gov/covid-data-tracker/#datatracker-home>.

⁷ Centers for Disease Control and Prevention, "COVID Data Tracker," 11 March 2021, <https://covid.cdc.gov/covid-data-tracker/#datatracker-home>.

⁸ ML Wang et al. "Addressing inequities in COVID-19 morbidity and mortality: research and policy recommendations." *Translational Behavioral Medicine* 10, no. 3 (2020): 516-519.

⁹ Macias Gil et al. "COVID-19 pandemic: Disparate health impact on the Hispanic/Latinx population in the United States." *The Journal of infectious diseases* 222, no. 10 (2020): 1592-1595.

rates of infection and a higher risk for hospitalization when compared to non-Hispanic white populations in the United States.¹⁰ In addition to the racial disparities, there are also differences in COVID-19 death rates for people at different income levels.¹¹ A study conducted in September 2020 found that counties with higher levels of poverty had higher death rates.¹² Considering this concerning data, researchers are suggesting social determinants of health that may be causing this.

Researchers proposed many possible reasons for this disparity. Systemic racism places many minorities in crowded neighborhoods and lower paying, essential service (front line) jobs, which may contribute to their higher rates of COVID-19.¹³ For example, the U.S. Bureau of Labor Statistics reported that only 16.2% of Hispanic employees are able to work from home, in comparison to 29.9% of non-Hispanic white employees.¹⁴ This clearly limits their ability to follow stay at home orders and reduce their risk of contracting COVID-19 by minimizing contact with others, or by only having masked or outdoor and distanced contact. Additionally, many of the risk factors for COVID-19 mortality (diabetes, hypertension, cardiovascular disease, and pulmonary disease) were already disproportionately affecting minorities prior to this pandemic,

¹⁰ Katherine Mackey et al. "Racial and ethnic disparities in COVID-19–related infections, hospitalizations, and deaths: A systematic review." *Annals of internal medicine* 174, no. 3 (2021): 362-373.

¹¹ Vida Abedi et al. "Racial, economic, and health inequality and COVID-19 infection in the United States." *Journal of racial and ethnic health disparities* (2020): 1-11.

¹² Vida Abedi et al. "Racial, economic, and health inequality and COVID-19 infection in the United States." *Journal of racial and ethnic health disparities* (2020): 1-11.

¹³ ML Wang et al. "Addressing inequities in COVID-19 morbidity and mortality: research and policy recommendations." *Translational Behavioral Medicine* 10, no. 3 (2020): 516-519.

¹⁴ Tiana N. Rogers et al. "Racial Disparities in COVID-19 Mortality Among Essential Workers in the United States." *World medical & health policy* 12, no. 3 (2020): 311-327.

which may be why they experience worse outcomes.¹⁵ All of these possibilities connect to preexisting disparities in health, and are linked to oppression in the United States.

In addition to systemic racism, researchers hypothesized that a language barrier is worsening this health disparity. A language barrier may be limiting the Latinx community's access to COVID-19 information. It is estimated that 30% of Hispanics do not consider themselves fluent in English.¹⁶ If COVID-19 materials are not available in Spanish, the health literacy of many people is jeopardized. Health literacy is the "ability to obtain, process, or understand basic health information needed to make appropriate health care decisions".¹⁷ A recent study determined that when comparing races, there are differences in the knowledge of how to prevent COVID-19 infection.¹⁸ The study by Jones showed that non-Hispanic white and Asian participants were more likely to answer COVID-19 knowledge questions correctly and were better at estimating the number of cases in the United States when compared to Hispanic and African American participants.¹⁹ This worsens the health disparity and may be due to the differences in resources about COVID-19. Another study found similar results, but acknowledged that

¹⁵ Alcendor, Donald J. "Racial disparities-associated COVID-19 mortality among minority populations in the US." *Journal of clinical medicine* 9, no. 8 (2020): 2442.

¹⁶ Macias Gil et al. "COVID-19 pandemic: Disparate health impact on the Hispanic/Latinx population in the United States." *The Journal of infectious diseases* 222, no. 10 (2020): 1592-1595.

¹⁷ Ratzan, S. C. and R. M. Parker. "Health literacy." National library of medicine current bibliographies in medicine. Bethesda: National Institutes of Health, US Department of Health and Human Services (2000).

¹⁸ Jeb Jones et al. "Similarities and differences in COVID-19 awareness, concern, and symptoms by race and ethnicity in the United States: cross-sectional survey." *Journal of medical Internet research* 22, no. 7 (2020): e20001.

¹⁹ Jeb Jones et al. "Similarities and differences in COVID-19 awareness, concern, and symptoms by race and ethnicity in the United States: cross-sectional survey." *Journal of medical Internet research* 22, no. 7 (2020): e20001.

more research needs to be done to identify the educational tools that may be contributing to this.²⁰

The issue of a language barrier may apply to people speaking a language other than English, as well as anyone who is not proficient in English. This is because many medical resources are written at an educational level higher than what the majority of the population is capable of comprehending. Over half of written health care instructions are written at above a tenth-grade level, while the average reading skill of an adult in the United States is around the eighth or ninth grade level.²¹ This means that many Americans are not able to fully comprehend medical information, even when it is provided in their own language. One study found that 23% of English speaking and 34% of Spanish speaking patients could not read and understand medical information, and the issue was worse for minority populations.²²

The idea that a language barrier may be worsening the COVID-19 disparity seems to be further supported by the fact that 18.7 percent of the United States speak a language that is not English, and 8.4 percent self-identify as speaking English less than “very well”.²³ Within the healthcare system, patients who have limited English proficiency are less satisfied with the care they receive.²⁴ Additionally, Spanish-

²⁰ Wilson Alobuia et al. "Racial disparities in knowledge, attitudes and practices related to COVID-19 in the USA." *Journal of public health* 42, no. 3 (2020): 470-478.

²¹ Peter Houts et al. "The role of pictures in improving health communication: a review of research on attention, comprehension, recall, and adherence." *Patient education and counseling* 61, no. 2 (2006): 173-190.

²² Julie Gazmararian et al. "Health literacy among Medicare enrollees in a managed care organization." *Jama* 281, no. 6 (1999): 545-551.

²³ Flores, Glenn. "Language barriers to health care in the United States." *N Engl J Med* 355, no. 3 (2006): 229-231.

²⁴ Flores, Glenn. "Language barriers to health care in the United States." *N Engl J Med* 355, no. 3 (2006): 229-231.

speaking patients whose families have a language barrier have increased risk for serious medical events.²⁵ While it is mandated that limited English proficiency patients have access to linguistic services during their healthcare visits, there are few regulations surrounding broader public health messaging that is done on a community-wide basis.²⁶

While there are not many concrete regulations around public health outreach, there are studies that suggest that using concrete language is helpful within health promotion resources. Concrete language in public health messaging is defined as containing action verbs in connection with specific details.²⁷ For example, an abstract message about COVID-19 would be “protect yourself from COVID-19.” A more concrete message about COVID-19 would be “wear a mask and stay six feet apart.” A study found that when a message is more concrete it demands more attention from the reader and is viewed as important.²⁸ Another study found that messaging with a prevention focus causes more readers to consider self-efficacy and their behavior.²⁹

There are articles that outline the best practices for translating medical resources. The most prominent figure in medical translation is Henry Fischbach, who defined many of the best practices that are still used in the field today. I used his paper and the practices he suggested in my analysis. While many organizations may attempt

²⁵ Adam Cohen et al. "Are language barriers associated with serious medical events in hospitalized pediatric patients?." *Pediatrics* 116, no. 3 (2005): 575-579.

²⁶ Elizabeth Jacobs et al. "The need for more research on language barriers in health care: a proposed research agenda." *The Milbank Quarterly* 84, no. 1 (2006): 111-133.

²⁷ Claude Miller et al. "Psychological reactance and promotional health messages: The effects of controlling language, lexical concreteness, and the restoration of freedom." *Human Communication Research* 33, no. 2 (2007): 219-240.

²⁸ Claude Miller et al. "Psychological reactance and promotional health messages: The effects of controlling language, lexical concreteness, and the restoration of freedom." *Human Communication Research* 33, no. 2 (2007): 219-240.

²⁹ Keller, Punam A. "Regulatory focus and efficacy of health messages." *Journal of Consumer Research* 33, no. 1 (2006): 109-114.

to use automatic translations or “machine translations”, these often include many errors. This is because language is more complex than we are currently capable of coding software for. Words can have multiple meanings and there are forms of grammar that are unique to some languages. It is advised that instead of using automatic translators, a real person should perform the translation whenever possible. This translator should “have a fairly extensive knowledge of... the subject matter of the translation... be able to read the language... well enough so that he can grasp the author’s intended meaning”, and “be able to embody that meaning” in the different languages being translated.³⁰ Then, in practice, the translator should ask for clarification when they do not understand thoroughly and be willing to deviate from original wording if that will be best for the reader.³¹ The translator should avoid abbreviations, even when they seem obvious to the translator or someone familiar with medical vocabulary.³² Lastly, it is recommended that when new technical terms are being used, they should be explained during the first use or within parentheses.³³ Therefore, my thesis also analyzes the use of medical vocabulary and acronyms in resources.

In addition to guidelines for the language translations, there are also recommendations for health messaging images. It is suggested that as often as possible, translators should be given “illustration aid by submitting layout dummies, art-work, or

³⁰ Fischbach, Henry. "Problems of medical translation." *Bulletin of the Medical Library Association* 50, no. 3 (1962): 462.

³¹ Fischbach, Henry. "Problems of medical translation." *Bulletin of the Medical Library Association* 50, no. 3 (1962): 462.

³² Fischbach, Henry. "Problems of medical translation." *Bulletin of the Medical Library Association* 50, no. 3 (1962): 462.

