



July 20, 2020

HHS Team  
U.S. Department of Health and Human Services

Dear HHS Team,

We have completed our six usability evaluations within three demographics on HHS.gov/coronavirus. In this document, you will find details on the methodology, findings, and recommendations.

Overall, the majority of the participants thought the website was comprehensive and professional. However, we have identified three categories for improvement in terms of the visual design, findability, and HTML construction. We recommend the following revisions:

1. Make small text more concise and/or add more graphics.
2. Emphasize the separation between HHS.gov and HHS.gov/coronavirus.
3. Improve the search bar results.
4. Add subheading links to the top of each page.
5. Properly arrange the order of information on specific pages.
6. Fix the irregular page movement caused by the header.

In applying these changes, we believe that HHS.gov/coronavirus will become a more effective source for informing the general public about coronavirus.

Amid the current COVID-19 pandemic, we thank you for your concerted efforts and for the opportunity to evaluate the usability of HHS.gov/coronavirus.

Sincerely,

Cathy Hu and Sydnei Mayers  
UX Research Interns

[Cathy.Hu@live.mercer.edu](mailto:Cathy.Hu@live.mercer.edu)  
[Sydnei.Elizabeth.Mayers@live.mercer.edu](mailto:Sydnei.Elizabeth.Mayers@live.mercer.edu)

Department of Technical Communication  
Mercer University

Cathy Hu & Sydnei Mayers, UX Research Interns

# Analyzing the Usability of [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus)

Prepared for  
The HHS Team

U.S. Department of Health and Human Services

July 20, 2020

## Executive Summary

Testing the usability of a website is an excellent way to gauge how easily users are able to navigate an interface to find what they are looking for. This study includes an evaluation of [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus), an analysis of the data, and a list of recommendations to improve the usability of the site.

The evaluation consisted of studying six participants from three demographics (18-30 years old, 31-50 years old, and 51+ years old) via Zoom. Participants participated in a usability test that measured the findability, clarity, effectiveness, and additional usability strengths and weaknesses of [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus).

- Visual Design
  - There is a lot of small text on the website and users are not reading thoroughly.
  - It is not apparent that [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus) is separate from [HHS.gov](https://www.hhs.gov).
  - The lack of subheading links at the top of each page makes it hard for users to find specific information.
  - Some sections are arranged in an illogical order.
- Findability
  - Results from the search bar are confusing users and leading them to the wrong resources.
- HTML Construction
  - The header causes the page to jump when scrolling.

Based on these findings, we recommend implementing the following: make small text more concise and/or add more graphics, emphasize the separation between [HHS.gov](https://www.hhs.gov) and [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus), improve the search bar results, add subheading links to the top of each page, properly arrange the order of information on specific pages, and fix the irregular page movement caused by the header.

With these changes, we believe [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus) will provide visitors with a more streamlined experience.

# Table of Contents

<b>Executive Summary</b>	ii
<b>Purpose Statement</b>	1
<b>Methodology</b>	1
Test Objectives	1
Participants	1
Evaluation Methods and Metrics	2
General Protocol	2
Tasks and Scenarios	3
<b>Findings</b>	3
Table 1: Overview of Findings	4
Positive Findings	4
Figure 1. Reaction Cards Results	5
Visual Design - Readability	6
Visual Design - Microsite Perceptibility	6
Findability - Search Bar	7
Visual Design - Subsection Accessibility	7
Visual Design - Order of Information	7
HTML Construction - Irregular Page Movement	8
<b>Recommendations</b>	8
Make small text more concise and/or add more graphics	8
Figure 2. Telehealth Apps Graphics	9
Emphasize the separation between HHS.gov and HHS.gov/coronavirus	9
Figure 3. HHS.gov/coronavirus Homepage Redesign	10
Improve the search bar results	10
Add subheading links to the top of each page	10
Figure 4. Heading and Subheading Anchor Links Mockup	11
Figure 5. Heading and Subheading Anchor Links Hovered Mockup	12
Properly arrange the order of information on specific pages	12
Fix the irregular page movement caused by the header	12
<b>Appendix A: Moderator's Script</b>	14
Introduction	14
Video Recording Permission	14
Introduction to Testing	14
Testing	14
SUS Questionnaire (Appendix D)	16

Reaction Cards (Appendix E)	16
After Testing	16
<b>Appendix B: Tasks Metrics</b>	17
Table 2: Time Spent on Each Task & Success Rate	17
<b>Appendix C: Post-Task Questionnaire</b>	19
Table 3. Overall Rating Analysis	19
Table 4. Rating Analysis by Age Group	20
Table 5. What Made Tasks Easy or Difficult	21
<b>Appendix D: SUS Survey</b>	22
Table 6: Notable SUS Questions	22
Table 7: SUS Scores	23
Figure 6: SUS Scores By Age Group	24
<b>Appendix E: Reaction Cards</b>	25
Table 8: Top Four Chosen Reaction Cards	25
Table 9: Negative Reaction Cards Chosen	26

# Analyzing the Usability of HHS.gov/coronavirus

## Purpose Statement

The Department of Health and Human Services would like to evaluate whether the HHS.gov/coronavirus site is usable for the general population. Ideally, HHS.gov/coronavirus would be able to provide members of the general population with information pertaining to coronavirus. However, the website has three areas of frustration: visual design, findability, and HTML construction.

Our purpose was to carefully analyze the user experience and provide feedback based on several sources of data: a usability test, a post-task questionnaire, a System Usability Scale (SUS) evaluation, and a reaction cards evaluation. In this document, we will report on how the usability analysis was accomplished, as well as the results from testing participants. Finally, our team has a list of recommendations to fix these issues.

## Methodology

This section outlines how the test was performed for each test participant. By following this prescribed methodology, we ensured that we obtained valid and reliable usability findings.

