

Heuristic Evaluation of

<https://www.cms.gov/>

This is the website of the Centers for Medicare and Medicaid Services. The primary functions of the website are to empower patients by allowing them to work with their doctors and make health care decisions that are best for them. The information supposedly available on the website includes quality and costs of health care providers and plans.

Places of occurrence	Usability problem description	Heuristic violated	Average severity score
Opening screen & main display	No information that signifies it is the home/ main page. Also, there are 6 different sections contained in the page. While some indicate “menu” or “news” sections, 2 of them do not contain a heading/ title. Users could be confused about the current state of the system and where they can go.	Visibility, minimalist	2.5
“Medicare” page (physical interface)	The home page contains a plethora of information that could overwhelm users. There are 24 subtitles in the page, each of which contains 10 hyperlinks. So altogether the hyperlinks available for users to click into in the same page amount to about 200.	Minimalist	3.5
	Furthermore, abbreviations, without definitions, frequently appear (i.e. HCPCS, ICD-10, PPS). Users without prior specific knowledge of Medicare/ Medicaid will find it difficult to navigate	Language, memory	3

<p>“Prescription Drug Coverage – General Information” page (options)</p>	<p>24 hyperlinks on the new prescription drug benefits are available for launch on the page. When a link is clicked, a zip file will automatically be downloaded to your computer. Local software is required to unzip the file. Sufficient storage of the local hard disk is also required for the file to be successfully saved. Some files are 22MB large.</p>	<p>Document, control, closure, minimalist</p>	<p>3.25</p>
	<p>Users cannot undo the process if they realise they have launched a file with unwanted information. Only way will be to navigate back to the page and try to download another one.</p>	<p>Undo</p>	<p>2</p>
<p>“Learn about our responses to recent emergencies and find the latest program guidance.” Tap on main page</p>	<div data-bbox="391 961 461 1016" data-label="Image"> </div> <p>The large icon commonly perceived as a “warning sign” is used to draw user’s attention and navigation to the tap that provides information of their latest program guidance. This may mislead users into thinking that an error has occurred.</p>	<p>Match</p>	<p>3.25</p>
<p>Contact</p>	<p>Despite all the required information of the contact form having been filled out, no contact details have been displayed to the user upon clicking the “show contacts”.</p>	<p>Error</p>	<p>3</p>
	<p>I then redo my search following the “search tips” appeared at the bottom of the page, but still is not able to get the desired information. The error message does not tell the user what they should do.</p>	<p>Message, visibility</p>	<p>2.5</p>

Conclusion

I selected a website whose main users are Medicaid and Medicare qualifiers to conduct a heuristic evaluation. I applied the 14 heuristics in Zhang's article to the user interfaces of the website, identified usability problems in various pages, sections and functions. 11 violations are found. Minimalist is the most frequently violated heuristic (3 times), followed by visibility (2 times). An example of a violation of the minimalist heuristic would be the number of hyperlinks appear one single page, under many different subheadings. A way to improve this can be to include dropdown menus for each subheading, which will allow users to only select the subheadings of their interests— rather than displaying everything in one screen. An example for the visibility heuristic violation is that “when the “show contacts” button is pressed, after entering all of the required values of the form, a message appears that reads “There are 0 contacts. Please alter your search criteria and try again.” A better phrasing would be to specify what alterations they user will have to make in order to get the contacts they want.

Given that the target users of the website are people who qualify for Medicaid and Medicare, who tend to be at older age and have lower education level, the website should be simplified to accommodate to the characteristics of the population.