³³ Fischbach, Henry. "Problems of medical translation." *Bulletin of the Medical Library Association* 50, no. 3 (1962): 462.

descriptions”.³⁴ This helps the translator visualize the end piece and aid in creating a better translation, while also providing the reader an additional way to comprehend the information being portrayed. Additionally, the use of images instead of only text increases the likelihood that the public will read the resources.³⁵ Furthermore, the use of images with text increased readers’ abilities to recall the information and improved their comprehension.³⁶ This improvement in comprehension was especially significant in low literacy readers.³⁷ It is recommended that for best practices, the pictures should “minimize distracting details”, “use simple language in conjunction with pictures”, and “include people from the intended audience in designing pictures”.³⁸

Many studies have been conducted on how language plays a role in health. However, there are currently few studies on how language and COVID-19 disparities may be related. My research will aim to provide a possible explanation for the differences in knowledge about COVID-19, and the differences in COVID-19 prevalence when comparing races and when comparing English and Spanish speakers. My thesis will compare existing COVID-19 resources from public health departments. In comparing these sources of information, my research adds onto the existing

³⁴ Fischbach, Henry. "Problems of medical translation." *Bulletin of the Medical Library Association* 50, no. 3 (1962): 462.

³⁵ Peter Houts et al. "The role of pictures in improving health communication: a review of research on attention, comprehension, recall, and adherence." *Patient education and counseling* 61, no. 2 (2006): 173-190.

³⁶ Peter Houts et al. "The role of pictures in improving health communication: a review of research on attention, comprehension, recall, and adherence." *Patient education and counseling* 61, no. 2 (2006): 173-190.

³⁷ Peter Houts et al. "The role of pictures in improving health communication: a review of research on attention, comprehension, recall, and adherence." *Patient education and counseling* 61, no. 2 (2006): 173-190.

³⁸ Peter Houts et al. "The role of pictures in improving health communication: a review of research on attention, comprehension, recall, and adherence." *Patient education and counseling* 61, no. 2 (2006): 173-190.

knowledge of the COVID-19 health disparities as well as identifies the importance of medical translation.

Methods

My research questions are “What differences (if any) exist when comparing English and Spanish COVID-19 resources?” and “What differences (if any) exist when comparing Oregon Health Authority and Centers for Disease Control and Prevention resources in both English and Spanish?” To answer this question, I use qualitative data. Using this type of data allows me to investigate language and translations and how they differ between documents as well as between different organizations.

In my thesis project, I analyze COVID-19 materials from the Oregon Health Authority and the Centers for Disease Control and Prevention. Specifically, I look at the materials that are categorized as “Community Resources” on their COVID-19 information pages. I use these documents because they are labeled as community resources and therefore are meant to be easily accessible and informative for members of the general public. The materials include documents published from September of 2020 to December of 2020. This includes 29 documents on the Oregon Health Authority website, 25 of which have Spanish translations. Additionally, I perform an analysis of 57 documents on the Centers for Disease Control and Prevention website, 28 of which have Spanish translations. The documents range in length from 1 to 5 pages. I view and take notes on documents, using the program Scrivener. I split the screen for all the documents that have Spanish translations. I read the English version first, then the Spanish version. I then review documents without a Spanish translation available.

Within the documents, I analyze the audience, the theme, the content, the language, the difficulty, and the layout. For my analysis, I utilize the best practices outlined in Henry Fischbach’s “Problems of Medical Translation” because they are

considered standard for the field. The recommendations in this resource define what specific characteristics I search for within each of these categories. Specifically,

Fischbach outlines the following guidelines:

1. The translator should have extensive knowledge of the subject.
2. The translator should ask for clarification when they do not understand the text.
3. The translator should be willing to change the wording if it will benefit the reader.
4. The text should be in clear and descriptive language.
5. When using technical or medical vocabulary, define it with the first use.
6. Abbreviations should be avoided, unless defined when first used.
7. Avoid using domestic words and phrases.
8. If multiple translations are correct, choose translations with the most wide-spread usage.
9. Whenever possible, give illustration aid.
10. Avoid puns and metaphors, as they may not make sense in other languages.³⁹

To analyze the audience, I look at the titles as well as what the OHA or CDC classified the document as. Both of these websites organize their resources by audience group, so I use the same groupings. The audiences are general public, agriculture workers, people with disabilities, caretakers, pregnant women/parents, high risk groups, employees, employers, healthcare workers, K-12 students, college students, teachers, coaches, and shelters. To analyze the theme, I consider the title and content of the resource and categorize based on the main message of the document. Several

³⁹ Fischbach, Henry. "Problems of medical translation." *Bulletin of the Medical Library Association* 50, no. 3 (1962): 462.

documents have more than one theme because they include information on different aspects of COVID-19. The themes include how to protect one's self and others, COVID-19 resources, what to do while you are sick, information about symptoms and exposure, COVID-19 in the workplace, harm reduction, masks, cleaning, contact tracing, and telemedicine. I analyze the content of the documents by putting the English and Spanish version side by side and checking to see if the information in the resource is the same for both. I analyze the language use by noting the conjugation forms in the document, the vocabulary words for medical terms, and the presence of English in any Spanish resources. I analyze the difficulty by considering the conjugation forms present, the number of words per sentence, and the number of sentences per page. While in English there is a standardized way to define the level of writing (Lexile), this does not exist in Spanish. However, I am able to draw conclusions by making the assumption that longer sentences and documents would be considered a higher reading level. Additionally, I analyze the layout of the documents by noting the use of images, the size of the images and their relation to the text, the font size of the text, and the amount of white space on a page.

Characteristics analyzed for each category

Categories of Analysis	Characteristics Used
Audience	Title, content, website classification
Theme	Title, content
Content	Information within English and Spanish versions side by side
Language	Conjugation forms, vocabulary relating to COVID-19, presence of English in documents
Difficulty	Conjugation forms, words per sentence, number of sentences in the document
Layout	Presence of images, size of images, size of text, amount of white space on page

Within each of these categories, I compare OHA English and Spanish documents to one another, CDC English and Spanish documents to one another, and the OHA and CDC document sets to one another.

Results and Discussion

Comparing Oregon Health Authority and Centers for Disease Control and Prevention

One major difference between OHA and CDC is the gender they use to talk about the noun COVID-19. With the emergence of a new disease, there are several new words that need to be translated. Coronavirus and COVID-19, an acronym for coronavirus disease, needed to have genders assigned to them. In general, when nouns are transferred to Spanish from other languages, they are considered masculine unless there is a reason they should be feminine. The Royal Spanish Academy, or *La Real Academia Española*, is the governing body of Spanish Language. They list their mission as “*el buen uso y la unidad del español*” (the good use and unity of Spanish).⁴⁰ This group is comprised of several Spanish authors and other well-known academics in the arts and sciences. They are elected by the other members and serve for life. As a group, they come to a consensus on new words, their gender, and usage. On March 27, 2020, they tweeted that the acronym COVID-19 is masculine.⁴¹ Their reasoning was that the root of coronavirus disease is “*el coronavirus*.” Additionally, they used the precedent of other viral diseases, Zika (*el zika*) and Ebola (*el ébola*), which both end in -a but are masculine nouns. However, the Royal Spanish Academy also said that *la COVID-19* is justified because some consider disease (*la enfermedad*) to be the root of the word, but

⁴⁰ “La Institución.” *Real Academia Española*, www.rae.es/la-institucion.

⁴¹ RAE, Twitter post, 27 March 2020, 4:16 AM, <https://twitter.com/RAEinforma/status/1243497190816915462>.

the majority of times COVID-19 should be male “*el uso mayoritario en masculino.*”⁴²

In this same thread of tweets, they also explained that the word can be written as “*COVID-19*” or “*covid-19*”, but not as “*Covid-19*”.⁴³

Many Spanish dictionaries list the acronym as both masculine and feminine. For example, Spanishdict.com has “*el COVID-19 (m), la COVID-19 (f)*” as the translation, with the usage note “This abbreviation may be treated as a feminine or masculine noun without its meaning changing”. While some dictionaries may be following what the Royal Spanish Academy suggests, others may observe how the majority of people are using the word instead of imposing rules.

There are other nouns in Spanish that are ambiguous in gender. For example, *el/la radio* (radio), *el/la mar* (sea), *el/la sartén* (frying pan) or *el/la lente* (lens). The genders of these can change based on region. Radio is feminine in Spain but masculine in Mexico; frying pan is masculine in Spain but feminine in Latin America. Other nouns have genders that change with context. For example, art is *el arte* when it is singular, but it is often feminine when plural, such as when talking about the fine arts (*las artes* or *las bellas artes*).

It is interesting that The Royal Spanish Academy mentioned using the precedent of Zika and Ebola because the word *el coronavirus* does not follow the same structure. Zika virus is written as *el virus del Zika* and Ebola virus is written as *el virus del Ébola*. Following that structure, one would assume coronavirus should be written as *el virus*

⁴² RAE, Twitter post, 27 March 2020, 4:17 AM, <https://twitter.com/RAEinforma/status/1243497301563359234>.

⁴³ RAE, Twitter post, 27 March 2020, 6:44 AM, <https://twitter.com/RAEinforma/status/1243534250256760833>.

del corona. However, the Royal Spanish Academy explained that because “coronavirus” was taken as one word from another language, they did not change it, and consider it part of the “*Diccionario de términos médicos*”.⁴⁴ While Zika and Ebola were also taken from other languages, they were separated from the word “virus”, which is why they were both rewritten with the same format.