## Test Objectives

The objectives of this test were to:

- Determine if the information on the website is findable.
- Examine if the information on the website is clear.
- Identify any components that could be improved on the website.
- Highlight any additional usability strengths and weaknesses present.

## Participants

We were tasked with testing general members of the population. We tested a total of six participants from three demographics: 18-30 years old, 31-50 years old, and 51+ years old.

We tested participants from three different demographics to ensure that we had a diverse sample of participants from the general population. Testing three demographics allowed us to better understand the varying needs and expectations of young adults through middle-aged adults for a government site related to coronavirus.

## Evaluation Methods and Metrics

Our methodology was selected to include multiple methods of data collection producing both quantitative and qualitative data. The methods are listed below:

- Usability test
  - Time spent per task
  - Success or failure per task
  - Participant behaviors, actions, and quotes
- Post-task questionnaire (Google Form)
- System Usability Scale evaluation (Google Form)
- Reaction cards evaluation (Google Form)

By conducting a usability test, we identified areas where people struggled with [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus) and made recommendations for improvement. Since usability testing employs real users accomplishing real tasks, it can provide objective performance data, such as time spent on task, error-rate, and task success or failure. The observations helped us gain empathy with users, and helped with the creation of alternative designs that better support those tasks.

In addition, our participants were asked to fill out a post-task questionnaire after each task to provide information regarding their experience with the specific task. We also chose to administer the System Usability Scale (SUS) to provide reliable quantitative data regarding the usability of [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus). In closing, the reaction cards evaluation was utilized to allow our participants to summarize their experience with [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus).

## General Protocol

Each test session began with the moderator or note taker sending a pre-test email to the participant. The pre-test email included links to the Zoom call, consent form, post-task questionnaire, SUS evaluation, and reaction cards evaluation. Once the participant joined the Zoom meeting, the moderator began the test session.

The moderator began recording the Zoom meeting once the participant submitted the consent form. After the participant began sharing their screens, the usability test commenced.

The moderator read out the scenarios and directed the participant to complete tasks associated with each scenario. After the participant completed each task, they were asked to complete a post-task questionnaire. The post-task questionnaire consisted of two questions: one which asked the participant to rate the difficulty of the task, and another which asked the participant what

made the task easy or difficult (see Appendix C). As the participant completed the tasks, the note-taker recorded any notable behaviors, quotes, and metrics (see Appendix B).

After completing the usability test, the participant was asked to complete a System Usability Scale (SUS) evaluation (see Appendix D) and a reaction cards evaluation (see Appendix E). Afterwards, the participant was thanked for their time and the test session was concluded.

## Tasks and Scenarios

Each participant was asked to complete the following tasks:

*Scenario: You think you have contracted coronavirus and want to find information about your options for testing.*

Task 1: Find what tests are available for COVID-19.

Task 2: Find if testing at home is possible.

Task 3: Find which companies offer community testing in your state.

*Scenario: You have been trying to alleviate your strong emotions of fear and worry about your health and the health of your loved ones.*

Task 4: Find out what can happen as a result of stress during an infectious disease outbreak.

Task 5: Find the number to call if you are experiencing emotional distress.

*Scenario: You are not sure if you are experiencing symptoms of coronavirus and want to speak to your doctor virtually about it.*

Task 6: Find which apps you could use to contact your doctor.

Task 7: Find if Medicare provides coverage for virtual services.

## Findings

We analyzed our findings based on a comprehensive evaluation of our data. We noted three main areas of frustration for our participants: visual design, findability, and HTML construction. See Table 1 below for an overview of findings.

*Table 1: Overview of Findings*

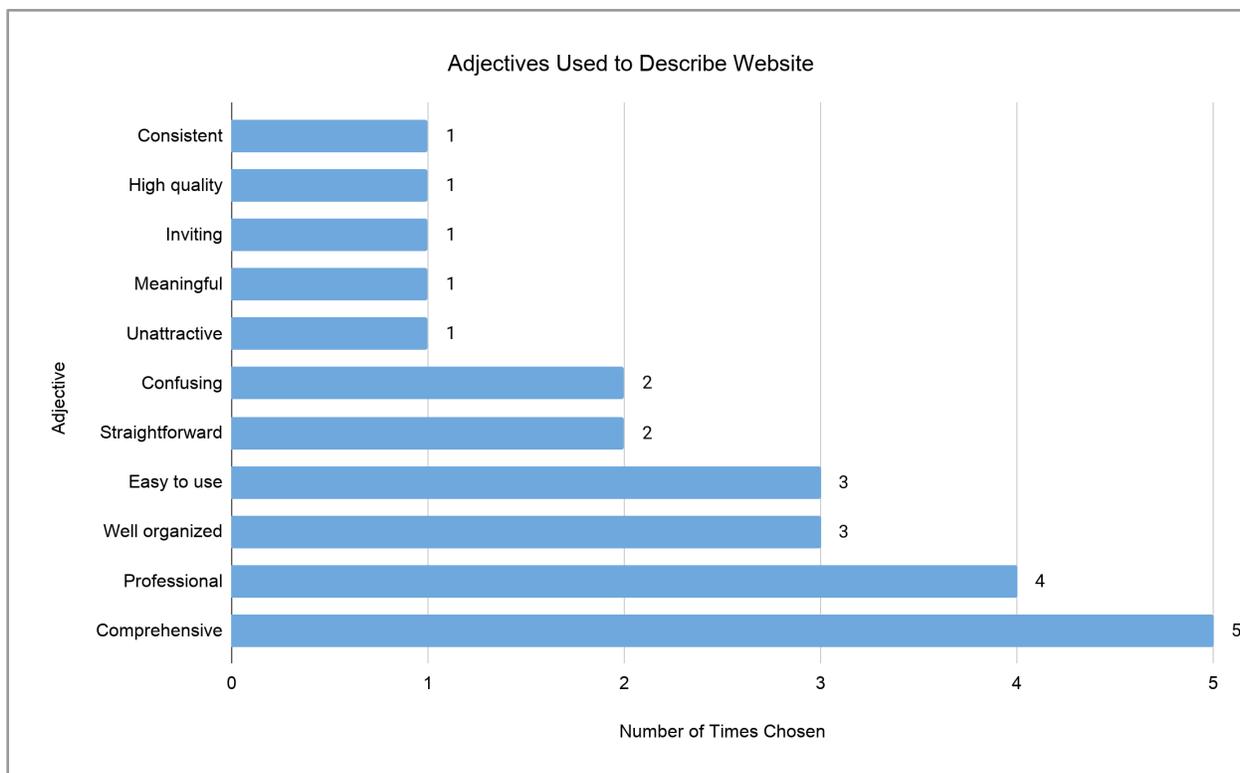
Category	Problem Identified	Description	Number of Participants Affected	Level of Severity (highest being 1)
Visual Design	Readability	There is a lot of small text on the website and users are not reading thoroughly.	6/6	1
Visual Design	Microsite Perceptibility	It is not apparent that HHS.gov/coronavirus is separate from HHS.gov.	6/6	2
Findability	Search Bar	Results from the search bar are confusing users and leading them to the wrong resources.	3/6	3
Visual Design	Subsection Accessibility	The lack of subheading links at the top of each page makes it hard for users to find specific information.	4/6	4
Visual Design	Order of Information	Some sections are arranged in an illogical order.	6/6	5
HTML Construction	Irregular Page Movement	The header causes the page to jump when scrolling.	6/6	6

