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TCID 672: Advanced Document Design
Week 1 Assignment: Document Evaluation

Web Page Evaluation and Comparison: COVID information from the State of Minnesota vs. Mayo Clinic

Introduction

As the COVID-19 pandemic continues, I had been staying up to date with information on Minnesota case rates and test-positivity rates via the Star Tribune newspaper website's Coronavirus tracking page. When the site discontinued that feature, I did a web search to replace that information source. These two documents are examples of what I found. I chose these specific examples to compare because as a user, I found the Mayo Clinic document to be more informative and clearer and was able to identify areas where the Department of Health's content and presentation were lacking.

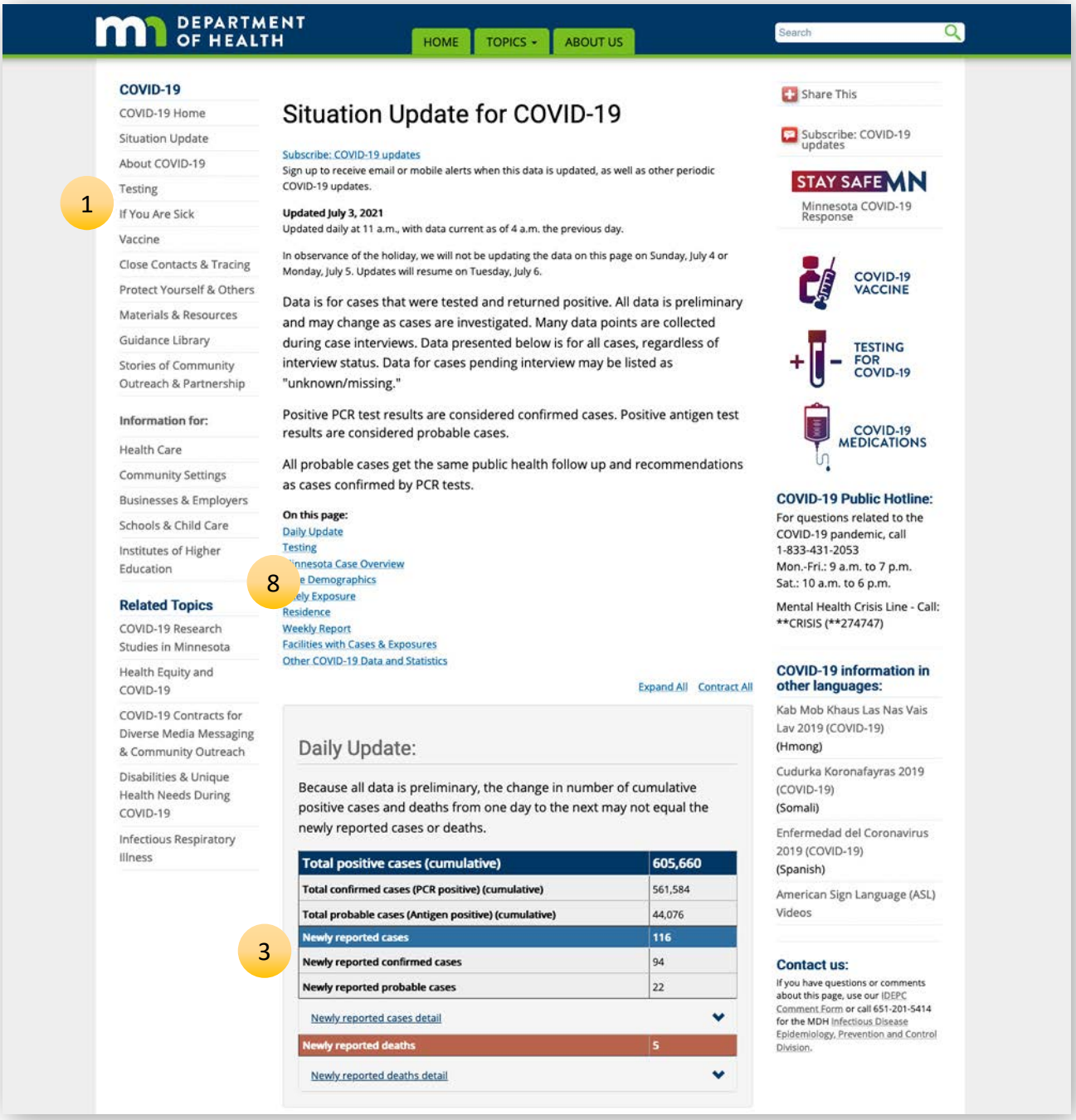
Since these are web pages, there are links and interactive features that a static document would not include. However, web pages are documents too, and can be evaluated by many of the same criteria. According to David M. Levy, "a document is whatever is available and evidenr to the user's eyes and hands." (Kimball & Hawkins, 2008, p. 5).