While the Oregon Health Authority and the Centers for Disease Control both use the recommended “*el coronavirus*”, they gender the word COVID-19 differently. OHA primarily uses the feminine version *la COVID-19*. One of the first documents they released, on March 7, 2020, “*Ayude a prevenir la propagación del COVID-19*” (Help Prevent the Spread of COVID-19) uses *el COVID-19*.⁴⁵ *Del*, used in the title, is a contraction of *de el*. This was released around the time that the World Health Organization named COVID-19 a global pandemic. OHA may have assumed that the word should be masculine because it was borrowed from another language. After this, almost all documents use *la COVID-19*. Only two other resources use it as a masculine noun. “*Autocuidado y cuidado de la comunidad durante el distanciamiento físico*” (Self and Community Care During Physical Distancing), published on September 16, 2020 uses *el COVID-19*.⁴⁶ “*Recursos para trabajadores*” (Resources for Workers) uses both *el* and *la COVID-19*.⁴⁷ However, this appears to be a typo, because *el COVID-19* appears once and *la COVID-19* appears ten times. It seems likely that the Oregon

⁴⁴ RAE, Twitter post, 27 March 2020, 12:38 PM, <https://twitter.com/RAEinforma/status/1243623572662374402>.

⁴⁵ Oregon Health Authority, “Ayude a prevenir la propagación del COVID-19,” 7 March 2020.

⁴⁶ Oregon Health Authority, “Autocuidado y cuidado de la comunidad durante el distanciamiento físico,” 16 September 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/ls2297.pdf>.

⁴⁷ Oregon Health Authority, “Recursos para trabajadores,” 26 May 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/ls2349e.pdf>.

Health Authority assumed COVID-19 to be a masculine noun, and then changed it to feminine and chose to be consistent with this, aside from two seemingly random uses of “*el COVID-19*”. While this does not align with the Royal Spanish Academy’s recommendation to use *el COVID-19*, it is also not technically incorrect.

Unlike the OHA, the CDC only uses the masculine version *el COVID-19*. However, there are several times that the documents exclude the article. For example, “*Investigacion de casos de COVID-19 y rastreo de contactos en lugares de trabajo que no pertenecen al sector de atencion medica*” (COVID-19 Case Investigation and Contact Tracing in Non-Healthcare Workplaces) uses “*casos de COVID-19*” in the title.⁴⁸ Normally, if using the masculine form, it would be *casos del COVID-19*. If using the feminine form, it would be *casos de la COVID-19*. However, many times it sounds more formal and more professional to omit the article after *de*. The documents never use *la COVID-19*, aligning with the Royal Spanish Academy’s recommendation.

While the Royal Spanish Academy makes recommendations in an effort to unite all Spanish speakers, the majority of native speakers do not consult the organization for information. Instead, they speak the way their families or communities speak. So, although the Royal Spanish Academy has ruled COVID-19 to be feminine, many speakers may still choose to use the masculine form. To approximate the popularity of *el* vs *la COVID-19*, I consulted Google trends. Below is a worldwide comparison of “*el covid-19*” versus “*la covid-19*” in Google searches over the past 12 months, in both a map and trendline format.

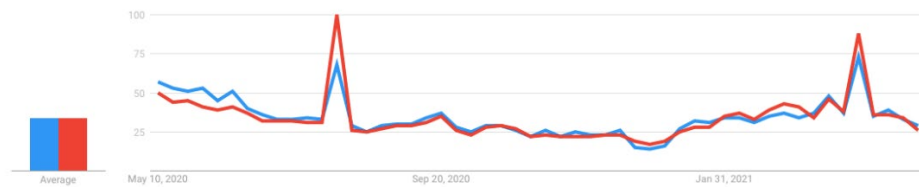
⁴⁸ Centers for Disease Control and Prevention, “Investigacion de casos de COVID-19 y rastreo de contactos en lugares de trabajo que no pertenecen al sector de atención médica,” 30 September 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/case-investigation-spanish.pdf>.

Trend map of “el covid-19” compared to “la covid-19” in Google searches worldwide



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Trendline of “el covid-19” compared to “la covid-19” in Google searches worldwide



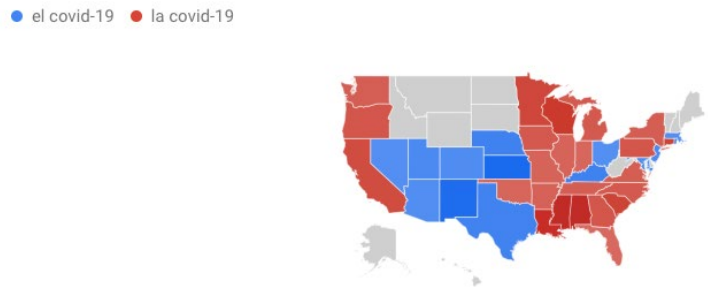
50

As seen in the figures above, the most frequently searched term varies by location around the world. In the United States, *el covid-19* was in 45% of these searches, while *la covid-19* was in 55%. However, in Spain, *el covid-19* was in 54% of these searches, while *la covid-19* was in 46%. Within the United States, the most commonly searched gender also varies by state, as seen in the table below.

⁴⁹ Data source: Google Trends(<https://www.google.com/trends>).

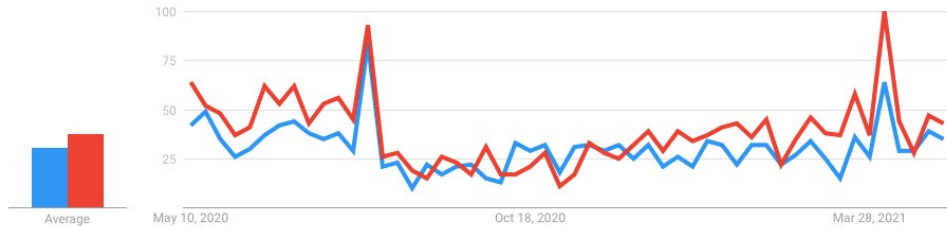
⁵⁰ Data source: Google Trends(<https://www.google.com/trends>).

Trend map of “el covid-19” compared to “la covid-19” in Google searches in the United States



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Trendline of “el covid-19” compared to “la covid-19” in Google searches in the United States



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As seen in these comparisons, the state of Oregon seems to favor the feminine version of COVID-19. This may be why the Oregon Health Authority uses “*la COVID-19*” in the majority of their translations. They likely want to choose the translation that makes sense to the majority of their audience; therefore, they chose to use the feminine noun.

From all of this data, it seems that there is no clear consensus among Spanish speakers about the gender of COVID-19. It may seem that the gender of this disease is not important. However, a recent study of French and Spanish speakers found that the gender of a virus can cause speakers to have gendered bias about the threat level

⁵¹ Data source: Google Trends(<https://www.google.com/trends>).

⁵² Data source: Google Trends(<https://www.google.com/trends>).

COVID-19 has.⁵³ When presented as a feminine noun, romance language speakers thought the virus was less dangerous, reducing their motivation to engage in preventative measures.⁵⁴ Therefore, it may be best to use *el COVID-19*, not only because it aligns with the Royal Spanish Academy's recommendation, but also because it may mean that more people will be willing to follow prevention guidelines.

In addition to the gender of COVID-19 varying, the vocabulary surrounding COVID-19 is varied. This is most likely to ensure that people with different vocabularies are able to understand. It could also be due to disagreements about the best term to use or regional variations in language. However, some different translations have slightly different meanings. For example, the resources use different words to talk about face masks. There are three translations of masks used: *máscara*, *mascarilla*, and *cubre bocas*. The different translations, their meanings, and connotations can be seen in the table below.

⁵³ Alican Mecit et al. "COVID-19 is Feminine: Grammatical Gender Influences Future Danger Perceptions and Precautionary Behavior." (2020).

⁵⁴ Alican Mecit et al. "COVID-19 is Feminine: Grammatical Gender Influences Future Danger Perceptions and Precautionary Behavior." (2020).

Most to least used translations of mask in CDC and OHA documents

Translation	Meaning	Origin/Use	Connotations
<i>Mascarilla</i>	Little <i>máscara</i> (face mask)	-illa means “little”, so <i>mascarilla</i> means little face mask	<p>Most commonly used in OHA, used in 11 documents/19 documents</p> <p>Most commonly used in CDC, used in 9 documents/12 documents</p> <p>Used in documents for both children and adults, implying that the “little” does not mean that the mask is small, but that the area it covers is small</p>
<i>Cubre bocas</i>	Mouth covering	Synonym for <i>tapabocas</i> , which is more common in Latin America, <i>boca</i> means mouth and <i>cubrir</i> means to cover, so <i>cubre bocas</i> means to cover the mouth	<p>Infrequently used in OHA documents, used in 3 documents/19 documents Primarily used when talking about children</p> <p>Infrequently used in CDC documents, “<i>cubiertas</i>” used in 3 documents/12 documents</p> <p>CDC uses <i>cubiertas</i>, meaning covering CDC makes a clear distinction between <i>cubiertas</i> and <i>mascarillas</i>, implying that <i>cubiertas</i> are not as protective as other masks due to their material</p>

<i>Máscara</i>	Face covering, face mask	<p>Often used to discuss a costume mask, or a mask that covers the entire face</p> <p>Can have other words added, for example: <i>máscara quirúrgica</i> (surgical mask)</p> <p><i>máscara de tela caseras</i> (homemade fabric masks)</p> <p><i>máscara KN95</i> (KN95 masks)</p>	<p>Infrequently used in OHA, used in 5 documents/19 documents</p> <p>Never used in CDC</p>
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Both OHA and CDC most frequently use *mascarillas* to talk about masks. The phrase is used in documents for both children and adults. This implies that the *-illa* is referring to the area the mask covers, and not to the person using the mask. *Máscara* typically means a mask covering your entire face, such as a costume mask, or a ski mask. In contrast, *mascarilla* seems to mean a mask that only covers your mouth and nose. This implies that it would be the best translation of the masks we are taking about in connection to COVID-19, which is likely why it is the most common translation in both sets of resources. However, these translations, like all vocabulary, are location dependent.