The level of severity was determined by analyzing the magnitude of the problem and the impact on user experience. For instance, participants struggled greatly with readability and microsite perceptibility as opposed to the slight inconvenience of the irregular page movement, and this is reflected in our severity rating.

### Positive Findings

Our team used reaction cards for the post-test evaluation which consisted of 20 different adjectives the participant could choose from that described their overall experience with HHS.gov/coronavirus. The top four adjectives used to describe the website were all positive. As

shown in Figure 1 below, the top adjectives chosen were comprehensive, professional, well organized, and easy to use. Direct quotes of why each participant chose those words are located in Table 8 in Appendix E.



*Figure 1. Reaction Cards Results*

Five out of six participants thought the site was comprehensive. Participants thought there was a lot of useful information that explained different subjects once they found the correct section. They appreciated the educational videos. By having a comprehensive website, the user should be able to receive all the necessary information they are looking for.

Four out of six participants thought the overall website looked professional. Participants felt that the website was clean, reliable, and credible. Additionally, participants praised the sources and the database used to find testing locations by state. One participant greatly appreciated the lack of ads.

According to three out of six participants, the website was well organized and easy to use. One participant thought that the website was organized but could be improved. Furthermore, participants liked the structure of the homepage and elements such as the “I would like info on...” tab and the navigation bar of links on each page.

In addition, participants responded to certain elements positively through the post-task questionnaire. In particular, participants enjoyed the drop-down menus and the vast number of resources present. See Table 5 in Appendix C for a full list of what made the tasks easy or difficult for participants.

### Visual Design - Readability

The amount of small text that is on HHS.gov/coronavirus caused users to quickly overlook the information they were looking for. Studies show that most people do not want to spend an excessive amount of time looking for an answer on a website. Users want the information to be in an obvious location so they will not have to spend too much time or exert too much effort. Refer to Appendix B to view an explanation of the users' attention span and the tasks metrics.

One participant stated, *“The small text is not good. You don't know where to start or where to go. There is too much going on. My first impression is that the website is confusing.”* They then continued to say, *“The organization of the homepage feels messy with all the small text and tabs that are almost the same size as the text below it”* (Participant 1, 18-30).

The low readability level directly linked to the results we found from conducting a SUS analysis on the website. The website obtained an average score of 67.9. Scores above a 68 indicate that the website has a higher than average usability level. So that let us know that the majority of participants believed this website is slightly below average (see Appendix D).

### Visual Design - Microsite Perceptibility

Participants did not realize that HHS.gov/coronavirus was a microsite and contained elements on the homepage that were actually part of the main HHS.gov website. A primary example of this would be the four tabs below the search bar: “About HHS,” “Programs & Services,” “Grants & Contracts,” and “Laws & Regulations.” Four participants thought the four tabs pertained to Coronavirus resources and attempted to use those links to complete tasks.

For the tasks “Find out what can happen as a result of stress during an infectious disease outbreak” and “Find the number to call if you are experiencing emotional distress,” three participants failed to complete these tasks because they navigated through the “Programs and Services” link rather than the “Mental Health & Coping” link further down the page. Each of these three participants came from different age groups (see Table 2).

For the tasks “Find which apps you could use to contact your doctor” and “Find if Medicare provides coverage for virtual services,” two participants also failed to complete these tasks because they navigated through the “Programs and Services” link than the “Telehealth” link further down. The two participants were from the 18-30 and 51+ age groups.

Additionally, the home logo was misleading to participants. In between each scenario, participants were asked to navigate back to the [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus) page. One participant from the 31-50 age group attempted to do so by clicking the top left corner of the heading, likely believing that the HHS.gov and Coronavirus logos were one logo. However, this redirected the participant to the main HHS.gov site, and the participant struggled to return to [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus).

## Findability - Search Bar

The search bar is currently located on the top of every page, which is an invitation for users to use it; however, the results from the search bar confused the users and led them to the wrong resources. Three participants used the search bar and were unable to find what they needed. Participants tried rephrasing what they were looking for, but the results were still unsatisfying.

During one of the tasks, a participant thought they typed something incorrectly in the search bar, which led to him not getting useful results (Participant 3, 31-50). The same participant spent over 12 minutes going back and forth with the search bar and the results page (see Table 2). Another participant stated twice “*the search bar was useless*” (Participant 1, 18-30). Whenever the participants use the search bar, they become irritated and impatient (see Table 5).