(See following pages for screenshots)

Numbered labels (1) mark features that will be discussed in the text to follow.

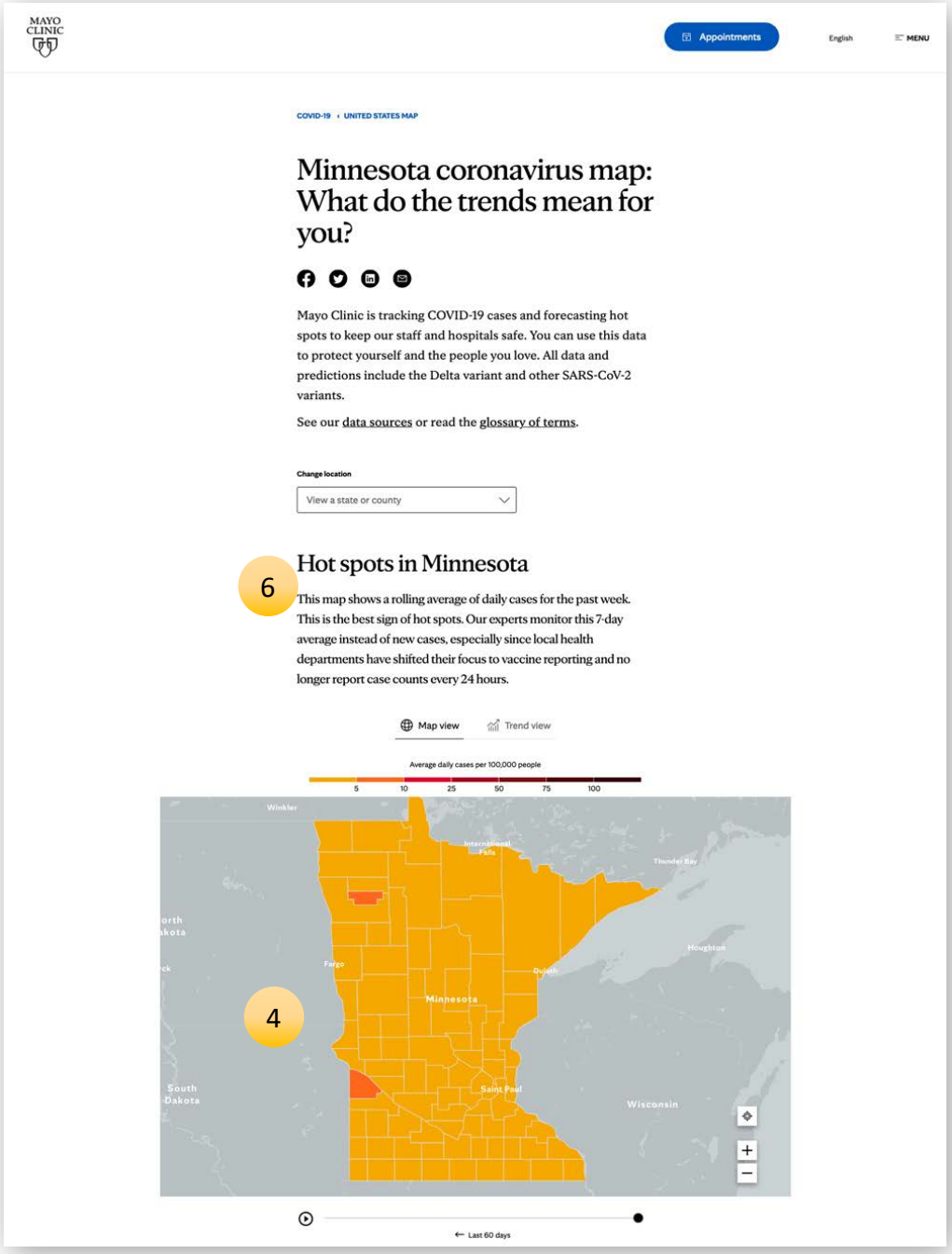
Document 1: Minnesota Department of Health Coronavirus Situation Update https://www.health.state.mn.us/diseases/coronavirus/situation.html captured on July 7, 2021