While OHA frequently uses *máscaras*, CDC does not use that term. Instead, they use *mascarilla* in almost all references to a mask. Additionally, instead of using the term *cubre bocas*, CDC uses *cubiertas*, or *cubiertas de tela para la cara*. Both

cubre bocas and *cubiertas* come from the verb *cubrir*, which means “to cover”, so they both appear to be translations that the majority of Spanish speakers would understand. However, the CDC makes a clear distinction that *cubiertas*/“coverings” are not as protective as *mascarillas* with the quote “*Las cubiertas para la cara no son un sustituto del EPP recomendado o requerido, como respiradores o mascarillas médicas*” (Face coverings are not a substitute of the recommended or required PPE, such as respirators or medical masks).⁵⁵ So, it seems that the CDC was trying to distinguish *mascarillas médicas* and *cubiertas* based on the material of each, and recommend the public to use a more protective mask when possible.

To gather the opinion of native Spanish speakers, I posted to a WordReference.com forum. I asked “*¿Cómo se dice "mask" en relación con COVID-19? ¿Máscara, mascarilla, cubrebocas, u otra palabra?*” The responses to this non representative survey, which seven people from five different Spanish-speaking countries responded to are organized below.

Translation of mask used by different Spanish speakers in their respective countries

	<i>Mascarilla</i>	<i>Máscara</i>	<i>Cubre bocas</i>	<i>Tapabocas</i>	<i>Barbijo</i>	<i>Nasobuco</i>
Location and Type of Spanish (if specified) of Respondent						
Puerto Rico PR Spanish	✓	✓	✓	✓		
Spain	✓					
Argentina				✓	✓	
Cuba						✓
Chile	✓					

⁵⁵ Centers for Disease Control and Prevention, “Establecimientos de procesamiento de carnes y aves: Estrategias clave para prevenir la infección por el virus del COVID-19 entre los empleados,” 10 June 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/FS-MeatProcessing-EMPLOYERS-spanish.pdf>.

Castilian Spanish						
Cuba						✓
San Francisco	✓		✓			
Totals	4	1	2	2	1	2

The most common response was *mascarilla*. However, many people mentioned the fact that this is location specific. One response, posted from San Francisco, said that most people speaking Mexican Spanish use *cubre bocas* even though the official signs use *mascarilla*. Three people responded with terms that are not present in OHA and CDC documents: *barbijo* and *nasobuco*. Two respondents from Habana, Cuba, agreed that *nasobuco* is the term preferred by both officials and native speakers. One response from Argentina explained that they use both *barbijo* and *tapabocas*. *Barbijo* seems to come from the word for chin, *barbilla*. However, the word is also often used to talk about a chinstrap. *Nasobuco* comes from the medical term “nasobuccal membrane”, the membrane separating the oral and nasal cavities, implying that this is a mask specifically covering the nose and mouth. This information, in combination with the usage and connotations of different translations all seem to suggest that *mascarilla*, *cubre bocas*, and *cuiertas* are the best translations for OHA and CDC to choose when writing about masks in the resources because the majority of Spanish speakers would understand all of these words.

Apart from the word choices, the most obvious differences between OHA and CDC resources are the number of documents and the amount of translations. While the CDC has more documents available that cover a wider range of topics, only approximately half of these documents are translated to Spanish. Additionally, several

translated of these resources were not available at the same time as their English counterparts. This differs from the OHA website, which has almost all of their resources available in Spanish, even though they do not cover as many topics or have as many documents. The next sections will examine the characteristics of both the OHA and CDC resources in more detail.

Oregon Health Authority

Guidelines for Assessing Resources

As explained previously, my methods for assessing these resources and translations are from Henry Fischbach's guidelines. Here is a reminder of his recommendations:

1. The translator should have extensive knowledge of the subject.
2. The translator should ask for clarification when they do not understand the text.
3. The translator should be willing to change the wording if it will benefit the reader.
4. The text should be in clear and descriptive language.
5. When using technical or medical vocabulary, define it with the first use.
6. Abbreviations should be avoided, unless defined when first used.
7. Avoid using domestic words and phrases.
8. If multiple translations are correct, choose translations with the most wide-spread usage.
9. Whenever possible, give illustration aid.
10. Avoid puns and metaphors, as they may not make sense in other languages.⁵⁶

⁵⁶ Fischbach, Henry. "Problems of medical translation." *Bulletin of the Medical Library Association* 50, no. 3 (1962): 462.

Translations Available

The majority of the Oregon Health Authority's COVID-19 resources are translated to Spanish. The Oregon Health Authority website has 29 COVID-19 community resources, of which 25 have Spanish translations available. The only four documents that do not yet have Spanish translations are: "Guide for Maternal/Child Home Visitation During the COVID-19 Pandemic", "I am Deaf or Hard of Hearing Tool", "I am Unable to Speak but I Can Understand You", and "Nurse Home Visitor Discussion Facilitator" do not have Spanish versions available.

Theme of Documents

Of the 29 OHA documents available in Spanish, the majority are about how to protect one's self and others. 16 of the documents focus on this. Eight documents are about COVID-19 resources, four documents are about masks, four give general background information about COVID-19, three discuss what to do while you are sick, two give information about symptoms and exposure, and two give information about COVID-19 in the workplace. Nine documents deal with more than one of these themes; several documents include an additional section about other resources.

All four of the documents without Spanish translations give information about protecting oneself and others. Additionally, "I am Deaf or Hard of Hearing Tool" and "I am Unable to Speak but I Can Understand You" give information about exposure and symptoms. "Nurse Home Visitor Discussion Facilitator: Things to think about in pregnancy, birth and after baby arrives" gives information about harm reduction, specifically related to COVID-19 testing and breastfeeding.

It is understandable that the “Guide for Maternal/Child Home Visitation During the COVID-19 Pandemic” is not available in Spanish because it contains repeated information that is well covered in other Spanish-language documents, covering basis about social distancing, wearing a mask, and hand washing practices. However, the “Nurse Home Visitor Discussion Facilitator: Things to think about in pregnancy, birth and after baby arrives” provides information not available in other documents. It discusses what to do if you are COVID-19 positive during labor. The guide also explains the infection risk while breastfeeding.⁵⁷ It would be beneficial to have this information available in several languages as it is not in any of the other Oregon Health Authority documents. While this information may be available and shared at hospitals or maternal clinics in the form of patient brochures, it is not clear why OHA published this information only in English.

Additionally, both the “I am Deaf or Hard of Hearing Tool” and “I am Unable to Speak but I Can Understand You” communication cards are unique from other documents. They contain images and short phrases to help people with disabilities communicate about COVID-19. The lack of translation for both of these documents raises questions about access of information for specific demographic populations, and especially vulnerable populations such as disabled Spanish speakers who may be hard of hearing or deaf, and thus particularly reliant on printed materials.

⁵⁷ Oregon Health Authority, “Nurse Home Visitor Discussion Facilitator: Things to think about in pregnancy, birth and after baby arrives,” 28 December 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/le3240.pdf>.

Audience

All documents are listed as “Community Resources”, implying that all of them are meant to be useful for the general population. Based on my review of the documents, it is clear that 12 of the 29 documents do not have a specific audience, instead containing information that is relevant to everyone, such as general information about the virus, masks, and social distancing. However, some documents have information targeted for more specific demographics. The OHA organizes these documents by subgroup on their website. Six documents are for agriculture workers, four are for people with disabilities, three are for caretakers, three are for pregnant women and parents, two are for people within higher risk groups, two are for employees. Three documents have information that is useful for more than one subgroup.

Presence of English in Spanish Documents

Four of the Spanish documents have English phrases within them. Many of the English phrases are then repeated in Spanish. This can be seen in the table below.

OHA documents that include Spanish translation of English phrases

Document Title	English Phrase
<p><i>“Prepare su hogar para una pandemia (Preparing Your Household for a Pandemic)”</i></p>	<p>“La Autoridad de Salud de Oregon (OHA, por sus siglas en inglés)”</p> <p>“Los Centros para el Control y la Prevención de Enfermedades (CDC, por sus siglas en inglés)”</p> <p>“El Centro de recursos para ancianos y discapacitados (ADRC, por sus siglas en inglés)”</p> <p>58</p>
<p><i>“Recursos para trabajadores (Resources for Workers)”</i></p>	<p>“Departamento de Trabajo e Industrias de Oregon (Oregon Bureau of Labor and Industry, BOLI)”</p> <p>“Administración de Salud y Seguridad Ocupacional (Occupational Safety and Health Administration, OSHA)”</p> <p>“El defensor de derechos de trabajadores del campo estatal (Farmworker Services’ State Monitor Advocate)”</p> <p>“Servicios de asistencia legal de Oregon (Legal Aid Services of Oregon, LASO)”</p> <p>“Programa de trabajadores agrícolas (The Farmworker Program)”</p> <p>“El Centro de Leyes de Oregon (Oregon Law Center(OLC)”</p> <p>59</p>

⁵⁸ Oregon Health Authority, “Prepare su hogar para una pandemia,” 7 August 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/ls3225.pdf>.

⁵⁹ Oregon Health Authority, “Recursos para trabajadores,” 26 May 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/ls2349e.pdf>.

This format is most likely used so that the reader can find these resources' websites. This format is also in accordance with recommended translation practices, which advise translators to only use acronyms when they are first introduced by what they stand for.⁶⁰

However, some of the Spanish documents have English phrases without the Spanish translations, as seen in the following table.