## Visual Design - Subsection Accessibility

Though anchor links for each heading are linked at the top of each page, the lack of subheading links caused some participants frustration as they attempted to complete tasks. Participants ran into the most trouble on the “Testing” and “Mental Health & Coping” pages.

In regards to the “Testing” page, one participant stated that completing tasks was “*a bit difficult because [they] didn’t see any links on the side or top*” and that they “*could not find the link to where testing can be done*” (Participant 6, 51+). A participant from the 18-30 age group also had trouble finding information located within subheadings on the “Testing” page.

Similarly on the “Mental Health & Coping” page, two participants from the 31-50 and 51+ age groups had trouble finding information such as the Disaster Distress Helpline as well as signs of stress during an infectious disease outbreak.

## Visual Design - Order of Information

There are two sections that could be placed in a better location to improve users’ experience. The first section is the “Community-Based Testing Site for COVID-19” table located on the testing page. Almost all of the states are listed in alphabetical order, with the exception of Arkansas and Arizona. Alphabetically, Arizona comes before Arkansas.

All six participants failed to correctly answer whether or not Medicare provides coverage for virtual services; however, they all assumed they answered it correctly (see Table 2). The answer was in the “Billing and Reimbursement” section which is located further down on the “Telehealth” page, but participants believed the answer to be in the “Telehealth Waivers” section further up on the page. We believe that none of the users wanted to read all the way to the bottom of the page.

### HTML Construction - Irregular Page Movement

When scrolling downwards, the header (with links to HHS.gov and HHS.gov/coronavirus) disappears and reappears once the user scrolls upwards. However, when the header reappears, the information on the page jumps up. This can be seen most clearly when slowly scrolling up on a page after scrolling down.

The page jumping occurred with all six participants but only one participant from the 18-30 age group commented on it. The participant noted that “*the page jumps around when scrolling*” and that this was something that hindered his experience of the website (Participant 2, 18-30).

## Recommendations

### 1. Make small text more concise and/or add more graphics

Due to the amount of unnecessary text, we recommend two options. The first option is to reduce the amount of text by making it more concise. The second option is to replace some of the text with graphics. Both options would allow users to quickly find what they need.

Four out of six participants failed to find the list of available apps that could be used to contact their doctor virtually. The failure was due to the list of apps being located in a small paragraph of text. Users prefer graphics over paragraphs of small text.

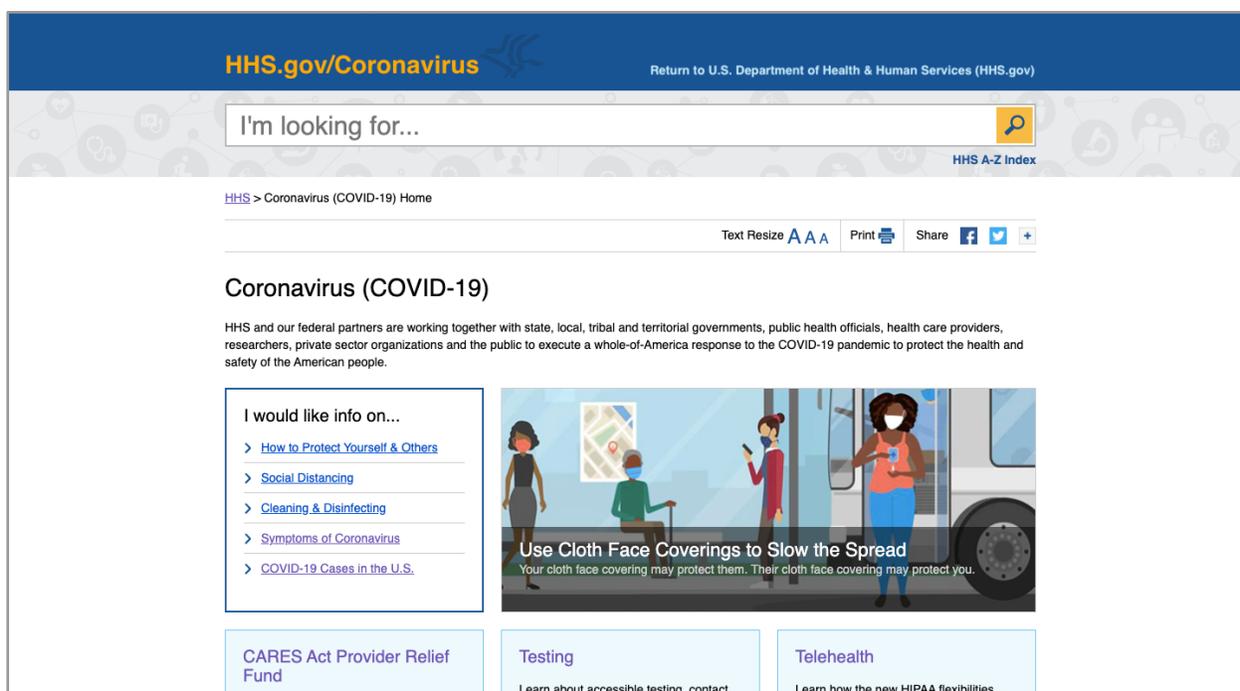
Provided below in Figure 2, is a mockup of possible graphics that could be used to indicate the available telehealth apps.

Figure 2. Telehealth Apps Graphics

## 2. Emphasize the separation between HHS.gov and HHS.gov/coronavirus

A number of participants believed that the four tabs below the search bar (“About HHS,” “Programs & Services,” “Grants & Contracts,” and “Laws & Regulations”) were also Coronavirus resources. In addition, one participant attempted to return to the main HHS.gov/coronavirus page by clicking the logo in the top left corner but was redirected to HHS.gov instead.