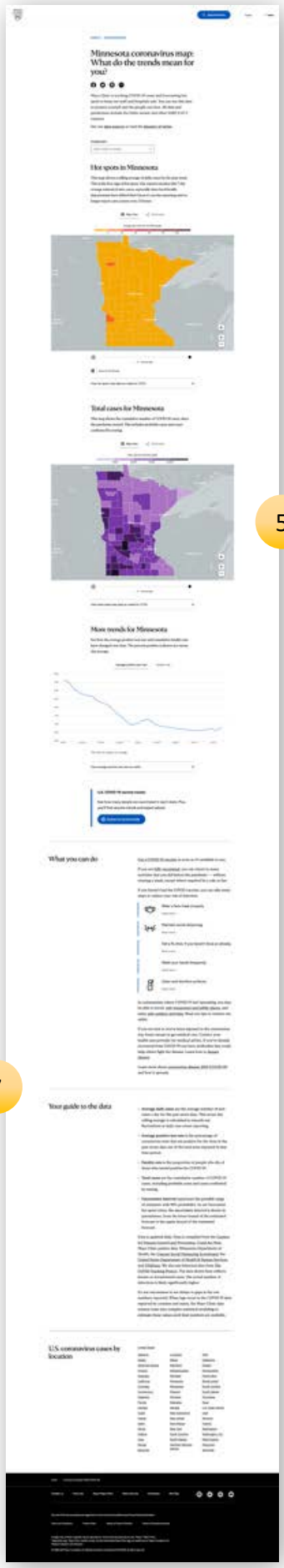
This is an “above the fold” (visible with minimal scrolling) screenshot of the Minnesota Department of Health webpage:



Document 2: Mayo Clinic Minnesota Coronavirus Map
https://www.mayoclinic.org/coronavirus-covid-19/map/minnesota captured on July 7, 2021

This is an “above the fold” (visible with minimal scrolling) screenshot of the Mayo Clinic webpage:





This is a full-length view of each of the pages. Note that this is not quite to scale; the Department of Health page has a longer scroll height than the Mayo Clinic page.

(For a more detailed view, see the full-size PNG images included with this paper, or visit the links given on the first page.)

Delivery

Both documents are informational webpages, composed of content chunks (including text, charts, navigation, and other objects) brought together into a single page by the web server. The information is time-dependent and regularly updated with current statistics. Both pages include charts and infographics in addition to text.

The Department of Health page provides information for the general public, and also for journalists and organizations that need to get numbers and data directly from the State of Minnesota (rather than a secondary source).

The Mayo Clinic page is assembled by experts from the Mayo Hospital system in Minnesota and the audience is individual community members. In addition, the Mayo Clinic page appears to be optimized for users of mobile devices (simple responsive layout, minimized navigation).