OHA documents that do not include Spanish translations of English phrases

Document Title	Document Title
<i>“Prepare su hogar para una pandemia (Preparing Your Household for a Pandemic)”</i>	“Two Weeks Ready Initiative” 61
<i>“Recursos sobre la COVID-19 para familias con niños y jóvenes con necesidades especiales de atención médica (Resources for Families of Children and Youth with Special Health Care Needs)”</i>	“OHSU Doernbecher Children’s Hospital” “Child Development Institute en University of North Carolina” “Family Voices” 62
<i>“Embarazo y parto en tiempos de COVID-19 (Pregnancy and Birth During COVID-19)”</i>	“doula” 63

⁶⁰ Fischbach, Henry. "Problems of medical translation." *Bulletin of the Medical Library Association* 50, no. 3 (1962): 462.

⁶¹ Oregon Health Authority, “Prepare su hogar para una pandemia,” 7 August 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/ls3225.pdf>.

⁶² Oregon Health Authority, “Recursos sobre la COVID-19 para familias con niños y jóvenes con necesidades especiales de atención medica,” 15 April 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/ls2309b.pdf>.

⁶³ Oregon Health Authority, “Embarazo y parto en tiempos de COVID-19,” 18 August 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/ls3239.pdf>.

This does not follow key best practices for translations,⁶⁴ and it is not clear why these phrases were not translated while others were. While some Spanish speakers may be familiar with these phrases, or able to comprehend them, ideally all of these should have Spanish translations. This would help ensure that all readers fully comprehend the information.

The document “*Embarazo y parto en tiempos de COVID-19* (Pregnancy and Birth During COVID-19)” uses the English term “doula”.⁶⁵ While many Spanish speakers may use this term, translations such as “*comadrona*”, “*partera*”, and “*asistente de parto*” are more common. Again, this does not follow best practices for medical translation, but it is the only instance I observed of a medical term included in English instead of Spanish.

Language Used

The most commonly used verb conjugation form in the documents is the formal imperative *usted* form. This form is also called the “command” form as it is typically used in Spanish to communicate an imperative, an order. It is used the most to advise people to wash (*lávese*) their hands, use (*use*) a mask, and maintain (*mantenga*) six feet of distance. The formal *usted* form shows respect and is inclusive. *Usted* does not imply a gender, as it just means “you.”

The documents also frequently use the present *nosotros* tense. This tense is used to speak from the point of view of Oregon Health Authority, to speak about their

⁶⁴ Fischbach, Henry. "Problems of medical translation." *Bulletin of the Medical Library Association* 50, no. 3 (1962): 462.

⁶⁵ Oregon Health Authority, “Embarazo y parto en tiempos de COVID-19,” 18 August 2020, <https://sharesystems.dhsosha.state.or.us/DHSForms/Served/ls3239.pdf>.

knowledge (*sabemos*). The *nosotros* form is also used to talk about what the community should do, in the conditional form or the imperative form (*deberíamos, trabajemos juntos*). While *nosotros* is also inclusive, it is a gendered term. In Spanish, when speaking to a group that includes men and women, most people use the masculine form. If the OHA wanted to be even more inclusive, they could also use *nosotras*. However, the majority of Spanish speakers would likely use *nosotros* and would consider it to already be inclusive.

Comparing Documents with Different Audiences

There are differences between documents created for caretakers/healthcare workers, documents created for the general public, and documents created for agriculture workers. To illustrate this, I have created a table comparing different aspects of two documents for each audience.

Examples of differences in OHA documents for different audiences

Audience	Document Title	Document Length	Number of Sentences	Average Length of Sentences
Caretakers	<i>Guía provisoria para el control de infecciones por COVID-19 para los trabajadores que brindan cuidados personales a domicilio</i> (Temporary guide to COVID-19 infection control for home healthcare workers) ⁶⁶	4 pages	40 sentences	25 words
	<i>COVID-19: guía para el cuidado de una persona en el hogar</i> (COVID-19: A guide to caring for a person at home) ⁶⁷	4 pages	57 sentences	13 words
General Public	<i>Cómo protegerse y proteger a otros de la COVID-19</i> (How to protect yourself and others from COVID-19) ⁶⁸	2 pages	27 sentences	14 words
	<i>Conozca la información acerca de la COVID-19</i> (Know the information about COVID-19) ⁶⁹	2 pages	32 sentences	17 words
Agriculture Workers	<i>¿Quiénes son más vulnerables?</i> (Who is more at risk?) ⁷⁰	2 pages	21 sentences	9 words
	<i>La COVID-19 es una enfermedad grave</i> (COVID-19 is a serious disease) ⁷¹	1 page	25 sentences	11 words

⁶⁶ Oregon Health Authority, “Guía provisoria para el control de infecciones por COVID-19 para los trabajadores que brindan cuidados personales a domicilio,” 30 December 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/ls2398.pdf>.

⁶⁷ Oregon Health Authority, “COVID-19: guía para el cuidado de una persona en el hogar,” 18 September 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/ls2299.pdf>.

⁶⁸ Oregon Health Authority, “Cómo protegerse y proteger a otros de la COVID-19,” 2 June 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served//LS2681.pdf>.

⁶⁹ Oregon Health Authority, “Conozca la información acerca de la COVID-19,” 29 October 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served//LS2356.pdf>.

⁷⁰ Oregon Health Authority, “¿Quiénes son más vulnerables?” 20 August 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/ls2349a.pdf>.

⁷¹ Oregon Health Authority, “La COVID-19 es una enfermedad grave,” 10 August 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served/ls2349f.pdf>.

The general pattern is that documents for caretakers are longer and have more words per sentence on average. The documents for agriculture workers are shorter and have fewer words per sentence on average, indicating that the sentences may be less complex. There is no official parameter in Spanish for what is considered a “complex” or “simple” sentence. One could assume that in general, longer sentences will be more complex and difficult to understand, because they will most likely include more conjunctions. However, this is not a perfect way to determine the difficulty of a text.

Layouts of OHA documents with different audiences

Audience	Layout
Caretakers	

⁷² Oregon Health Authority, “Guía provisoria para el control de infecciones por COVID-19 para los trabajadores que brindan cuidados personales a domicilio,” 30 December 2020, <https://shredsystems.dhsoha.state.or.us/DHSForms/Served/ls2398.pdf>.

⁷³ Oregon Health Authority, “COVID-19: guía para el cuidado de una persona en el hogar,” 18 September 2020, <https://shredsystems.dhsoha.state.or.us/DHSForms/Served/ls2299.pdf>.

General Public

Cómo protegerse y proteger a otros de la COVID-19

Cómo se propaga

- El virus se propaga de una persona a otra principalmente por medio de gotitas respiratorias que una persona infectada produce al toser, estornudar o hablar.
- Las gotitas pueden llegar a la boca o la nariz de la persona que se encuentra cerca, o caerle en los ojos o en la nariz.
- La COVID-19 también puede propagarse a través de la saliva que se produce al besar superficies u objetos que contienen el virus.
- El virus también puede propagarse al tocar superficies u objetos que contienen el virus.
- Se se propaga con facilidad entre personas y animales.

Todos deberían cumplir con las siguientes medidas preventivas:

- Lávate las manos con frecuencia con agua tibia y jabón por al menos 20 segundos. Si no puedes usar agua tibia y jabón, usa un desinfectante para manos que contenga al menos un 60% de alcohol.
- Cúbrete al toser y estornudar con el codo o un paño de papel. Si usas un paño de papel, deséchalo y lávate las manos de inmediato.
- No te toques el rostro.
- Mantén una distancia de al menos seis pies de las personas con las que te ves.
- Usa un elemento de protección facial de tela, papel o plástico cuando tengas que salir. El uso de protección facial puede ayudar a evitar la propagación del virus a medida que las personas continúan a salir y desplazarse.

Limpiar y desinfectar las superficies que toca con frecuencia.

Evita los puntos de contacto de la COVID-19:

- Escuchas
- Tactiles
- Telefonos
- Protección
- Industria
- Exposición
- Entire
- Móvil

Continúa en la página 2

Otros síntomas importantes

- Quienes están de los ojos. En los ojos rojos, irritados, hinchados o con flujo de lágrimas. Realiza el mismo tipo de ojos rojos, hinchados o con flujo de lágrimas. Realiza el mismo tipo de ojos rojos, hinchados o con flujo de lágrimas.
- Si está enfermo, cúbrase en casa, llame a su proveedor de atención médica y siga los pasos que le indiquen.
- Si tiene riesgo de sufrir complicaciones graves (personas mayores de 65 años de edad o con afecciones médicas), comuníquese con su proveedor de atención médica. De lo contrario, véngase a casa y cúbrase.






















Conozca la información acerca de la COVID-19

¿Qué es la COVID-19?

La COVID-19 es una nueva enfermedad causada por un virus que se propaga por el contacto cercano con una persona infectada o por la inhalación de las gotitas que una persona infectada produce al toser, estornudar o hablar. El virus también puede propagarse a través de la saliva que se produce al besar superficies u objetos que contienen el virus.

¿Cómo se propaga el coronavirus?

La COVID-19 se propaga entre personas que están cerca o que tocan superficies que una persona infectada ha tocado. Esto puede suceder al estar cerca de una persona infectada, al tocar una superficie que una persona infectada ha tocado, o al besar a una persona infectada. El virus también puede propagarse a través de la saliva que se produce al besar superficies u objetos que contienen el virus.

¿Quiénes están en riesgo?

Quiénes están en riesgo de que el virus se transmita a una persona que está infectada o que ha estado infectada recientemente. Quiénes están en riesgo de que el virus se transmita a una persona que está infectada o que ha estado infectada recientemente. Quiénes están en riesgo de que el virus se transmita a una persona que está infectada o que ha estado infectada recientemente.