As such, it is recommended that the separation between HHS.gov and HHS.gov/coronavirus is made more prominent. See Figure 3 for a mockup of a possible redesign for the HHS.gov/coronavirus homepage.



*Figure 3. HHS.gov/coronavirus Homepage Redesign*

This mockup shows the removal of the four tabs underneath the search bar to draw attention to the more relevant Coronavirus resources linked below.

In addition, two changes have been made to the header. Firstly, the “HHS.gov” and “Coronavirus” logos on the left have been replaced with an “HHS.gov/Coronavirus” logo to indicate that clicking this logo would redirect the user to HHS.gov/coronavirus. Secondly, a link has been added to the right that states “Return to U.S. Department of Health & Human Services (HHS.gov)” to provide users with a way to navigate to the main HHS.gov page.

### 3. Improve the search bar results

The results from the search bar are inadequate. As stated earlier, the results from the search bar confused users and led them to the wrong resources. The results need to be more relevant to what the users are specifically typing into the search bar. By updating the code for the search bar results to be more inclusive, it would allow the users to quickly find exactly what they are looking for. It would also reduce the level of irritation for the users.

### 4. Add subheading links to the top of each page

Participants stated that some of the information was difficult to find, as there was no direct link at the top of the page. A lot of the information participants were asked to find were located within the subheadings. However, while headings were linked at the top of the page, subheadings were not.

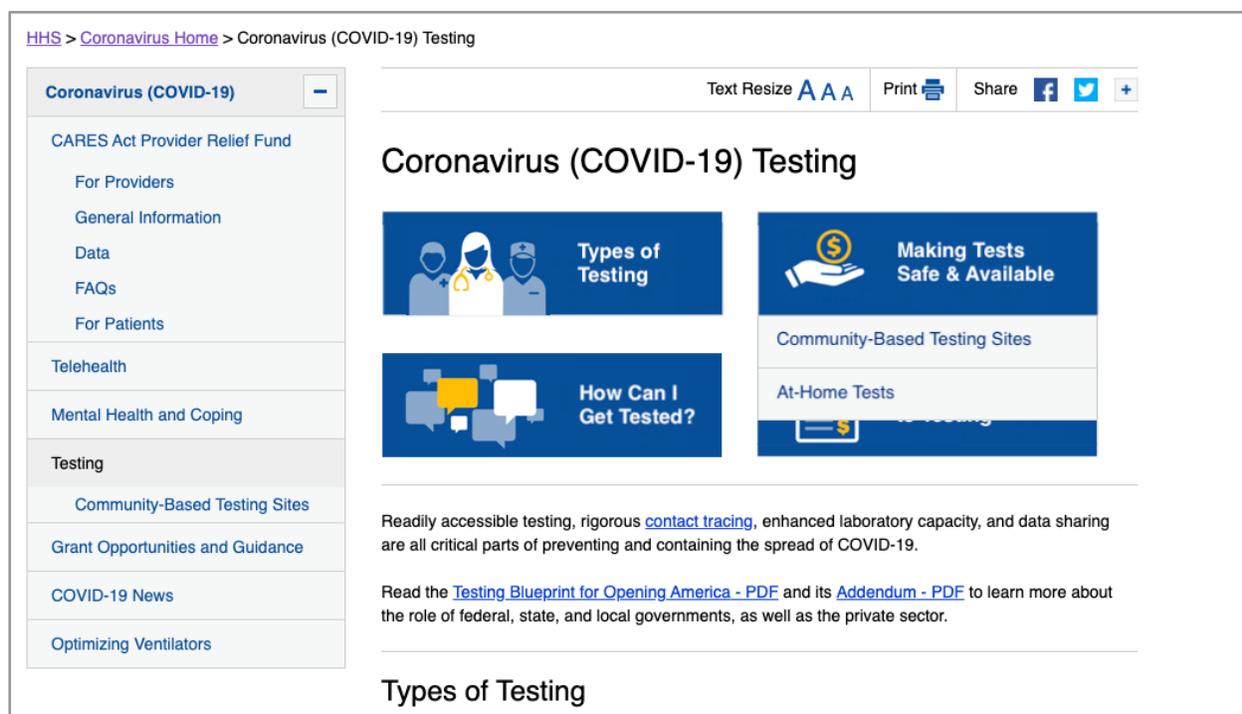
In order to help users locate specific information more efficiently, make subheading links accessible from the top of the page. As this could cause the links at the top to be too overwhelming, mockups have been added to provide a possible redesign of the anchor links at the top of each page.

See Figure 4 below for a possible redesign of the anchor links on the “Testing” page. The four tabs display the four main headings on the page and would also function as anchor links.



*Figure 4. Heading and Subheading Anchor Links Mockup*

Once the user hovers over the tabs, links to each heading’s subheadings are displayed. See Figure 5 below for a demonstration of hovering over the “Making Tests Safe & Available” tab to reveal the “Community-Based Testing Sites” and “At-Home Tests” subheading anchor links.



*Figure 5. Heading and Subheading Anchor Links Hovered Mockup*

## 5. Properly arrange the order of information on specific pages

The misarranged two states on the “Community-Based Testing Site for COVID-19” table located on the testing page could cause confusion. It could be corrected by alphabetizing the states Arkansas and Arizona. Alphabetically, Arizona comes before Arkansas.

The “Billing and Reimbursement” section should come before the “Waivers from the Centers for Medicare and Medicaid Services (CMS)” section. The correction could decrease the number of misinformed users.

## 6. Fix the irregular page movement caused by the header

Though the header contains valuable information such as links to the main HHS.gov and HHS.gov/coronavirus pages, in addition to a search bar, the jumpiness negatively affects users’ experience on the website.

One possible solution could be to keep the header visible only when the user is at the top of the page. This would mean that the header is visible when the user is at the top of the page and not appear at any other time.