Rhetoric

The audience for the Department of Health page is more institutional (less oriented towards casual browsing) than the Mayo Clinic audience. The tone is impersonal and reads like a disclaimer:

> Data is for cases that were tested and returned positive. All data is preliminary and may change as cases are investigated. Many data points are collected during case interviews. Data presented below is for all cases, regardless of interview status. Data for cases pending interview may be listed as "unknown/missing."

Both pages provide information about current infection rates and vaccination statistics, but the tone of the Mayo page is more personable and informal. The Mayo page also includes more text content directed towards the individual user. Care was obviously taken to consider the emotional impression or *ethos* (the user's impression about the speaker or author of the document (Kimball & Hawkins, 2008):

> Mayo Clinic is tracking COVID-19 cases and forecasting hot spots to keep our staff and hospitals safe. You can use this data to protect yourself and the people you love. All data and predictions include the Delta variant and other SARS-CoV-2 variants.

The Minnesota Department of Health page includes additional categories of data (likely exposure, type of residence, etc.) while the Mayo Clinic page is more streamlined to focus on data that is useful to a wider audience, such as current hot spots and test positivity rate.

Aesthetics

Layout

The Department of Health layout includes a relatively simple header/top navigation, but both sidebars (left and right sides of the page) are full of navigation links, some for the current site and some that link to more distant resources. (See [1] on the labeled screenshots above). This leads to a dense, cluttered impression (clutter and lack of white space is one of the "13 amateur errors" outlined by Golombisky and Hagen (2017, p. 38). In contrast, the Mayo Clinic site has opted to hide the site navigation under a small "Menu" button (see [2]) and has no distracting sidebar navigation or widgets. The content is front and center, with plenty of white space.

Another thing to notice on the Department of Health site is the overuse of boxes and borders (see full-length screenshot on page 4). Borders are usually intended by the designer to separate content. A better approach is to "think twice before using a border or a box at all. Negative space can do the same separating job" (Golombisky & Hagen 2017, p. 35-36).

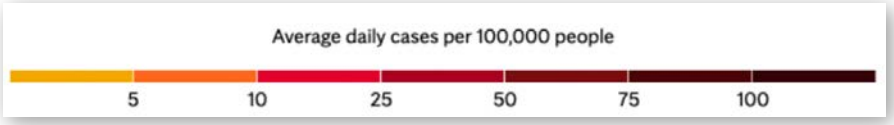
Color

Both sites appear to be working with a specific color palette, which is likely codified in the site's stylesheets according to a design guide. Mayo's content (excepting the infographics) follows a minimal palette of black and bright blue on a white background:

The Department of Health's colors follow the standard set on other State of Minnesota websites, with brand colors of dark blue and lime green, using black for text and white or light gray for background. However, this site adds several additional colors for table headers [3], possibly to differentiate content:

While the colors above are not used to convey information, the colors in the maps on the Mayo Clinic page do have a purpose. In the first map [4], caution is implied by the yellow-to-red scale

showing counties with higher levels of infection. In addition, this scale is accessible for different levels of color vision, because it works via value (lightness or darkness) as well as hue:



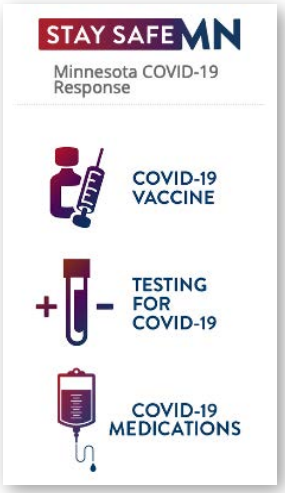
A second map on the Mayo Clinic page is based on a purple hue [5], but again uses value to indicate relative density (of cases overall).

Both sites meet accessibility guidelines for sufficient color contrast for web text.

Graphics

The Department of Health website and the Mayo Clinic site both use graphics mainly for informational purposes; there are multiple graphs on the state site, and map-based infographics on the Mayo site. However, icons are also used on both pages:

Below, State of Minnesota website (sidebar); right, Mayo Clinic website (appears in main content column)



Note that the state website appears to have a distinct color palette for the “Stay Safe MN” initiative.