¿Cómo puedo protegerme y proteger a los demás?

Las cosas que puede hacer incluyen las siguientes:

- Cúbrete la boca y la nariz cuando estés en lugares públicos, con un paño de papel.
- Lávate frecuentemente las manos.
- Mantén una distancia de al menos seis pies de las personas que no están contigo.
- Si estás enfermo, cúbrase en casa, llame a su proveedor de atención médica y siga los pasos que le indiquen.
- Si tienes riesgo de sufrir complicaciones graves (personas mayores de 65 años de edad o con afecciones médicas), comuníquese con su proveedor de atención médica. De lo contrario, véngase a casa y cúbrase.

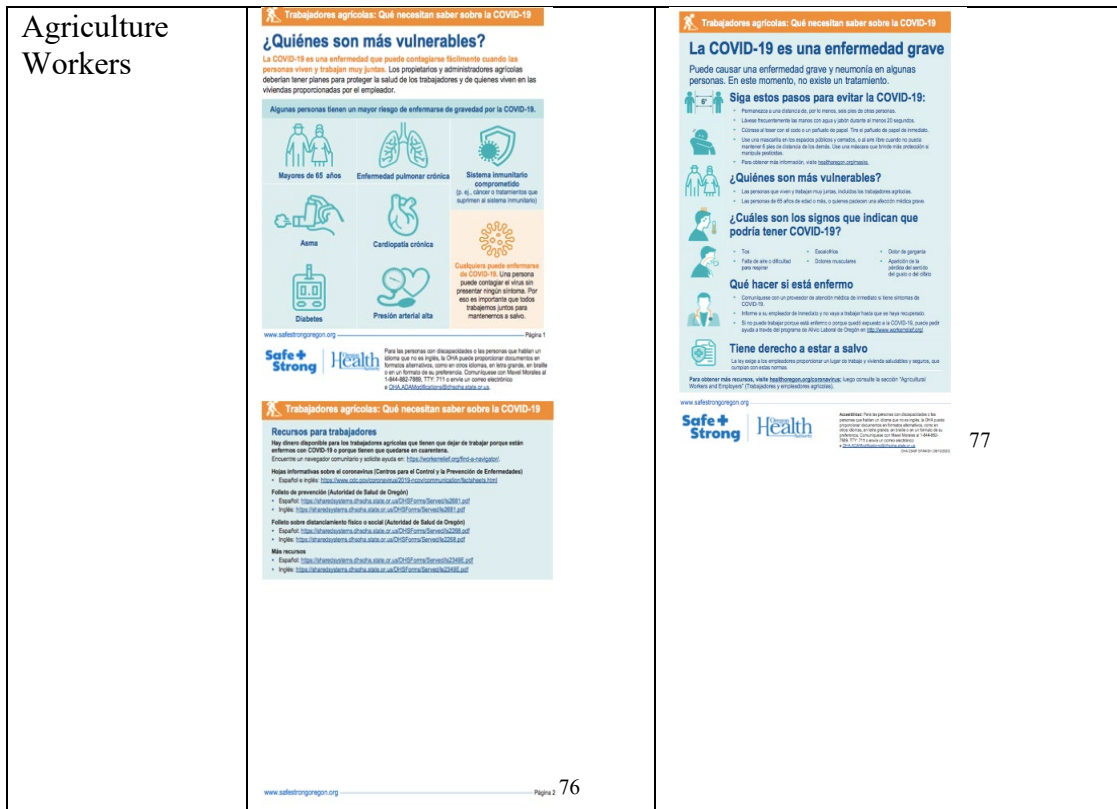







⁷⁴ Oregon Health Authority, “Cómo protegerse y proteger a otros de la COVID-19,” 2 June 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served//LS2681.pdf>.

⁷⁵ Oregon Health Authority, “Conozca la información acerca de la COVID-19,” 29 October 2020, <https://sharesystems.dhsoha.state.or.us/DHSForms/Served//LS2356.pdf>.



From this table, one can see that the layout also changes for the different audiences. The documents for caretakers have little white space, as well as minimal images. The documents for the general public contain several images, primarily small icons to help the audience visualize the main points of each section. This is in accordance with best practices,⁷⁸ which recommend that for translations of medical resources, an image relating to the main point should be included. Additionally, the majority of the images include a small phrase as a caption to ensure audience

⁷⁶ Oregon Health Authority, “¿Quiénes son más vulnerables?” 20 August 2020, <https://sharingsystems.dhsoha.state.or.us/DHSForms/Served/ls2349a.pdf>.

⁷⁷ Oregon Health Authority, “La COVID-19 es una enfermedad grave,” 10 August 2020, <https://sharingsystems.dhsoha.state.or.us/DHSForms/Served/ls2349f.pdf>.

⁷⁸ Fischbach, Henry. "Problems of medical translation." *Bulletin of the Medical Library Association* 50, no. 3 (1962): 462.

understanding, another key recommendation for translations.⁷⁹ There is less text on the pages, but still not a lot of white space. The documents for agriculture workers contain the most images, with an average of one image for each section. The text size for each of these documents is roughly the same. All of this appears to be evidence that the OHA did consider their audience when creating documents and adjusted the resources to reflect this. This is in alignment with translation recommendations, which encourage the translator to consider who will be using these resources.⁸⁰

Centers for Disease Control and Prevention

Translations Available

Approximately half of the Centers for Disease Control and Prevention COVID-19 resources are translated to Spanish. The Centers for Disease Control and Prevention website has 57 COVID-19 community resources. 28 of these have Spanish translations available.

Theme of Documents

Of the 57 documents, the majority are about protecting oneself and others. 33 documents give information about how to protect yourself and others. Six documents are about masks, six are about cleaning, five are about harm reduction, four give general

⁷⁹ Peter Houts et al. "The role of pictures in improving health communication: a review of research on attention, comprehension, recall, and adherence." *Patient education and counseling* 61, no. 2 (2006): 173-190.

⁸⁰ Peter Houts et al. "The role of pictures in improving health communication: a review of research on attention, comprehension, recall, and adherence." *Patient education and counseling* 61, no. 2 (2006): 173-190.

information about COVID-19, two are about contact tracing, one is about COVID-19 in the workplace, and one is about telemedicine.

Of the 29 documents without Spanish translations, 19 give information about protecting yourself and others. Four are about masks, four are about cleaning, 1 is about harm reduction, and one gives general information about COVID-19.

Audience

On the CDC website, the documents have the target audience defined, and it is possible to search and filter the documents by these target audiences. 32 of the 57 documents have the audience listed as “General Public”. 12 of the documents have information targeted for K-12 students. Four are for employers, three are for parents, three are for shelters, two are for teachers, two are for coaches, two are for people with COVID-19, one is for high risk groups, one is for employees, one is for college students, and one is for healthcare workers.

Of the 29 documents without Spanish translations, 19 are for the general public, three are for K-12 students, three are for shelters, two are for coaches, one is for employers, one is for college students, and one is for healthcare workers. Many of the documents are repetitive, which may be why they do not have translations. For example, there are 19 documents without translations that contain information about hand washing, social distancing, and masks to protect from COVID-19. This is in addition to 14 documents with translations covering the same information.

However, none of the documents created to be used in shelters are available in Spanish. This is putting vulnerable populations at risk. People relying on shelters may already find it more difficult to social distance, so providing information about how to

limit exposure is especially important. Additionally, the one document created for college students is unavailable in Spanish, as well as the one document created for healthcare workers. Again, these groups may be in situations where it is difficult to limit their contact with others, so it is important that they have access to this information.

Differing Publication Dates

Of the 28 Spanish documents available, 15 of them were published later than their English version. This may indicate that the documents without Spanish versions are in the process of being translated and will be available later. However, many of the documents without Spanish translations were uploaded several months ago.

Additionally, six of the English documents have newer or updated versions available, while their Spanish translations do not.

Publication date differences for CDC documents

Title (in Spanish and English)	English Version Publishing Date	Spanish Version Publishing Date	Days between the Documents
COVID-19 Case Investigation and Contact Tracing in Non-Healthcare Workplaces <i>Investigación de casos de COVID-19 y rastreo de contactos en lugares de trabajo que no pertenecen al sector de atención médica</i>	9/30/2020	10/5/2020	5 days
How to Safely Wear and Take Off a Mask <i>Cómo ponerse y quitarse la mascarilla de forma segura</i>	12/21/2020	12/28/2020	7 days
3 Steps to Take While Waiting for Your Test Results <i>Tres medidas clave que debe tomar mientras espera el resultado de la prueba del COVID-19</i>	12/10/2020	12/18/2020	8 days
Please Wear a Mask <i>Por favor póngase una mascarilla</i>	8/5/2020	8/13/2020	8 days
Don't Feel Well? Stay Home When You are Sick <i>¿No te sientes bien? Quédate en casa si estas enfermo</i>	7/20/2020	7/30/2020	10 days
Keep Space Between You and Others <i>Mantén un espacio entre tú y los demás</i>	7/20/2020	7/30/2020	10 days
Don't Let Your Germs Go for a Ride <i>No dejes que los microbios se vayan de paseo</i>	7/20/2020	7/30/2020	10 days
Class Rules <i>Reglas de la clase</i>	7/20/2020	7/30/2020	10 days
Basic Dos and Don'ts for Employees to Prevent Workplace Violence	8/14/2020	8/26/2020	12 days

<i>Los SÍ y los NO básicos para que los Empleados puedan prevenir la violencia en el lugar de trabajo</i>			
5 Safety Tips at Aquatic Venues <i>Tome estas 5 medidas de seguridad para que todos nos mantengamos sanos</i>	6/9/2020	6/25/2020	16 days
Checklist for Staff at Aquatic Venues <i>Lista de verificación diaria para el persona</i>	6/9/2020	6/25/2020	16 days
Meat and Poultry Processing Facilities <i>Establecimientos de procesamiento de carnes y aves</i>	5/15/2020	6/10/2020	26 days
Telemedicine- What Does it Mean and Why Should You Care <i>Telemedicina, ¿Qué significa y por qué le debería importar?</i>	9/3/2020	10/9/2020	36 days
K-12 Students: Did You Wash Your Hands? <i>Estudiantes: ¿Te lavaste las manos?</i>	7/22/2020	9/9/2020	49 days
What You Should Know about COVID-19 <i>Lo que usted debe saber acerca del COVID-19 para protegerse a usted y a los demás</i>	6/1/2020	9/10/2020	101 days

From this table, there does not seem to be a clear pattern in the amount of time it took for these English documents to be published in Spanish. The time ranges from 5 to 101 days. It is not clear if this was due to the actual time it took to translate these documents, or if the difference is because they were not given to translators until several days of being uploaded as English documents. However, when arranged from the least to the most time difference between documents, it does seem like the documents with very specific populations (aquatic venues, meat and poultry processing

facilities) took more time to be translated than some of the documents that would apply to the entire population. Additionally, documents with newer information about contact tracing and COVID-19 testing had fewer days between the documents. This could have been done purposefully, to prioritize releasing new information in Spanish before repeated information that is available in other documents.