Another possible solution could be to affix the header to the top of the page. This would mean that the header does not disappear from the top of the user's screen at all and continues to be accessible as the user scrolls up and down.

## Appendix A: Moderator's Script

This script was adapted from (Barnum, 2011, pp. 193-195).

### *Introduction*

Hello! Thank you for being here with us today.

My name is Cathy. Sydnei and I are here to evaluate the usability of a government site related to coronavirus. For your information, I am reading from a script to ensure I say the exact same thing to each participant and to ensure that nothing is skipped or missed.

Your participation will help us understand what changes should be made to develop an informative, usable website.

### *Video Recording Permission*

This session will be recorded. The reason for recording the session is so that we can collect additional data after the test. Please complete the legal consent form to give us permission to record your use of the site. If you have any questions, please feel free to ask.

**(Start Zoom recording.)**

### *Introduction to Testing*

Before we begin, I will explain how this test will work.

I will ask you to view a government site related to coronavirus and give you tasks to complete. I really appreciate your feedback about your experience, so I would like you to think aloud as you navigate the site. You may want to say things like, "I'm clicking this because..." or "I don't like this because...".

Additionally, this test is meant to evaluate the website, not your abilities. You do not need to know anything about the website beforehand.

Do you have any questions before we begin?

In the center of the Zoom toolbar, there is a large green button that says "share screen". Please click that. Now there will be an option asking which screen you would like to share; please share whichever display you will be using (desktop/screen 1).

**Additionally, please tell me which browser you are using.**

Thank you. Please navigate to [www.HHS.gov/coronavirus](http://www.HHS.gov/coronavirus).

### *Testing*

I have several tasks for you to complete as we go through the site. Remember, this is not a test of you; it is a test of the website, and I'm very interested in your reactions about it. Please remember to think out loud.

*Scenario: You think you have contracted coronavirus and want to find information about your options for testing.*

Task 1: Find what tests are available for COVID-19.

Please fill out the post-task questionnaire for Task 1. Please tell us what you are typing and why.

Task 2: Find if testing at home is possible.

Please fill out the post-task questionnaire for Task 2. Please tell us what you are typing and why.

Task 3: Find which companies offer community testing in your state.

Please fill out the post-task questionnaire for Task 3. Please tell us what you are typing and why.

**Please return to [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus).**

*Scenario: You have been trying to alleviate your strong emotions of fear and worry about your health and the health of your loved ones.*

Task 4: Find out what can happen as a result of stress during an infectious disease outbreak.

Please fill out the post-task questionnaire for Task 4. Please tell us what you are typing and why.

Task 5: Find the number to call if you are experiencing emotional distress.

Please fill out the post-task questionnaire for Task 5. Please tell us what you are typing and why.

**Please return to [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus).**

*Scenario: You are not sure if you are experiencing symptoms of coronavirus and want to speak to your doctor virtually about it.*

Task 6: Find which apps you could use to contact your doctor.

Please fill out the post-task questionnaire for Task 6. Please tell us what you are typing and why.

Task 7: Find if Medicare provides coverage for virtual services.

Please fill out the post-task questionnaire for Task 7. Please tell us what you are typing and why.

Thank you for your feedback. We have two extra forms for you to fill out in order to help us gather some more data.

*SUS Questionnaire (Appendix D)*

Please go to the SUS questionnaire. This will help us understand your experience with this website. Additionally, please explain why you are choosing each answer.

*Reaction Cards (Appendix E)*

Please go to the reaction cards form. This form contains twenty different words that may be used to describe HHS.gov/coronavirus. Please choose four words from the list that you would use to describe your experience with the site and please elaborate on why you chose those words.

*After Testing*

Thank you for participating in this test! We really appreciate your feedback and we hope you have a wonderful day.

## Appendix B: Tasks Metrics

Table 2: Time Spent on Each Task & Success Rate

	#1	#2	#3	#4	#5	#6	Average*
<b>1: Find what tests are available for COVID-19.</b>	9:36	1:12	1:40	2:32	3:14	:17	3:05
	success	success	success	failure	success	success	5/6
<b>2: Find if testing at home is possible.</b>	5:09	:31	4:49	:44	1:03	2:38	2:29
	success	success	success	success	success	failure	5/6
<b>3: Find which companies offer community testing in your state.</b>	4:05	:30	:44	1:05	:42	4:32	1:56
	failure	success	success	success	success	success	5/6
<b>4: Find out what can happen as a result of stress during an infectious disease outbreak.</b>	3:33	1:04	4:10	2:42	1:56	3:13	2:46
	failure	success	failure	failure	failure	failure	1/6
<b>5: Find the number to call if you are experiencing emotional distress.</b>	4:14	:26	4:05	3:38	:10	1:37	2:21
	failure	success	success	failure	success	success	4/6
<b>6: Find which apps you could use to contact your doctor.</b>	3:49	:49	9:00	3:40	2:55	2:04	3:42
	failure	success	failure	success	failure	failure	2/6
<b>7: Find if Medicare provides coverage for virtual services.</b>	3:40	:32	4:51	2:27	:11	1:07	2:08
	failure	failure	failure	failure	failure	failure	0/6

\*Averages are calculated by adding up the number of successes/six participants

Research shows that users tend to spend an average of 45 seconds on any website, so that should be considered the expected amount of time. With that in mind, the average time spent on [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus) for each task is well over 45 seconds. No task took an average of 45 seconds or less. The following list indicates how much longer participants took in contrast to the average time:

- Tasks 3 and 7 took more than twice the expected amount of time.
- Tasks 2, 4, and 5 took more than three times the expected amount of time.
- Tasks 1 and 6 took more than four times the expected amount of time.

All six participants failed the last task because they strongly believed they found the correct answer. As a result, out of all of the tasks, the average time for this task is the second lowest.