Typography

Typography on the Department of Health site follows a hierarchy that is sometimes inconsistent, with headers at times appearing smaller or un-emphasized alongside body copy. All fonts used are a nondescript sans-serif, leading to a sameness that feels unconsidered or disorganized.

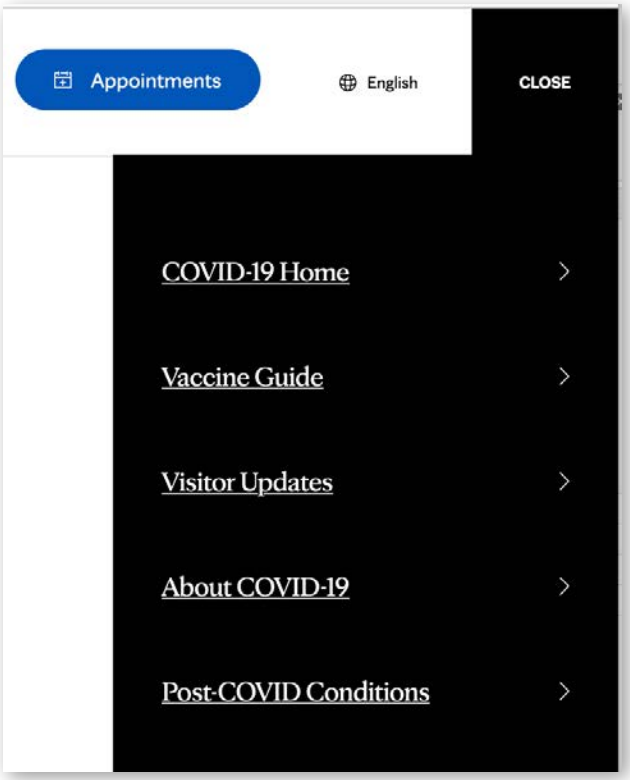
The Mayo Clinic site appears to have more control over its typography. A clear hierarchy [6] is created between headlines and body text, although both are a serif font. Less important text or notes are rendered in a much smaller, sans-serif font. Further down on the page, a combination of layout and typography sets up the headlines on the left, and content on the right, adding restful-to-the-eye white space and clarity [7].

Usability

Navigation

As mentioned in the discussion of page layout, the Department of Health page includes many visible navigation elements in the sidebars [1]. This does provide a one-click path to other pages, but it is not always clear what the user will find on those pages, or whether they will lead to related pages on this site or to external sources. This site also uses an in-page navigation system of anchor links [8] which link to content further down on the page. This is not as user-friendly as it could be: when clicking an anchor link from that menu, the user is dropped into new content, and the corresponding headline is out-of-frame (a common issue with within-page links). In addition, upon arrival at the new position, there is no “back to top” button or link to return the user to the menu (but at least the browser’s back button functionality has been preserved).

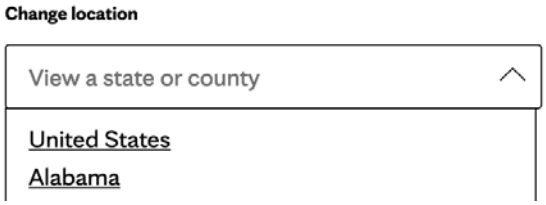
The Mayo Clinic page hides the main navigation under an icon in the header, a common convention for web pages that are likely to be viewed on mobile devices [2]. When expanded, it looks like this:

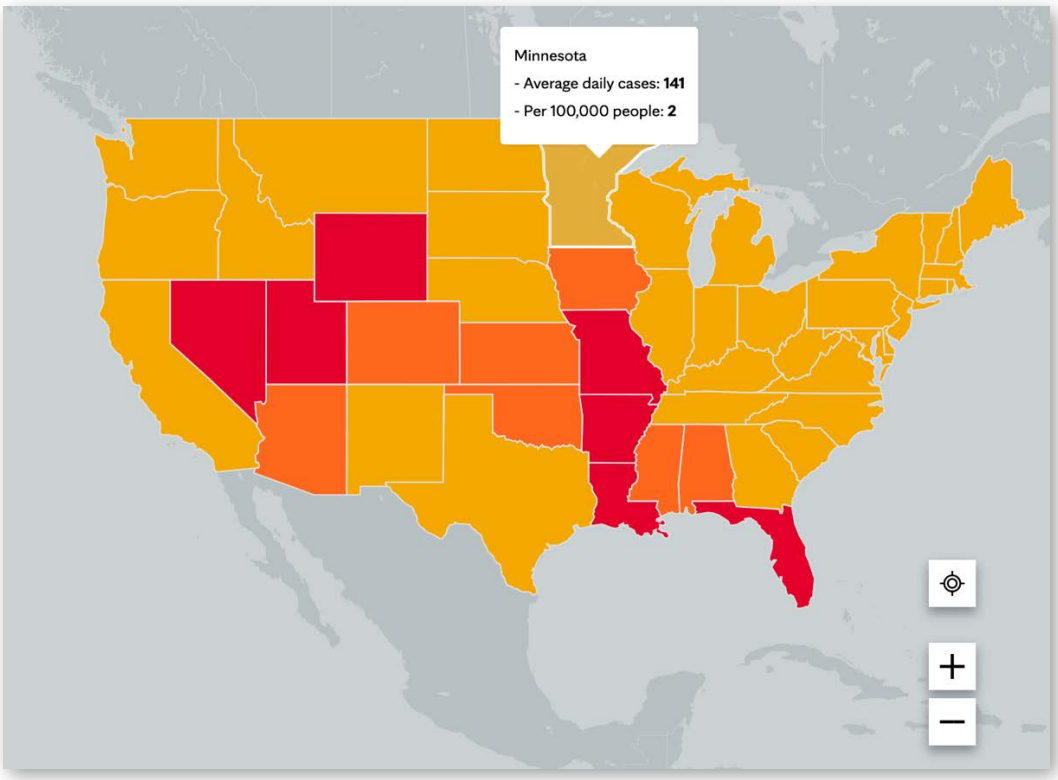


While this looks simple and usable, these links do not actually expand (as suggested by the “>” on the right), but click directly to other Mayo affiliated websites, with differing design schemes.

Since we’re only analyzing this page, the other pages and their inconsistencies are out of scope.

The other navigation element on the Mayo Clinic page is this drop-down (select menu), which allows users to change the location (Mayo is providing information for all the states, not just Minnesota):