Language Used

The most commonly used verb conjugation form in the resources is the formal imperative *usted* form. It is most often used to advise people to clean (*limpie, desinfecte*), to wear a mask (*use, lleve*), and to maintain distance (*mantenga*). However, the CDC uses different conjugation forms depending on the audience. For the 12 documents targeted towards K-12 students, the primary conjugation form is the imperative *tú* form. Both *usted* and *tú* mean “you”, but using *usted* is more formal than using *tú*. However, it is accepted practice to use this term and verb conjugation when communicating with a younger audience.

The plural of “you” is always *ustedes* and is present in both types of documents. In addition to using *tú*, “*Mantén un espacio entre tú y los demás* (Keep Space Between You and Others)” also uses the *yo* form.⁸¹ The document is asking students to stop and ask themselves if they need to wash their hands, which is why the *yo* or “I” form is necessary.

⁸¹ Centers for Disease Control and Prevention, “Mantén un espacio entre tú y los demás,” 30 July 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/COVID19-k-12-school-posters-keep-space-when-outside-ES.pdf>.

Comparing Documents with Different Audiences

There are clear differences between documents created for children and documents created for adults. To illustrate these differences, I have taken three examples of each type of document and created a table outlining aspects.

Examples of differences in CDC documents for different audiences

Audience	Document Title	Document Length	Number of Sentences	Average Length of Sentences	Conjugation
Adults	<i>Cómo ponerse y quitarse la mascarilla de forma segura</i> (How to Put on and Remove a Mask Safely) ⁸²	1 page	24 sentences	13 words per sentence	Uses the <i>usted</i> form
	<i>Lo que usted debe saber acerca del COVID-19 para protegerse a usted y a los demás</i> (What You Need to Know about COVID-19 to Protect Yourself and Others) ⁸³	1 page	30 sentences	14 words per sentence	Uses the <i>usted</i> form (present even in the title)
	<i>Telemedicina, ¿Qué significa y por qué le debería importar?</i> (Telemedicine- What Does it Mean and Why Should You Care) ⁸⁴	1 page	24 sentences	13 words per sentence	Uses the <i>usted</i> form

⁸² Centers for Disease Control and Prevention, “Cómo ponerse y quitarse la mascarilla de forma segura,” 7 November 2020, https://www.cdc.gov/coronavirus/2019-ncov/downloads/cloth-face-covering_SP.pdf.

⁸³ Centers for Disease Control and Prevention, “Lo que usted debe saber acerca del COVID-19 para protegerse a usted y a los demás,” 10 September 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/2019-ncov-factsheet-sp.pdf>.

⁸⁴ Centers for Disease Control and Prevention, “Telemedicina, ¿Qué significa y por qué le debería importar?,” 9 October 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/global-covid-19/telemedicine-spanish.pdf>.

Children	<i>Estudiantes: ¿Te lavaste las manos? (Students: Did You Wash Your Hands?)</i> ⁸⁵	1 page	13 sentences	5 words per sentence	Uses the <i>tú</i> form Uses the <i>yo</i> form
	<i>Mantén un espacio entre tú y los demás (Keep Space Between You and Others)</i> ⁸⁶	1 page	6 sentences	6 words per sentence	Uses the <i>tú</i> form Uses the <i>ustedes</i> form
	<i>No dejes que los microbios se vayana de paseo (Don't Let Your Germs Go for a Ride)</i> ⁸⁷	1 page	4 sentences	16 words per sentence	Uses <i>tú</i> form

The most obvious difference in the above table are the differences in words per sentence and the differences in the conjugation form used. As seen in the table, it does appear that the CDC attempted to make several of the documents for children simpler, by using short sentences. This does follow recommended translation practices. The exception to this is “*No dejes que los microbios se vayana de paseo (Don't Let Your Germs Go for a Ride)*”, which has an average of 16 words per sentence. However, the entire document is only four sentences long and is also accompanied by a large image. Therefore, while the sentences are longer, it does not appear to be as complex as documents created for adults. It is also important to note that the documents for children are defined as being for K-12, which is a large group that encompasses children of varying reading levels. This may be why they vary so much in the words per sentence

⁸⁵ Centers for Disease Control and Prevention, “Estudiantes: ¿Te lavaste las manos?,” 9 September 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/COVID19-k-12-school-posters-wash-your-hands-ES.pdf>.

⁸⁶ Centers for Disease Control and Prevention, “Mantén un espacio entre tú y los demás,” 30 July 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/COVID19-k-12-school-posters-keep-space-when-outside-ES.pdf>.

⁸⁷ Centers for Disease Control and Prevention, “No dejes que los microbios se vayana de paseo,” 30 July 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/COVID19-k-12-school-posters-germs-go-for-a-ride-ES.pdf>.

used. Additionally, while each of these examples is only a page, the resources for adults contain much more information. The documents targeted towards adults have more sentences per document than the documents targeted towards children. While many of the documents for children have one simple message, documents for adults contain multiple sections with in-depth information.

Layout of Documents

In addition to adjusting language choice and complexity based on the audience, it also seems that the CDC adjusted the layout of resources. These differences can be seen in the table below, which compare a few resources for adults and children.

Examples of different layouts for CDC documents with different audiences

Audience	Document Layout
Adults	Small text, complete sentences, very little white space

Cómo ponerse y quitarse una mascarilla de manera segura

PÓNSELA LA MASCARILLA CORRECTAMENTE

- Lávese las manos antes de ponerse la mascarilla.
- Póngasela de manera que cubra la nariz y la boca y quede ajustada detrás de la cabeza.
- Tras de que se ajuste bien, cubra los lados de la cara.
- Respiración de que pueda respirar fácilmente.
- No la ponga en una mascarilla con un filtro menor de 2 años.



PÓNSELA UNA MASCARILLA PARA AYUDAR A PROTEGER A LOS DEMÁS

- Póngase una mascarilla para ayudar a proteger a los demás en caso de que usted esté infectado, pero no tenga síntomas.
- Dejéala puesta todo el tiempo que esté en un lugar público.
- No se la quite del cuello ni la deje sobre la frente.
- No se la toque, si lo hace, límpiese las manos.



PRÁCTIQUE HÁBITOS DE SALUD COTIDIANOS

- Manténgase al menos a 6 pies (2 metros) de los demás.
- Evite el contacto con las personas que estén enfermas.
- Lávese frecuentemente las manos con agua y jabón por al menos 20 segundos cada vez.
- Ore un desinfectante de manos si no hay jabón disponible.



QUÍTSELA LA MASCARILLA CON CUIDADO, CUANDO ESTE EN CASA

- Quítela desmontando los lazos que se atan detrás de la cabeza o evitando las bandas elásticas que se pegan en las orejas.
- Sólo toque las tiras o bandas elásticas.
- Evite tocar la mascarilla con las manos.
- Meta la mascarilla en la basura de ropa.
- Lávese las manos con agua y jabón.



Las mascarillas personales no son iguales a las mascarillas quirúrgicas de los hospitales. No las utilice sobre otras personas ni los alrededores de esas personas y no ponga mascarillas de nuevo a su alrededor.

Para más información sobre cómo hacer una mascarilla, consulte [cdc.gov/coronavirus-es](https://www.cdc.gov/coronavirus-es)

Lo que usted debe saber acerca del COVID-19 para protegerse a usted y a los demás

Infórmese sobre el COVID-19

- La enfermedad del coronavirus 2019 (COVID-19) es una infección causada por un virus que se puede propagar de persona a persona.
- El virus que causa el COVID-19 es un nuevo coronavirus que se ha propagado por todo el mundo.
- El COVID-19 puede causar desde síntomas leves (como fiebre) hasta casos de enfermedad graves.

Sega cómo se propaga el COVID-19

- Usted puede infectarse al estar en contacto cercano (dentado de 6 pies o 2 metros) al largo de dos brotes, con una persona que tenga COVID-19. El COVID-19 se propaga principalmente de persona a persona.
- Usted puede infectarse por medio de gotitas respiratorias de una persona infectada (tos, estornudos o habla).
- También podría contraer la enfermedad al tocar una superficie u otro objeto en los que está el virus, y luego tocar la boca, la nariz o los ojos.