## Appendix C: Post-Task Questionnaire

Participants responded to the following questions after each task:

1. How difficult was this task to accomplish?
  - a. Straightforward
  - b. Neutral
  - c. Difficult
2. What made this task easy or difficult for you?

*Table 3: Overall Rating Analysis*

	1 (Straightforward)	2 (Neutral)	3 (Difficult)
1: Find what tests are available for COVID-19.	4 participants	1 participant	1 participant
2: Find if testing at home is possible.	3 participants	1 participant	2 participants
3: Find which companies offer community testing in your state.	5 participants	0 participants	1 participant
4: Find out what can happen as a result of stress during an infectious disease outbreak.	3 participants	1 participant	2 participants
5: Find the number to call if you are experiencing emotional distress.	3 participants	2 participants	1 participant
6: Find which apps you could use to contact your doctor.	4 participants	0 participants	2 participants
7: Find if Medicare provides coverage for virtual services.	5 participants	1 participant	0 participants

Table 4: Rating Analysis by Age Group

	#1	#2	#3	#4	#5	#6	Average
1: Find what tests are available for COVID-19.	2	1	1	1	3	1	1.5
2: Find if testing at home is possible.	1	1	3	1	2	3	1.83
3: Find which companies offer community testing in your state.	1	1	1	1	1	3	1.33
4: Find out what can happen as a result of stress during an infectious disease outbreak.	3	1	1	2	1	3	1.83
5: Find the number to call if you are experiencing emotional distress.	2	1	2	3	1	1	1.67
6: Find which apps you could use to contact your doctor.	1	1	3	1	3	1	1.67
7: Find if Medicare provides coverage for virtual services.	1	1	2	1	1	1	1.17

Ratings were quantified as follows: ratings of “Straightforward” are equivalent to a 1, ratings of “Neutral” are equivalent to a 2, and ratings of “Difficult” are equivalent to a 3.

The orange columns represent the 18-30 age group, the green columns represent the 31-50 age group, and the purple columns represent the 51+ age group.

Most participants thought that the task “Find if Medicare provides coverage for virtual services” was straightforward. Unfortunately, all participants failed the task as all participants were either led offsite or believed that accessing the “Telehealth waivers” section was the correct way to complete the task.

Table 5: What Made Tasks Easy or Difficult

	What made this task easy?	What made this task difficult?
1: Find what tests are available for COVID-19.	<ul style="list-style-type: none"> <li>- Immediate visibility of the category</li> <li>- Search bar</li> <li>- Format was easy to read</li> </ul>	<ul style="list-style-type: none"> <li>- Test types did not make sense until participant watched the “An Introduction to COVID-19 Tests” video</li> <li>- Attempting to complete the task led participant offsite</li> </ul>
2: Find if testing at home is possible.	<ul style="list-style-type: none"> <li>- Bolded “At-Home Tests” subheading</li> </ul>	<ul style="list-style-type: none"> <li>- Search bar was not helpful</li> <li>- Information was not visible</li> </ul>
3: Find which companies offer community testing in your state.	<ul style="list-style-type: none"> <li>- Easily accessed from “Testing” page</li> <li>- Useful subsection on the “Testing page”</li> </ul>	<ul style="list-style-type: none"> <li>- Did not see any links at the top that pointed towards “Community-Based Testing”</li> <li>- Attempting to complete the task led participant offsite</li> </ul>
4: Find out what can happen as a result of stress during an infectious disease outbreak.	<ul style="list-style-type: none"> <li>- Boxes on main page are good directory tools</li> </ul>	<ul style="list-style-type: none"> <li>- Search bar was not helpful</li> <li>- Information was not visible</li> <li>- Attempting to complete the task led participant offsite</li> </ul>
5: Find the number to call if you are experiencing emotional distress.	<ul style="list-style-type: none"> <li>- Easily found on the “Mental Health and Coping” page</li> <li>- Heading was clear</li> </ul>	<ul style="list-style-type: none"> <li>- Attempting to complete the task led participant offsite</li> </ul>
6: Find which apps you could use to contact your doctor.	<ul style="list-style-type: none"> <li>- “Telehealth” box easy to find</li> </ul>	<ul style="list-style-type: none"> <li>- Information was not visible</li> <li>- Attempting to complete the task led participant offsite</li> <li>- “Telehealth” box description was not good enough</li> </ul>
7: Find if Medicare provides coverage for virtual services.	<ul style="list-style-type: none"> <li>- “Medicare” information clearly labeled</li> </ul>	<ul style="list-style-type: none"> <li>- Attempting to complete the task led participant offsite</li> </ul>

## Appendix D: SUS Survey

*Table 6: Notable SUS Questions*

<b>Notable SUS Questions</b>	<b>1 (Strongly disagree)</b>	<b>2 (Disagree)</b>	<b>3 (Neutral)</b>	<b>4 (Agree)</b>	<b>5 (Strongly agree)</b>
I think I would need the support of a technical person to be able to use this website.	5 participants		1 participant		
I found the various functions in this website were well integrated.		1 participant		5 participants	
I thought the website was easy to use.			3 participants	2 participants	1 participant
I felt very confident using the website.			2 participants	3 participants	1 participant
I needed to learn a lot of things before I could get going with this website.	3 participants	1 participant		2 participants	
I found the website unnecessarily complex.	1 participant	2 participants	2 participants	1 participant	

I found the website very cumbersome to use.	1 participant	3 participants	1 participant	1 participant	
---	---------------	----------------	---------------	---------------	--

The one participant who answered “neutral” to “I think I would need the support of a technical person to be able to use this website” stated that they felt “the search bar was useless” (Participant 1, 18-30).

The one participant who answered “disagree” to “I found the various functions in this website were well integrated” stated that they felt the “search bar was unnoticeable and the [“I would like info on...”] tabs should be relevant” (Participant 1, 18-30).