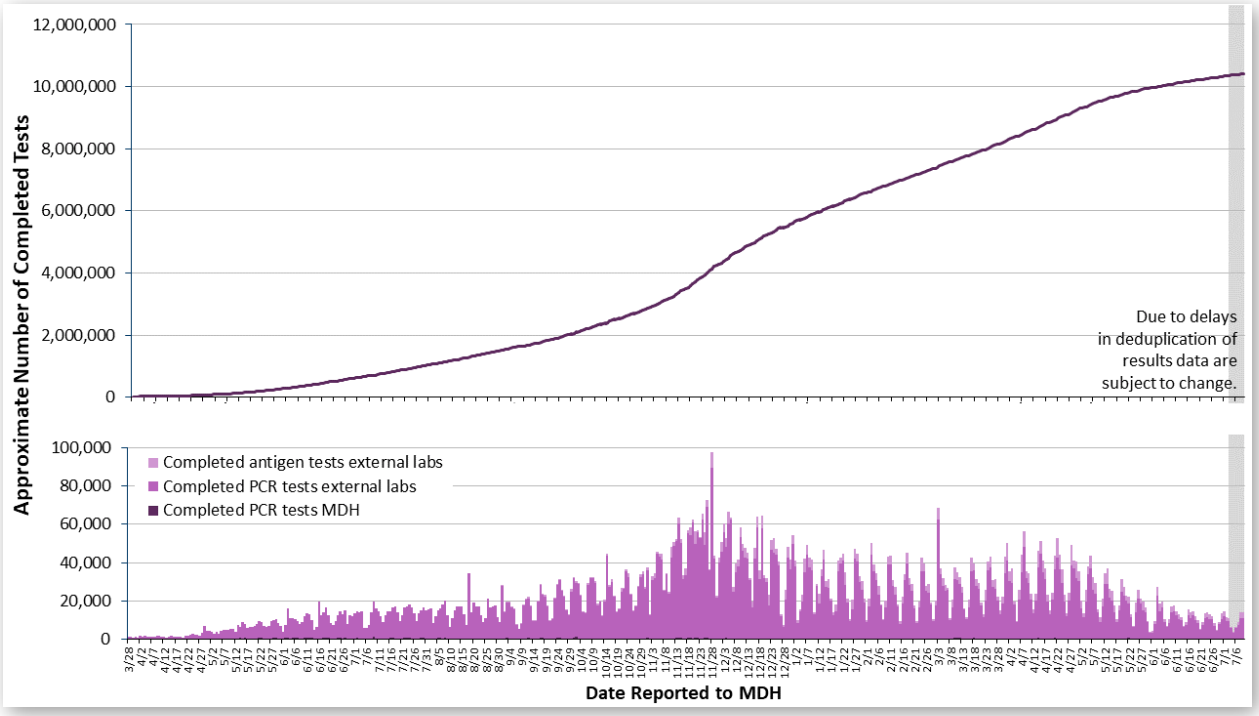




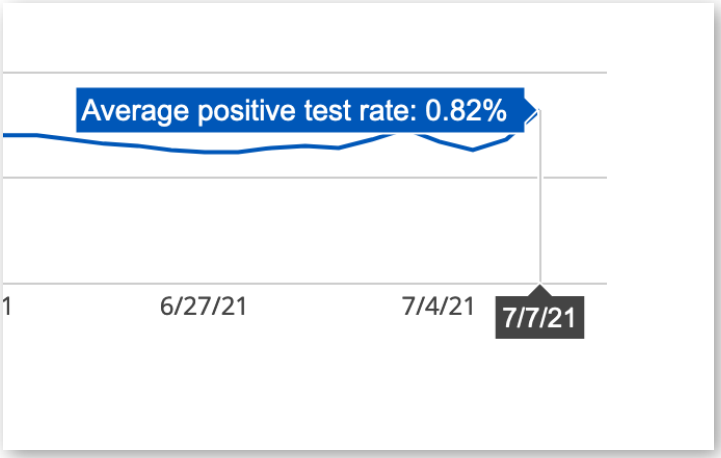
Note the “yellow for caution, red for danger” color alignment on this Mayo Clinic map.

Functionality

Functionality is of paramount importance on the web, this is where I found the most glaring differences between the documents being evaluated. To name just a few examples, on the Department of Health page, there are many bar graphs and charts (see page 4). However, on close inspection, these are screenshots from a different source (which means the type is not selectable or accessible to screen-reader technology) and the type is too small to read easily. Unlike some chart embeds, there are no affordances (such as popup “tooltips” upon mouse-over) for the user to dig deeper into the information. See below for an actual-size graphic:

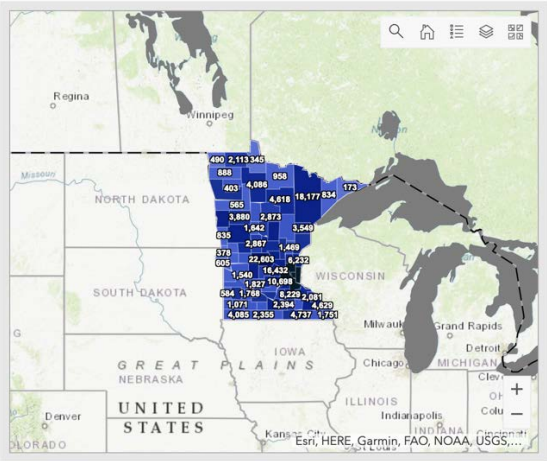


In contrast, the Mayo Clinic site uses "live" charts that are interactive for the user – hovering over the data points provides more information throughout the chart:

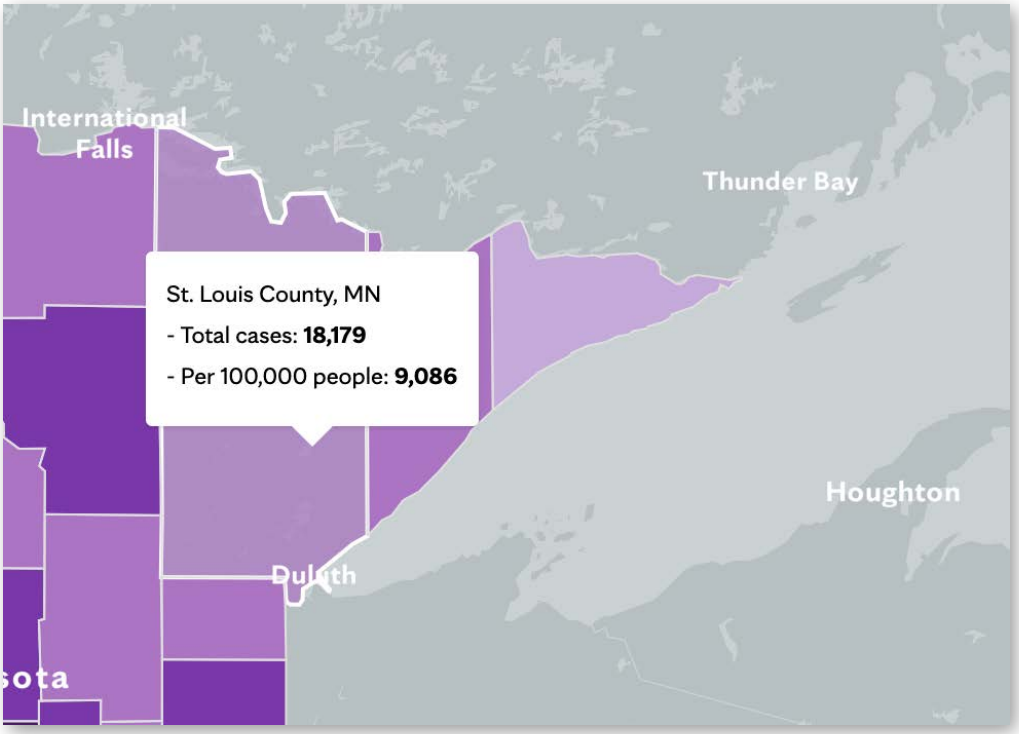


Maps are another problem for the Department of Health site, in that scrolling over the map has the effect of abandoning the page scroll and zooming the map content to extreme magnification. This is an often-seen issue, but it has simple solutions that developers can implement (the Mayo Clinic site's maps do not display this "zoom-jacking" behavior).

Department of Health map, before scrolling over map (left) and after scrolling (right):



On this map from the Mayo Clinic site, a rollover shows additional information. The map can be magnified using the map controls (but does not zoom while the user is scrolling):



Clarity

Several of the issues already discussed in this paper have the effect of reducing clarity. From the too-small text to the non-useful color palette, to cluttered navigation and typographic confusion, it's clear to me that the Minnesota Department of Health site could be doing a better job of conveying clear, actionable information to users. Even the tone and word choices are more consistent user-friendly at the Mayo site.

Works Cited

Hagen, R., & Golombisky, K. (2017). *White space is not your enemy: a beginner's guide to communicating visually through graphic, web & multimedia design*. CRC Press, Taylor & Francis Group.

Kimball, M. A., & Hawkins, A. R. (2008). *Document design: a guide for technical communicators*. Bedford/St. Martin's.