Práctique y promueva a los demás el COVID-19

- En la actualidad no existe una vacuna que proteja contra el COVID-19. La mejor manera de protegerse es evitar la exposición al virus que causa el COVID-19.
- Quédese en casa tanto como sea posible y evite el contacto cercano con los demás.
- En entornos públicos, póngase una mascarilla que le cubra la nariz y la boca.
- Limpie y desinfecte las superficies que se tocan con frecuencia.
- Lávese las manos frecuentemente con agua y jabón por al menos 20 segundos o con un desinfectante de manos que contenga al menos un 60 % de alcohol.

Práctique el distanciamiento social

- Cuando sea posible, evite reuniones con muchas personas.
- Consulte al médico y complete actividades bancarias en línea.
- Si tiene que ir en persona, manténgase a una distancia de al menos 6 pies o 2 metros de los demás y evite los objetos que tenga que tocar.
- Tras entregar a domicilio y comida para llevar, evite el contacto personal al salir como sea posible.

Si está enfermo, prevenga la propagación del COVID-19

- Quédese en casa si está enfermo, excepto para comprar alimentos.
- Evite usar servicios de transporte público, vehículos compartidos o taxis.
- Manténgase alejado de otros personas que los miembros en su casa.
- No hay un tratamiento específico para el COVID-19, pero puede buscar atención médica para que los médicos puedan tratar el mejor riesgo de enfermedad más severa.

Comienza su riesgo de enfermarse gravemente

- Todos están en riesgo de contraer el COVID-19.
- Los adultos mayores y las personas de cualquier edad que tengan afecciones subyacentes tienen mayor riesgo de mayor riesgo de enfermedad más severa.

TELEMEDICINA, ¿QUÉ SIGNIFICA Y POR QUÉ LE DEBERÍA IMPORTAR?

¿QUÉ ES LA TELEMEDICINA?

Telemedicina es el uso de información electrónica y tecnología de telecomunicación para recibir atención médica que necesita intervención diagnóstica o de salud. También se refiere a un teléfono o dispositivo con internet para conectar su atención médica mientras se protege usted y la posibilidad de atención médica del COVID-19. Bajo esta nueva medida para determinar el uso de telemedicina es apropiado para las necesidades de salud.



¿POR QUÉ USAR TELEMEDICINA AHORA?

Para que tenga menos contacto con establecimientos de atención médica, otros pacientes y personal de atención médica y de reducir el riesgo de COVID-19 y mantenerse sano usted y su familia.

¿CUÁLES SON LOS BENEFICIOS DE LA TELEMEDICINA?

- Le permite recibir atención médica en su hogar y con privacidad.
- Le permite enviar mensajes y recibir mensajes de su médico usando mensajes de texto o correo electrónico.
- Permite el monitoreo remoto de su salud.
- Ahorra tiempo y costos de transporte.
- Reduce el tiempo de espera para recibir atención.
- Reduce la cantidad de visitas a centros médicos.



¿CUÁNDO SE PUEDE USAR LA TELEMEDICINA?

Cuando reciba orientación con su proveedor de atención médica sobre el manejo de su salud en general o el manejo de una afección existente durante el brote de COVID-19.

¿Qué tipo de atención médica puede recibir mediante telemedicina?

- Evaluación de COVID-19, recomendaciones sobre si hacerse la prueba y orientación sobre el diagnóstico y tratamiento.
- Atención médica en general (a. e., visitas de rutina, control de la presión arterial, consejo sobre el uso de medicamentos, como serpillero común).
- Recetas para medicamentos.
- Consejo nutricional.
- Consejo de salud mental.



¿CÓMO SE PONE EN CONTACTO CON UN PROVEEDOR DE ATENCIÓN MÉDICA PARA PROGRAMAR UNA CONSULTA POR TELEMEDICINA?

Como sea apropiado para su atención médica para verificar si otros servicios por Internet y qué tecnología necesita para la consulta.



[cdc.gov/coronavirus-es](https://www.cdc.gov/coronavirus-es)

⁸⁸ Centers for Disease Control and Prevention, “Cómo ponerse y quitarse la mascarilla de forma segura,” 7 November 2020, https://www.cdc.gov/coronavirus/2019-ncov/downloads/cloth-face-covering_SP.pdf.

⁸⁹ Centers for Disease Control and Prevention, “Lo que usted debe saber acerca del COVID-19 para protegerse a usted y a los demás,” 10 September 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/2019-ncov-factsheet-sp.pdf>.

⁹⁰ Centers for Disease Control and Prevention, “Telemedicina, ¿Qué significa y por qué le debería importar?,” 9 October 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/global-covid-19/telemedicine-spanish.pdf>.

Children

Estudiantes: trabajemos juntos para detener la propagación del COVID-19

¿TE LAVASTE LAS MANOS?

detente



piensa



lávate las manos



PREGÚNTATE:

- ¿Acabo de ir al baño?
- ¿Estoy por comer?
- ¿Acabo de comer?
- ¿Estornudé o tosí?
- ¿Toqué cosas u objetos que otras personas han tocado?
- ¿Toqué basura?
- ¿Toqué mi mascarilla?

Si no puedes lavarte las manos, pídele a tu maestro o a otro adulto que te den desinfectante de manos



[cdc.gov/coronavirus-es](https://www.cdc.gov/coronavirus-es)

Estudiantes: trabajemos juntos para detener la propagación del COVID-19

MANTÉN UN ESPACIO ENTRE TÚ Y LOS DEMÁS

cuando estén afuera



6 PIES
2 M

en el aula



6 PIES | 2 M

en el autobús




Si es posible, trata de sentarte lejos por medio.



[cdc.gov/coronavirus-es](https://www.cdc.gov/coronavirus-es)


NO DEJES QUE LOS MICROBIOS SE VAYAN DE PASEO



CÚBRETE LA NARIZ Y LA BOCA AL TOSER Y ESTORNUDAR

con un pañuelo desechable o con la parte interna del codo.
Si usas un pañuelo desechable, bófalo a la basura y lávate las manos de inmediato.

Si no puedes lavarte las manos, pídele a tu maestro o a otro adulto que te den desinfectante de manos



[cdc.gov/coronavirus-es](https://www.cdc.gov/coronavirus-es)

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Large text, images and white space take up the majority of space

⁹¹ Centers for Disease Control and Prevention, “Estudiantes: ¿Te lavaste las manos?,” 9 September 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/COVID19-k-12-school-posters-wash-your-hands-ES.pdf>.

⁹² Centers for Disease Control and Prevention, “Mantén un espacio entre tú y los demás,” 30 July 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/COVID19-k-12-school-posters-keep-space-when-outside-ES.pdf>.

⁹³ Centers for Disease Control and Prevention, “No dejes que los microbios se vayana de paseo,” 30 July 2020, <https://www.cdc.gov/coronavirus/2019-ncov/downloads/community/schools-childcare/COVID19-k-12-school-posters-germs-go-for-a-ride-ES.pdf>.

The differences in the layouts and uses of images is clear from these tables. While the documents for adults do contain images, they are smaller in order to have room for more text. The general pattern for these resources is that they are primarily text, with one small image for each section. This does not align with best translation practices, which recommend that each image should have a caption.⁹⁴ However, each image is still associated in some way with a section of text. This is not the case for documents for children, which contain more white space as well as larger images. Additionally, the font size of text varies based on the audience. The documents for children use a larger font size, likely because there is less content. Resources for adults have small text, most likely because they contain more sentences per page. These patterns, in connection with the patterns in language, demonstrate that the CDC did attempt to adjust their message for the intended audience. Additionally, the CDC did change the images to match their audiences. For example, all of the images in documents for children show younger people following the recommendations, while all of the images in documents for adults show adults following the recommendations. This is following the guidelines of images in medical resources, which recommend that the pictures match the audience who will be reading them.⁹⁵

⁹⁴ Peter Houts et al. "The role of pictures in improving health communication: a review of research on attention, comprehension, recall, and adherence." *Patient education and counseling* 61, no. 2 (2006): 173-190.

⁹⁵ Peter Houts et al. "The role of pictures in improving health communication: a review of research on attention, comprehension, recall, and adherence." *Patient education and counseling* 61, no. 2 (2006): 173-190.

Conclusion

The disparity in Spanish language COVID-19 resources may be a contributing factor to the disproportionate impact of the disease on Latinx communities. Not all documents on the Oregon Health Authority and Centers for Disease Control and Prevention websites are available in Spanish. This means that not all information about COVID-19 is available to Spanish speakers through these organizations.

While not all information is available in Spanish, the translated resources follow medical translation best practices the majority of the time. For all translated documents, the content in the English and Spanish versions are the same. There are few examples of English being present in the Spanish versions. The majority of medical terms or acronyms are defined or explained when introduced. It is also evident that both organizations attempt to adjust their messages for the intended audience, aligning with best practices.

When starting this project, I assumed that I would be able to classify the writing difficulty level of documents by collecting information on sentence length and document length. However, while clear parameters exist in English, there is not a clear system for determining text difficulty in Spanish. In the future, it would be helpful to create a classification system and use it to analyze these or other public health documents.

The resources examined for this project only include documents published prior to 2021. Future research should assess more recent documents, as well as resources from different public health organizations. Additionally, it is important to acknowledge that these resources are not the only way to access information about COVID-19 and

may not even be the most common way the public is accessing information. In the future, studying how many Spanish speakers use these resources, or identifying the most popular sources of information about COVID-19 would help to focus the effort of translation onto materials that the majority of the population use.

This project focused on Spanish translations. While Spanish is the second most common language in the United States (behind English), there are several other languages with millions of speakers. Researching the translations and information available in these other languages could give more context to health disparities and what groups are the most impacted by a language barrier.

This research gives context to the role of public health organizations and how their response in a pandemic is crucial to protecting minorities. It also emphasizes the importance of medical translations and disseminating information in all languages. Highlighting these gaps is the first step to eliminating health disparities and ensuring that all information is available to all people.

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