One participant who answered “agree” to “I needed to learn a lot of things before I could get going with this website” stated that “there is definitely a learning process” and “even after the test, [they] feels like [they don’t] know how to work the site” (Participant 1, 18-30).

*Table 7: SUS Scores*

Age Group	SUS Score	Average by Age Group
18-30	32.5	57.5
	82.5	
31-50	57.5	75
	92.5	
51+	67.5	71.25
	75	
<b>Total Average</b>		<b>67.9</b>

The standard average system usability scale (SUS) score is 68. Scores above this mean that the website has a higher than average usability level, and scores below this indicate that the website has lower than average usability. Our average test SUS score was 67.9, which indicates that HHS.gov/coronavirus has a slightly lower than average usability level.

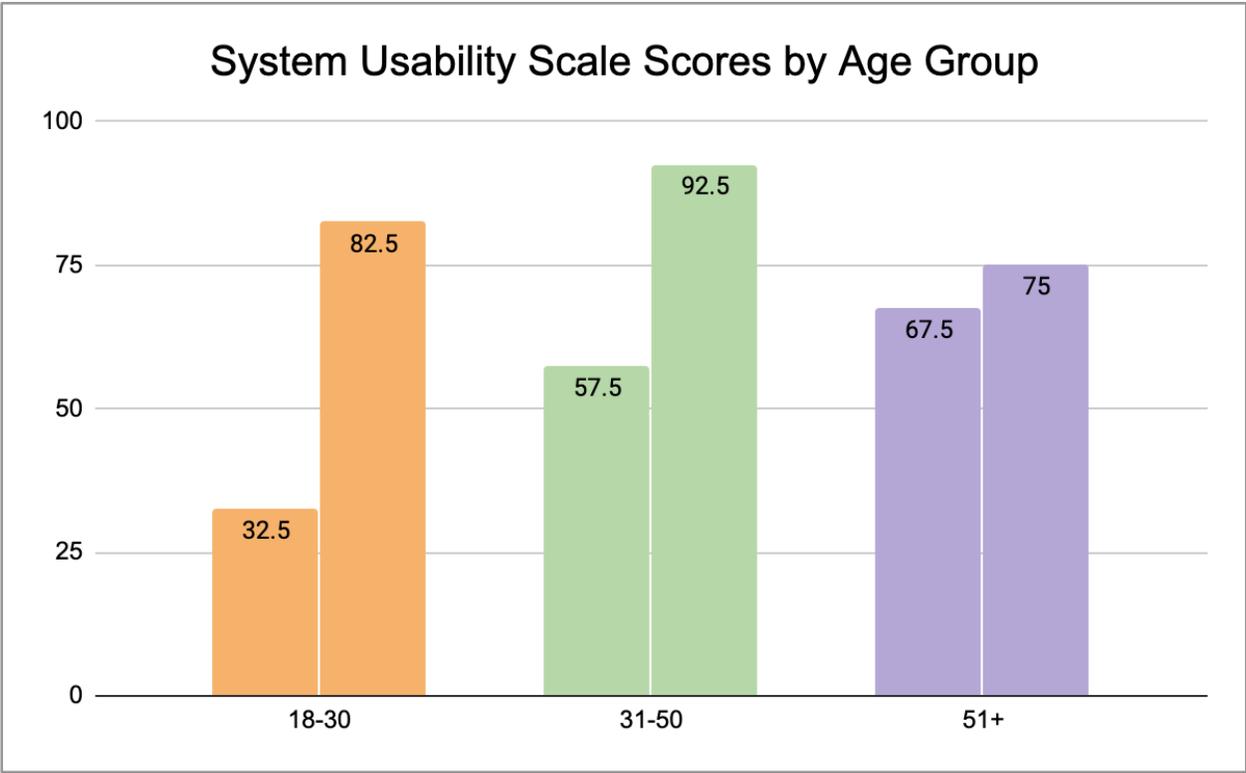


Figure 6. SUS Scores By Age Group

## Appendix E: Reaction Cards

*Table 8: Top Four Chosen Reaction Cards*

<b>Words Chosen</b>	<b># of Times Chosen</b>	<b>Quote</b>
Comprehensive	5	<p>“Once you find the right section, there is a lot of good information. I really like the testing page video. I would also enjoy reading about some of the information.” (Participant 1, 18-30)</p> <p>“The articles [from the external website] got into some dense stuff. That could be helpful.” (Participant 3, 31-50)</p> <p>“There are explanations for different things.” (Participant 5, 51+)</p> <p>“I believe the website is comprehensive, but I would need to look at the website a bit longer.” (Participant 6, 51+)</p>
Professional	4	<p>“The website has credibility and it is reliable. The content is professional but the visual design is not.” (Participant 1, 18-30)</p> <p>“It was clean cut. There were no spam ads popping up.” (Participant 3, 31-50)</p> <p>“It was well designed. The sources were great and the database was working well in terms of finding locations by state.” (Participant 5, 51+)</p>
Well organized	3	<p>“The structure of the homepage was easy to use.” (Participant 2, 18-30)</p> <p>“The website was organized but it could use a bit more organizing.” (Participant 6, 51+)</p>
Easy to use	3	<p>“I like the ‘I would like info on...’ tab on the homepage.” (Participant 5, 51+)</p>

*Table 9: Negative Reaction Cards Chosen*

<b>Words chosen</b>	<b># of Times Chosen</b>	<b>Quote</b>
Confusing	2	<p>“The small text is not good. You don’t know where to start or where to go. There is too much going on. My first impression is that the website is confusing.” (Participant 1, 18-30)</p> <p>“I expected to find more information about testing. I also wanted to know about the apps available for telehealth.” (Participant 5, 51+)</p>
Unattractive	1	<p>“The organization of the homepage feels messy with all the small text and tabs that are almost the same size as the text below it.” (Participant 1, 18-30)</p>